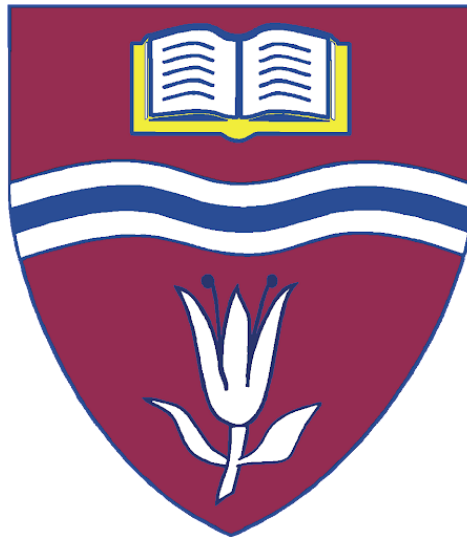




St Mary's C of E Primary School Management Plan – Solar Photovoltaic System

Site Address	Link Lane, Pulborough, West Sussex RH20 2AN	
Prepared By	Amanda Hopper	Study Manager
Technical Specialists	Andrew Mylroi Lamont Graham Young	Design Engineer Electrical Engineer
Approved By	Gareth Jefferies	Operations Director
Date of Report	12 th June 2026	
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Project Reference	RePP 25/8021	

Table of Contents

Table of Contents.....	i
1 Introduction	1
1.1 Site Location and Description	1
1.2 Description of the Proposed Development	2
1.3 Planning Context.....	2
1.4 Carbon Emission Reduction	3
2 Project Team and Responsibilities	3
3 Construction Management	3
4 Amenity and Environmental Management.....	4
5 Ecology and Biodiversity	4
6 Heritage and Visual Impact Management.....	4
7 Structural and Building Safety.....	4
7.1 Roof Structural Capacity Confirmation.....	4
7.2 Fire Safety Considerations	4
7.3 Emergency Access and Shut-Down Procedures.....	5
8 Operational Management.....	5
9 Health and Safety Management	5
10 Decommissioning and Restoration	5
11 Compliance and Monitoring.....	5
Appendix A – Site Photos	6
Appendix B – Site Drawings	8
Appendix C – Manufacturer Specifications.....	11
Appendix D - Structural Assessments	14

1 Introduction

St Marys C of E Primary School, part of the Diocese of Chichester, aspires to achieve net zero by 2030. The school wish to install two rooftop solar photovoltaic systems to reduce its dependency on grid purchased power to improve resilience and support its net zero aspirations.

The purpose of this document is to demonstrate how the proposed development will be managed during installation, operation, and decommissioning, ensuring:

- Safeguarding of pupils, staff, and visitors,
- Protection of residential amenity,
- Compliance with local and national planning policy,
- Minimal environmental, visual, and noise impacts.

1.1 Site Location and Description

St Marys C of E Primary School is located in the village of Pulborough, West Sussex just outside the South Downs National Park. The school is in active educational use and includes classrooms and office areas. The original building was opened in 1972 and has had subsequent extensions. The site has a swimming pool and open playing fields.

The school has an existing solar PV array system as labelled in Figure 1-1.

