



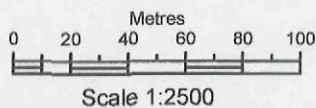
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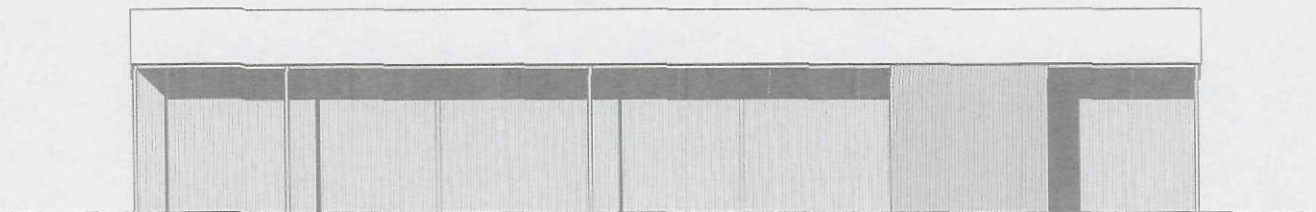


Supplied by: **Latitude - Southampton**
Serial number: 04118300
Centre coordinates: 532322.5 326750.75

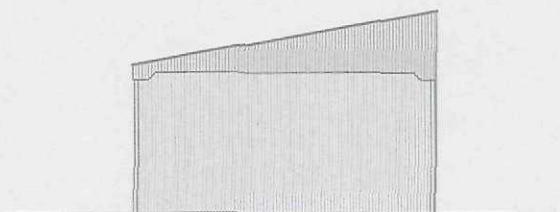
Further information can be found on the OS Sitemap Information leaflet or the Ordnance Survey web site:
www.ordnancesurvey.co.uk

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Ref: 0119-11

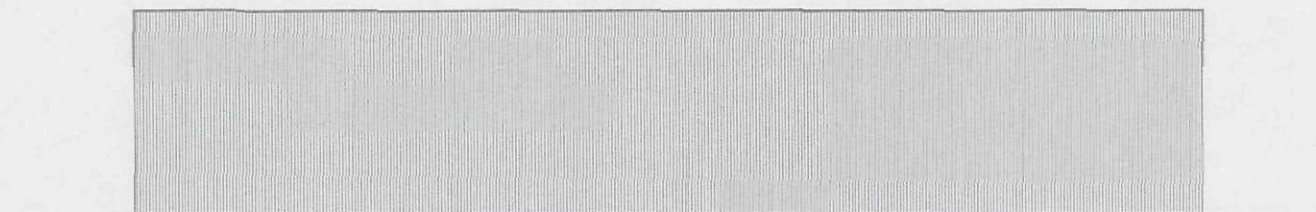
Elevation E-E



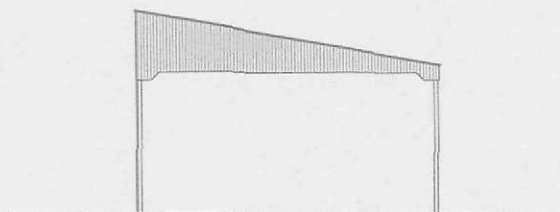
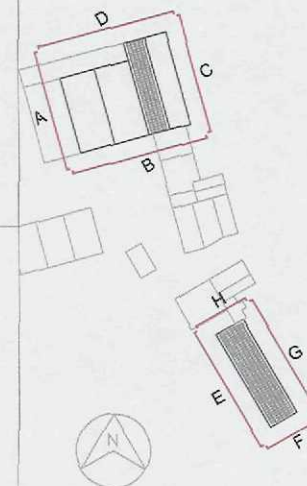
Elevation F-F



Elevation G-G



Elevation H-H



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Notes: 1. DO NOT SCALE FROM THIS DRAWING. USE FIGURE DIMENSIONS ONLY.

