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Technical Data

Version A4 for SOLSHARE-3P-35-03

General Specifications

Parameter	Value
Dimensions	920 X 485 X 270 mm (H X W X D)
Weight	58Kg
Max number of connections per unit	15 single-phase or 5 three-phase (or a combination)
Install environment	Degree of protection IP54 (as per IEC 60529)
Operating temperature range	-20 to +50°C
Metering accuracy	± 2%

Electrical Specifications

Parameter	Value (at 25°C)
Max nominal current (per phase)	35 A
Voltage range (phase to neutral)	216 – 280 VAC
Voltage drop (I is nominal current)	2.8 V
Mains frequency range	50 – 60 Hz
Overcurrent rating	50 kA
Max power input at 230V (recommended)	22 kW
Input Power Factor	1

Safety Certification

The SolShare is certified with the Regulatory Compliance Mark (RCM)	AS/NZS3820:2009
The SolShare is certified with the UK CA mark	

Accessories

15 x Current Transformers (10 metre cable lengths)

Installation Requirements

1. Power input from a three-phase, grid connected inverter (3 x single-phase grid connected inverters can be used if required)
2. It is recommended that there are at least 2 outputs connected on each phase. Example minimum connections:
   - 6 x single-phase
   - 2 x three-phase
   - 1 x three-phase plus 3 x single-phase
3. Ganged/co-located smart meters and main switches
4. Cable access between SolShare unit and control main switchboard
5. Installation must be carried out by a licensed electrician who has gained SolShare installation certification
6. SolShare must be kept free of dust and water ingress during installation

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Here you can see a typical SolShare installation.
Each SolShare is paired with an inverter, in this case, a 20 kW Fronius Symo. With 15 outputs per SolShare, this configuration can connect to up to 30 flats.

Allume

Allume SolShare Wiring Schematic UK

Version D1

To be used alongside:

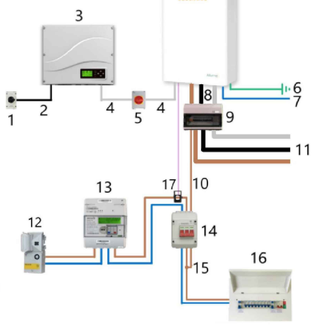
- Allume SolShare Design and Installation Guide UK
- Allume SolShare Installation Manual UK

Key:

1 – DC isolator from panels
2 – DC cable, inverter input
3 – Inverter
4 – AC inverter output / SolShare input (4c+e)
5 – Inverter supply main switch
6 – SolShare output earth connected to common earthing terminal
7 – SolShare output neutral connected to the building main neutral terminal
8 – 15 single-phase output connections (5 on L1, 5 on L2, 5 on L3)
9 – SolShare maintenance circuit breakers (single-phase)
10 – One single-phase output from the SolShare
11 – The remining 14 single-phase SolShare outputs to be connected to other flats
12 – DNO single-phase cut out
13 – Utility electricity meter
14 – Three-pole meter isolator (live and neutral from grid + live from SolShare output)
15 – Solar point of supply
16 – Consumer unit
17 – SolShare monitoring CT