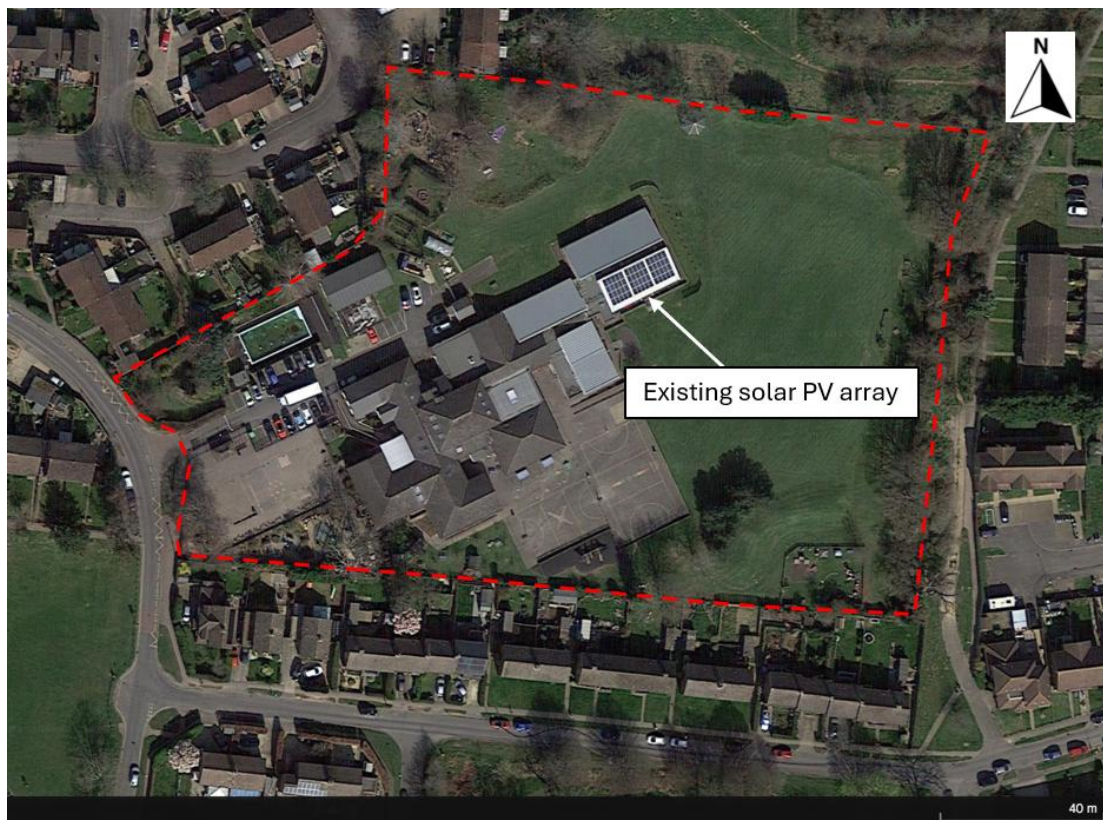


Figure 1-1: Site boundary, taken from Google Earth

Site photos are provided in [Appendix A](#).

1.2 Description of the Proposed Development

The proposed development is for the installation of four rooftop solar PV arrays in two systems with a total of 66 solar PV rooftop panels (Figure 1-2). Total grid connected capacity is 20 kWp (two 10 kWp inverters). Drawings of the proposed layout are provided in [Appendix B](#).

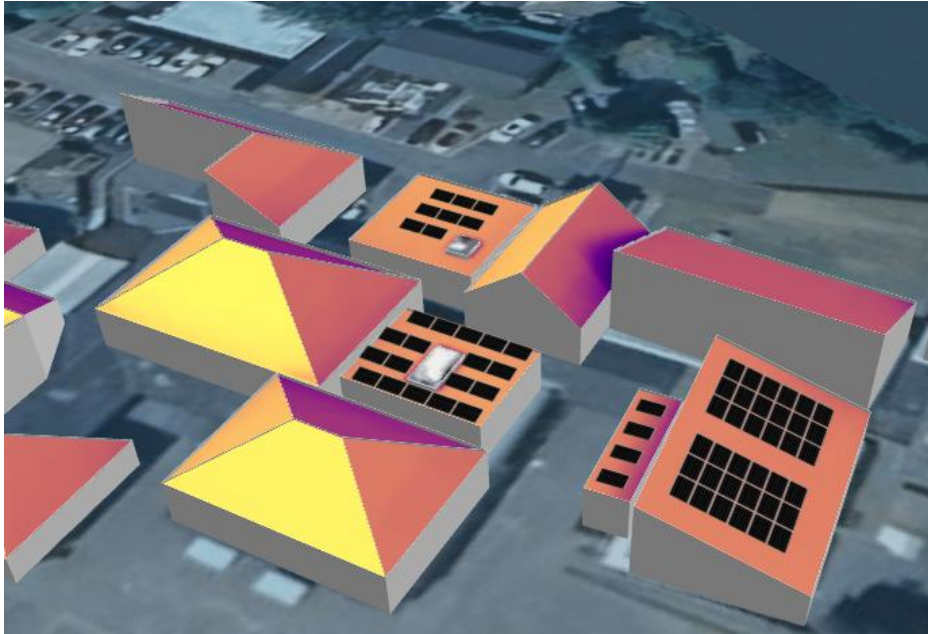


Figure 1-2: Model output representation of the proposed solar PV systems

Arrays are mounted across the roofs in rows, with either a southerly or easterly aspect. Further information and panel details are provided in [Appendix C](#). The proposed panel sizes are 1762 (L) x 1134 (W) x 30(D) mm mounted in a landscape orientation. Each panel weighs 22kg and the optimiser unit adds a further 750g. On the pitched roof, racking and accessories adds an additional load of around 3-5 kg per panel. On the flat roofs, racking and ballast adds an additional load of around 50-60 kg per panel.

