



**Client: TPCC Interiors Ltd**

Daylight and Sunlight Assessment for the Development at  
St Mary's House, Church Street, Bentworth, GU34 5RD

**July 2023**

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## Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Date	Written by	Checked by
0	Draft Issue	7 <sup>th</sup> July 2023	HA	LH
1	Final Issue	10 <sup>th</sup> July 2023	HA	LH

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Template Rev – July 2022

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## 1 Executive Summary

The detailed analysis undertaken as part of this assessment has assessed the potential impact of the proposed development at St Mary's House, Church Street, Bentworth, GU34 5RD, in relation to daylight, sunlight and overshadowing on the neighbouring building, the Brambles.

In line with the assessment criteria prescribed by the BRE Guidelines, it has been shown that all of the neighbouring rooms, windows and amenity areas will not result in a notable reduction in the amount of either daylight or sunlight enjoyed by the neighbouring building.



## 2 Background and Scope of Appraisal

### 2.1 Study Objectives

Herrington Consulting has been commissioned by TPCC Interiors Ltd to assess the potential impact of the proposed development at St Mary's House, Church Street, Bentworth, GU34 5RD, in relation to daylight, sunlight and overshadowing on the neighbouring building. The key objectives of the assessment are to:

- assess the baseline conditions at the site;
- analyse the potential impacts of the development on the daylight and sunlight currently received by the neighbouring building;
- assess these impacts in line with any relevant planning policies and best practice guidance.

### 2.2 Site Location

The site is situated in the village and civil parish of Bentworth, within the administrative boundaries of East Hampshire District Council. The location of the site is shown in Figure 1.1 and the site plan included in Appendix A.1 of this report gives a more detailed reference to the site location and layout.

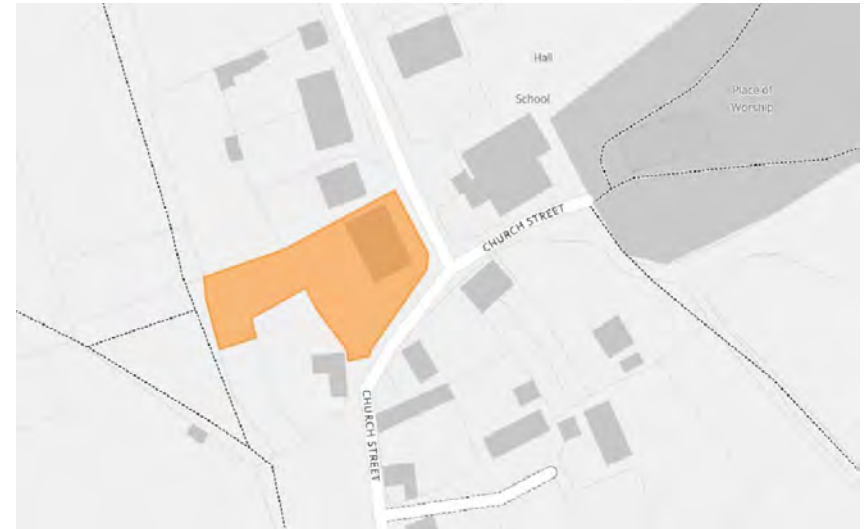


Figure 1.1 – Location map (Contains Ordnance Survey data © Crown copyright and database right 2011)

### 2.3 The Development

The proposal for development is to build a single storey front extension, a two-storey rear extension, a first-floor side extension (to the north side of the dwelling), and crown roofs formed over flat roofed areas alongside minor internal amendments. Drawings of the proposed scheme are included in Appendix A.1 of this report.

## 3 Policy and Guidance

### 3.1 National Planning Policy

#### **National Planning Policy Framework (Revised July 2021)**

Paragraph 125 on 'Achieving appropriate densities' states that "c) *local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards).*"

#### **Guidance on Effective Use of Land (Revised July 2019)**

The guidance states that: *'Where a planning application is submitted, local planning authorities will need to consider whether the proposed development would have an unreasonable impact on the daylight and sunlight levels enjoyed by neighbouring occupiers, as well as assessing whether daylight and sunlight within the development itself will provide satisfactory living conditions for future occupants.'*

Further to this, it also states that *'All developments should maintain acceptable living standards. What this means in practice, in relation to assessing appropriate levels of sunlight and daylight, will depend to some extent on the context for the development as well as its detailed design. For example in areas of high-density historic buildings, or city centre locations where tall modern buildings predominate, lower daylight and daylight and sunlight levels at some windows*

*may be unavoidable if new developments are to be in keeping with the general form of their surroundings.*

*In such situations good design (such as giving careful consideration to a building's massing and layout of habitable rooms) will be necessary to help make the best use of the site and maintain acceptable living standards.'*

### 3.2 Regional Planning Policy

There is no regional planning policy relating to daylight, sunlight or overshadowing.

### 3.3 Local Planning Policy

#### **East Hampshire District Local Plan (Adopted July 2018)**

Supplementary Planning Document – 'Residential Extensions & Householder Development' states that:

*2.4) General advice for extensions: consideration should also be given to the size of an extension and whether it would adversely affect your neighbours. For example, would it result in overshadowing or overbearing of their gardens/amenity space, or cause a loss of daylight or sunlight into the existing rooms of a neighbouring property?*

*2.13) Rear extensions: the maximum limit to which extensions will be favourably considered is generally determined by drawing a straight line at an angle of 45° towards an adjacent property from the nearest projecting corner of the extension, when viewed from above. If the centre of a habitable room window on a neighbouring property lies on this line (or lies within the triangle*

*created by the vertical surfaces of the properties and this line) then the extension is likely to have an unacceptable impact on the daylight received by this window.*

*2.14) Other material considerations will be taken into account to decide on the likely impact of a proposal on local residential amenity, such as window size, the orientation of properties relative to the trajectory of the sun and the presence of intervening physical features (such as the height of boundaries and the presence of trees). These factors can also affect the amount of daylight/sunlight received by adjoining properties.*

### 3.4 Best Practice Guidance

In the absence of official national planning guidance / legislation on daylight and sunlight, the most recognised guidance document is published by the Building Research Establishment and entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice', Third Edition, 2022; herein referred to as the 'BRE Guidelines'.

The BRE Guidelines are not mandatory and themselves state that they should not be used as an instrument of planning policy, however in practice they are heavily relied upon as they provide a good guide to approach, methodology and evaluation of daylight and sunlight impacts.

Whilst the BRE Guidelines provide numerical guidance for daylight, sunlight and overshadowing, these criteria should not be seen as absolute targets. The document states that the intention of the guide is to aid rather than constrain the designer. The Guide is not an instrument of planning policy, therefore whilst the

methods given are technically robust, it is acknowledged that some level of flexibility should be applied where appropriate.

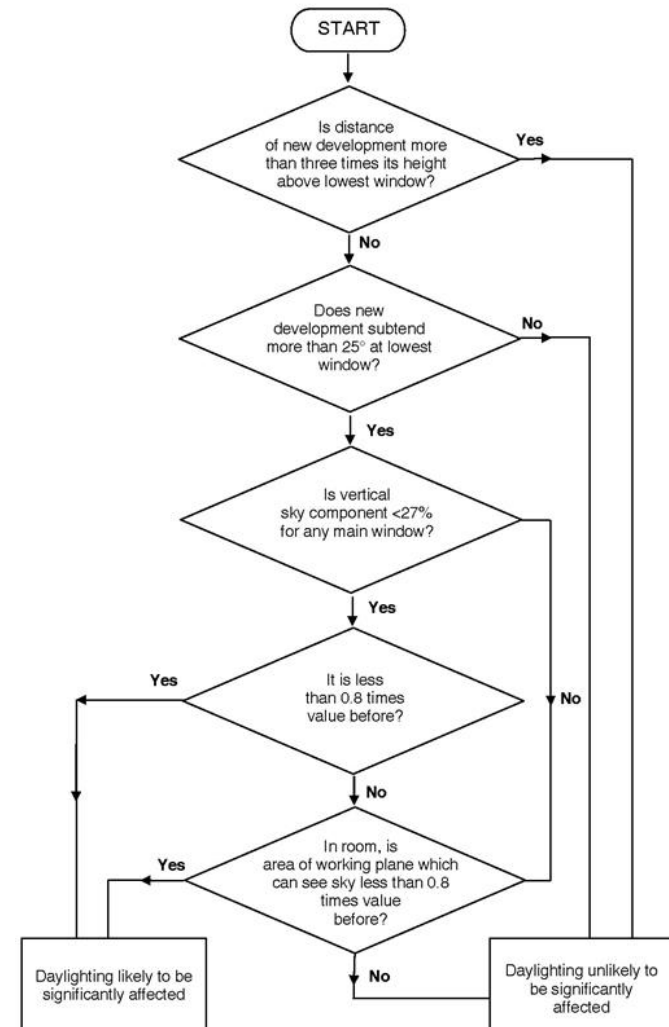
## 4 Assessment Techniques

### 4.1 Background

Natural light refers to both daylight and sunlight. However, a distinction between these two concepts is required for the purpose of analysis and quantification of natural light in buildings. In this assessment, the term '*Daylight*' is used for natural light where the source is the sky in overcast conditions, whilst '*Sunlight*' refers specifically to the light coming directly from the sun.

The primary objective of this assessment is to quantify the impacts of the proposed development on the adjacent building[s] and therefore the methods employed by this study are focussed on this objective. These methodologies are described in the following sections of this report and follow the hierarchical approach set out by the BRE Guidelines. The 'decision chart' outlining this process (Figure 20 of the Guidelines) has been reproduced for clarity.

The BRE guidelines are primarily intended for use for residential rooms in adjoining dwellings. However, they may also be applied to any existing non-domestic buildings where the occupants have a reasonable expectation of daylight, which could include schools, hospitals, hotels and offices in specific circumstances. For dwellings, it states that living rooms, dining rooms and kitchens should be assessed. Bedrooms should also be checked, although it states that they are less important. Other rooms, such as bathrooms, toilets, storerooms, circulation areas and garages need not be assessed.



