

26 APR 2012

For office use only

Application No.

Date received

Fee paid £

Receipt No:

320120424P

Council Offices, Church Walk, Clitheroe, Lancashire, BB7 2RA Tel: 01200 425111 www.ribblevalley.gov.uk

Application for Planning Permission.
Town and Country Planning Act 1990

Publication of applications on planning authority websites.

Please note that the information provided on this application form and in supporting documents may be published on the Authority's website. If you require any further clarification, please contact the Authority's planning department.

1. Applicant Name, Address and Contact Details

Title:	Mr	First name:	James	Surname:	Brierley
Company name:					
Street address:	Worston House				
Town/City:	Worston				
County:	Lancashire				
Country:	UK				
Postcode:	BB7 1QA				
Telephone number:	Country Code		National Number		Extension Number
Mobile number:					
Fax number:					
Email address:					

Are you an agent acting on behalf of the applicant? ☒ Yes ☐ No

2. Agent Name, Address and Contact Details

Title:	Mr	First Name:	Simon	Surname:	Stickley
Company name:	Energi Installations Plc				
Street address:	9A & 9B Hurstwood Court				
	Wheelton Lane				
Town/City:	Leyland				
County:	Lancashire				
Country:	United Kingdom				
Postcode:	PR25 3UQ				
Telephone number:	Country Code	National Number		Extension Number	
	44	(0)1772 643900			
Mobile number:					
Fax number:					
Email address:	simon@energiplc.com				

3. Description of the Proposal

Please describe the proposed development including any change of use:

The proposal is for a ground mounted PV array to be installed in the field to the NW of Worston House, in a low profile arrangement. The proposal also includes the planting of a Thuja screen hedge and the creation of a wildflower meadow in the area of the field surrounding the PV modules.

Has the building work or change of use already started? ☐ Yes ☒ No

4. Site Address Details

Full postal address of the site (including full postcode where available)

Description:

House: Suffix:
House name:
Street address:
Town/City:
County:
Postcode:

Description of location or a grid reference
(must be completed if postcode is not known):

Easting:
Northing:

5. Pre-application Advice

Has assistance or prior advice been sought from the local authority about this application?

☐ Yes ☒ No

6. Pedestrian and Vehicle Access, Roads and Rights of Way

Is a new or altered vehicle access proposed to or from the public highway?

☐ Yes ☒ No

Is a new or altered pedestrian access proposed to or from the public highway?

☐ Yes ☒ No

Are there any new public roads to be provided within the site?

☐ Yes ☒ No

Are there any new public rights of way to be provided within or adjacent to the site?

☐ Yes ☒ No

Do the proposals require any diversions/extinguishments and/or creation of rights of way?

☐ Yes ☒ No

7. Waste Storage and Collection

Do the plans incorporate areas to store and aid the collection of waste?

☐ Yes ☒ No

Have arrangements been made for the separate storage and collection of recyclable waste?

☐ Yes ☒ No

8. Authority Employee/Member

With respect to the Authority, I am:

- (a) a member of staff
- (b) an elected member
- (c) related to a member of staff
- (d) related to an elected member

Do any of these statements apply to you?

☐ Yes ☒ No

9. Materials

Please state what materials (including type, colour and name) are to be used externally (if applicable):

Others - description:

Type of other material:

Description of *existing* materials and finishes:

Description of *proposed* materials and finishes:

Are you supplying additional information on submitted plan(s)/drawing(s)/design and access statement?

☒ Yes ☐ No

If Yes, please state references for the plan(s)/drawing(s)/design and access statement:

10. Vehicle Parking

3201204-4P

Please provide information on the existing and proposed number of on-site parking spaces:

Type of vehicle	Existing number of spaces	Total proposed (including spaces retained)	Difference in spaces
Cars	0	0	0
Light goods vehicles/public carrier vehicles	0	0	0
Motorcycles	0	0	0
Disability spaces	0	0	0
Cycle spaces	0	0	0
Other (e.g. Bus)	0	0	0
Short description of Other			

11. Foul Sewage

Please state how foul sewage is to be disposed of:

Mains sewer ☐ Package treatment plant ☐ Unknown ☒
Septic tank ☐ Cess pit ☐

Other

Are you proposing to connect to the existing drainage system?

☐ Yes ☒ No ☐ Unknown

12. Assessment of Flood Risk

Is the site within an area at risk of flooding? (Refer to the Environment Agency's Flood Map showing flood zones 2 and 3 and consult Environment Agency standing advice and your local planning authority requirements for information as necessary)

☐ Yes ☒ No

If Yes you will need to submit an appropriate flood risk assessment to consider the risk to the proposed site.