There is no increase in building height following installation. The maximum height of the flat roof PV panels will be less than 1m from roof level. The pitched roof panels increase the height by approximately 130 to 150mm ([Appendix B](#), Proposed elevation drawing).

Each of the two systems will have an inverter mounted in the local building in a non-pupil accessible area.

A battery energy storage system (BESS) is not being considered, though the proposed inverter has future battery connectivity options.

1.3 Planning Context

The proposal aligns with:

- **National Planning Policy Framework (NPPF)** – supporting renewable energy and climate change mitigation.
- **Horsham District Council Local Plan** – policies supporting sustainable development and low-carbon energy generation.

The development is considered appropriate in scale and use and does not adversely affect the character or operation of the school or surrounding area.

1.4 Carbon Emissions Reduction

The system is estimated to save 4.11 tCO₂e per annum, which will reduce over time as the grid decarbonises by 2035.

2 Project Team and Responsibilities

Company	Responsibility
Applicant / school: St Mary's C of E Primary School	Overall responsibility
Principal contractor: ReEnergise	Installation and site management
Solar PV installer: TBC, following tender	Technical installation and commissioning
Structural engineer: Salluz Construction Consultants	Roof capacity confirmation
Planning consultant: Aspect 360	Planning compliance and liaison

3 Construction Management

Programme and duration of works	It is anticipated that the solar PV system will be installed and commissioned during the school summer holiday in late July / August and will take 4 to 6 weeks.
Construction access and deliveries	All deliveries will use the school's main entrance to the west of the site via New Place Road. There will be no heavy goods vehicles required beyond those required for initial panel delivery. Deliveries will be managed to reduce traffic movements.
Working hours	0800 – 1800 Monday to Friday.
Storage of materials and equipment	Materials and equipment will be stored within the school grounds in a restricted area dedicated to the project. Temporary fencing will be used as needed. The school grounds are protected by perimeter fencing and a lockable entrance gate system.
Scaffolding	Temporary scaffolding will be used for the duration of the works.
Contractor parking and staff welfare	Parking is available within the school grounds. Welfare facilities will be provided as necessary by the contractor for the duration of the project.

4 Amenity and Environmental Management

Noise and vibration control	Noise will be limited to the rooftop installation activities and transport movements.
Wind impact	Wind buffers will be included in the design to minimise impact and prevent uplift (see Appendix C).
Lighting during installation	No temporary lighting will be required.
Waste management and recycling	Waste shall be removed by the contractor to meet compliance.

5 Ecology and Biodiversity

The solar PV system will be fitted with standard bird control deterrent measures which prevent nesting under the panels. This will not impact the local birdlife and is a widely used measure used to protect the array in the long term.

No vegetation or tree clearance is required.

6 Heritage and Visual Impact Management

The overall panel layout and system design will minimise impact on neighbouring properties:

- The arrays are located on the buildings within the school grounds and will not be visible from the main entrance.
- There is minimal view from neighbouring houses due to orientation and perimeter treelines.
- The panels will be black and non-reflective. The risk of glint and glare is minimal due to roof orientation and panel specification.

7 Structural and Building Safety

7.1 Roof Structural Capacity Confirmation

A structural survey was completed on the roofs by Salluz Construction Consultants ([Appendix D](#)), and the design of the array has been accommodated to meet the findings.

7.2 Fire Safety Considerations

Risk of fire will be minimised through use of a 'rapid shutdown system', integral to the solar PV system. On detection of a fault, reduces direct current (DC) voltage to less than 1V per panel, eliminating the risk of DC arcing, which is the main cause of fire. Labelling will be provided to inform emergency services of equipment isolation and a location map to be sited at the Fire Alarm Panel in the main building lobby.

7.3 Emergency Access and Shut-Down Procedures

Both DC and AC isolators will be provided adjacent to the solar PV system inverters. Signage will be provided to provide the correct process of isolation / reinstatement of the AC and DC power.

8 Operational Management

The lifetime of the system is anticipated to be approximately 20 years. It will be routinely inspected and maintained to meet manufacturer warranty requirements and ensure operational safety and efficiency and longevity of the system.

