

RICHARD W STAIG
CHARTERED BUILDING SURVEYOR

J. Haskins Esq.
Haskins Design Limited
The Civic Centre
St Mary's Road
SWANLEY BR8 7BU

Date: Friday, October 1, 2022
Our ref: rs/ROL.22/1

Dear Mr Haskins

RUTHERFORD STABLES HERMITAGE ROAD HIGHAM KENT ME3 7NE
DAYLIGHT

This Report has been commissioned by mutual Client in support of their *Permitted Development Application* in respect of the proposed conversion at the above to advise whether the proposed fenestration should provide adequate daylight to the proposed dwellings.

The works considered are as shown on your drawing referenced 191-PD-01 hereto attached.

The technical analysis undertaken, in accordance with *BR209 (2022)*, demonstrates that there should be sufficient daylight reaching the proposed dwellings to provide adequate daylight with good daylight distribution.

Following the publication of the information paper entitled "*Site Layout planning for daylight and sunlight: A guide to good practice*" by the *Building Research Establishment* in 1991, the assessment of daylight and sunlight has been generally carried out in accordance with the criteria set by this publication and which is generally taken to be the accepted basis for such assessment and adopted by most Planning Authorities. This publication has now been superseded by the *Second Edition* issued *October 2011* which itself has been superseded by *BR209 (2022)*.

The *BR209 (2022)* does give numerical guidelines, but recommends that these should be interpreted flexibly. Paragraph 1.6 of the *BR209 (2022)* states in entirety *The guide is intended for building designers and their clients, consultants, and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design (see Section 5). In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings. Alternatively, where natural light is of special importance, less obstruction and hence more sunlight and daylight may be deemed necessary. The calculation methods in Appendices A and B are entirely flexible in this respect. Appendix F gives advice on how to develop a consistent set of target values for skylight under such circumstances.*



RICHARD STAIG CHARTERED BUILDING SURVEYOR
30 RED LION STREET RICHMOND TW9 1RB Mob: 07710 066235

RICHARD STAIG BSc. MRICS

Prior to providing my detailed advice, I would confirm that I am a Chartered Building Surveyor working predominately in the field of rights of light including daylight and sunlight assessments. I have an extensive and highly specialised knowledge, in these areas having worked in the past for both Anstey Horne & Co. for five years and Schatunowski Brooks (formerly known as Michael Brooks Associates as it was when I joined, then known as GVA Schatunowski Brooks and now part of Avison Young) for three years, as well as Delva Patman Associates - now known as Delva Patman Redler LLP - for four years prior to joining in Partnership Dixon Payne in 2001. All are acknowledged Experts in these fields; I now act under my own banner.

I regularly provide Expert Witness advice in respect of Planning Applications in respect of daylight and sunlight at Planning Inquiries acting for both Appellants and Planning Authorities. I was consulted by the *Building Research Establishment* prior to the revision of their guidelines in 2011 and was part of the further consultation about further revisions currently being considered following the publication of *BS EN 17037:2018*. Those discussions have resulted in the recently published *BR209 2022*.

With regard to providing adequate daylight to the proposed units, *paragraph 2.16* of the *BR 209(2022)* provides:

- 2.1.6 The amount of daylight a room needs depends on what it is being used for. But roughly speaking, if it is:*
- greater than 65° (obstruction angle less than 25° or VSC at least 27%) conventional window design will usually give reasonable results.*
 - between 45° and 65° (obstruction angle between 25° and 45°, VSC between 15% and 27%) special measures (larger windows, changes to room layout) are usually needed to provide adequate daylight.*
 - between 25° and 45° (obstruction angle between 45° and 65°, VSC between 5% and 15%) it is very difficult to provide adequate daylight unless very large windows are used.*
 - less than 25° (obstruction angle greater than 65°, VSC less than 5%) it is often impossible to achieve reasonable daylight, even if the whole window wall is glazed*

The VSC (vertical sky component), simply put, is the amount of light received at the centre of a window with the maximum that can be received on a vertical face being 39.6%.

