de matos ryan

The Carriage House
26 The Street
Burgh Next Aylsham
Norfolk NR11 6TP

DESIGN & ACCESS STATEMENT
PHOTOVOLTAIC PANELS

October 25th 2023

Introduction

Proposal

We are seeking approval for 15no PV panels in the inner courtyard which would not be visible in the public views of the building. The existing slate helps cover the ideas as there would not be such a contrast.

- PV measurments: 1762H x 1134W x 30D
- Amount: 15
- Mounting system: Slate Tiles

Pre-App Enquiry

Before this submission, we sought informal Pre-App advice from Heritage Officer Steve Beckett. In his email on January 19th 2022, he stated that in principle we could support the use of PVs in the inner courtyard on account of the fact they would not be visible on the public views of the building. He also felt the slate background was more sympathetic to the use of dark PVs. His view was that the mono-pitch form was the most simplistic and sympathetic.

Performance Conclusion

The sunpath diagram shows the arcs of the sky that the sun passes through at different times of the day and year as yellow blocks (shown in pages 9 & 10). The shaded area indicates the horizon as seen from the location of the solar array. Where objects on the horizon are within 10m of the array, an added semi-circle is drawn to represent the increased shading. Blocks of the sky that are shaded by objects on the horizon are coloured red, and a shading factor is calculated from the number of red blocks. The performance of the solar array is calculated by multiplying the size of the array (kWp) by the shading factor (sf) and a site correction factor (kk), taken from tables which take account of the geographical location, orientation and inclination of the array.

Location

The Carriage House
26 The Street
Burgh upon Aylsham
Tuttington
Norfolk NR11 6TP

Applicant

Barbara Christie-Miller
The Carriage House
26 The Street
Burgh upon Aylsham
Tuttington
Norfolk NR11 6TP

Agent

De Matos Ryan Architects
99-100 Turnmill Street
London EC1 5QP

Use

To remain a single dwelling.

Access

To remain as existing.

Planning History

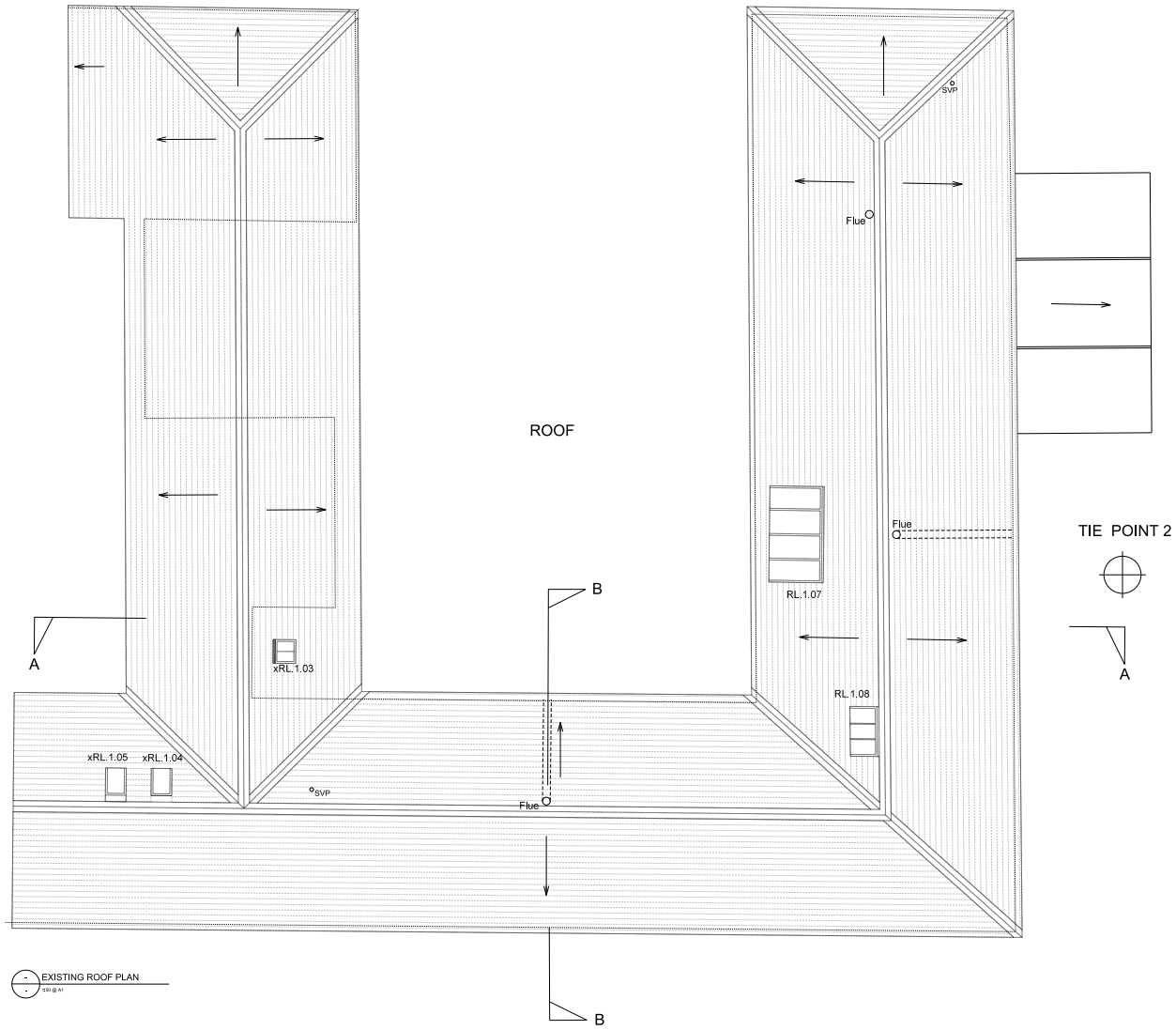
890899 & 890919 : Conversion of Farm Building to Five Dwellings & Annexe : Full Approval