Generated electricity will be used by the school. The system will be grid connected with limitation in alignment with the DNO Connection Agreement, following a G99/G100 application. Excess generation not used on site will be exported back to the grid. It is expected that export of excess generation will peak during the summer school holidays when generation is at its highest and demand at its lowest.

The system will be monitored online or via an app to enable live data analysis.

9 Health and Safety Management

All works will be completed by a reputable competent accredited installer. Health and safety will meet CDM regulations and working at heights controls implemented.

Relevant insurances will be held by the contractor and installer for the works. The relevant operational areas will be restricted during the installation.

Training will be provided to relevant school staff to ensure the continued safe operation of the system.

A rapid shut down system is proposed as a safety measure, as discussed in [Section 7.3](#) and detailed in [Appendix C](#).

10 Decommissioning and Restoration

The system will be decommissioned at end of life and the parts recycled as far as possible or disposed of as appropriate. The roof will be returned to its prior condition should the solar PV system not be replaced.

11 Compliance and Monitoring

Installation will be carried out in accordance with the approved drawing and planning conditions. Ongoing operational compliance will be the responsibility of the school. Complaint handling and community liaison will be the responsibility of the school.

Appendix A – Site Photos



St Mary's C of E Primary School: Google Streetview image of main entrance from New Place Road



Pitched roof building view looking north



Pitched roof building adjacent flat roof view looking north



Flat roof building view looking east

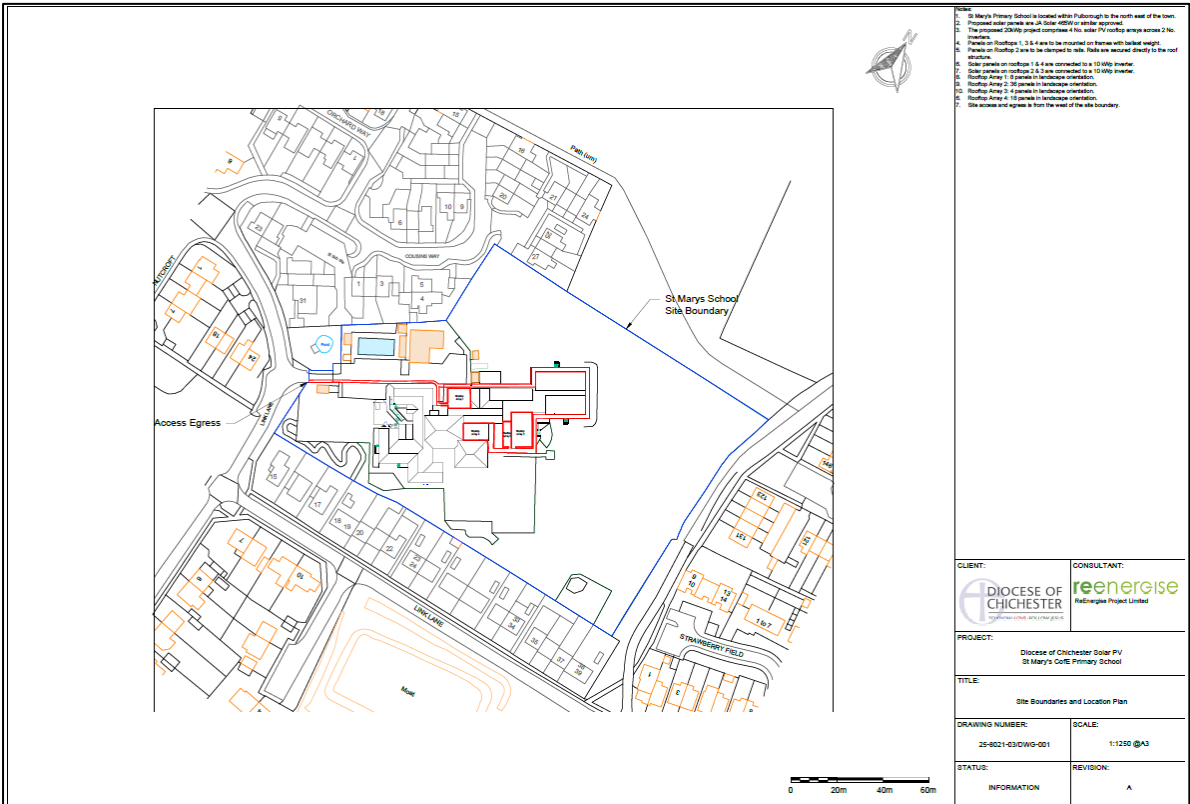


Pitched roof building view looking north



St Marys C of E Primary School: Existing solar PV array. Inset aerial photo shows location of roof.

