

Our Ref: 21251

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Date: 04 May 2021

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www.delvapatmanredler.co.ukMr Chris Wells
Design Studio SW
4 The Close
Uplands Park
Truro TR1 1LY

BY EMAIL ONLY – chriswells4@me.com

Dear Chris,

MILL LANE, GRAMPOUND, TR2 4RU: INTERNAL DAYLIGHT ASSESSMENT

Further to our recent correspondence regarding the potential daylight and sunlight implications associated with the proposed development at Mill Lane, Grampound, TR2 4RU.

Daylight Guidance

The technical assessment has been undertaken in accordance with the methodology outlined in The Building Establishment Report “*Site Layout for Daylight and Sunlight 2011*” (BRE209). This BRE document is the principle guidance note when considering daylight and sunlight.

This is the document widely used by local authorities to help determine the planning application. The advice given is not mandatory, although it provides numerical guidelines, these should be interpreted flexibly as natural lighting is only one of many factors in site layout design.

National Planning Policy Framework: June 2019

The National Planning Policy Framework (NPPF) adopted in June 2019, sets out the Government’s planning policies and how these are expected to be applied. It provides a framework that can be used by councils to produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.

Section 4 of the NPPF relates to decision-making setting out the principles to consider when determining applications. Paragraph 38 states that “*Local planning authorities should approach decisions on proposed development in a positive and creative way*”.

Paragraph 123 (c) mentions daylight and sunlight stating that local planning authorities “*when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight*”.

National Planning Practice Guidance: October 2019

Paragraph 6 of the NPPG acknowledges that new development may cause an impact on daylight and sunlight levels enjoyed by neighbouring properties. It requires local authorities to assess whether the impact to neighbouring occupiers would be “*unreasonable*”.

Paragraph 7 of the NPPG considers appropriate levels of sunlight and daylight. It states that “*all developments should maintain acceptable living standards*” which also depends on the context of the site.

Also at:Delva Patman Redler
Thavies Inn House
3-4 Holborn Circus
London EC1N 2HADelva Patman Redler
The Quay
12 Princes Parade
Liverpool L3 1BG

Cornwall Local Plan: 2010-2030

The Cornwall Local Plan sets out policies and guidelines for the location, scale and type of future development in Cornwall up to 2030 and provides detailed development management policies to be used in determining planning applications.

Policy 12-Design states that all development should demonstrate that existing context has been considered during the design process.

Policy 13-Development Standards sets out the principle to consider when determining applications. Paragraph 6 suggests that all new developments are expected to utilise opportunities for natural lighting, ventilation and heating by design, layout and orientation.

Internal Daylight Adequacy Methodology

The BRE guide recommends that the Average Daylight Factor (ADF) method of assessment is used to measure the overall amount of daylight within proposed habitable spaces. This is also the appropriate method when considering daylight to recently consented scheme.

Average Daylight Factor (ADF)

The BRE guide measures the overall amount of daylight in a space. The calculation considers the VSC value, the size and number of windows serving the space, the overall size of the room and its intended use to give a total percentage value. BS 8206-02 *Code of practise for daylighting* recommends ADF values of 2% in kitchens, 1.5% in living rooms and 1% in the bedroom.

To calculate ADF levels the following values have been applied:

- Diffuse glass transmission (T): 0.68 for clear double glazing.
- Maintenance factor for dirt on glass (M): 8% loss for vertical glazing.
- Window Aperture Area (Aw): 0.8% for frame correction factor.
- Area-weighted surface reflectance (R): Ceilings: 0.85, Walls: 0.81, Floors: 0.4.

It must be noted that the site is surrounded by mature deciduous trees and although trees are not commonly included in daylight and sunlight assessments, they have been included in this study. When considering the daylight levels within the proposed habitable spaces of the building overlooking the densely wooded area, the BRE guidance indicates that:

Paragraph H2.1 *"Sometimes, however, trees should be taken into account, eg where a new dwelling is proposed near to large existing trees."*

Paragraph H2.8: *"For a room where BS 8206-2 minimum value is exceeded in winter, but not in summer, daylight provision year-round is likely to be adequate, but it is clear that the trees are having some effect on daylight."*

When assessing the level of daylight within proposed habitable units, we have considered two scenarios as per Table H1 of the BRE guidelines. Trees in full leaf generally have a transparency of only 20% and bare branches have a transparency of around 60%. In real-life conditions, the deciduous trees are in full leaf only for a short period of the year and a fraction of daylight will be transmitted through the crown of the trees in summer months and much more during the winter months. Therefore, it is natural that if daylight provision is adequate during summer months, the habitable space will receive good levels of daylight during the whole year.