To carry out the necessary analysis, a 3D computer model have been constructed from your drawings and technical analysis has been undertaken in accordance with *Appendix B* of the *BR209 (2022)* – Waldram analysis - to quantify the VSC received by the proposed fenestration with the results are attached; the results demonstrate that the proposed units should receive adequate daylight.

By way of explanation, Percy J. Waldram invented the Waldram diagram as a method of showing on a 2d image the curved and three-dimensional view of the sky from a fixed point. The area of a Waldram diagram drawn to scale is 396cm² which represents the total amount of unobscured sky that can be seen from a vertical plane. The vertical edges of any obstructions are plotted as vertical lines on the diagrams by reference to their angle from the reference point. The head of any obstruction are plotted along the droop line corresponding to their altitudes above the horizontal measured in the section perpendicular to the reference point.

With regard to daylight, the *BRE Second Edition 2011* advises that if at the centre of a window the VSC is greater than 27% of the visible dome then enough skylight should be reaching the window. To put this into terms more readily understood, when looking at the sky dome within an open field you would be able to see 39.6% of the total sky dome.

As a further check to the adequacy of the daylight received, further analysis has been undertaken in accordance with *Appendix D* of the *BR209 (2022)*. *D1 of Appendix D* states:

D1 The no sky line divides those areas of the working plane which can receive direct skylight, from those which cannot. It indicates how good the distribution of daylight is in a room. Areas beyond the no sky line will generally look gloomy.

The results of the analysis are attached, but demonstrates that all bar one room achieves daylight distribution of practically 100% with only the Master Bedroom to Unit 2 achieving 85% daylight distribution to the room, but this is a consequence of the corridor leading to the room itself not receiving direct daylight whereas the main room received 100% daylight distribution.

For the sake of clarity, areas shown yellow and blue indicate receipt of direct daylight whereas areas coloured black are the areas which do not receive any direct daylight.

In conclusion, it is my Expert opinion that the technical analysis undertaken, in accordance with *BR209 (2022)*, demonstrates that there should be sufficient daylight reaching the proposed dwellings to provide adequate daylight with good daylight distribution.

I hope that the foregoing clarifies matters, but if you have any queries, please do not hesitate to contact me.