Appendix B – Site Drawings



Site boundaries and location plan



Existing plan and elevations



Proposed plan and elevations

Appendix C – Manufacturer Specifications

Inverter and Energy Management System

The photovoltaic system shall utilise the SolarEdge optimised architecture, comprising module-level SolarEdge power optimisers to provide continuous Maximum Power Point Tracking (MPPT) at each PV module. This design mitigates losses caused by module mismatch, partial shading, degradation, or soiling, ensuring higher and more predictable energy yield across the array. The power optimisers also provide an integrated Rapid Shutdown System (RSS), compliant with current electrical and fire-safety requirements, automatically reducing DC voltage at module level to a safe value when the inverter is shut down or mains supply is isolated. This significantly improves safety for installers, maintenance engineers, and emergency services, and is particularly suited to public buildings such as schools where electrical safety and regulatory compliance are critical.



Centralised DC-to-AC conversion shall be provided by two SolarEdge SE10k three-phase inverters, rated at 10 kVA each, designed for commercial PV applications. The inverter operates with a fixed DC voltage, decoupling array design from inverter MPPT constraints and enabling longer string lengths and flexible array layouts. The SE10K-RWB48 includes advanced monitoring via the SolarEdge monitoring platform, allowing real-time performance tracking at module, string, and inverter level, as well as fault detection and remote diagnostics. The inverter supports export limitation, grid code compliance, and integration with site energy management systems, making it suitable for schools seeking to optimise self-consumption, meet grid connection requirements, and support future battery storage integration.

Solar PV Panels

The photovoltaic array shall be constructed using JA Solar 465 W monocrystalline all-black PV modules, incorporating high-efficiency half-cut cells and multi-busbar technology to deliver strong performance under both full-sun and low-irradiance conditions. The modules feature a non-reflective, all-black aesthetic, achieved through black anodised frames, black backsheets, and anti-reflective coated glass, making them particularly well suited to installations on public-facing buildings such as schools where visual impact is a consideration. The advanced cell architecture reduces resistive losses and improves shade tolerance, while robust mechanical design ensures long-term durability, resistance to wind and snow loading, and consistent performance throughout the operational life of the system.



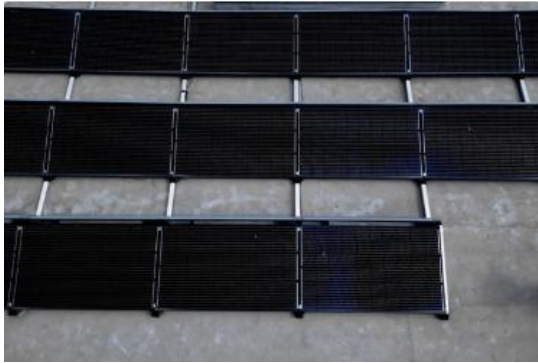
JA Solar 465 W monocrystalline all-black PV modules

JAM54D41-465/LB N-Type series Panel specification:

- Length: 1762 mm
- Width: 1134 mm
- Thickness: 30 mm
- Weight: ~22 kg.

JA Solar modules are manufactured under strict quality control standards and are certified to relevant international and UK-adopted standards for electrical safety and performance. Each module offers a high power density, allowing efficient use of available roof area and reducing balance-of-system requirements. The specified 465 W format provides an effective balance between module size, handling, and output, supporting optimised system layouts for commercial roofs. These modules are well suited to integration with modern inverter platforms and energy management systems, enabling schools to maximise daytime self-consumption, support export-limited operation, and achieve long-term, reliable renewable energy generation with minimal visual intrusion.