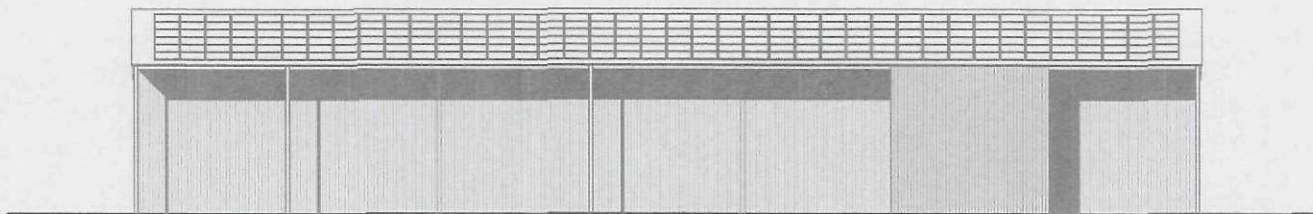


EvoEnergy,
 Eldon Business Park,
 Eldon Road,
 Nottingham, NG9 6DZ

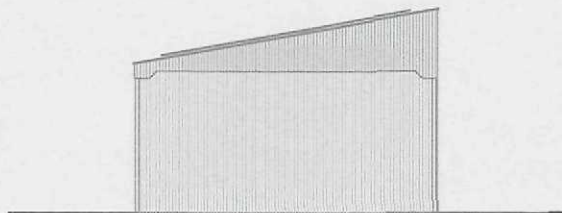
T: 01446 150200
 F: 01512 111917
 www.evoenergy.co.uk
 info@evoenergy.co.uk

				Drawing Status		Client	
				PLANNING APPLICATION		Robin Buck (Jack Buck Farms Ltd)	
						Project	
						Moulton Seas End	
						Title	
						Existing Elevations	
						Drawing number	
						03-00068-C41-01	
1	DMJ	Feb 11	Planning Application	CW	Scale (A3)	1:200	Drawn by
Rev	By	Date	Details	Chkd	Date	04.02.11	Checked by
							CW

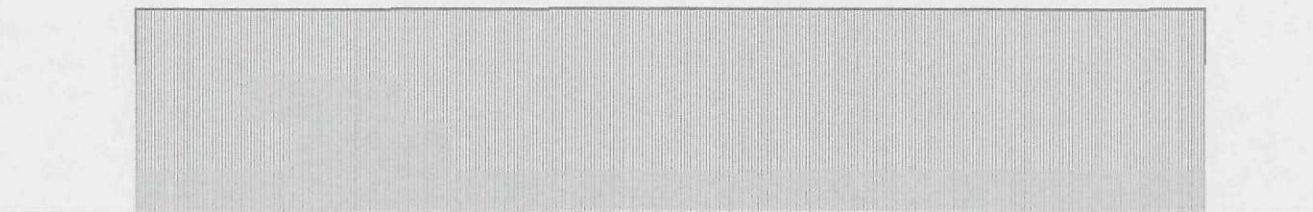
Elevation E-E



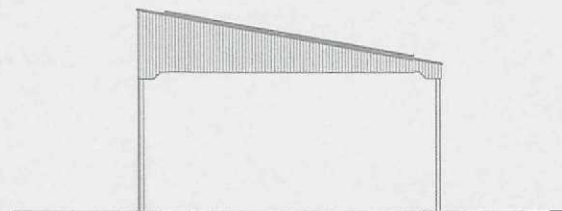
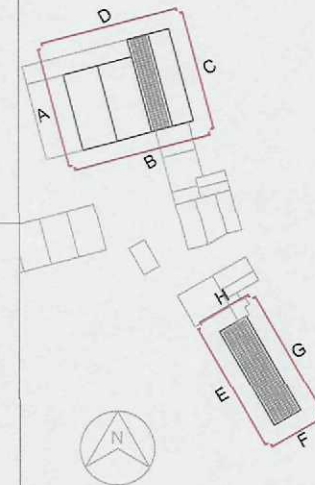
Elevation F-F