Allume

SOLSHARE

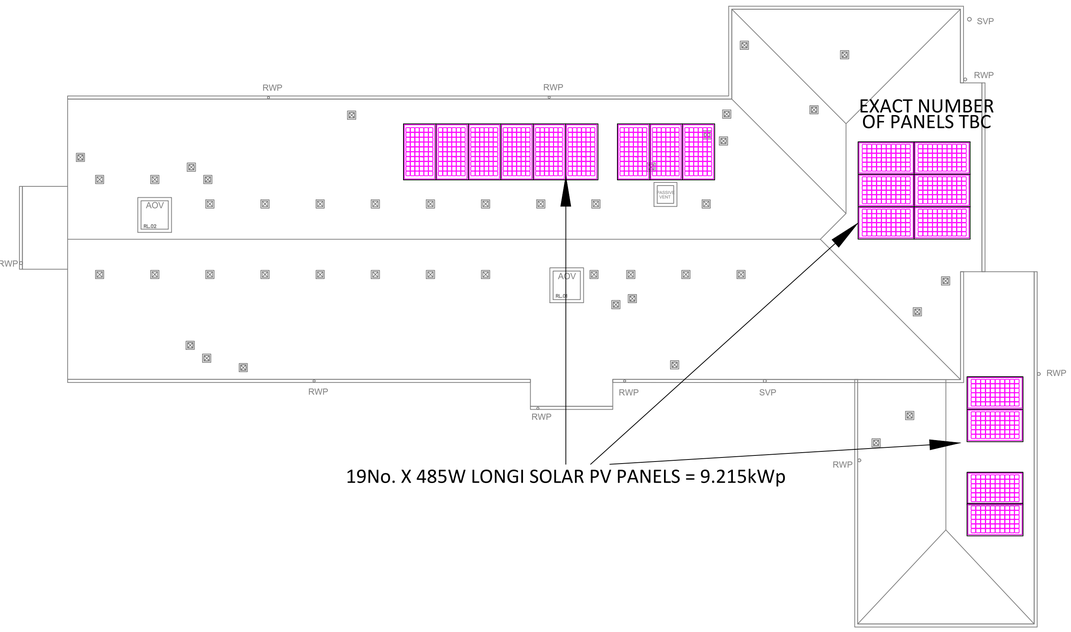


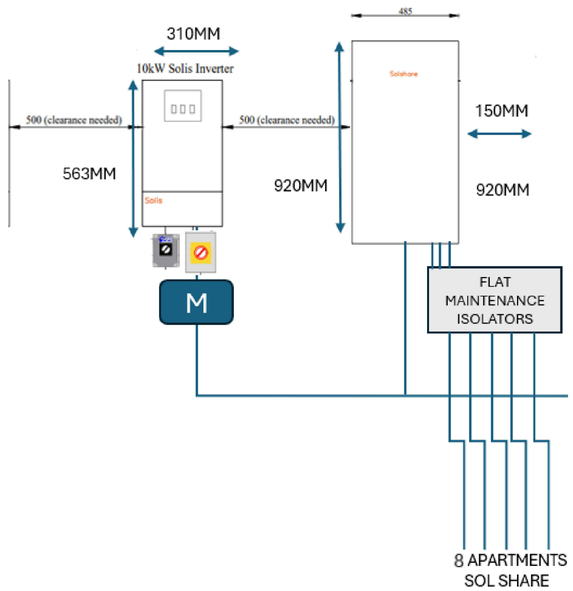
Note: The cabling between the **SolShare** and **9** must be rated to receive the full current rating of the inverter output as all power can be directed to one output.

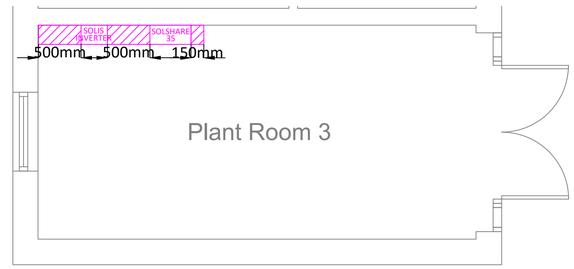
Note: The thermal capacity of the cabling from **9** to **14** must be determined by the appropriate Earth Fault Loop impedance for the DNO fuse within **12**.

Note: The output phase of the SolShare **must match** the flat's phase.

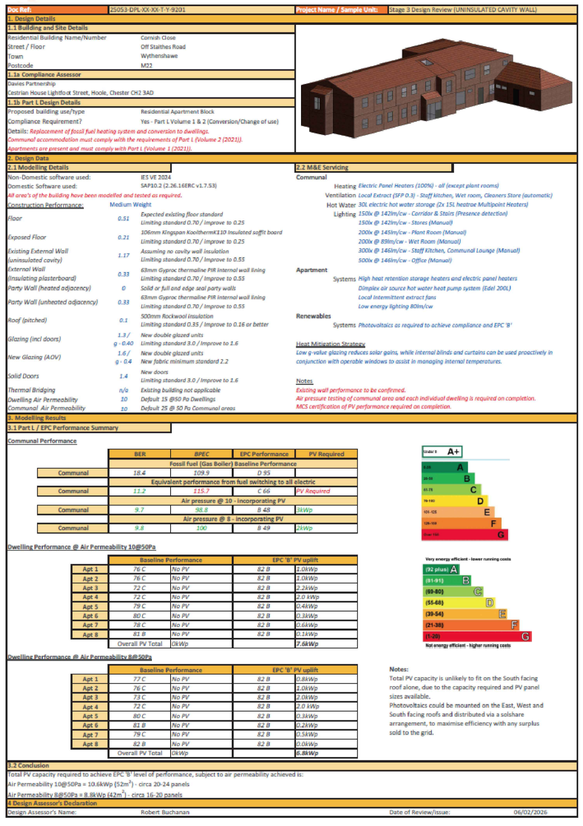
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PLANT ROOM PV INSTALLATION(NTS)