940548 & 940549 : Renewal of Planning Application numbers 890919 & 890899 for Conversion of Farm Building to Five Dwellings & Annexe : Full Approval

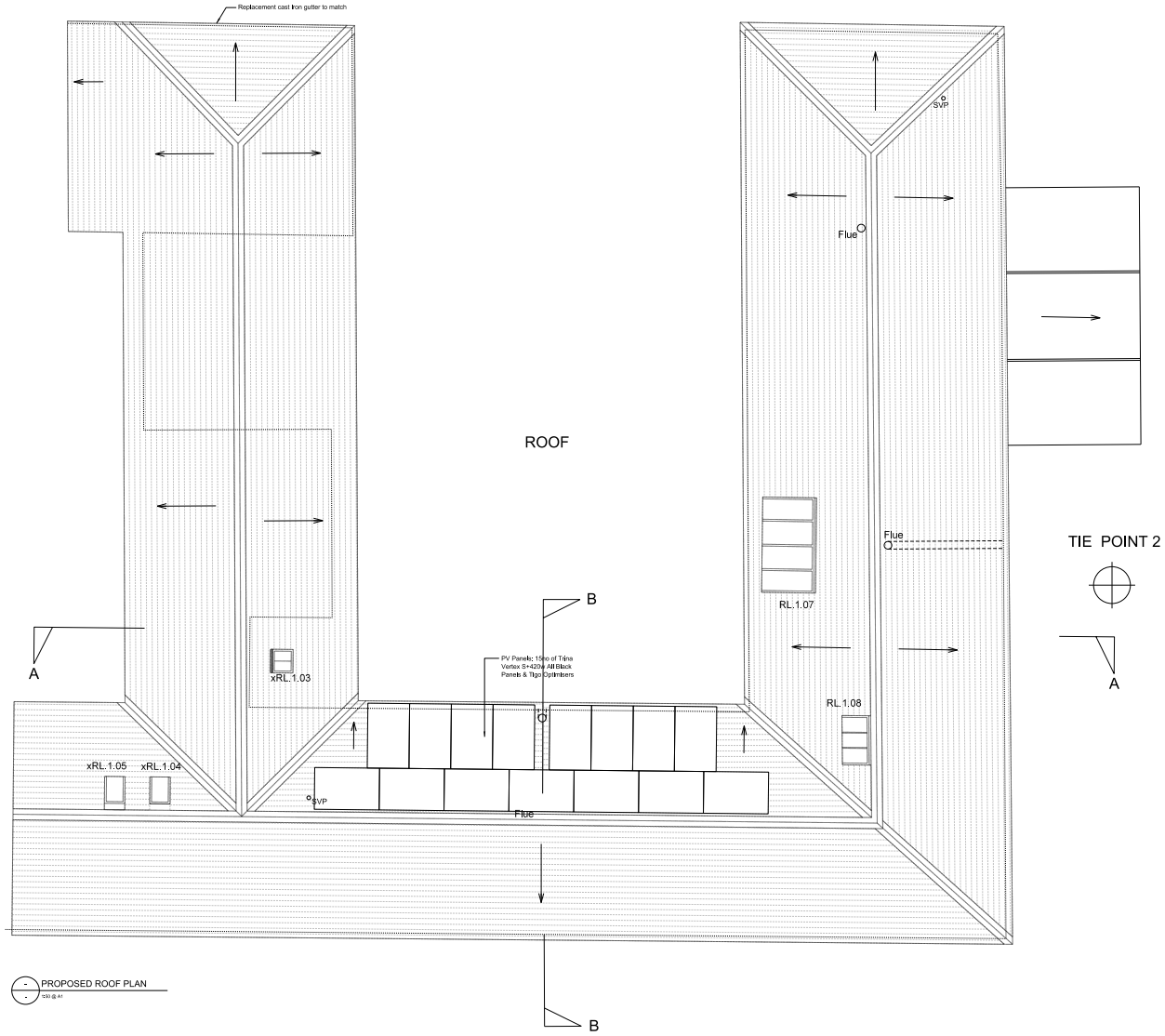
20211109 & 20211274 : Removal of non-original ceilings and partition walls, replacement of non-original painted timber windows with steel framed triple glazed windows, lining of the internal faces of external walls and roof soffit with high grade insulation. Replace oil fire boiler with air source heat pump. Installation of conservation type rooflights