Is your proposal within 20 metres of a watercourse (e.g. river, stream or beck)?

☒ Yes ☐ No

Will the proposal increase the flood risk elsewhere?

☐ Yes ☒ No

How will surface water be disposed of?

☐ Sustainable drainage system ☐ Main sewer ☐ Pond/lake
☒ Soakaway ☐ Existing watercourse

13. Biodiversity and Geological Conservation

To assist in answering the following questions refer to the guidance notes for further information on when there is a reasonable likelihood that any important biodiversity or geological conservation features may be present or nearby and whether they are likely to be affected by your proposals.

Having referred to the guidance notes, is there a reasonable likelihood of the following being affected adversely or conserved and enhanced within the application site OR on land adjacent to or near the application site:

a) Protected and priority species

☐ Yes, on the development site ☐ Yes, on land adjacent to or near the proposed development ☒ No

b) Designated sites, important habitats or other biodiversity features

☐ Yes, on the development site ☐ Yes, on land adjacent to or near the proposed development ☒ No

c) Features of geological conservation importance

☐ Yes, on the development site ☐ Yes, on land adjacent to or near the proposed development ☒ No

14. Existing Use

Please describe the current use of the site:

Fallow land

Is the site currently vacant? ☒ Yes ☐ No

If Yes, please describe the last use of the site:

Remote dissused garden plot

When did this use end (if known) (DD/MM/YYYY)?

01/04/2002

Does the proposal involve any of the following?

If yes, you will need to submit an appropriate contamination assessment with your application

Land which is known to be contaminated? ☐ Yes ☒ No

Land where contamination is suspected for all or part of the site? ☐ Yes ☒ No

A proposed use that would be particularly vulnerable to the presence of contamination? ☐ Yes ☒ No

15. Trees and Hedges

Are there trees or hedges on the proposed development site? ☐ Yes ☒ No

And/or: Are there trees or hedges on land adjacent to the proposed development site that could influence the development or might be important as part of the local landscape character?

☐ Yes ☒ No

If Yes to either or both of the above, you may need to provide a full Tree Survey, at the discretion of your local planning authority. If a Tree Survey is required, this and the accompanying plan should be submitted alongside your application. Your local planning authority should make clear on its website what the survey should contain, in accordance with the current 'BS5837: Trees in relation to construction - Recommendations'.

16. Trade Effluent

Does the proposal involve the need to dispose of trade effluents or waste? ☐ Yes ☒ No

17. Residential Units

Does your proposal include the gain or loss of residential units? ☐ Yes ☒ No

18. All Types of Development: Non-residential Floorspace

Does your proposal involve the loss, gain or change of use of non-residential floorspace? ☐ Yes ☒ No

19. Employment

If known please complete the following information regarding employees:

	Full-time	Part-time	Equivalent number of full-time
Existing employees	0	0	0
Proposed employees	0	0	0

20. Hours of Opening

If known, please state the hours of opening for each non-residential use proposed:

Use	Monday to Friday		Saturday		Sunday and Bank Holidays		Not Known
	Start Time	End Time	Start Time	End Time	Start Time	End Time	
A1							☒
A2							☒
A3							☒
A4							☒
A5							☒
B1A							☒
B1B							☒
B1C							☒
B2							☒
B8							☒
C1							☒
C2							☒
D1							☒

20. Hours of Opening (continued)

320120424P

D2								☒
Other								☒

21. Site Area

What is the site area?

139.4

sq metres

22. Industrial or Commercial Processes and Machinery

Please describe the activities and processes which would be carried out on the site and the end products including plant, ventilation or air conditioning. Please include the type of machinery which may be installed on site:

The PV cells will directly convert sunlight (electromagnetic radiation) to DC electricity. This DC electricity will be converted to AC electricity by the inverter at the property Worston House.

Is the proposal for a waste management development?



Yes



No

23. Hazardous Substances

Is any hazardous waste involved in the proposal?



Yes



No

24. Site Visit

Can the site be seen from a public road, public footpath, bridleway or other public land?



Yes



No

If the planning authority needs to make an appointment to carry out a site visit, whom should they contact? (Please select only one)



The agent



The applicant



Other person

25. Certificates (Certificate A)**Certificate of Ownership - Certificate A****Town and Country Planning (Development Management Procedure) (England) Order 2010 Certificate under Article 12**

I certify/The applicant certifies that on the day 21 days before the date of this application nobody except myself/ the applicant was the owner (owner is a person with a freehold interest or leasehold interest with at least 7 years left to run) of any part of the land or building to which the application relates.