#### 4.2 Vertical Sky Component (VSC)

The Vertical Sky Component (VSC) calculation is the ratio of the direct sky illuminance falling on the outside of a window, to the simultaneous horizontal illuminance under an unobstructed sky. The standard CIE (Commission Internationale d'Éclairage) Overcast Sky is used and the ratio is expressed as a percentage. For example, a window that has an unobstructed view over open fields would benefit from the maximum VSC, which would be close to 40%. For a window to be considered as having a reasonable amount of skylight reaching it, the BRE Guidelines suggests that a minimum VSC value of 27% should be achieved. When assessing the impact of a new development on an existing building the BRE Guidelines sets out the following specific requirement:

*If the VSC with the new development in place is both less than 27% and less than 0.8 times its former value, then the reduction in light to the window is likely to be noticeable.*

This means that a reduction in the VSC value of up to 20% its former value would be acceptable and thus the impact would be considered negligible. It is important to note that the VSC is a simple geometrical calculation, which provides an early indication of the potential for daylight entering the space. It does not, however, assess or quantify the actual daylight levels inside the rooms.

#### 4.3 No Sky Line (NSL)

The No Sky Line, or sometimes referred to as No Sky View method, describes the distribution of daylight within rooms by calculating the area of the 'working plane', which can receive a direct view of the sky. The working plane height is generally set at 850mm above floor level within a residential property and 700mm within a commercial property. When assessing the potential impacts on the

daylight available to the neighbouring properties, the BRE Guidelines state that if the area within a room receiving direct skylight is reduced by less than 0.8 following the construction of a new development, the impact will be noticeable to the occupants. This is also true if the No Sky Line encroaches onto key areas like kitchen sinks and worktops.

#### 4.4 Annual Probable Sunlight Hours (APSH)

It is also possible to quantify the amount of sunlight available to a new development and the recognised methodology for undertaking this analysis is the Annual Probable Sunlight Hours (APSH) method.

To pass this test the centre point of the window will need to receive more than one quarter (25%) of the APSH, including at least 5% APSH in the winter months between 21<sup>st</sup> September and the 21<sup>st</sup> March. The BRE Guidelines state that if 'post-development' the available sunlight hours are both less than the amount above and less than 0.8 times their 'pre-development' value, either over the whole year or just within the winter months, then the occupants of the existing building will notice the loss of sunlight. In addition, if the overall annual loss is greater than 4% of APSH, the room may appear colder and less pleasant.

For new development and especially where existing buildings are being re-developed, it is important to acknowledge that these are aspirational targets intended to aid and not constrain the designer.

These aspirational targets were derived to improve the amenity of single dwellings that typically comprise a living room, kitchen and bedrooms; the objective being to maximise sunlight in the main living areas. However, for buildings that contain multiple apartments, it is rarely possible to configure the

internal layout such that all rooms receive direct sunlight as it is inevitable that some windows will be situated on an elevation that faces within 90 degrees of due north.

It is therefore important to understand that when assessing the provision of sunlight to a building containing multiple dwellings, the BRE Guidelines seek only to maximise the amount of sunlight received. They do not set absolute targets.

#### 4.5 Overshadowing

The BRE Guidance suggests that where new development may affect one or more amenity areas, then analysis can be undertaken to quantify the loss of sunlight resulting from overshadowing. Typical examples of areas that could be considered as open spaces or amenity areas are main 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. Amenity areas in the form of balconies are not recommended to be assessed under the BRE Guidelines due to their small size and often significant obstruction.

##### ***Sun Hours on Ground***

The BRE Guidelines recommend that for a garden or amenity area to appear adequately sunlit throughout the year, at least 50% of an amenity area should receive at least 2 hours of sunlight on 21<sup>st</sup> March. The BRE Guidelines also suggest that if, as a result of a new development, an existing garden or amenity area does not meet these guidelines, and the area which can receive some sun on the 21<sup>st</sup> March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable.

When undertaking this analysis, sunlight from an altitude of 10° or less has been ignored as this is likely to be obscured by planting and undulations in the surrounding topography. Driveways and hard standing for cars is also usually left out of the area used for this calculation. Fences or walls less than 1.5 metres high are also ignored. Front gardens which are relatively small and visible from public footpaths are omitted with only main back gardens needing to be analysed.

The Guidelines also state that "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". This is especially the case for deciduous trees, which provide welcome shade in the summer whilst allowing sunlight to penetrate during the winter months.

##### ***Transient Overshadowing***

The BRE Guidelines suggest that where large buildings are proposed, which may affect a number of open spaces or amenity areas, it is useful and illustrative to plot a shadow plan to show the location of shadows at different times of the day and at key times during the year. Typically, the 21<sup>st</sup> March, the 21<sup>st</sup> June, and 21<sup>st</sup> December are used to represent the annual variance of sun position, noting that the position of the sun in the sky during the spring equinox (21<sup>st</sup> March) is equivalent to that of the autumn equinox.

The BRE Guidelines provide no criteria for the significance of transitory overshadowing other than to suggest that by establishing the different times of day and year when shadow would be cast over surrounding areas, provides an indication as to the significance of the likely effect of a new development. The assessment of transient overshadowing effects is therefore based upon expert judgment, taking into consideration the likely effects of the various baseline

conditions and comparing them with the likely significant transient overshadowing effects of the redevelopment proposals.

## 5 Assessment Methodology

### 5.1 Method of Baseline Data Collation

The following data and information has been used to inform this study:

- OS Mastermap mapping
- Measured survey data (Stuart Bailey Land Surveyor – September 2022)
- Scheme drawings in PDF format (Bonnington Architects Limited – July 2023)
- Photographic information provided by Tom Cannon on 6<sup>th</sup> March 2023 and 4<sup>th</sup> April 2023
- 3D Building model constructed using photogrammetric techniques (provided by AccuCities in March 2023, based on satellite imagery from 2021 to 15cm accuracy)
- Aerial photography (Google Maps and Bing)

### 5.2 Identification of Key Sensitive Receptors

The BRE Guidelines are intended for use for rooms and adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms circulation areas and garages are not deemed as requiring daylight and therefore are not identified as sensitive receptors. The BRE document also states that the guidelines may also be applied to any non-domestic building where the occupants have a reasonable

expectation of daylight. This would normally include schools, hospitals, hotels, hostels, small workshops and some offices.

The first step in this process is to determine the key sensitive receptors, i.e. which windows may be affected by the proposed development. Key receptors are those windows that face, or are located broadly perpendicular to the proposed development.

If a window falls into this category, the second step is to measure the obstruction angle. This is the angle at the level of the centre of the lowest window between the horizontal plane and the line joining the highest point of nearest obstruction formed from any part of the proposed development. If this angle is less than 25° then it is unlikely to have a substantial effect on the diffuse daylight enjoyed by the existing window and the window is not deemed to be a sensitive receptor. A graphical representation of the 25° rule is illustrated in Figure 4.1 below.

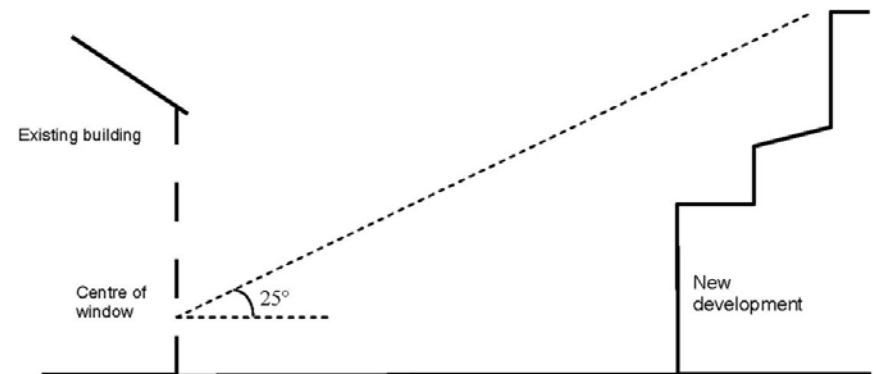


Figure 5.1 – Graphical representation of the 25° Rule (indicative buildings used for illustration purposes only)



As part of this assessment a digital three-dimensional model of the study area has been created for both the 'pre' and 'post' development scenarios. Images of these models are shown by the drawings appended to this report.

Using the 3D model, it is possible to identify all windows having an obstruction angle no greater than 25°. Impacts to these windows are therefore deemed to be negligible in line with the criteria set out within the BRE Guidelines.

There are, however, circumstances where the 25°*degree* rule is not wholly appropriate, for example where the development facing the window does not create a uniform obstruction along the skyline, or where the proposals are not directly adjacent to the receptor window. In these situations, professional judgement is used to differentiate between windows that require more detailed analysis and those that will clearly not be impacted. Where any level of uncertainty exists, the window is taken forward for detailed analysis.

Windows serving non-habitable spaces are not included within the assessment as these are not identified by planning policy or by the BRE Guidelines to be sensitive to changes in daylight and sunlight. Therefore, as part of the identification of sensitive receptor process, the use of each room is, where possible, established and windows serving non-habitable spaces such as toilets, store rooms, stairwells and circulation spaces are identified. Typically kitchens that have a floor area less than 13m<sup>2</sup> are not considered to be habitable spaces in their own right.

Windows serving rooms within commercial premises are assumed to be non-habitable and in accordance with the BRE Guidelines are not identified as sensitive receptors. However, there are special cases where it can be assumed

that some non-domestic uses could be deemed to have a reasonable expectation of daylight and therefore could be taken forward for more detailed analysis. Typically, these could be school classrooms, hospital wards, art studios etc, but professional judgement is generally relied upon to determine this and where considered appropriate, windows serving commercial premises are included.

Drawings showing the location of all sensitive receptors that have been assessed as part of this study are included in Appendix A.2 of this report.