Doc Ref:	25053-DPL-XX-XX-T-Y-9201	Project Name / Sample Unit:	Stage 3 Design Review (UNINSULATED CAVITY WALL)

1. Design Details

1.1 Building and Site Details

Residential Building Name/Number	Cornish Close
Street / Floor	Off Staithes Road
Town	Wythenshawe
Postcode	M22

1.1a Compliance Assessor

Davies Partnership
Centrian House Lightfoot Street, Hoole, Chester CH2 3AD

1.1b Part L Design Details

Proposed building use/type	Residential Apartment Block
Compliance Requirement?	Yes - Part L Volume 1 & 2 (Conversion/Change of use)

Details: *Replacement of fossil fuel heating system and conversion to dwellings.*
Communal accommodation must comply with the requirements of Part L (Volume 2 (2021)).
Apartments are present and must comply with Part L (Volume 1 (2021)).

2. Design Data

2.1 Modelling Details

Non-Domestic software used:	IES VE 2024
Domestic Software used:	SAP10.2 (2.26.16BRE v1.7.53)

All area's of the building have been modelled and tested as required.

Construction Performance:

	Value	Max Limiting Weight
Floor	0.51	Expected existing floor standard Limiting standard 0.70 / Improve to 0.25
Exposed Floor	0.21	106mm Kingspan Kooltherm€120 insulated soffit board Limiting standard 0.70 / Improve to 0.25
Existing External Wall (uninsulated cavity)	1.17	Assuming no cavity wall insulation Limiting standard 0.70 / Improve to 0.55
External Wall (insulating plasterboard)	0.33	63mm Gyproc thermaline PIR internal wall lining Limiting standard 0.70 / Improve to 0.55
Party Wall (heated adjacency)	0	Solid or full end edge seal party walls
Party Wall (unheated adjacency)	0.33	63mm Gyproc thermaline PIR internal wall lining Limiting standard 0.70 / Improve to 0.55
Roof (pitched)	0.1	300mm Rockwool Insulation Limiting standard 0.35 / Improve to 0.16 or better
Glazing (incl doors)	1.3 / g - 0.40	New double glazed units Limiting standard 3.0 / Improve to 1.6
New Glazing (AOV)	1.6 / g - 0.4	New double glazed units New fabric minimum standard 2.2
Solid Doors	1.4	New doors Limiting standard 3.0 / Improve to 1.6
Thermal Bridging	n/a	Existing building not applicable
Dwelling Air Permeability	10	Default 15 @50 Pa Dwellings
Communal Air Permeability	10	Default 25 @ 50 Pa Communal areas

2.2 M&E Servicing

Communal

Heating *Electric Panel Heaters (100%) - all (except plant rooms)*
Ventilation *Local Extract (SFP 0.3) - Staff Kitchen, Wet room, Cleaners Store (automatic)*
Hot Water *30L electric hot water storage (2x 15L heatrae Multipoint Heaters)*
Lighting *150lx @ 142lm/cw - Corridor & Stairs (Presence detection)*
150lx @ 142lm/cw - Stores (Manual)
106mm Kingspan Kooltherm€120 insulated soffit board
200lx @ 285lm/cw - Plant Room (Manual)
200lx @ 89lm/cw - Wet Room (Manual)
300lx @ 146lm/cw - Staff Kitchen, Communal Lounge (Manual)
500lx @ 146lm/cw - Office (Manual)

Apartment

Systems *High heat retention storage heaters and electric panel heaters*
Dimplex air source hot water heat pump system (Edel 200L)
Local Intermittent extract fans
Low energy lighting 80lm/cw

Renewables

Systems *Photovoltaics as required to achieve compliance and EPC 'B'*

Heat Mitigation Strategy
Low g-value glazing reduces solar gains, while internal blinds and curtains can be used proactively in conjunction with operable windows to assist in managing internal temperatures.