Elevation G-G



Elevation H-H



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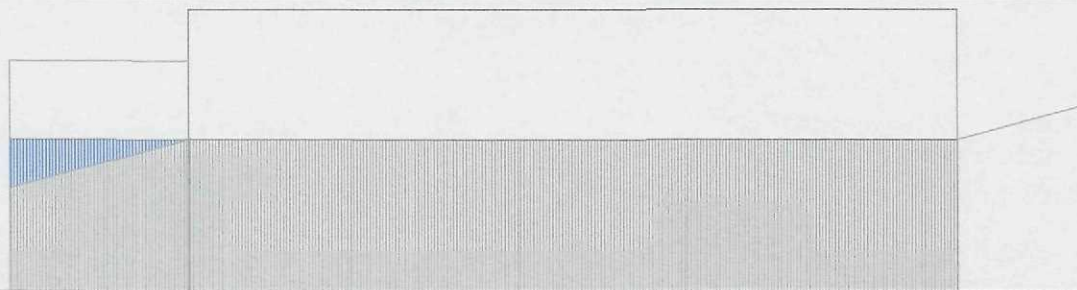


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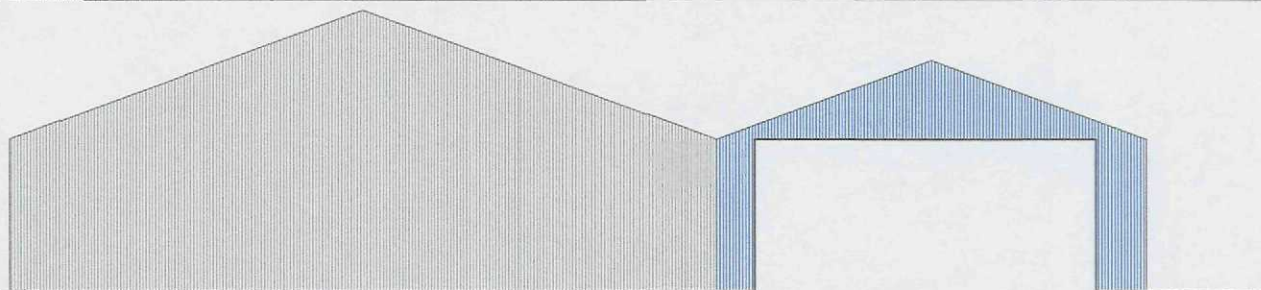
T: 01448 160200
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www.evoenergy.co.uk
info@evoenergy.co.uk

				Drawing Status PLANNING APPLICATION			Client Robin Buck (Jack Buck Farms Ltd)
							Project Moulton Seas End
							Title Proposed Elevations
							Drawing number 03-00068-C41-02
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Rev	By	Date	Details	Chkd	Date 04.02.11	Checked by CW	