In summary, habitable rooms in the following residential building have been identified as potential sensitive receptors and have therefore been tested.

- The Brambles, Bentworth

### 5.3 Numerical Modelling

The numerical analysis used in this assessment has been undertaken using the Waldrum Tools (Version 6.0.0.11) software package.

### 5.4 Calculation Assumptions

The following assumptions have been made when undertaking the analysis:

- When assessing the VSC the calculation is based on the centre point of the window position.
- When assessing the daylighting for internal rooms and in the absence of specific information, the following parameters are assumed:

- For new buildings, the glazing type is assumed to be double glazing (Pilkington K Glass 4/16/4 Argon filled) with a light transmittance value of 0.78 (value for double glazed unit not per pane). For existing buildings, a value of 0.68 has been assumed.
- Correction factor for frames and glazing bars = 0.8
- Where information from the designer is not available, the following values are used to derive the Maintenance Factor applied to the transmittance values.

Type of window	Maintenance Factor	
	Rural/ suburban	Urban
Vertical, no overhang	0.96	0.92
Vertical, sheltered from rain by balcony/overhang	0.88	0.76
Sloping rooflight	0.92	0.84
Horizontal rooflight	0.88	0.76

Table 5.1 – Parameters used for deriving Maintenance Factor

- Where information on internal room layouts of adjacent properties is not known, best estimates as to room layout and size have been made in order to undertake No Skyline analysis.
- Where the internal arrangements and room uses have been estimated, it should be noted that this has no bearing upon the tests for VSC or APSH because the reference point is at the centre of the window being tested and windows have been accurately drawn from the survey information where

possible. It is relevant to the daylight distribution assessment, but in the absence of suitable plans, estimation is a conventional approach.

- In areas where survey data has not been provided or needs to be supplemented with additional information, photographs, OS mapping and brick counts have been used in the process of building the 3D model of the surrounding and existing buildings.
- When analysing the effect of the new building on the existing buildings, the shading effect of the existing trees has been ignored. This is the recommended practice where deciduous trees that do not form a dense belt or tree line are present (BRE Guidelines – Appendix H). This is because daylight is at its scarcest and most valuable in the winter when most trees will not be in leaf.
- In situations where windows are deeply set-back beneath balconies or other overhanging features, it is common for these rooms to have low VSC values as a result of the obstruction caused by the balcony. It widely accepted and acknowledged within the BRE Guidelines that the presence of balconies can mask the impact of a proposed development when using the VSC test and therefore the Guidelines suggest that the window should be tested both 'with' and 'without' the balcony in place. If the ratio of change with the development in place, but with the balconies removed, remains above 0.8, then it can be concluded that it is the presence of the balcony rather than the introduction of a new building that is the main factor in the relative loss of light.

### 5.5 Assessment criteria

The numerical assessment criteria specified within the BRE Guidelines is designed to identify the threshold at which point a change in daylight or sunlight would become 'noticeable' to the occupants. Consequently, where the results of the daylight/sunlight analysis demonstrate compliance with the BRE criteria it can be concluded that the impact will be negligible. However, a point that should be stressed here is that 'noticeable' does not necessarily equate to 'unacceptable' and the BRE's standard target values should not always be considered as pass/fail criteria. Whilst the BRE Guidelines provide numerical guidance for daylight, sunlight and overshadowing, these criteria should not be seen as absolute targets since, as the document states, the intention of the guide is to help rather than constrain the designer. The Guide is not an instrument of planning policy, therefore whilst the methods given are technically robust, it is acknowledged that some level of flexibility should be applied where appropriate.

Consequently, based on the numerical assessment criteria set out with the BRE Guidelines and the use of professional judgment, the following assessment criteria have been established and are used in describing the impacts of the proposed development.

Significance	Description	Change Ratio
Negligible	No alteration or a small alteration from the existing scenario. Results demonstrate full compliance with the BRE assessment criteria and therefore occupants are unlikely to notice any change.	1.0 to 0.8
Minor adverse	An alteration from the existing scenario which may be marginally noticeable to the occupant. This may include a marginal infringement of the numerical levels suggested in the BRE Guidelines, which should be viewed in context. A typical change ratio for this level of significance would be 0.7	0.7 to 0.8
Moderate adverse	An alteration from the existing scenario which may cause a moderate noticeable change to the occupant. This may consist of a moderate infringement of the numerical BRE assessment criteria.	0.6 to 0.7
Major adverse	An alteration from the existing scenario which may cause a major noticeable change to the occupant. This may consist of a significant infringement of the numerical BRE assessment criteria.	Less than 0.6

Table 5.2 – Daylight & Sunlight Impact Descriptors

## 6 Discussion of Daylighting Impacts

Based on the results of the numerical analysis summarised in Appendix A.3, it is possible to draw conclusions on the impacts that the proposed development will have on the neighbouring building. These are based on the principle numerical tests that are discussed below.

As there have been concerns and objections from the neighbouring occupant (Planning Ref 32860/002) regarding the boundary hedge height marked on the planning drawings, the boundary wall has been tested in two scenarios for the purposes of this assessment. One scenario is a 1.8m high wall as marked on the topographic survey. This is assessed as the worst-case scenario. The second scenario is a 2.5m high wall to take into consideration the significant amount of vegetation along the boundary wall and measurements of this have been provided by the client. The two scenarios have been summarised for all of the tests as discussed below, and an image of the scenarios is provided in Figure 6.1.

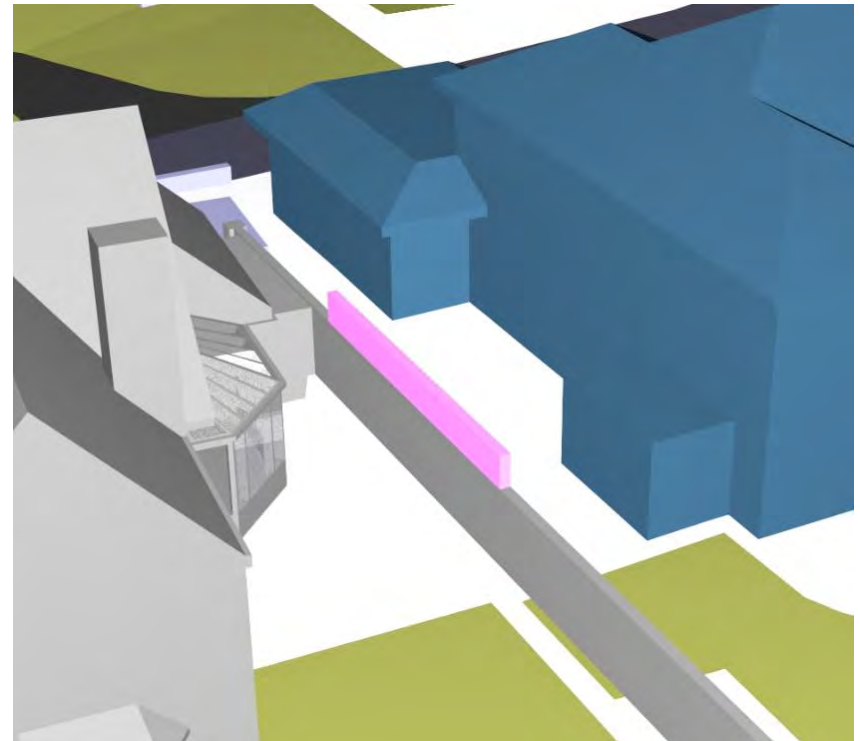


Figure 6.1 – Assessed wall height scenarios (1.8m wall in grey, and the additional height of the 2.5m wall in pink)

### 6.1 Vertical Sky Component Assessment

The BRE Guidelines operate on the general principle that where the retained VSC is 27% or greater, or where the retained VSC has not reduced to less than 0.8 times its former value, then the reduction in daylight is unlikely to be noticeable to the building's occupants and thus the impact can be deemed negligible.

Where rooms have multiple windows that serve the same area of the room, the BRE Guidelines recommend calculating a 'weighted average' for each window VSC result. The results of the average VSC result for each room are summarised in Table 6.1 and the detailed results for all windows are included in Appendix A.3.

Property	No. of Rooms Tested	Rooms meeting BRE Guidelines		VSC Rooms Transgressions		
		No.	%	Minor adverse	Moderate adverse	Major adverse
Wall 1.8m						
The Brambles	5	5	100%	0	0	0
Wall 2.5m						
The Brambles	5	5	100%	0	0	0

Table 6.1 – Results of Vertical Sky Component (VSC) Analysis

Inspection of the results of this test show that all of the rooms either retain a VSC value greater than 27% post development, or have a ratio of change that is 0.8 or above and therefore are fully compliant. Consequently, in line with the assessment criteria set out within the BRE Guidelines it is possible to conclude that the impact will be **negligible**.

## 6.2 No Sky Line Assessment

In order to pass the No Sky Line Assessment, the BRE Guidelines state that the area of the working plane within the room that has a view of the sky should not be reduced to less than 0.8 times its former value as a result of new development. One benefit of the daylight distribution test is that the resulting contour plans

show where the light falls within a room, for both the existing and proposed conditions, and a judgement can be made as to whether the room will retain light to a reasonable depth.

In Appendix D of the BRE guidance, it states in D3 that '*In most cases the position of the no sky line has to be found from plans. The calculation can only be carried out where room layouts are known. Using estimated room layouts is likely to give inaccurate results and is not recommended. However, where plans are available, for example on the local authorities online planning portal, the calculation should be carried out*'.

The results of the No Sky Line/Daylight Distribution analysis are summarised below.

Property	No. of Rooms Tested	Rooms meeting BRE Guidelines		No Sky Line Rooms Transgressions		
		No.	%	Minor adverse	Moderate adverse	Major adverse
Wall 1.8m						
The Brambles	5	5	100%	0	0	0
Wall 2.5m						
The Brambles	5	5	100%	0	0	0

Table 6.2 – Results of No Sky Line (NSL) Analysis

From the results summarised above, it can be seen that as a result of the proposed development, the impact on the daylight distribution within the assessed rooms will be negligible. The reduction in the area of the working plane

that has a direct view of the sky will be less than 20% therefore occupants are unlikely to notice any change.