Sunlight

When considering the amount of sunlight to buildings, the BRE report recommends that all main living rooms should be considered if they have a window facing within 90° of due south. Direct sunlight to kitchens and bedrooms is considered less important. To calculate this the BRE has produced sunlight templates for London, Manchester and Edinburgh establishing the Annual Probable Sunlight Hours (APSH) unobstructed light for these areas.

All of the habitable windows/rooms are located to the north-west; hence they do not qualify for the assessment.

Source Information

The assessment has been undertaken using the following information:

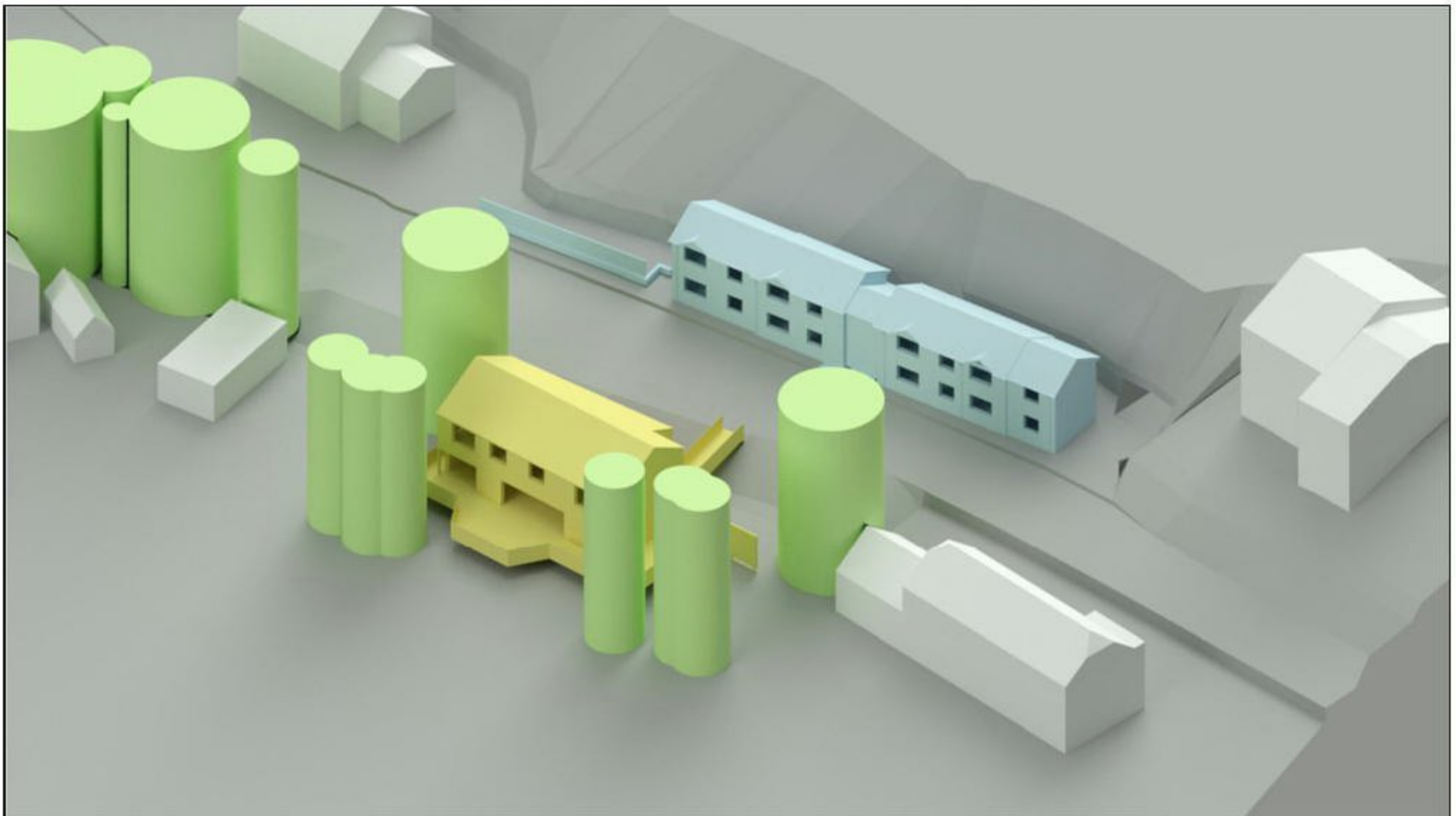
- Context: 3D Land Surveys Ltd: Dwg No's: 20-025-TOPO-01-3D, Evolve Arboricultural Impact Assessment: EV-3680-B-TS CA A.
- Consented Scheme: Design Studio SW: 2021/96/100 and 81-SPD.
- Proposed Scheme: Design Studio SW: 2021/96/100 and Mill Lane Total Site provided 27 April 2021.