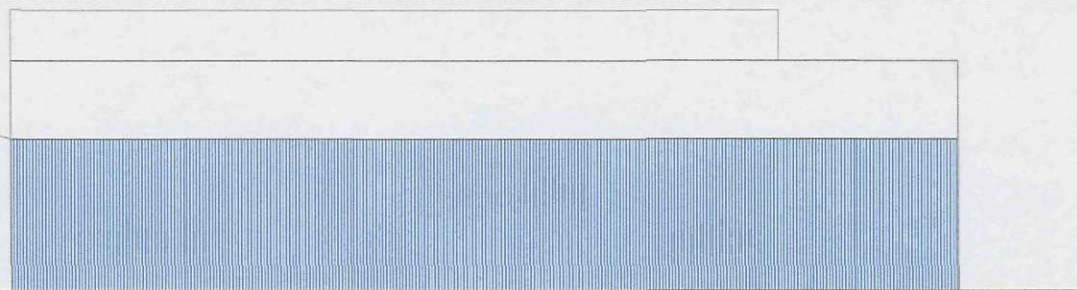
Elevation A-A



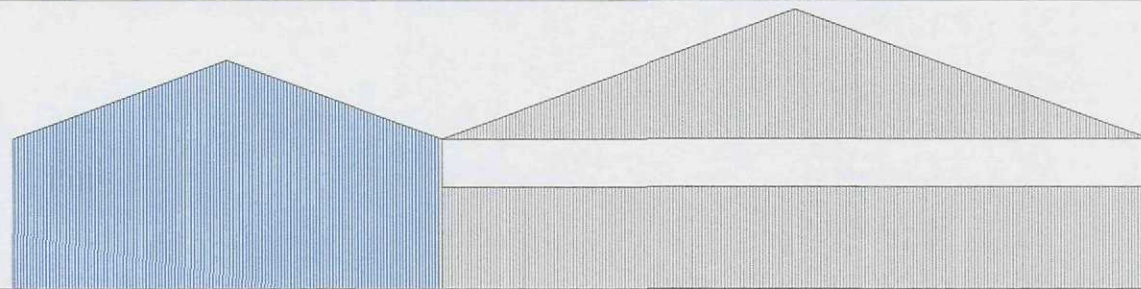
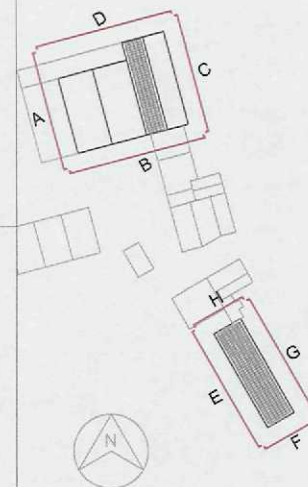
Elevation B-B



Elevation C-C



Elevation D-D



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Drawing Status

PLANNING APPLICATION

Client Robin Buck
 (Jack Buck Farms Ltd)

Project Moulton Seas End

Title Existing Elevations

Drawing number

03-00068-C41-03

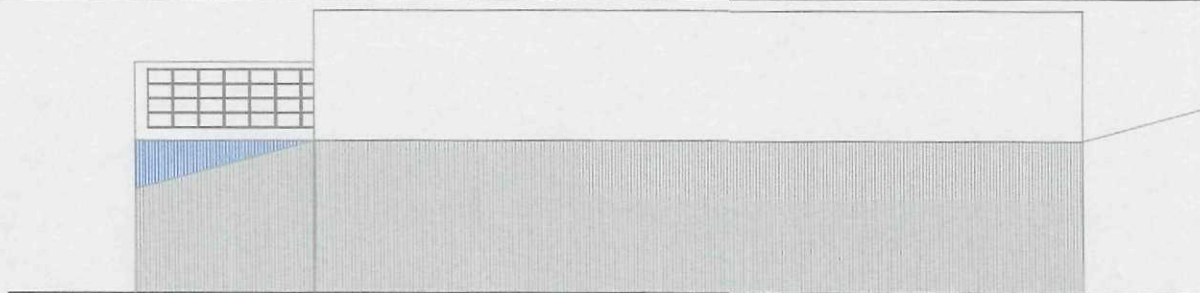
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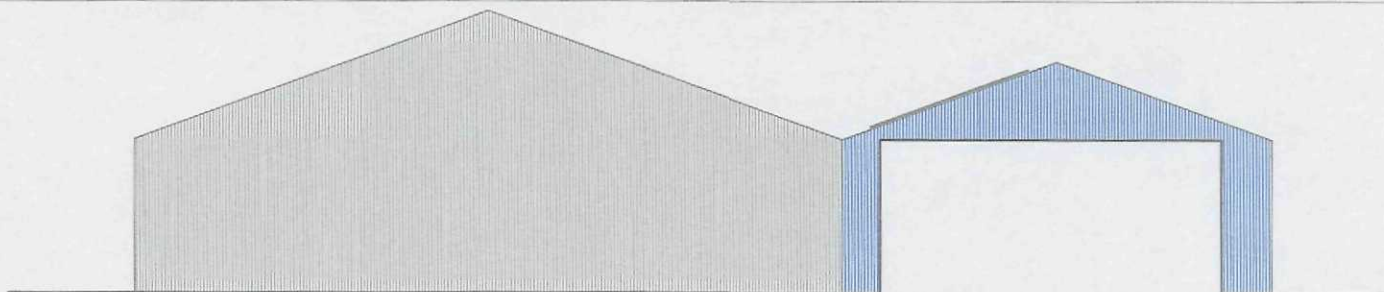
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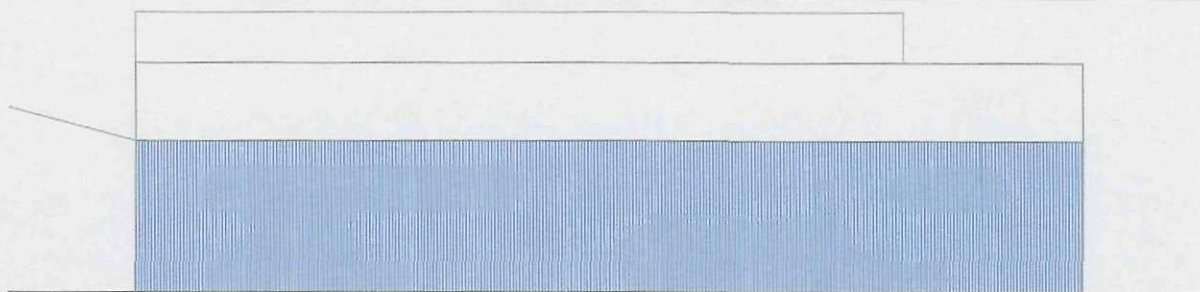
Elevation A-A