### 6.3 Summary of Daylighting Impacts

The proposed development at St Mary's House, Church Street, Bentworth, GU34 5RD has been evaluated against the criteria set out by the BRE Guidelines for the assessment of the potential impacts on the daylight of the neighbouring property. One property has been identified as the sensitive receptor for this study, (The Brambles, Bentworth) and therefore, the habitable rooms and the windows serving the rooms within this property have been tested.

When the magnitude of reduction is considered, it is evident that this will be within the acceptable limits set out within the BRE Guidelines. Consequently, it is possible to conclude that any changes to the daylight received by the habitable rooms of the neighbouring building will not be significant and is unlikely to be noticeable by the occupants.

## 7 Sunlight and Overshadowing Analysis

### 7.1 Annual Probable Sunlight Hours Assessment

The Annual Probable Sunlight Hours (APSH) tests have been carried out using the numerical model described in Section 4.3. The assessment requirements for the APSH test, as set out in the BRE Guidelines, have been reiterated below. For the assessment to conclude that the sunlighting of the existing dwelling could be adversely affected, all three of the following tests need to have been failed:

**Test A** - Does the window receive less than 25% of the APSH, or less than 5% the APSH between 21<sup>st</sup> September and 21<sup>st</sup> March?

**Test B** - Does the assessed window receive less than 0.8 times its former sunlight hours during either the 'whole year' or 'winter' period?

**Test C** - Is the reduction in sunlight received over the whole of the year greater than 4% of the APSH?

However, these tests are only applicable to windows that face within 90 degrees of due south. Consequently, in line with the guidelines and assessment methodologies set out within the BRE document, the analysis of sunlight impacts has only been carried out for these windows. Windows facing within 90 degrees of due north are not analysed and impacts are deemed to be negligible.

It should also be noted that where rooms have windows on more than one elevation, it is acceptable to sum the non-coincident sunlight hours to achieve a 'room total'. This approach is acknowledged by the BRE Guidelines and

facilitates a greater understanding of the sunlight received within a room by taking into account the fact that some windows will receive sunlight at different times during the day.

When examining the results of the three sunlight tests, it is first necessary to understand why there are three separate tests and more importantly, why it is not necessary to pass all three to demonstrate that there is no adverse impact. The BRE Guidelines clearly state that for the proposed development to be considered to have an adverse effect on the available sunlight to neighbouring windows, all three tests would need to have been failed.

This is because sunlight is not assessed in terms of its contribution to the overall lighting levels within the room. The value attributed to sunlight is its transient presence and the way in which it can make a room appear bright and cheerful. There are also therapeutic values associated with sunlight and therefore it can be seen that these are not quantitative metrics that can be assessed using a single pass/fail criteria test. It is also necessary to understand that the amount of sunlight received by a window is strongly influenced by the orientation of the window elevation and any surrounding obstructions.

As a consequence of these factors, the assessment methodology embodied within the three separate tests allows the change in sunlight to be assessed in terms of the magnitude of change, absolute change and the retained level of sunlight. To conclude that a new development has no adverse impact, all that is required is for one of the three tests to be passed. The APSH test has been carried out and the detailed results of the analysis are included in Appendix A.3 and a summary of the results are shown in Table 7.1 below.

Property	No. of Windows Tested	Annual			Winter		
		Windows that meet BRE Guidelines		No. of Windows Experiencing Adverse Impacts	Windows that meet BRE Guidelines		No. of Windows Experiencing Adverse Impacts
		No.	%		No.	%	
Wall 1.8m							
The Brambles	24	24	100%	0	24	100%	<b>0</b>
Wall 2.5m							
The Brambles	24	24	100%	0	24	100%	<b>0</b>

Table 7.1 – Results of Annual Probable Sunlight Hours (APSH) Analysis

When the results of the APSH analysis summarised in Table 7.1 and Appendix A.3 are inspected, it can be seen that all windows and rooms pass at least one of the sunlight tests. Consequently, it has been demonstrated that the proposed scheme will have a negligible impact on neighbouring building.



## 7.2 Sun on the Ground

The BRE Guidelines acknowledge that good site layout planning for daylight and sunlight should not limit itself to providing good natural light inside buildings. Sunlight in the space between buildings has an important effect on the overall appearance and ambiance of a development.

The 2022 BRE Guidelines suggest that the Spring Equinox (21<sup>st</sup> March) is a suitable date for the assessment and therefore using the specialist software described in Section 4.3, the path of the sun is tracked to determine where the sun would reach the ground and where it would not.

The BRE guidelines recommend that at least half of a garden or amenity area should receive at least 2 hours of sunlight on March 21<sup>st</sup> or the area which receives 2 hours of direct sunlight should not be reduced to less than 0.8 times its former value (i.e. there should be no more than a 20% reduction).

Typical examples of areas that could be considered as open spaces or amenity areas are main 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.

The rear garden of The Brambles has been identified as the only sensitive amenity area and the results of the sun on ground test are presented in Appendix A.3 of this report. The results indicate that, in both scenarios, 97% of this area benefits from at least two hours of direct sunlight on the 21<sup>st</sup> March, far exceeding the 50% target threshold. In addition, it can be seen that as a result of the proposed development, the sunlight available to these amenity areas will not be reduced by more than 20% which is the acceptable reduction limit prescribed by

the BRE Guidelines. Consequently, it can be concluded that the proposed development will not result in a noticeable increase in overshadowing to the neighbouring garden.

## 8 Conclusions

The detailed analysis undertaken as part of this assessment has examined the impact of the proposed development at St Mary's House, Church Street, Bentworth, GU34 5RD, on the amount of daylight enjoyed by the neighbouring building. One property has been identified as the sensitive receptor for this study, (The Brambles, Bentworth) and therefore, the habitable rooms and the windows serving the rooms within this property have been tested.

In line with the assessment criteria prescribed by the BRE Guidelines, it has been shown that the reduction in daylighting to the rooms of the neighbouring building will be within the acceptable limits. Consequently, it is possible to conclude that any changes to the daylight received by the habitable rooms of the neighbouring building will not be significant and is unlikely to be noticeable by the occupants.

The assessment of the impact of the proposed development on the sunlight enjoyed by the neighbouring building has also shown that despite some reductions seen in the number of probable sunlight hours enjoyed by these windows these are again within the limits prescribed by the BRE Guidelines as being acceptable. Furthermore, the assessment of the sunlight available to the neighbouring amenity area indicates that this will experience no change to the excellent sunlight levels it currently enjoys.

In summary, the development proposal has been appraised in line with the guidelines set out in the BRE document. When assessed against the criteria for establishing whether the proposed development will have a significant impact, it has been possible to conclude that the development will not result in a notable

reduction in the amount of either daylight or sunlight enjoyed by the neighbouring building.