Mounting Systems



Rail mounting system flat roof

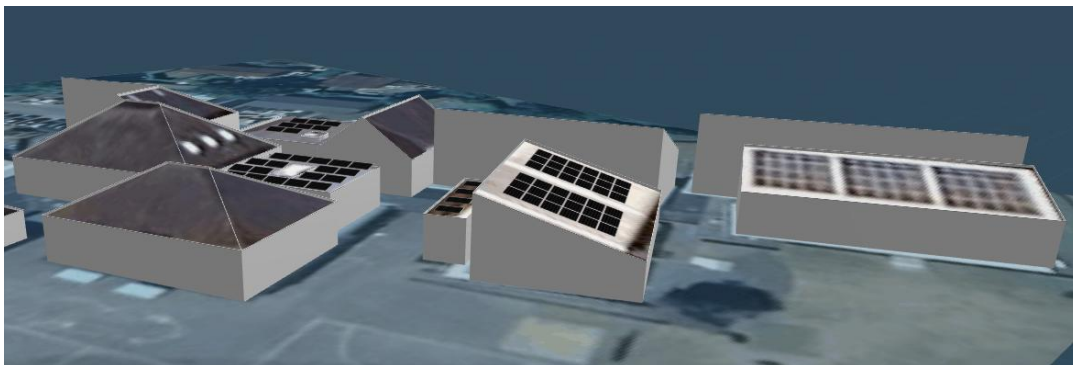


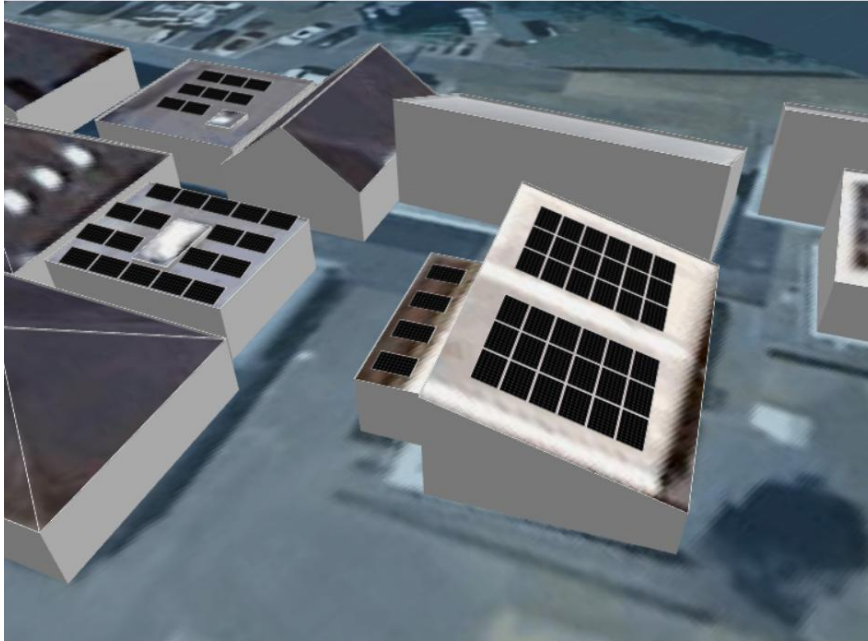
Rail mounting system standing seam

The Renusol adjustable rail system with ballast blocks are assembled direct on the roof to avoid penetration complete with wind buffers to reduce wind uplift. Rail spacing between panel rows will be aligned preventing overshadowing from adjacent panels.

For the pitched metal roof, a standing seam clamp system will be used avoiding penetration with an access path between panels for maintenance and cleaning.

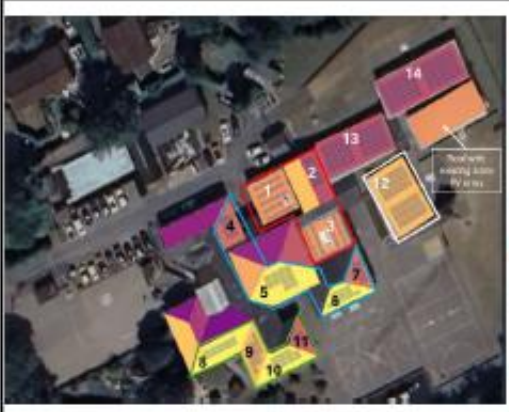
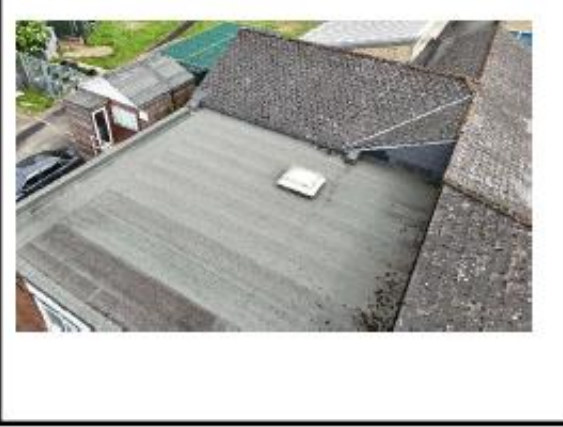
The proposed solar PV installation model output is shown below.