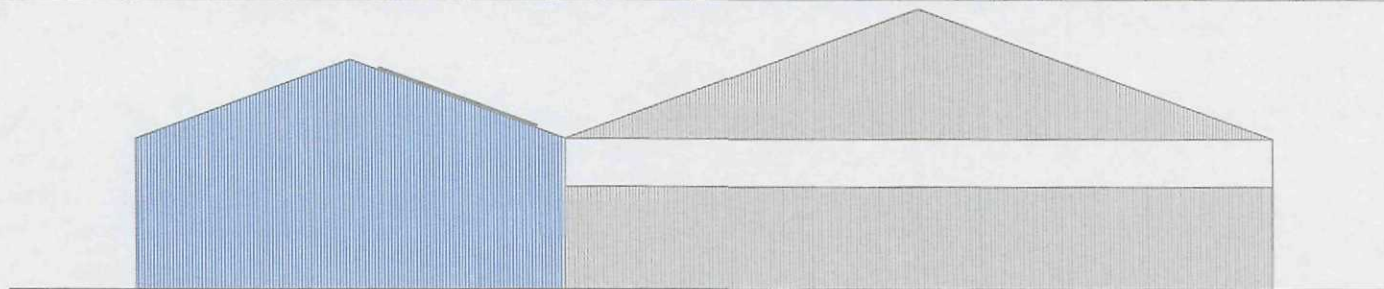
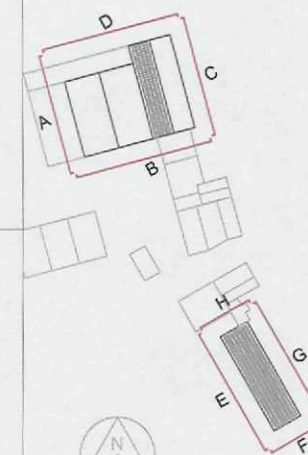
Elevation B-B



Elevation C-C



Elevation D-D



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Notes: 1. DO NOT SCALE FROM THIS DRAWING. USE FIGURE DIMENSIONS ONLY.

Rev	By	Date	Details
1	DMJ	Feb 11	Planning Application

Drawing Status
 PLANNING APPLICATION

Scale (A3)	1:200
Date	04.02.11

Client	Robin Buck (Jack Buck Farms Ltd)
Project	Moulton Seas End
Title	Proposed Elevations
Drawing number	03-00068-C41-04

Drawn by	DMJ
Checked by	CW

JACK BUCK FARMS LTD_PV Roof Layout



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Notes:

Revisions:

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DRAWING. USE FIGURE
DIMENSIONS ONLY.