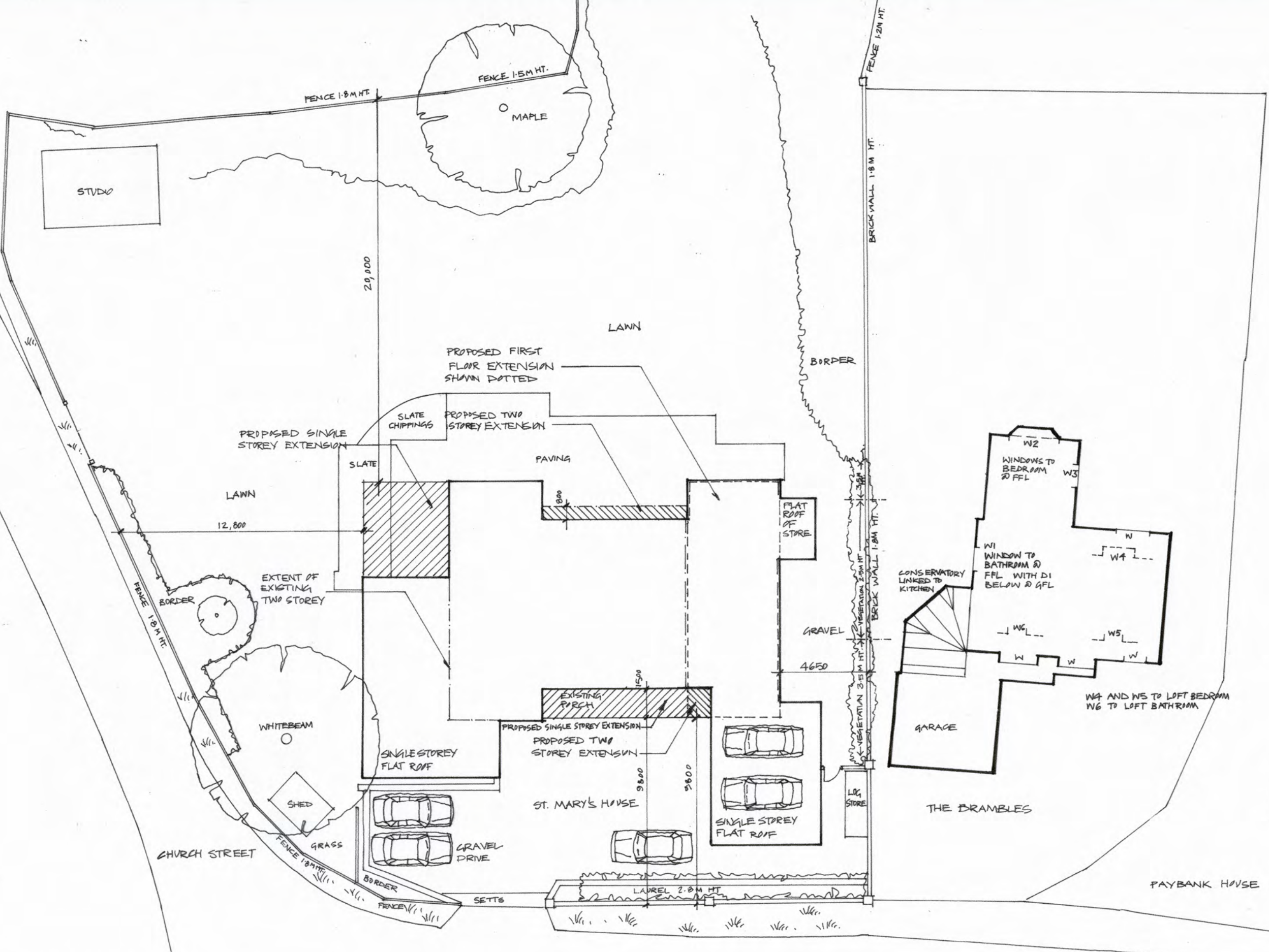
## **A Appendices**

Appendix A.1 – Scheme Drawings

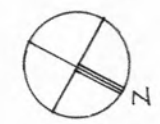
Appendix A.2 – Graphical Model Outputs

Appendix A.3 – Tabulated Results for Daylight & Sunlight Calculations

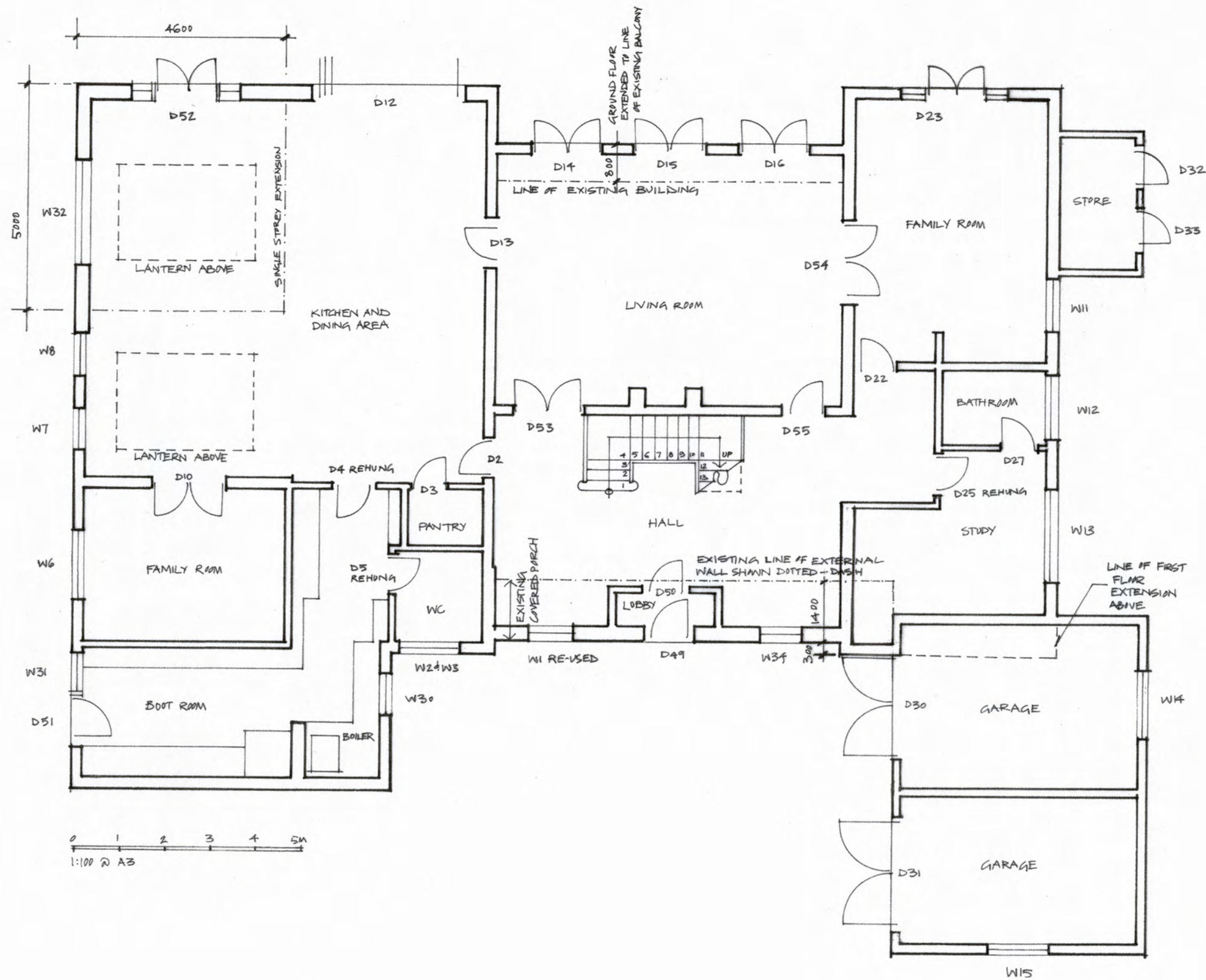
## Appendix A.1 – Scheme Drawings



General Notes		
A	Planning Application	2.7.23
No.	Revision/Issue	Date
Block Plan Dimensioned		
Bonnington Architects Limited 3 New Foresters Cottages Isington Hampshire GU34 4PS Telephone 01420 23264		
Project:		St Mary's House
Date:		18 <sup>th</sup> December 2022
Scale:	1:200	Drawing No. SMH/06A

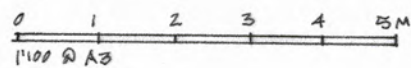
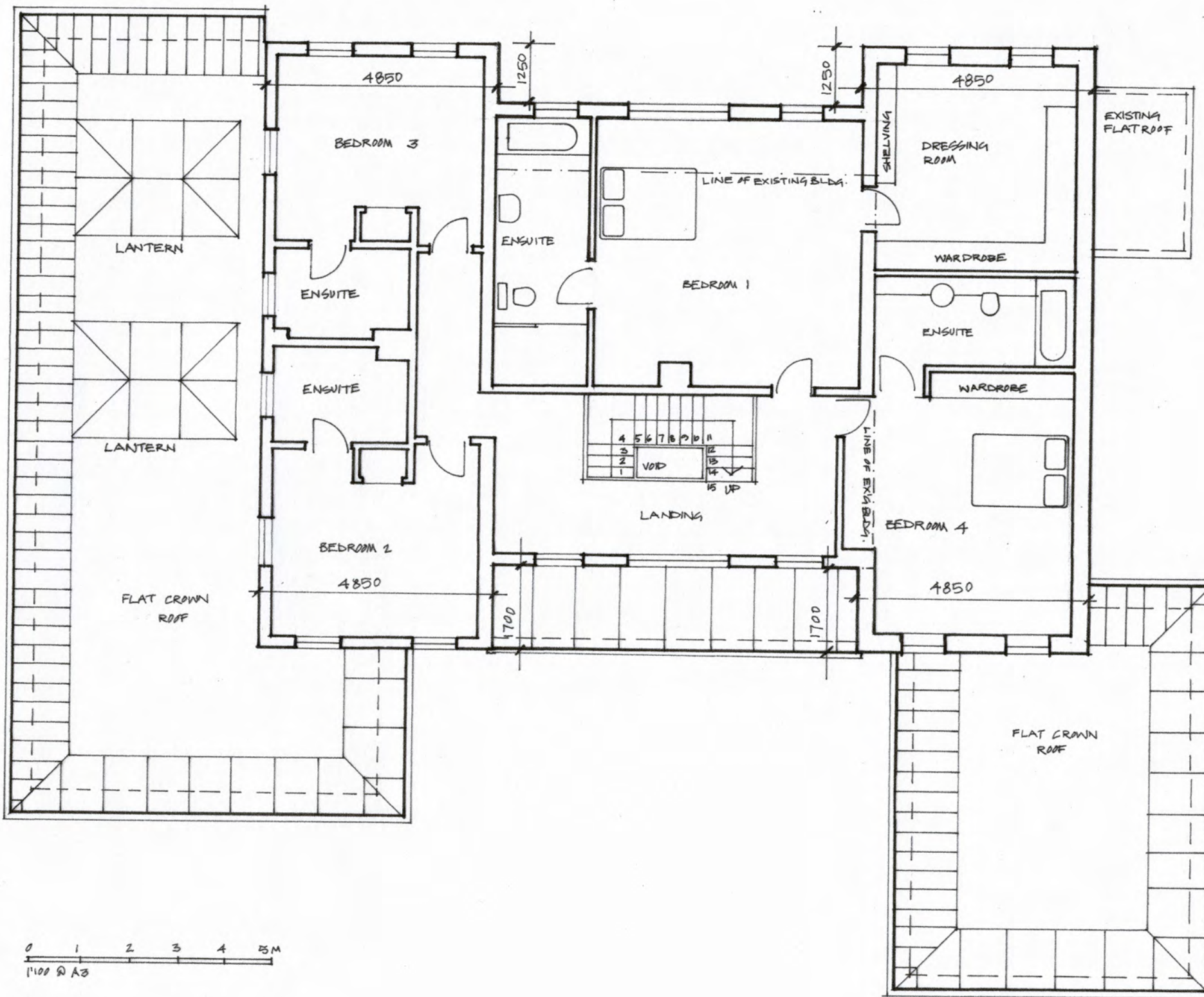