Title: Mr First name: Simon Surname: Stickley

Person role: Agent

Declaration date:

26/04/2012



Declaration made

25. Certificates (Agricultural Land Declaration)**Agricultural Land Declaration****Town and Country Planning (Development Management Procedure) (England) Order 2010 Certificate under Article 12**

Agricultural Land Declaration - You Must Complete Either A or B

(A) None of the land to which the application relates is, or is part of an agricultural holding ☒(B) I have/The applicant has given the requisite notice to every person other than myself/the applicant who, on the day 21 days before the date of this application, was a tenant of an agricultural holding on all or part of the land to which this application relates, as listed below: ☐

If any part of the land is an agricultural holding, of which the applicant is the sole tenant, the applicant should complete part (B) of the form by writing 'sole tenant - not applicable' in the first column of the table below

Title: Mr First Name: Simon Surname: Stickley

Person role: Agent

Declaration date:

26/04/2012



Declaration Made

26. Declaration

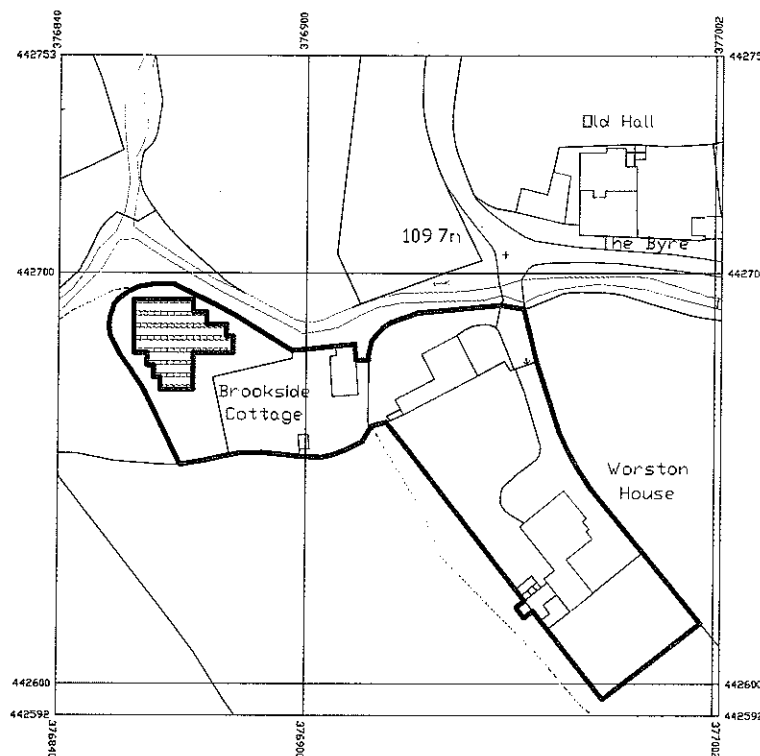
I/we hereby apply for planning permission/consent as described in this form and the accompanying plans/drawings and additional information.