Model output for the proposed solar array layout

Appendix D - Structural Assessments

	 SALLUZ CONSTRUCTION CONSULTANTS St Mary's C of E Primary School, RH20 2AN Assessment of Existing Building <u>ROOF 1</u> Structure For PV Installation Client: ReEnergise Ltd Salluz Ref: 932 Building: Roof as photo Date: 20/05/2026																					
Statement of Purpose The building inspected has been assessed for the capacity of the existing roof structure to support the proposed loading from the installation of solar PV panels.																						
Location St Mary's C of E Primary School RH20 2AN Date of Inspection 12th May 2026 Inspector Eamon Stafford BSc(Eng), MISTructE - For and on behalf of Salluz Ltd																						
Limitation of Inspection Inspection was visual only <table border="0"> <tr> <td>Carried out from:-</td> <td>Ext. Ground Level</td> <td>Yes</td> <td>Floor Level:</td> <td>Gnd FL</td> <td>Roof Level:</td> <td>No</td> </tr> <tr> <td></td> <td>Within Roof Space</td> <td>N/A</td> <td>Scaffold Access:</td> <td>No</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Other</td> <td>No</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Carried out from:-	Ext. Ground Level	Yes	Floor Level:	Gnd FL	Roof Level:	No		Within Roof Space	N/A	Scaffold Access:	No				Other	No				
Carried out from:-	Ext. Ground Level	Yes	Floor Level:	Gnd FL	Roof Level:	No																
	Within Roof Space	N/A	Scaffold Access:	No																		
	Other	No																				
Building Approx Building Age:- 1960's/70's Building Roof Construction:- Probable felt on boarding on firings on timber joists, board ceiling. Significant modifications since built:- No Note: Roof was part of larger flat roof with the adjacent area being over roofed with pitched tile Any special considerations:- No Information Reviewed None provided; visual inspection only PV Installation Ballasted system / Panel Area 2.37m² Advised PV loading of 0.12 kN/m² Advised weight of ballast 75Kg (0.32 kN/m²) Loadings <table border="0"> <tr> <td>Original Roof Dead Load (Approx.)</td> <td>1.03 kN/m²</td> </tr> <tr> <td>Probable Original Roof Imposed Load</td> <td>0.60 kN/m²</td> </tr> <tr> <td>TOTAL Original Loads</td> <td>1.63 kN/m²</td> </tr> <tr> <td>TOTAL Proposed Loads</td> <td>1.8 kN/m²</td> </tr> </table> Attachments Roof Loading Assessment	Original Roof Dead Load (Approx.)	1.03 kN/m ²	Probable Original Roof Imposed Load	0.60 kN/m ²	TOTAL Original Loads	1.63 kN/m²	TOTAL Proposed Loads	1.8 kN/m²	 													
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TOTAL Proposed Loads	1.8 kN/m²																					
CONCLUSION Is it structurally ok for the proposed weight of PV arrangement on the roof YES Ballasted PV system must be limited to a roof coverage of 60/40 (PV to free roof area)																						