Dwn: DMJ Chkd: EC Scale: NTS Date: 04/01/2011
Drg No: Rev: 1

Client:

Jack Buck Farms Ltd

Location:

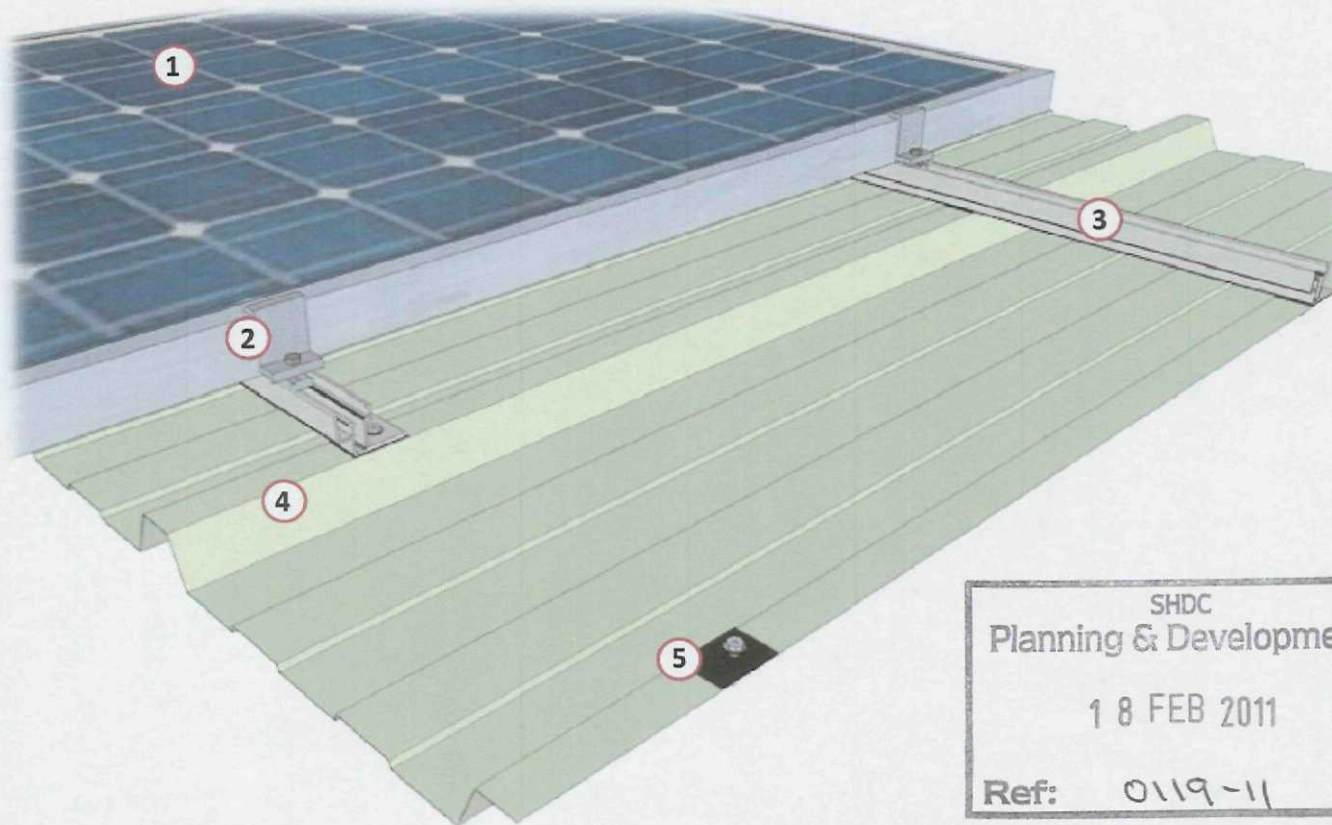
Spalding

Title:

Sharp 235 Layout Options

Rev	Date	Comments	Dwn	Chkd
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Trapezoidal Roof Fixing



1. PV Module
2. End Bracket
3. Conergy Rail
4. Trapezoidal Sheet
5. EPDM Self adhesive rubber



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info@evoenergy.co.uk

Conergy Theta/Delta System

Client:	Robin Buck
Project:	Jack Buck Farms
PV Number:	03-00068
Title:	Roof Fixing Detail

SHARP

NU Series (60 cells)
245 W | 240 W | 235 W

Monocrystalline silicon photovoltaic modules



Say yes to solar power! Because it protects the climate.