Notes
Existing wall performance to be confirmed.
Air pressure testing of communal area and each individual dwelling is required on completion.
MCS certification of PV performance required on completion.

3. Modelling Results

3.1 Part L / EPC Performance Summary

Communal Performance

	BER	BPEC	EPC Performance	PV Required
	Fossil fuel (Gas Boiler) Baseline Performance			
Communal	18.4	109.9	D 95	
	Equivalent performance from fuel switching to all electric			
Communal	11.2	115.7	C 66	PV Required
	Air pressure @ 10 - incorporating PV			
Communal	9.7	98.8	B 48	3kWp
	Air pressure @ 8 - incorporating PV			
Communal	9.8	100	B 49	2kWp

Dwelling Performance @ Air Permeability 10@50Pa

	Baseline Performance		EPC 'B' PV uplift	
Apt 1	76 C	No PV	82 B	1.0kWp
Apt 2	76 C	No PV	82 B	1.0kWp
Apt 3	72 C	No PV	82 B	2.2kWp
Apt 4	72 C	No PV	82 B	2.2 kWp
Apt 5	79 C	No PV	82 B	0.4kWp
Apt 6	80 C	No PV	82 B	0.3kWp
Apt 7	78 C	No PV	82 B	0.6kWp
Apt 8	83 B	No PV	82 B	0 kWp
	Overall PV Total	0kWp		7.6kWp

Dwelling Performance @ Air Permeability 8@50Pa

	Baseline Performance		EPC 'B' PV uplift	
Apt 1	77 C	No PV	82 B	0.8kWp
Apt 2	76 C	No PV	82 B	1.0kWp
Apt 3	73 C	No PV	82 B	1.8kWp
Apt 4	72 C	No PV	82 B	2.0 kWp
Apt 5	80 C	No PV	82 B	0.3kWp
Apt 6	81 B	No PV	82 B	0.2kWp
Apt 7	79 C	No PV	82 B	0.5kWp
Apt 8	82 B	No PV	82 B	0.0kWp
	Overall PV Total	0kWp		6.6kWp

Notes:
Total PV capacity is unlikely to fit on the South facing roof alone, due to the capacity required and PV panel sizes available.
Photovoltaics could be mounted on the East, West and South facing roofs and distributed via a solshare arrangement, to maximise efficiency with any surplus sold to the grid.

3.2 Conclusion

Total PV capacity required to achieve EPC 'B' level of performance, subject to air permeability achieved is:

Air Permeability 10@50Pa = 10.6kWp (52m²) - circa 20-24 panels
Air Permeability 8@50Pa = 8.3kWp (42m²) - circa 16-20 panels

4 Design Assessor's Declaration

Design Assessor's Name: Robert Buchanan
Date of Review/Issue: 06/02/2026

Doc Ref:	25053-DPL-XX-XX-T-Y-9201	Project Name / Sample Unit:	Stage 3 Design Review (INSULATED CAVITY WALL)

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Construction Performance:

	Value	Max Limiting Weight
Floor	0.51	Expected existing floor standard Limiting standard 0.70 / Improve to 0.25 or better
Exposed Floor	0.21	106mm Kingspan Kooltherm€120 insulated soffit board Limiting standard 0.70 / Improve to 0.25 or better
Existing External Wall (insulation filled cavity)	0.4	Insulated cavity (blown / mineral wool insulation) Limiting standard 0.70 / Improve to 0.55 or better
External Wall (insulating plasterboard)	0.2	63mm Gyproc thermaline PIR internal wall lining Limiting standard 0.70 / Improve to 0.55 or better
Party Wall (heated adjacency)	0	Solid or full end edge seal party walls
Party Wall (unheated adjacency)	0.2	63mm Gyproc thermaline PIR internal wall lining Limiting standard 0.70 / Improve to 0.55 or better
Roof (pitched)	0.1	300mm Rockwool Insulation Limiting standard 0.35 / Improve to 0.16 or better
Glazing (incl doors)	1.3 / g - 0.40	New double glazed units Replacement standard 1.4
New Glazing (AOV)	1.6 / g - 0.4	New double glazed units New fabric minimum standard 2.2
Solid Doors	1.4	New doors Limiting standard 3.0 / Improve to 1.5
Thermal Bridging	n/a	Existing building not applicable
Dwelling Air Permeability	10	Default 15 @50 Pa Dwellings
Communal Air Permeability	10	Default 25 @ 50 Pa Communal areas