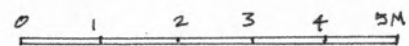
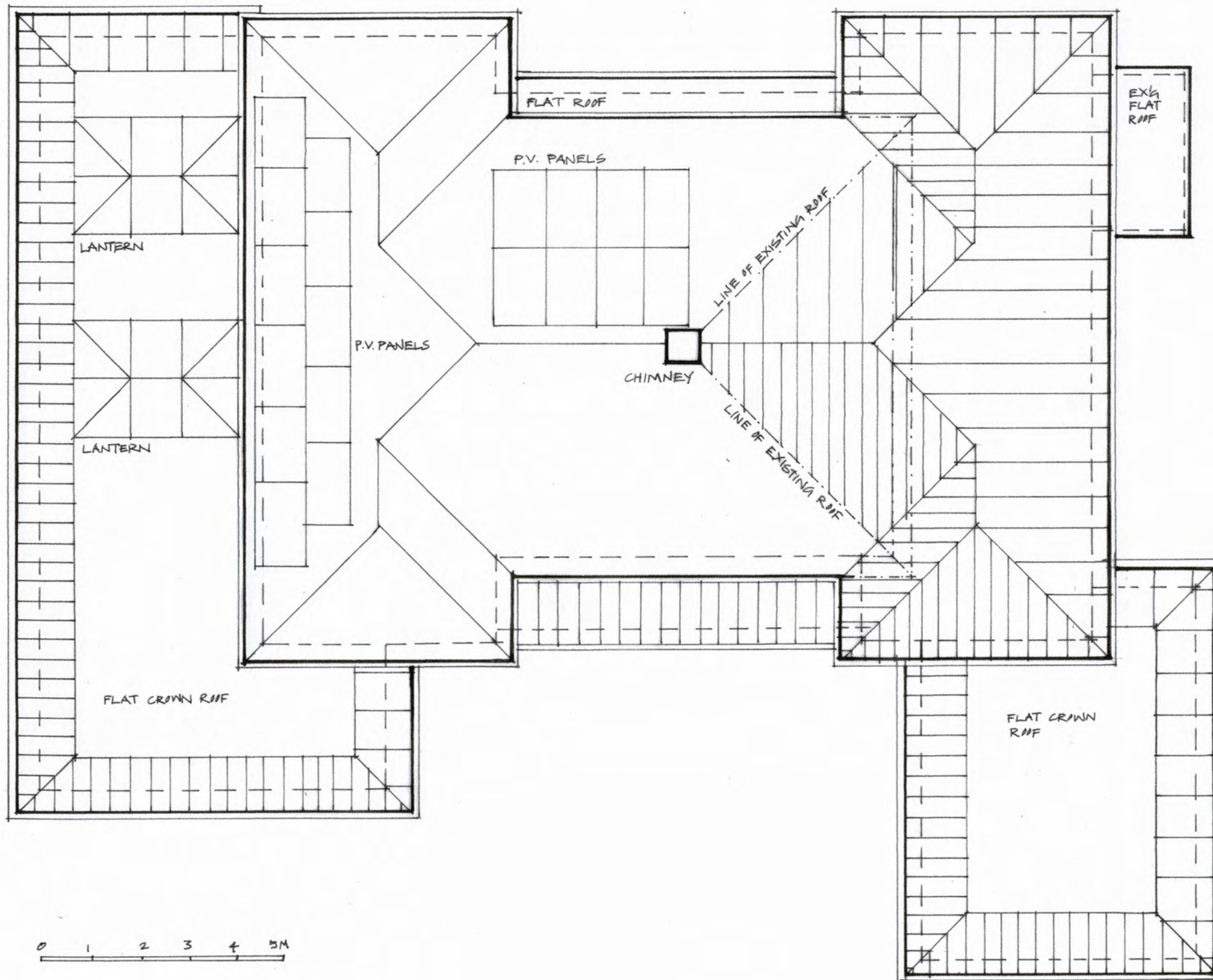
General Notes		
A	Planning Application	2.7.23
No.	Revision/Issue	Date
Proposed Ground Floor Plan		
Bonnington Architects Limited 3 New Foresters Cottages Isington Hampshire GU34 4PS Telephone 01420 23264		
Project:		St Mary's House
Date:		18 <sup>th</sup> December 2022
Scale:	1:100	Drawing No. SMH/07A





General Notes		
No.	Revision/Issue	Date
Proposed First Floor Plan		
Bonnington Architects Limited 3 New Foresters Cottages Isington Hampshire GU34 4PS Telephone 01420 23264		
Project: St Mary's House		
Date: 2 <sup>nd</sup> July 2023		
Scale: 1:100	Drawing No. SMH/12	





General Notes		
No.	Revision/Issue	Date
Proposed Roof Plan		
Bonnington Architects Limited 3 New Foresters Cottages Isington Hampshire GU34 4PS Telephone 01420 23264		
Project: St Mary's House		
Date: 2 <sup>nd</sup> July 2023		
Scale: 1:100	Drawing No. SMH/13	

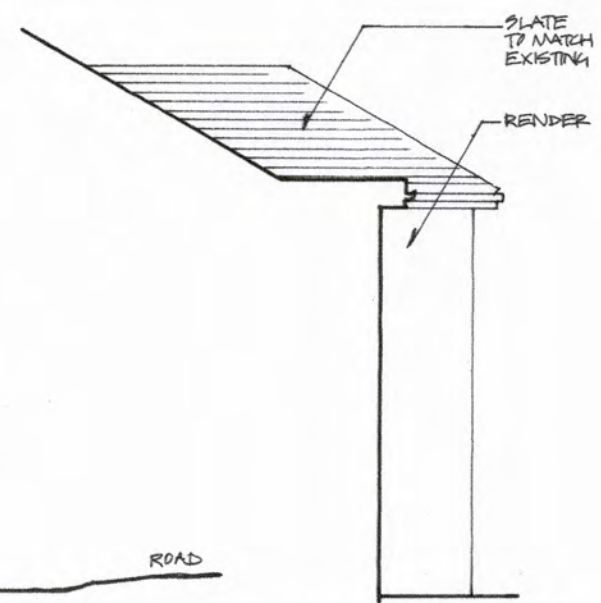
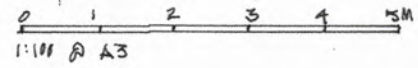




EAST ELEVATION



SOUTH ELEVATION (REMAINS THE SAME AS SHOWN ON DRAWING SMH/10 FOR CONSENTED SCHEME 32860/002)



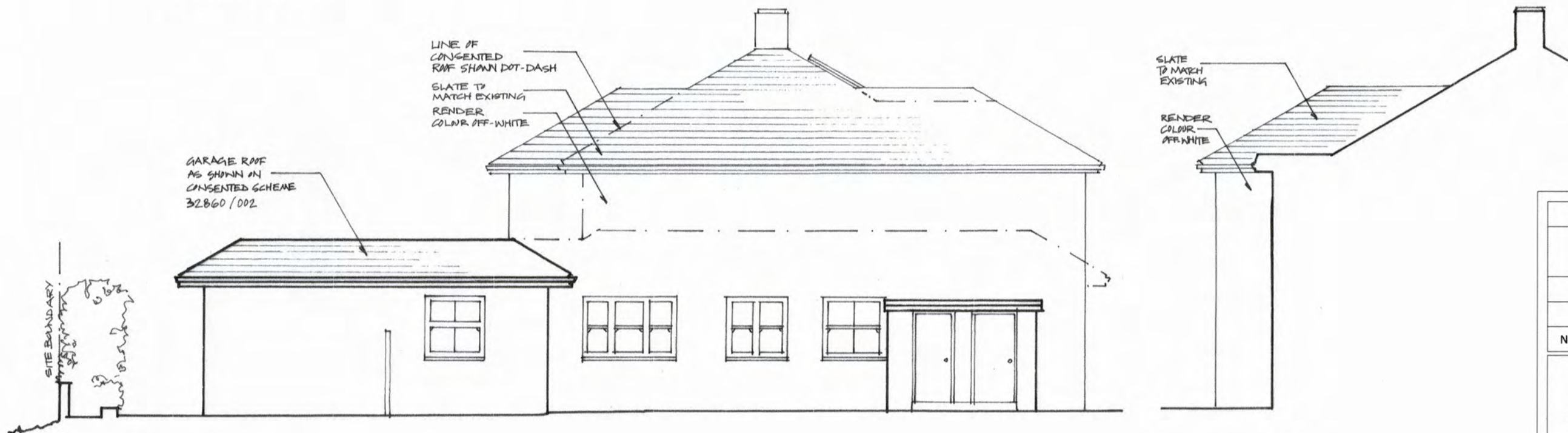
NORTH ELEVATION OF REAR PROJECTION (EXISTING KITCHEN @ GFL AND BEDROOM 3 @ FFL)

General Notes		
No.	Revision/Issue	Date
Proposed East and South Elevations		
Bonnington Architects Limited 3 New Foresters Cottages Isington Hampshire GU34 4PS Telephone 01420 23264		
Project:	St Mary's House	
Date:	2 <sup>nd</sup> July 2023	
Scale:	1:100	Drawing No. SMH/14





WEST ELEVATION



NORTH ELEVATION

0 1 2 3 4 5 M  
1:100 @ A3

SOUTH ELEVATION OF REAR EXTENSION (FAMILY ROOM & GFL AND DRESSING ROOM @ FFL)

General Notes		
No.	Revision/Issue	Date
Proposed West and North Elevations		
Bonnington Architects Limited 3 New Foresters Cottages Isington Hampshire GU34 4PS Telephone 01420 23264		
Project:		St Mary's House
Date:		2 <sup>nd</sup> July 2023
Scale:	1:100	Drawing No. SMH/15

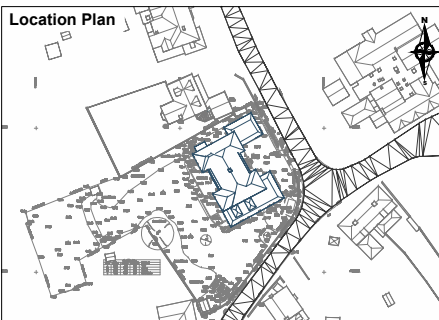
## Appendix A.2 – Graphical Model Outputs



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CONSULTING LIMITED

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Canterbury  
Kent CT4 6DQ

Tel : 01227 833855  
enquiries@herringtonconsulting.co.uk  
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**Legend**

- Existing Buildings
- Surrounding Buildings

01	Second issue	00/00/0000
00	First issue	07/07/2023

Rev	Description	Date
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CLIENT  
Tom Cannon MRICS