Yours sincerely,

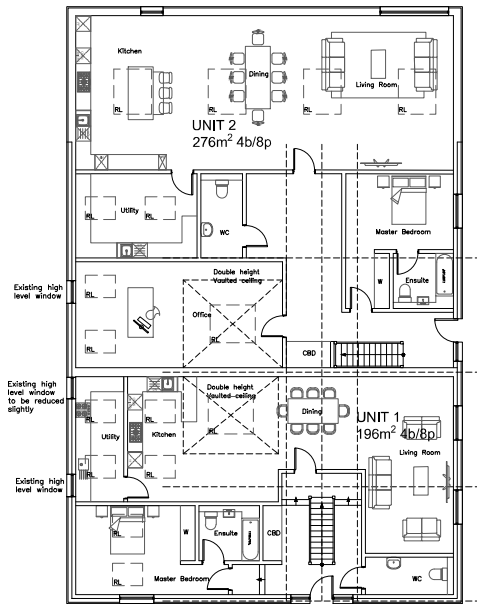


R W STAIG

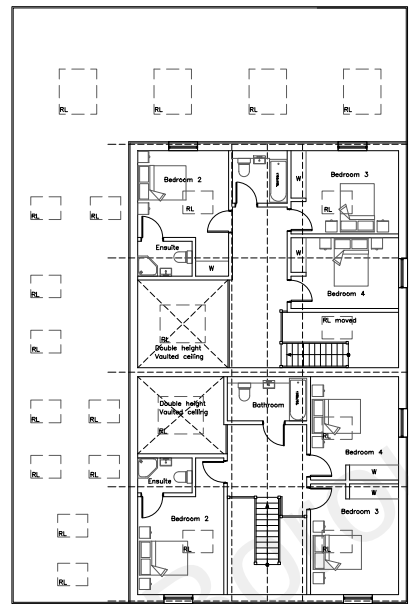
E-mail : richardstaig@btinternet.com

Mobile : 07710 066235

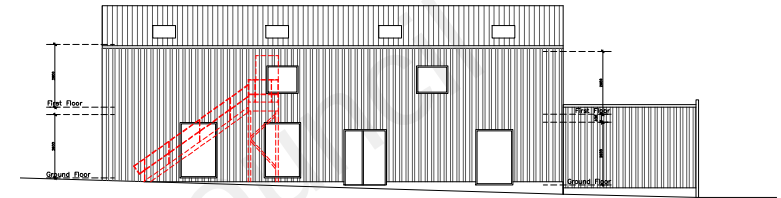
Encs



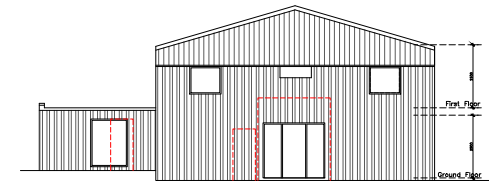
PROPOSED GROUND FLOOR PLAN
Scale 1:100



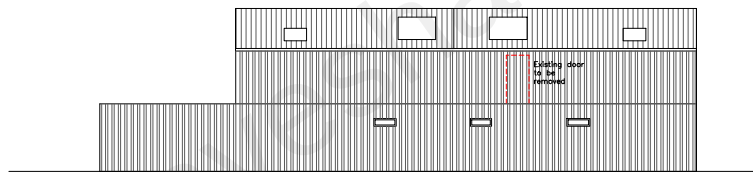
PROPOSED FIRST FLOOR PLAN
Scale 1:100



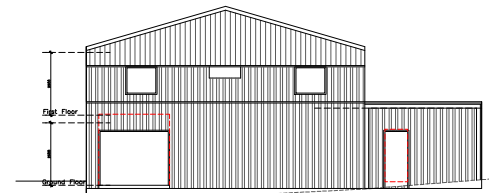
PROPOSED SIDE ELEVATION (SOUTH EAST)
Scale 1:100



PROPOSED FRONT ELEVATION (SOUTH WEST)
Scale 1:100



PROPOSED SIDE ELEVATION (NORTH WEST)
Scale 1:100



PROPOSED REAR ELEVATION (NORTH EAST)
Scale 1:100



1:100 SCALE

Rev	Date	Comments
A	30.08.22	Larger rooflights added

PLANNING

Client:
Mr Paul Rutherford

Project:
Conversion at Rutherford
Stables,
Hermitage Road,
Higham
Kent, ME3 7NE

Title:
Proposed Plans and
Elevations

Project No.
191

Drawing No.
191-PD-01

HASKINS
DESIGNS LTD

The Civic Centre, St Mary's Road, Swanley, Kent, BR8 7BU.
Phone: 01522 478561 Mobile: 07802 182202
info@haskinsdesigns.co.uk Website: haskinsdesigns.co.uk

Scale
1:100 @ A1

Revision
A

Date
Feb 2022

Drawn
RL

Check
JH

BR209 (2022)

RUTHERFORD STABLES HERMITAGE ROAD HIGHAM KENT ME3 7NE

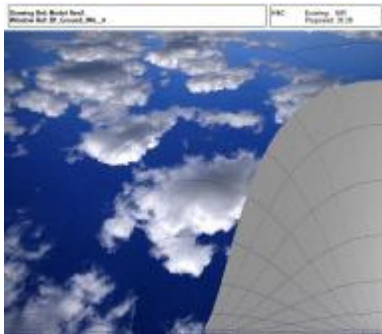
DAYLIGHT

Building Name	Floor Name	Window Name	Window Id	Vsc Proposed	Meets BRE Criteria
B1	Ground	W1	1	36.700888	YES
B1	Ground	W2	2	36.700888	YES
B1	Ground	W4	4	70.560742	YES
B1	Ground	W5	5	70.493457	YES
B1	Ground	W6	6	31.779496	YES
B1	Ground	W7	7	90.716309	YES
B1	Ground	W8	8	88.521875	YES
B1	Ground	W16	16	97.087166	YES
B1	Ground	W17	17	97.418945	YES
B1	Ground	W18	18	89.193457	YES
B1	Ground	W19	19	86.310156	YES
B1	Ground	W20	20	87.563867	YES
B2	Ground	W1	9	37.183757	YES
B2	Ground	W2	10	35.577599	YES
B2	Ground	W7	15	36.700888	YES