2.2 M&E Servicing

Communal

Heating *Electric Panel Heaters (100%) - all (except plant rooms)*
Ventilation *Local Extract (SFP 0.3) - Staff Kitchen, Wet room, Cleaners Store (automatic)*
Hot Water *30L electric hot water storage (2x 15L heatrae Multipoint Heaters)*
Lighting *150lx @ 142lm/cw - Corridor & Stairs (Presence detection)*
150lx @ 142lm/cw - Stores (Manual)
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Dimplex air source hot water heat pump system (Edel 200L)
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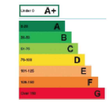
Notes
Existing wall performance to be confirmed.
Air pressure testing of communal area and each individual dwelling is required on completion.
MCS certification of PV performance required on completion.

3. Modelling Results

3.1 Part L / EPC Performance Summary

Communal Performance

	BER	BPEC	EPC Performance	PV Required
	Fossil fuel (Gas Boiler) Baseline Performance			
Communal	14.1	86.8	C 70	
	Equivalent performance from fuel switching to all electric			
Communal	8.8	91.2	B 44	PV Required
	Air pressure @ 10 - incorporating PV			
Communal	8.1	82.7	B 40	1.5kWp
	Air pressure @ 8 - incorporating PV			
Communal	9.8	91.1	B 39	1kWp



Dwelling Performance @ Air Permeability 10@50Pa

	Baseline Performance		EPC 'B' PV uplift	
Apt 1	77 C	No PV	82 B	0.7kWp
Apt 2	77 C	No PV	82 B	0.8kWp
Apt 3	73 C	No PV	82 B	1.8kWp
Apt 4	73 C	No PV	82 B	1.7 kWp
Apt 5	81 B	No PV	82 B	0.2kWp
Apt 6	81 B	No PV	82 B	0.1kWp
Apt 7	80 C	No PV	82 B	0.4kWp
Apt 8	82 B	No PV	82 B	0.0kWp
	Overall PV Total	0kWp		5.7kWp

Dwelling Performance @ Air Permeability 8@50Pa

	Baseline Performance		EPC 'B' PV uplift	
Apt 1	78 C	No PV	82 B	0.7kWp
Apt 2	77 C	No PV	82 B	0.8kWp
Apt 3	74 C	No PV	82 B	1.8kWp
Apt 4	74 C	No PV	82 B	1.7 kWp
Apt 5	81 B	No PV	82 B	0.2kWp
Apt 6	82 B	No PV	82 B	0.0kWp
Apt 7	80 C	No PV	82 B	0.3kWp
Apt 8	83 B	No PV	83 B	0.0kWp
	Overall PV Total	0kWp		5.2kWp

Notes:
Total PV capacity is unlikely to fit on the South facing roof alone, due to the capacity required and PV panel sizes available.
Photovoltaics could be mounted on the East, West and South facing roofs and distributed via a solshare arrangement, to maximise efficiency with any surplus sold to the grid.

3.2 Conclusion

Total PV capacity required to achieve EPC 'B' level of performance, subject to air permeability achieved is:

Air Permeability 10@50Pa = 7.2kWp (37m²) - circa 14-16 panels
Air Permeability 8@50Pa = 6.2kWp (31m²) - circa 12-14 panels

4 Design Assessor's Declaration

Design Assessor's Name: Robert Buchanan
Date of Review/Issue: 06/02/2026

REV	DESCRIPTION	DATE
A	REVISED TO ARCHITECTS FIRE BREAKS	16/02/2026

ISSUE

PRELIMINARY

CLIENT

GREENWOOD

PROJECT

CORNISH CLOSE

TITLE

PV INSTALLATION

SCALE:	1:100@A1	DRAWN:	SG
DATE:	JAN 2026	CHECKED:	MM
DRAWING No.	P0308/PV	REV:	A

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