PROJECT  
St Mary's House, Church Street, Bentworth

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	3705	LH	LR

DWG REF. 3D Model - Existing Location Plan	DWG No. 3705 01
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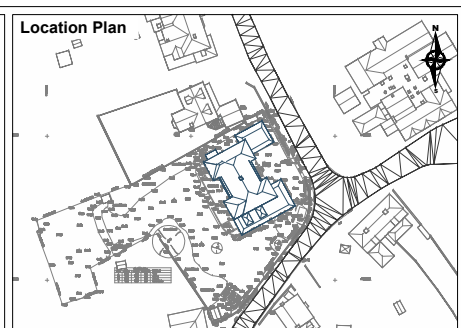




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**Legend**

- Existing Buildings
- Surrounding Buildings

01	Second issue	00/00/0000
00	First issue	07/07/2023
Rev	Description	Date

CLIENT  
Tom Cannon MRICS

PROJECT  
St Mary's House, Church Street, Bentworth

SCALE Not to scale	PROJ REF 3705	ANALYST LH	DRAWN BY LR
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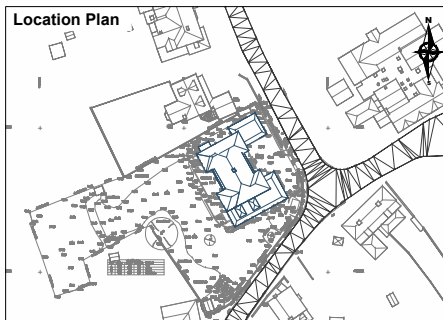
DWG REF. 3D Model - Existing Site Scenarios	DWG No. 3705 02
--	--------------------



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**Legend**

- Existing Buildings
- Surrounding Buildings

Rev	Description	Date
01	Second issue	00/00/0000
00	First issue	07/07/2023

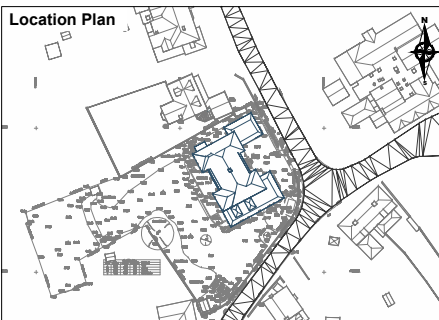
CLIENT			
Tom Cannon MRICS			
PROJECT			
St Mary's House, Church Street, Bentworth			
SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	3705	LH	LR
DWG REF.			DWG No.
3D Model - Existing Site Scenarios			3705 03



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**Legend**

- Proposed Buildings
- Surrounding Buildings

Rev	Description	Date
01	Second issue	00/00/0000
00	First issue	07/07/2023

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PROJECT  
St Mary's House, Church Street, Bentworth

SCALE Not to scale	PROJ REF 3705	ANALYST LH	DRAWN BY LR
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DWG REF. 3D Model - Proposed Location Plan	DWG No. 3705 04
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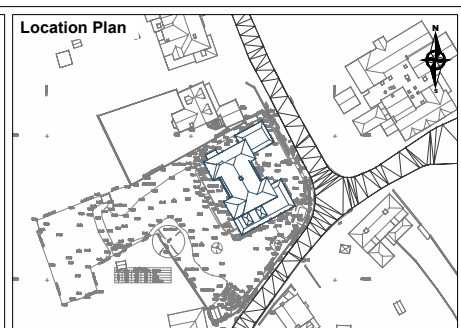




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**Legend**

- Proposed Buildings
- Surrounding Buildings

01	Second issue	00/00/0000
00	First issue	07/07/2023
<b>Rev</b>	<b>Description</b>	<b>Date</b>

CLIENT  
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PROJECT  
St Mary's House, Church Street, Bentworth

SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	3705	LH	LR

DWG REF. 3D Model - Proposed Site Scenarios	DWG No. 3705 05
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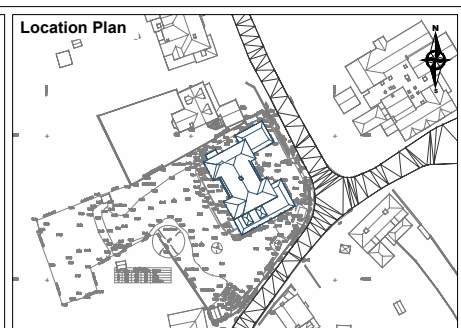




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**Legend**

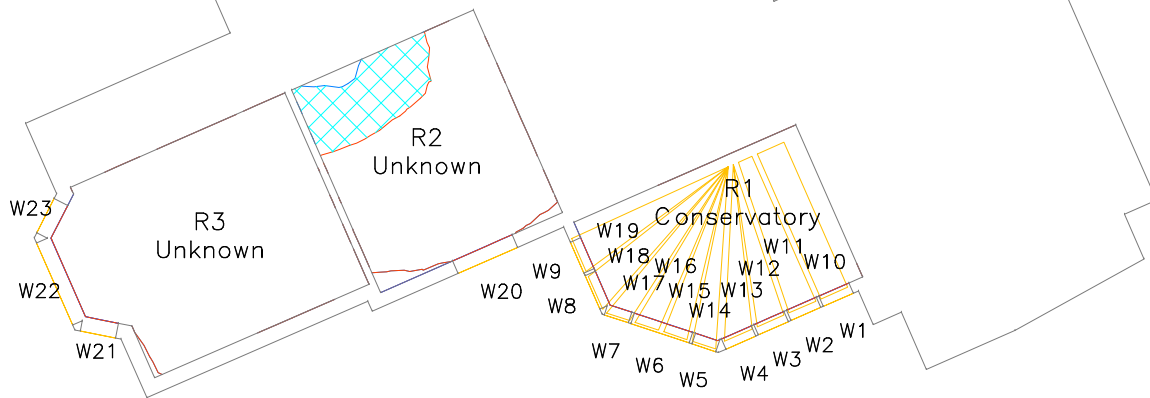
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- Surrounding Buildings

Rev	Description	Date
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00	First issue	07/07/2023

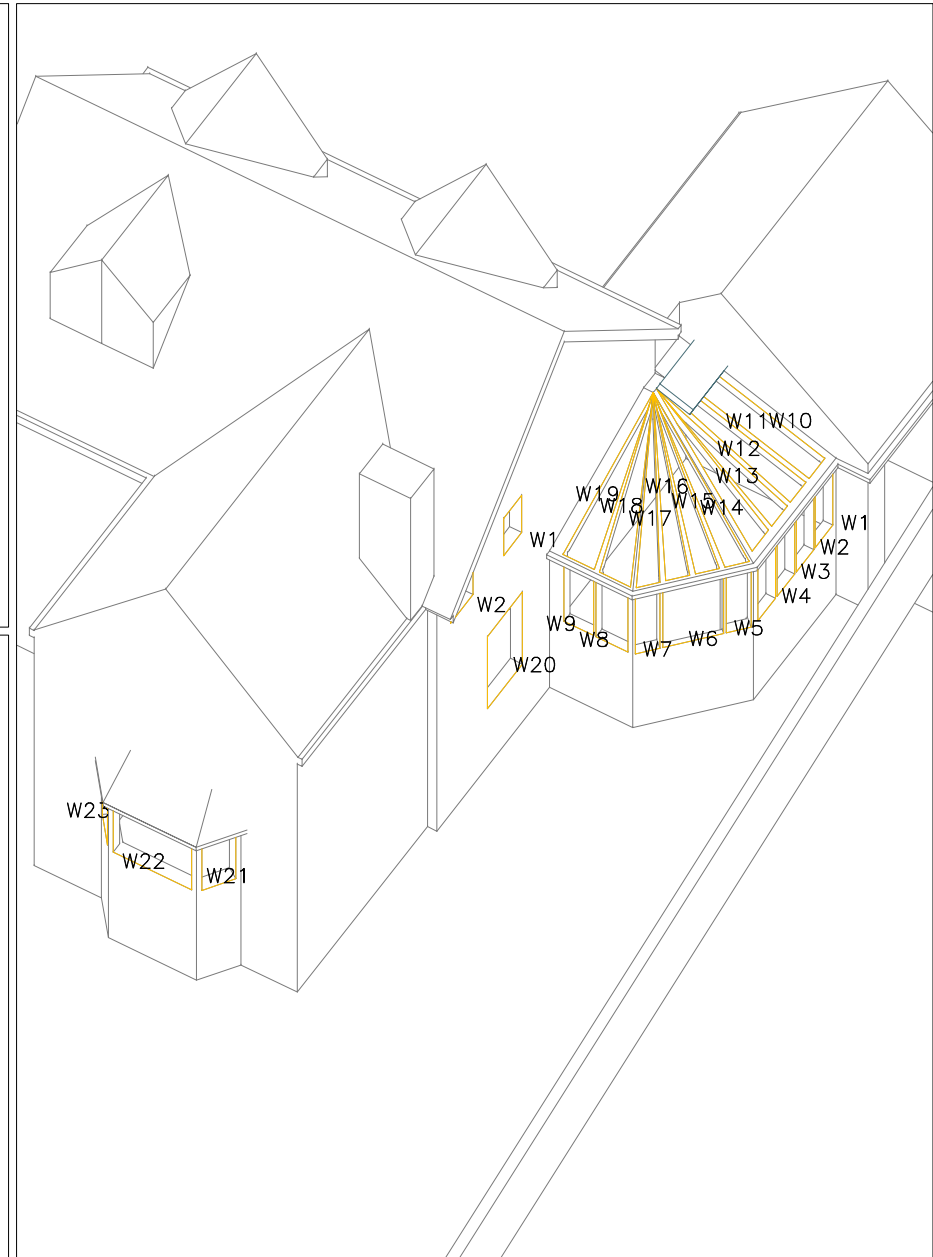
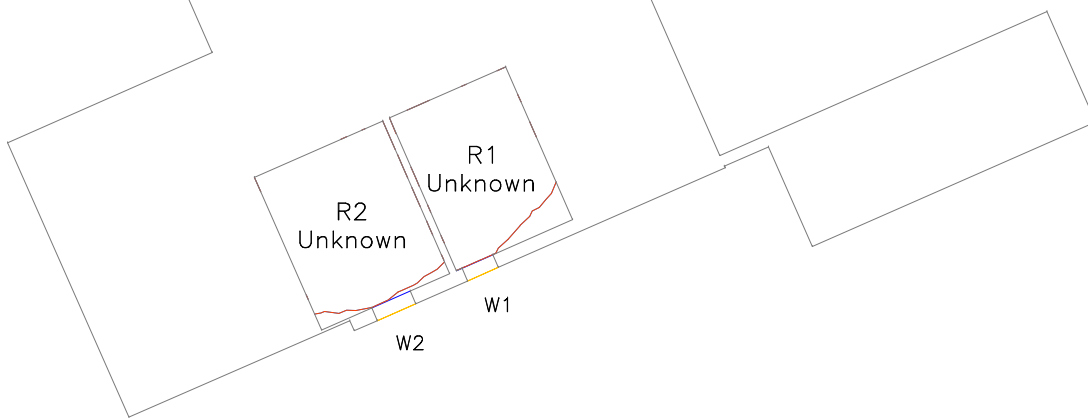
CLIENT			
Tom Cannon MRICS			
PROJECT			
St Mary's House, Church Street, Bentworth			
SCALE	PROJ REF	ANALYST	DRAWN BY
Not to scale	3705	LH	LR