Building Name	Floor Name	Room Name	Room Use	Room Area	Lit Area Pr	Proposed %	Meets BRE Criteria
B1	Ground	R1	Bedroom	67.251158	67.233711	99.97%	YES
B1	Ground	R2	Bedroom	18.446591	18.446591	100.00%	YES
B2	Ground	R1	Bedroom	92.393886	92.393886	100.00%	YES
B2	Ground	R2	Bedroom	15.56683	13.20233	84.81%	YES



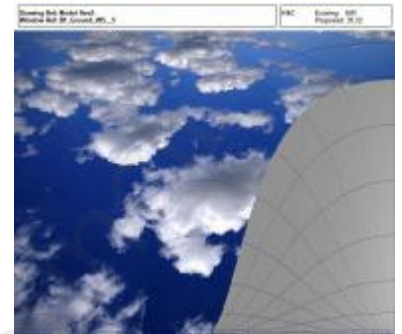
BR209 (2022)
RUTHERFORD STABLES HERMITAGE ROAD HIGHAM KENT ME3 7NE
DAYLIGHT WALDRAM DIAGRAMS



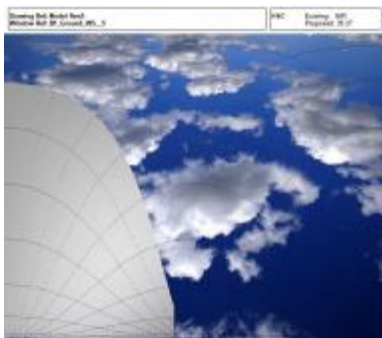
HSC-B1_Ground_W4__4-North



HSC-B1_Ground_W4__4-South



HSC-B1_Ground_W5__5-North



HSC-B1_Ground_W5__5-South



HSC-B1_Ground_W7__7-North



HSC-B1_Ground_W7__7-South



HSC-B1_Ground_W8__8-North



HSC-B1_Ground_W8__8-South



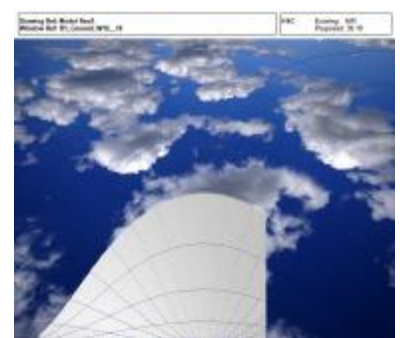
HSC-B1_Ground_W17__17-North



HSC-B1_Ground_W17__17-South



HSC-B1_Ground_W18__18-North

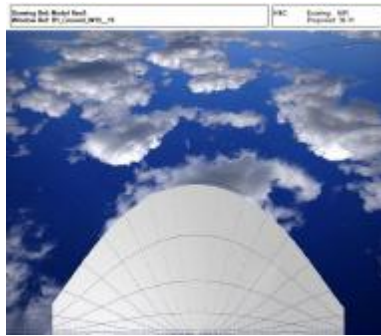


HSC-B1_Ground_W18__18-South

BR209 (2022)
RUTHERFORD STABLES HERMITAGE ROAD HIGHAM KENT ME3 7NE
DAYLIGHT WALDRAM DIAGRAMS



HSC-B1_Ground_W19__19-North



HSC-B1_Ground_W19__19-South



HSC-B1_Ground_W20__20-North



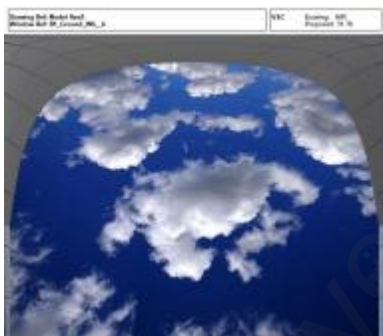
HSC-B1_Ground_W20__20-South



VSC-B1_Ground_W1__1



VSC-B1_Ground_W2__2



VSC-B1_Ground_W6__6



VSC-B2_Ground_W1__9



VSC-B2_Ground_W2__10



VSC-B2_Ground_W7__15