	 SALLUZ CONSTRUCTION CONSULTANTS St Mary's C of E Primary School, RH20 2AN Assessment of Existing Building <u>ROOF 3</u> Structure For PV Installation Client: ReEnergise Ltd Salluz Ref: 932 Building: Roof as photo Date: 20/05/2026																					
Statement of Purpose The building inspected has been assessed for the capacity of the existing roof structure to support the proposed loading from the installation of solar PV panels.																						
Location St Mary's C of E Primary School RH20 2AN Date of Inspection 12th May 2026 Inspector Eamon Stafford BSc(Eng), MISTructE - For and on behalf of Salluz Ltd																						
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	Within Roof Space	N/A	Special Access:	No																		
	Other	Yes - Roof structure was viewed above a suspended ceiling tile.																				
Building Approx Building Age:- 1990's/20000's Building Roof Construction:- Probable single ply membrane on boarding on insulation on boarding on timber joists, suspended tile ceiling. WARM ROOF Significant modifications since built:- No Note: Roof was an infill of a previous courtyard area. Any special considerations:- Yes Condition of roof should be checked as drone photo provided shows some wear/tear of the roof membrane. Information Reviewed None provided; visual inspection only PV Installation Ballasted system / Panel Area 2.37m² Advised PV loading of 0.12 kN/m² Advised weight of ballast 75Kg (0.32 kN/m²) Loadings <table border="0"> <tr> <td>Original Roof Dead Load (Approx.)</td> <td>1.06 kN/m²</td> </tr> <tr> <td>Probable Original Roof Imposed Load</td> <td>0.60 kN/m²</td> </tr> <tr> <td>TOTAL Original Loads</td> <td>1.66 kN/m²</td> </tr> <tr> <td>TOTAL Proposed Loads</td> <td>1.83 kN/m²</td> </tr> </table> Attachments Roof Loading Assessment	Original Roof Dead Load (Approx.)	1.06 kN/m ²	Probable Original Roof Imposed Load	0.60 kN/m ²	TOTAL Original Loads	1.66 kN/m²	TOTAL Proposed Loads	1.83 kN/m²	 													
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	SALLUZ CONSTRUCTION CONSULTANTS St Mary's C of E Primary School, RH20 2AN Assessment of Existing Building <u>ROOF 12</u> Structure For PV Installation (Flat Roof Area Only) Client: ReEnergise Ltd Salluz Ref: 932 Building: Roof as photo Date 20/05/2026																					
Statement of Purpose The building inspected has been assessed for the capacity of the existing roof structure to support the proposed loading from the installation of solar PV panels.																						
Location St Mary's C of E Primary School RH20 2AN Date of Inspection 12th May 2026 Inspector Eamon Stafford BSc(Eng), MISTructE - For and on behalf of Salluz Ltd																						
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Building Approx Building Age:- 1960's/70's Building Roof Construction:- Probable felt on boarding on firings on timber joists, board ceiling. Significant modifications since built:- No Any special considerations:- No Information Reviewed None provided; visual inspection only PV Installation Ballasted system / Panel Area 2.37m2 Advised PV loading of 0.12 kN/m2 Advised weight of ballast 75Kg (0.32 kN/m2) Loadings <table border="0"> <tr> <td>Original Roof Dead Load (Approx.)</td> <td>1.03 kN/m2</td> </tr> <tr> <td>Probable Original Roof Imposed Load</td> <td>0.60 kN/m2</td> </tr> <tr> <td>TOTAL Original Loads</td> <td>1.63 kN/m2</td> </tr> <tr> <td>TOTAL Proposed Loads</td> <td>1.8 kN/m2</td> </tr> </table> Attachments Roof Loading Assessment	Original Roof Dead Load (Approx.)	1.03 kN/m2	Probable Original Roof Imposed Load	0.60 kN/m2	TOTAL Original Loads	1.63 kN/m2	TOTAL Proposed Loads	1.8 kN/m2	 													
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CONCLUSION Is it structurally ok for the proposed weight of PV arrangement on the roof Ballasted PV system must be limited to a roof coverage of 60/40 (PV to free) YES																						

Loading Assessment

St Mary's C of E Primary School



SALLUZ

CONSTRUCTION CONSULTANTS

Existing Roof Load Assessment

General Structure	Felt	0.15 kN/m2
	Boarding	0.18 kN/m2
	Firings	0.10 kN/m2
	Joists	0.25 kN/m2
	Ceiling	0.20 kN/m2
	Services	0.10 kN/m2
	Insulation	0.05 kN/m2
		1.03 kN/m2
	Imposed Load	0.60 kN/m2
	TOTAL	1.63 kN/m2

Existing Basic Roof Snow Load Assessment 0.50 kN/m2

Proposed

PV

Wt of PV System	0.12 kN/m2
Wt of ballast (75kg/panel)	0.32 kN/m2
	0.44 kN/m2
60/40 PV to Roof	0.27 kN/m2
Wt PV System + Snow Load	0.77 kN/m2
Total Dead+Live Load (1.03 + 77)	1.8 kN/m2

Original

Original Dead+Live Load	1.63 kN/m2
-------------------------	------------

Increase

Proposed - Existing	0.17 kN/m2
Percentage Increase	10 %

Conclusion

The above loading increases are deemed acceptable as follows:-

A load increase of 10% or under would be deemed acceptable.

Note, once PV installed, personnel access to the roof is very restricted.

A ballasted PV system must be limited to a roof coverage of 60/40 (PV to free roof area)