DWG REF.	DWG No.
3D Model - Proposed Site Scenarios	3705 06

The Brambles  
Ground Floor Plan



The Brambles  
First Floor Plan

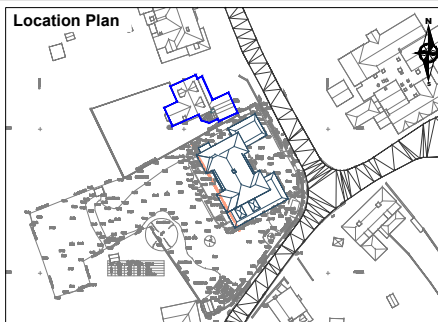


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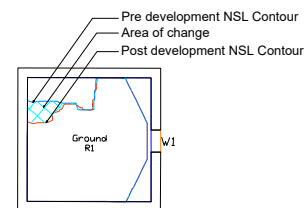
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Location Plan



Legend



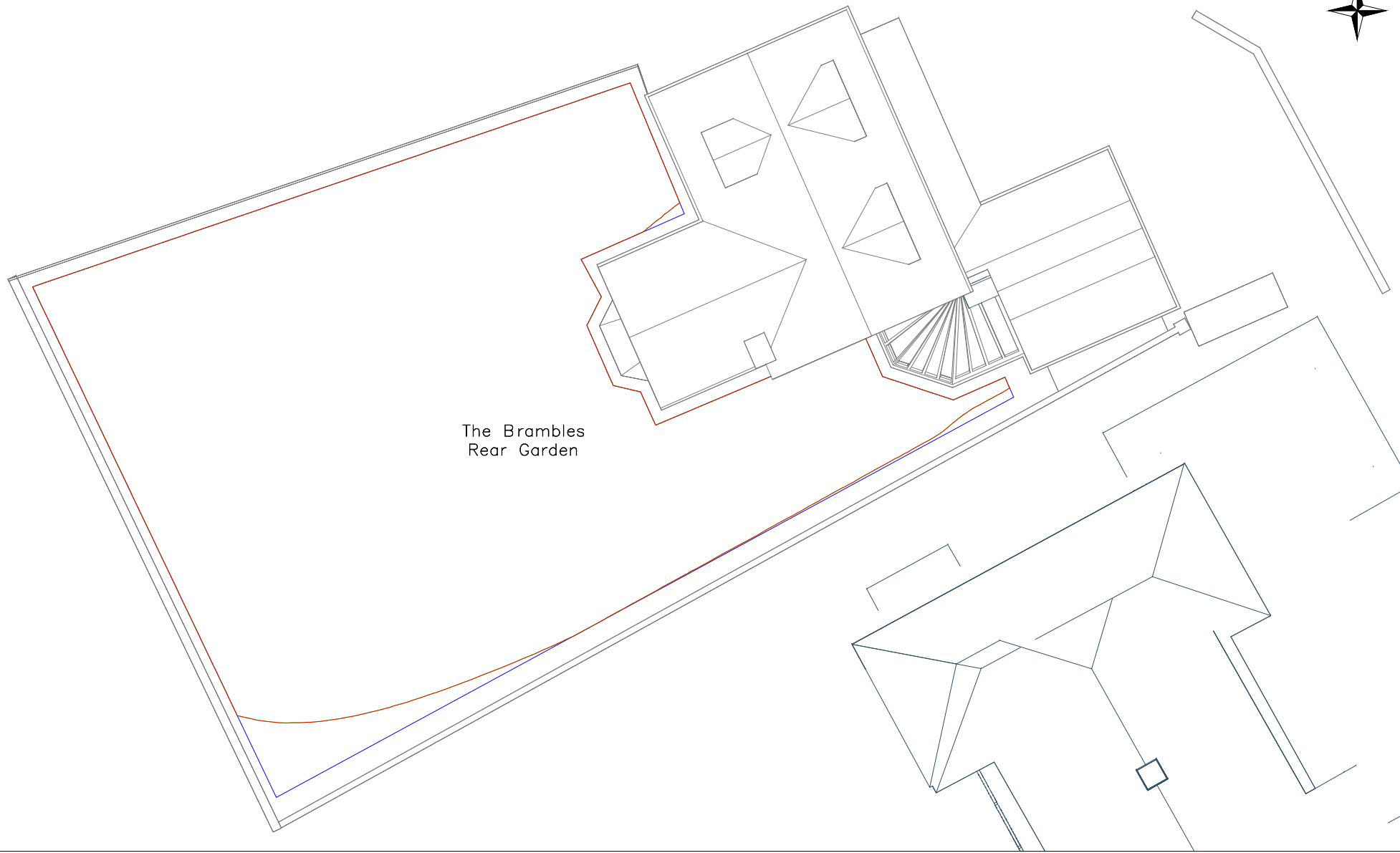
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00	First issue	07/07/2023

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PROJECT  
St Mary's House, Church Street, Bentworth

SCALE	PROJ REF	ANALYST	DRAWN BY
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DWG REF.	DWG No.
NSL contours	3705-07



The Brambles  
Rear Garden

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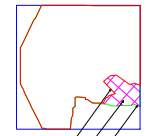
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Location Plan

Legend



2hr Sun on ground contour  
(post development)  
Area of change  
2hr Sun-on-ground contour  
(pre-development)

01	Second issue	00/00/0000
00	First issue	07/07/2023
Rev	Description	Date

CLIENT  
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PROJECT  
St Mary's House, Church Street, Bentworth

SCALE Not to scale	PROJ REF 3705	ANALYST LH	DRAWN BY LR
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DWG REF. 2hr SoG amenity contours	DWG No. 3705-08
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## Appendix A.3 – Tabulated Results for Daylight and Sunlight Calculations



Project Name: Church Street Bentworth  
 Project No.: 3705  
 Report Title: Daylight Distribution Analysis - Neighbour  
 Date of Analysis: 17/04/2023  
 1.8m Wall Height

Floor Ref.	Room Ref	Room Attribute	Property Type	Room Use	Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
<b>The Brambles</b>									
Ground	R1		Residential	Dining Room	Area m2	11.84	11.84		
					% of room	100.00%	100.00%	1.00	YES
	R2		Residential	Unknown	Area m2	14.03	13.51	10.75	
					% of room	96.30%	76.64%	0.80	YES
	R3		Residential	Unknown	Area m2	17.02	16.96	16.96	
					% of room	99.66%	99.66%	1.00	YES
First	R1		Residential	Unknown	Area m2	6.77	6.25	6.25	
					% of room	92.36%	92.36%	1.00	YES
	R2		Residential	Unknown	Area m2	7.47	7.19	7.19	
					% of room	96.25%	96.25%	1.00	YES

Project Name: Church Street Bentworth  
Project No.: 3705  
Report Title: Two hours Sunlight to Amenity Analysis - Neighbour  
Date of Analysis: 17/04/2023  
1.8m Wall Height

Floor Ref	Amenity Ref	Amenity Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
<b>The Brambles</b>						
Ground	A1	Area m2 Percentage	383.58 371.11 97%	371.11 97%	1.00	YES





Project Name: Church Street, Bentworth  
 Project No.: 3705  
 Report Title: Daylight Distribution Analysis - Neighbour  
 Date of Analysis: 17/04/2023  
 2.5m Wall Height

Floor Ref.	Room Ref	Property Type	Room Use		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
<b>The Brambles</b>									
Ground	R1	Residential	Conservatory	Area m2	11.84	11.84	11.84		
				% of room		100.00%	100.00%	1.00	YES
	R2	Residential	Unknown	Area m2	14.03	13.50	10.75		
				% of room		96.28%	76.61%	0.80	YES
	R3	Residential	Unknown	Area m2	17.02	16.96	16.96		
				% of room		99.66%	99.66%	1.00	YES
First	R1	Residential	Unknown	Area m2	6.77	6.25	6.25		
				% of room		92.36%	92.36%	1.00	YES
	R2	Residential	Unknown	Area m2	7.47	7.19	7.19		
				% of room		96.25%	96.25%	1.00	YES

Project Name: Church Street, Bentworth  
 Project No.: 3705  
 Report Title: Two hours Sunlight to Amenity Analysis - Neighbour  
 Date of Analysis: 17/04/2023  
 2.5m Wall Height

Floor Ref	Amenity Ref	Amenity Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
<b>The Brambles</b>						
Ground	A1	Area m2 Percentage	383.58 97%	370.58 97%	1.00	YES