Existing Site

The site is located on a vacant parcel of land to the west of Mill Lane directly opposite the Mill Lane Surgery. The surgery recent acquired planning consent to redevelop the single storey unit into a two-storey residential building. For the purposes of this assessment, the consented Mill Lane Surgery scheme has been used as the baseline condition.

Proposed

The proposed scheme will consist of constructing a two-storey residential building on the vacant site. The proposed scheme (Gold) and consented scheme (Blue) are shown in the image below and in more detail on attached drawing 21251/SPT/001.



Average Daylight Factor Results

The detailed ADF results for the habitable rooms on the ground and first floors of the proposed and consented schemes are shown on attached drawings 21251/ST/001 and 002. The results documented below are based on 20% daylight passing through the crowns during the summer months and it is only natural that the daylight provision will be much better with 60% daylight passing through the trees during the winter months.

Trees in Full Leaf – 20% Daylight Passing

Consented Scheme

The ADF results with the trees in full leaf indicate that all 12 habitable rooms within the consented scheme will fully comply with the BRE target values and will benefit from very good levels of daylight.

Proposed Scheme

The ADF results with the trees in full leaf indicate that all 5 habitable rooms within the proposed scheme will fully comply with the BRE target values and will benefit from very good levels of daylight.

Summary

Overall, the findings indicate that the Design Studio SW scheme massing complies with the BRE guide and should be considered to be in accordance with the aims of the Cornwall Council planning policy in daylight terms.

I trust the above is sufficient, but if you have any questions, please do not hesitate to contact me.