Innovations from a photovoltaic pioneer

As a solar specialist with 50 years' experience in photovoltaics (PV), Sharp makes significant contributions to ground-breaking progress in solar technology.

Sharp photovoltaic modules in the NU series are designed for applications with high power requirements. These quality monocrystalline modules produce a continuous, reliable yield, even under demanding operational conditions.

All Sharp NU series modules offer system integration which is optimal both technically and economically, and are suitable for installations in on and off-grid PV systems.



Brief details for the installer

- 156.5 mm × 156.5 mm dark blue monocrystalline solar cells
- 60 cells in series
- 2,400 N/m² mechanical load-bearing capacity (245 kg/m²)
- 1,000 V DC maximum system voltage
- IEC/EN 61215, IEC/EN 61730, Application class A
- Class II (VDE: 40021391)

Product features

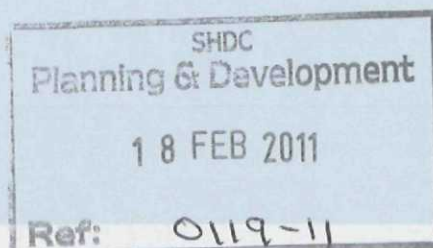
- High-performance photovoltaic modules made of dark blue monocrystalline (156.5 mm)² silicon solar cells with module efficiencies of up to 14.9 %.
- Anti-reflex coating to increase light absorption (for NU-E245J5 and NU-E240J5).
- Bypass diodes which minimise the loss in output when shading occurs.
- Textured cell surface for particularly high electricity yields.
- BSF structure (Back Surface Field) to optimise cell efficiency.
- Use of tempered white glass, EVA plastic, and weather protection film, as well as a silver anodised aluminium frame with drainage holes for long-term use.
- Output: connection cable with waterproof plug connector.

Quality from Sharp

Benchmarks are set by the quality standards of Sharp Solar. Continual checks guarantee a consistently high level of quality. Every module undergoes visual, mechanical, and electrical inspection. This is recognisable by means of the original Sharp label, the serial number, and the Sharp guarantee:

- 5 year product guarantee
- 10 year performance guarantee for a power output of 90%
- 25 year performance guarantee for a power output of 80%

The detailed guarantee conditions and additional information can be found at www.sharp.eu.



Mechanical data

Cell	Monocrystalline (156.5 mm) ² silicon solar cell
Quantity and wiring of cells	60 in series
Dimensions	1,652 × 994 × 46 mm (1.64 m ²)
Weight	19 kg
Connection type	Cable with plug connector (MC-3)

Limit values

Operating temperature (cell)	– 40 to + 90	°C
Storage temperature		
Storage air humidity (relative)	up to 90	%
Maximum system voltage	1,000	V DC
Maximum mechanical load	2,400	N/m ²
Over-current protection	15	A

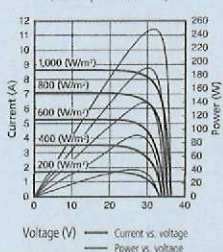
Electrical data

		NU-E245 (J5)	NU-E240 (J5)	NU-E235 (E2)	
Maximum power	P _{max}	245 W _p	240 W _p	235 W _p	
Open-circuit voltage	V _{OC}	37.5	37.3	37.0	V
Short-circuit current	I _{SC}	8.73	8.63	8.60	A
Voltage at point of maximum power	V _{mpp}	30.5	30.2	30.0	V
Current at point of maximum power	I _{mpp}	8.04	7.95	7.84	A
Module efficiency	η _m	14.9	14.6	14.3	%
NOCT		47.5	47.5	47.5	°C
Temperature coefficient – open-circuit voltage	αV _{OC}	– 130	– 130	– 130	mV / °C
Temperature coefficient – short-circuit current	αI _{SC}	+0.053	+0.053	+0.053	% / °C
Temperature coefficient – power	αP _{max}	– 0.485	– 0.485	– 0.485	% / °C

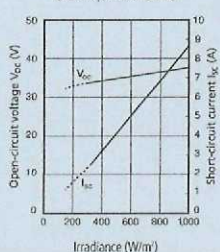
The electrical data applies under standard test conditions (STCs): irradiation 1,000 W/m² with light spectrum AM 1.5 and a cell temperature of 25 °C. The rated electrical characteristics are subject to a manufacturing tolerance of – 5% / + 10%, NOCT conditions: irradiation of 800 W/m², ambient temperature of 20 °C and wind speed of 1 m/sec.