West Garden

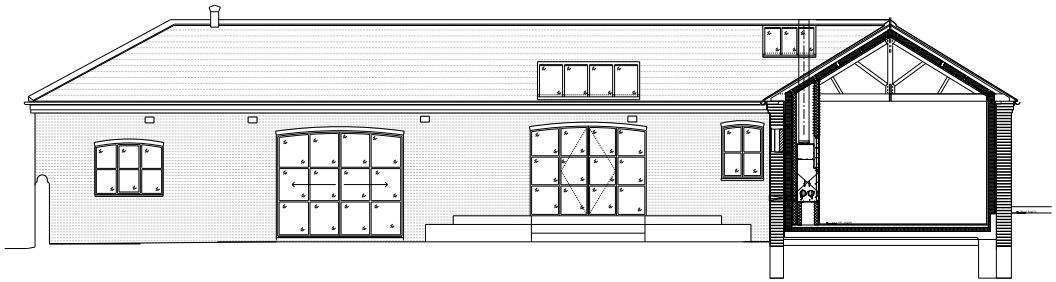
Existing - Roof Plan



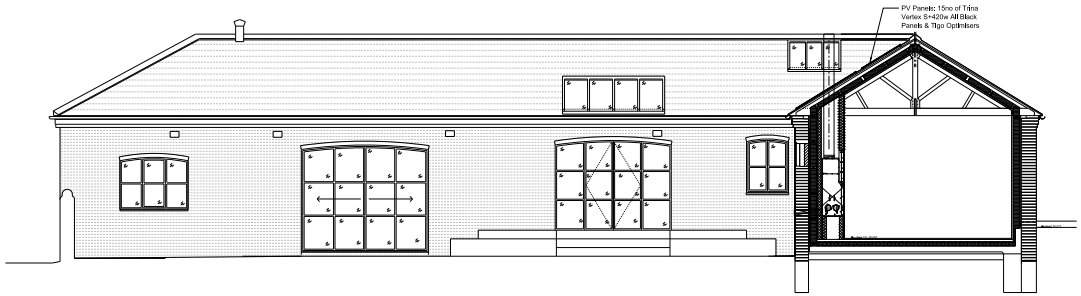
Proposed - Roof Plan



Existing & Proposed - Section BB

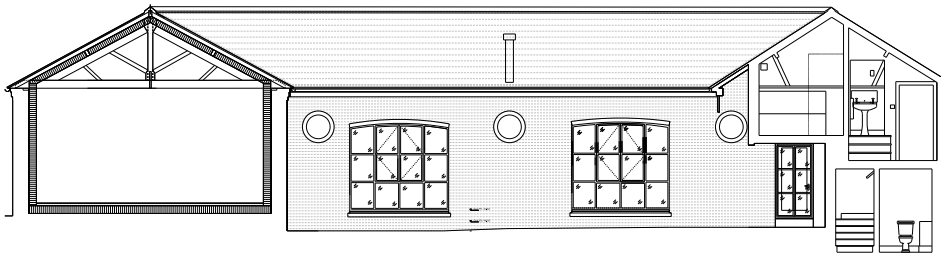


EXISTING SECTION BB
1:50 @ A1

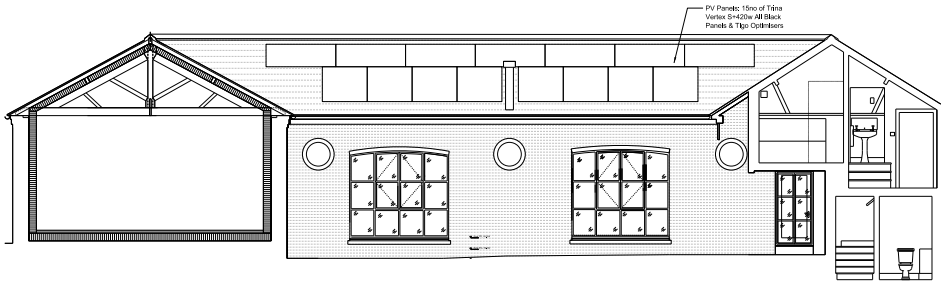


PROPOSED SECTION BB
1:50 @ A1

Existing & Proposed - Section AA



EXISTING SECTION BB
1:50 @ A1



PROPOSED SECTION BB
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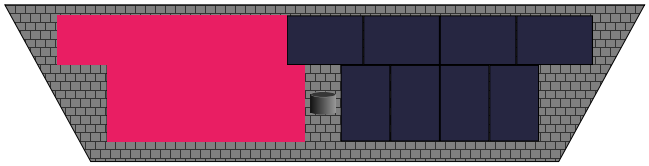
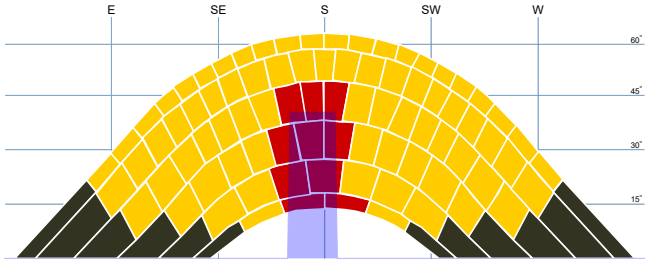
Proposed Inverter - Inputs 1 & 2

Inverter 1

Hybrid Inverter

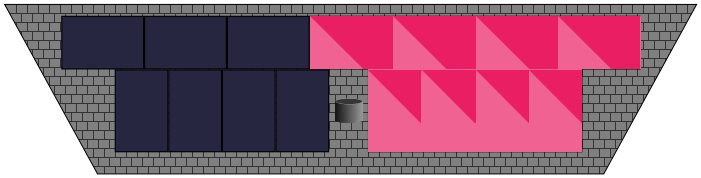
Input 1

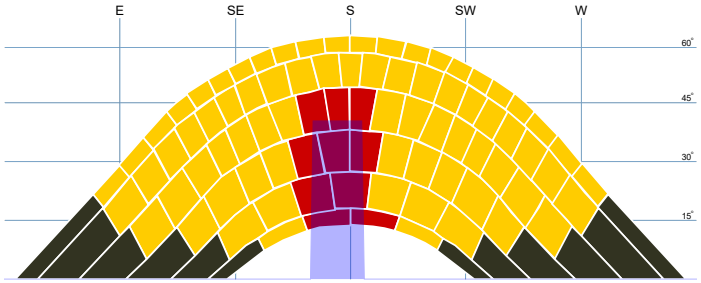




A. Installation data		
Installed capacity of PV system - kWp (stc)	2.905	kWp
Orientation of the PV system - degrees from South	5	°
Inclination of system - degrees from horizontal	30	°
Postcode region	12	
B. Performance calculations		
kWh/kWp (Kk)	952	kWh/kWp
Shade factor (SF)	0.90	
Estimated output (kWp x Kk x SF)	2489	kWh

Input 2





A. Installation data		
Installed capacity of PV system - kWp (stc)	3.320	kWp
Orientation of the PV system - degrees from South	5	°
Inclination of system - degrees from horizontal	30	°
Postcode region	12	
B. Performance calculations		
kWh/kWp (Kk)	952	kWh/kWp
Shade factor (SF)	0.90	
Estimated output (kWp x Kk x SF)	2845	kWh

Performance Summary

Performance Summary

A. Installation data		
Installed capacity of PV system - kWp (stc)	**6.225**	kWp
Orientation of the PV system - degrees from South	**See individual inputs**	
Inclination of system - degrees from horizontal	**See individual inputs**	
Postcode region	**12**	
B. Performance calculations		
kWh/kWp (Kk)	**See individual inputs**	
Shade factor (SF)	**See individual inputs**	
Estimated output (kWp x Kk x SF)	**5334**	kWh

Important Note: The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. This estimate is based upon the standard MCS procedure is given as guidence only for the first year of generation. It should not be considered as a guarantee of performance.

Shading will be present on your system that will reduce its output to the factor stated. This factor was calculated using the MCS shading methodology and we believe that this will yield results within 10% of the actual energy estimate stated for most systems.