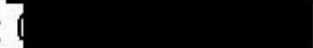
Yours faithfully

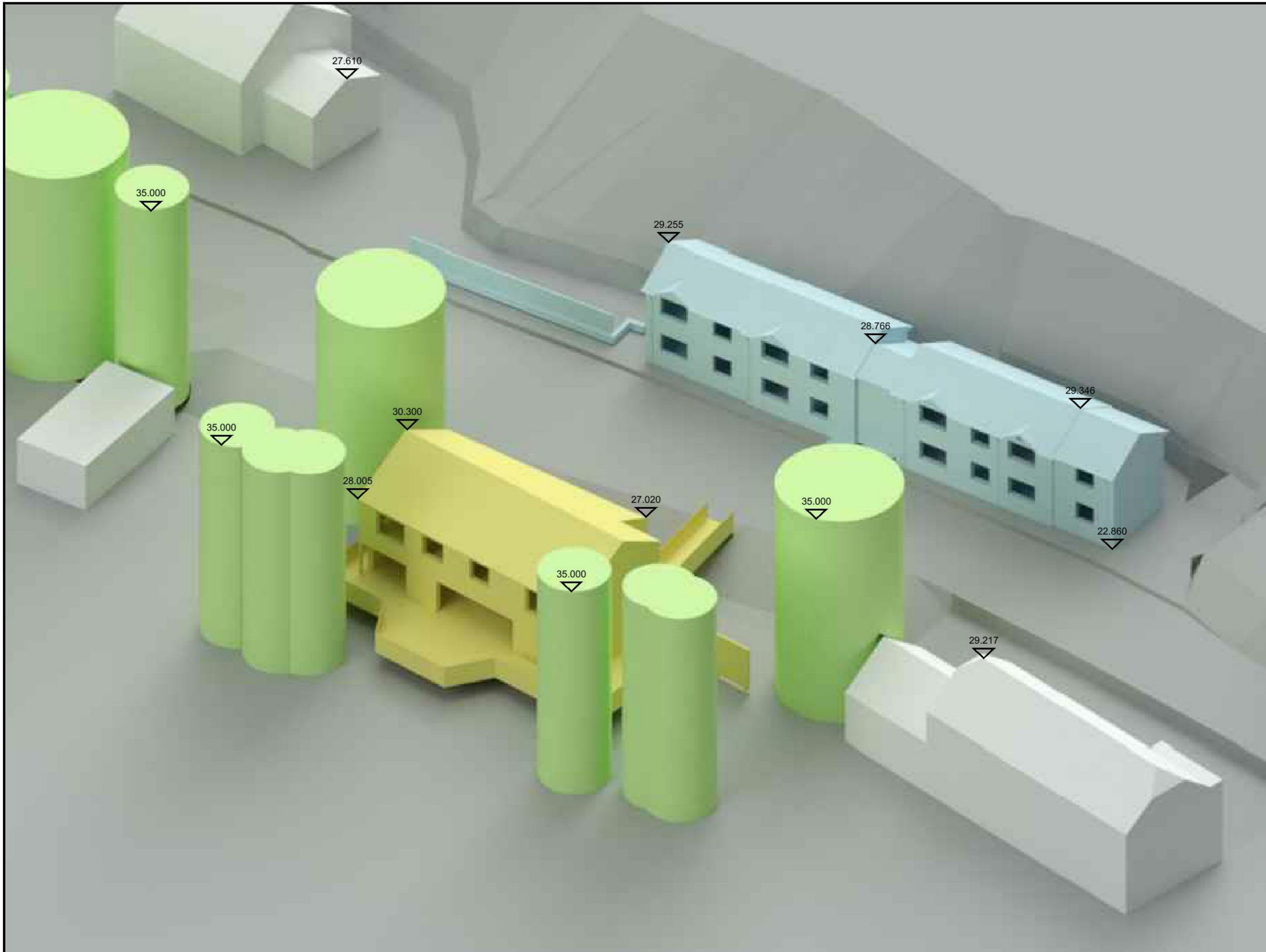


Chris Harris BSc

Partner

E: 

M: 



NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:

	Existing		Consented
	Proposed		Cumulative
	Neighboring Property		Cutback Envelope

SOURCE DATA:
 Existing and Surrounding:
 3D Land Surveys Ltd:
 Dwg No's: 20-0250-TOPO-01-3D.

Consented Scheme:
 Design Studio DW:
 Dwg No's: 2020-81-101D and 81-SPD.

Proposed Scheme:
 Dwg No's: 2021/96/100 and Mill Lane Total Site provided 27 April 2021.

NOTES:
 All heights in (mm), should be read in conjunction with Dwg No: 2020-81-SP rev D and Evolve Arboricultural Impact Assessment - Ref: EV-3680-B-TS CA AIA



REV	Description	Drawn	Date

DELVA PATMAN REDLER
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Thavies Inn House
 3-4 Holborn Circus
 London EC1N 2HA
 020 7336 3666
 www.delvapatmanredler.co.uk info@delvapatmanredler.co.uk

The Plaza
 100 Old Hall Street
 Liverpool L3 9JQ
 0151 242 0980

TITLE:
MILL LANE
 GRAMPOUND
 TR2 4RU

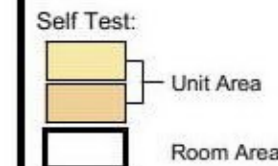
DRAWING:
 SPOT HEIGHT DRAWING

DRAWN: CH	JOB NBR:
SCALE: NTS	21251
DATE: 28.04.2021	
DWG NO:	REV:
SPT-001	-

3D View: Proposed

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:



SOURCE DATA:

Existing and Surrounding:
3D Land Surveys Ltd:
Dwg No's: 20-0250-TOPO-01-3D.

Consented Scheme:
Design Studio DW:
Dwg No's: 2020-81-101D and 81-SPD.