Characteristic curves NU-E245 (J5)

Characteristic curves: current / power vs. voltage (cell temperature: 25 °C)



Characteristic curves: open-circuit voltage / short-circuit current vs. irradiance (cell temperature: 25 °C)



Applications

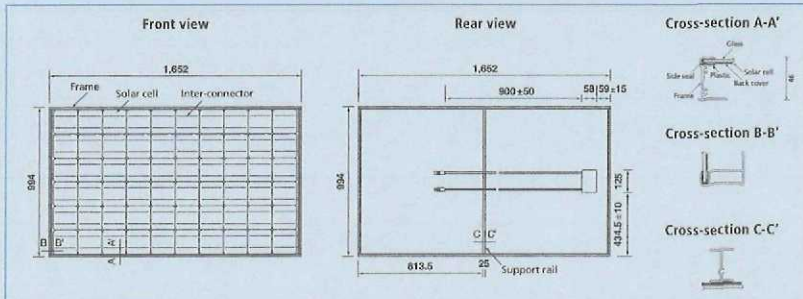
- On-grid PV systems
- On-roof PV systems
- Off-grid PV systems
- Ground-mounted PV systems

Please read our detailed installation manual carefully before installing the photovoltaic modules.

Registration

Sharp Solar guarantees safety, product quality and value stability for many years – the only thing we ask is: that you register your modules with the serial numbers so we can send you the warranty certificate. It is quick and easy to register your modules at www.brandaddedvalue.net

Exterior dimensions



Note

Technical data is subject to change without prior notice. Before using Sharp products, please request the latest data sheets from Sharp. Sharp accepts no responsibility for damage to devices which have been equipped with Sharp products on the basis of unverified information.

The specifications may deviate slightly and are not guaranteed. Installation and operating instructions are to be found in the corresponding handbooks, or can be downloaded from www.sharp.eu.

This module should not be directly connected to a load.

Sharp Energy Solution Europe
a division of Sharp Electronics (Europe) GmbH
Sonninstrasse 3, 20097 Hamburg, Germany
Tel: +49(0)40/23 76-0 • Fax: +49(0)40/23 76-2193
www.sharp.eu

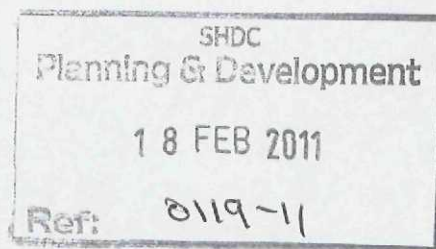
Local responsibility:

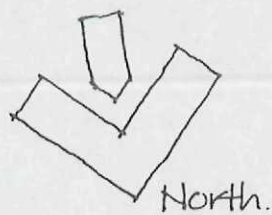
Austria
SolarInfo.at@sharp.eu
Benelux
SolarInfo.seb@sharp.eu
Central & Eastern Europe
SolarInfo.scee@sharp.eu

Denmark
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Germany
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Scandinavia
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Spain & Portugal
SolarInfo.es@sharp.eu
Switzerland
SolarInfo.ch@sharp.eu
United Kingdom
SolarInfo.uk@sharp.eu

SHARP





North.



Project
LAYOUT OF FARM BUILDINGS
MOULTON SEAS END, SPALDING.

Client
JACK BUCK (FARMS) LIMITED

ALAN HORNSBY
ARCHITECTURAL SERVICES LTD

"Little Acre"
Peak Hill, Cowbit,
Spalding, Lincs. PE12 6AW
Tel. Holbeach (01406) 380591

Scale 1:500 Drg. no. 07/13/01
Date February 2007

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18 FEB 2011

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