Proposed Scheme:
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Consented Scheme: First Floor



Consented Scheme: Ground Floor



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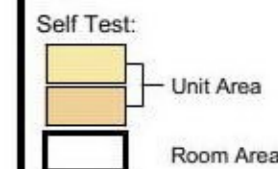
TITLE:
MILL LANE
GRAMPOUND
TR2 4RU

DRAWING:
AVERAGE DAYLIGHT FACTOR RESULTS
CONSENTED SCHEME

DRAWN: CH	JOB NBR:
SCALE: 1:100@A3	21251
DATE: 28.04.2021	
DWG NO:	REV:
ST-001	-

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING

KEY:



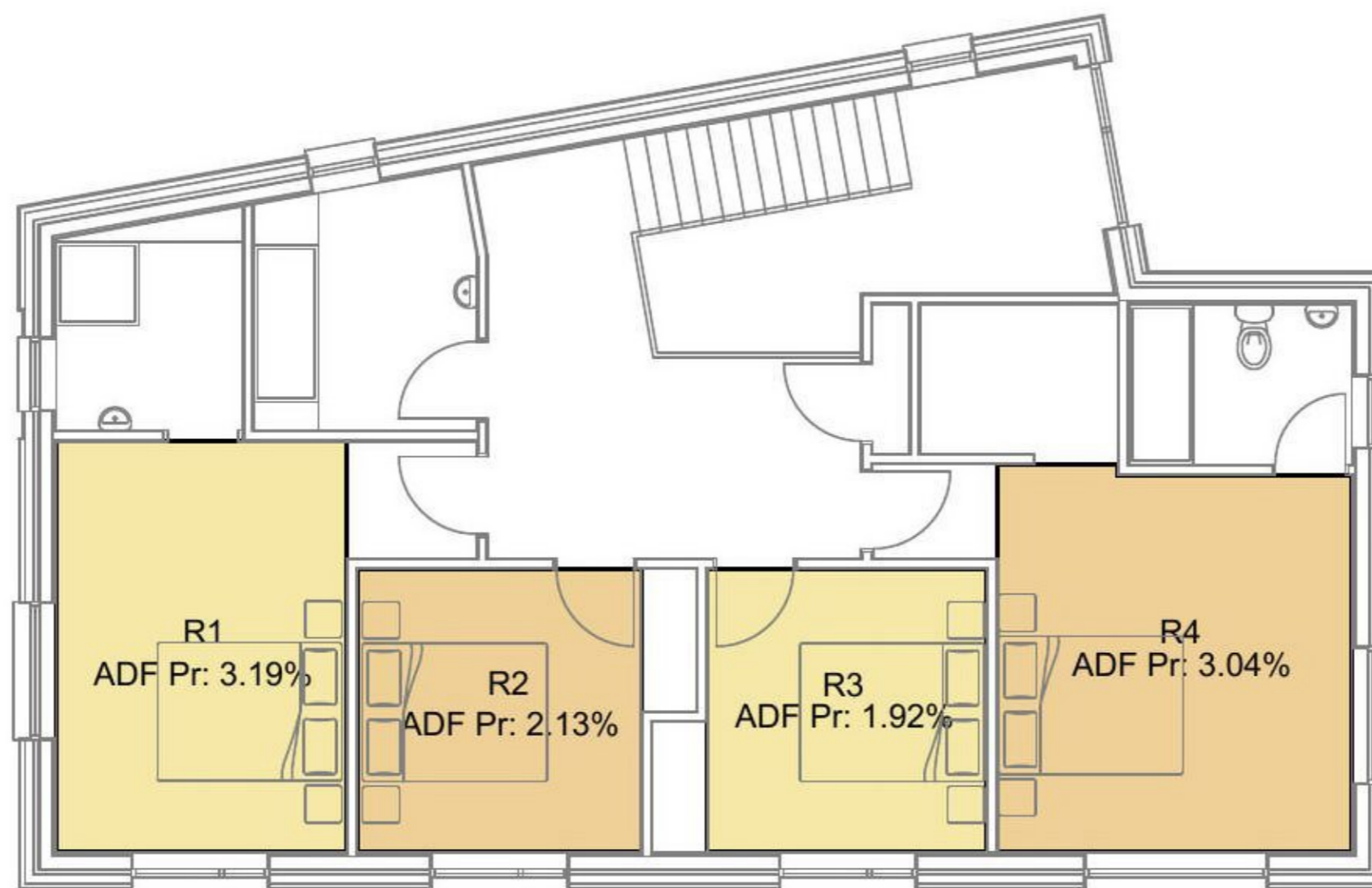
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Existing and Surrounding:
3D Land Surveys Ltd:
Dwg No's: 20-0250-TOPO-01-3D.

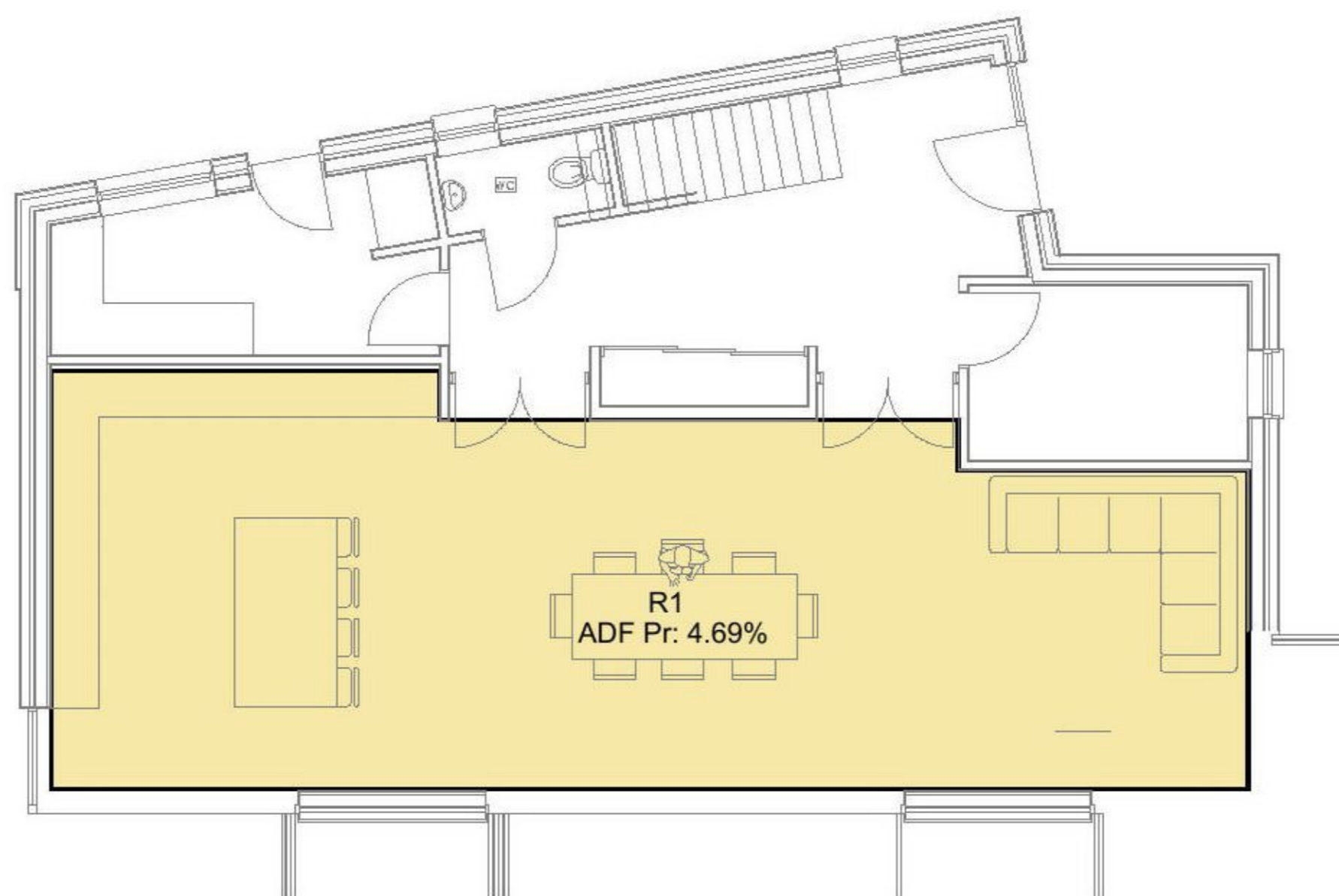
Consented Scheme:
Design Studio DW:
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Proposed Scheme:
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Proposed Scheme: First Floor



Proposed Scheme: Ground Floor



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MILL LANE
GRAMPOUND
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DRAWING:
AVERAGE DAYLIGHT FACTOR RESULTS
CONSENTED SCHEME

DRAWN: CH	JOB NBR:
SCALE: 1:100@A3	21251
DATE: 28.04.2021	
DWG NO:	REV:
ST-002	-