Date

26/04/2012

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0 20 40 60



Energi plc
www.energiplc.com
Tel: 01772 643 900

9A - 9B Hurstwood Court
Lancashire Business Park
Centurion Way
Leyland PR25 3UQ

Project:
Worston House

Title:
Site Layout

Client: **Mr J. Brierley**

Location: **Worston House, Worston, BB7 1QA**

Drawn by: **SS**

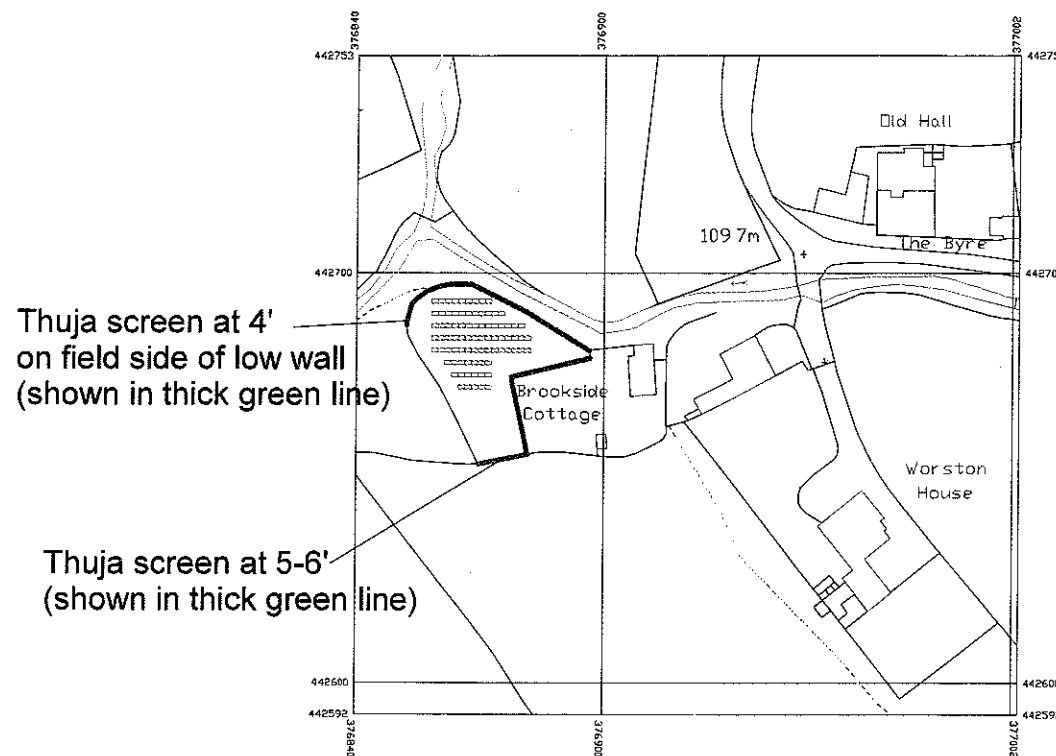
Date: **26/04/12**

Drawing number: **Worston-SP**

Scale: **1:1250 @ A3**

Rev:

320120424P



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Tel: 01772 643 900

9A - 9B Hurstwood Court
Lancashire Business Park
Centurion Way
Leyland PR25 3UQ

Project: **Worston House**

Title: **Proposed Module Layout 2
With Thuja planting areas**

Client: **Mr J. Brierley**

Location: **Worston House, Worston, BB7 1QA**

Drawn by: **SS**

Date: **26/04/12**

Drawing number: **Worston-PML2**

Scale: **1:1250 @ A3**

Rev:

320120424P

Planning, Heritage, Design and Access Statement

Field to the NW of Worston House, Worston, Lancashire, BB7 1QA

Planning Statement

The proposed development is for a 20kWp ground mounted solar photovoltaic (PV) system to be installed in the field to the NW of Worston House. The PV system is anticipated to generate 17,168kWh (SAP 2009) of electricity per annum, which will provide a large proportion of Worston's House energy needs. This would save 9,751kg of CO2 emissions.

The proposed site for the ground mounted PV array is the field to the NW of Worston House which currently has no use other than some fruit bushes in the Eastern side. These will remain in position as they provide some screening from the Cottage property which is to the East of the field. The shape of the field allows the modules to be orientated to face South for maximum performance. The field has been mostly cleared of vegetation and levelled in preparation for this development.

Worston House has recently been extensively renovated by the owner, Mr Brierley, to a high standard. He has modernised the heating system to incorporate underfloor heating and a ground source heat pump which makes the property use the best of modern heating practices. Used together this provides a comfortable living space within the house and uses less energy than electric or fuel heating systems. The heating system does run on electricity and the addition of this PV system would significantly contribute to the energy demand of this house. Adding solar power to this house will lower the energy bills and greatly reduce the associated carbon emissions from grid electricity.

The new National Planning Policy Framework sets out the new planning policies; which aims to achieve sustainable development and simplify policy. This development should be permitted to support a low carbon future by installing renewable technology (point 12), support sustainable economic development as set out in the core planning principles in point 17. It is also noted in point 17 that development should conserve heritage assets in a manner appropriate to their significance, the significance of this field is not specifically mentioned in the conservation area description, and it does not significantly add character to the Worston area. This area is open and the low height of the rows of modules will keep the area open. Views of this field will be mostly obstructed by the trees on the North side of the brook. The addition of Thuja screen bushes and grass and wild flower meadow in the field will add to the rural value of the field to the local area.

Design Statement

Mr Brierley and Energi are aware of the Conservation Area of Worston and have taken action to limit the impact of the PV system through careful design choices.

Mr Brierley will plant a border of Thuja (coniferous bushy tree from Cypress family) trees to act as a screen to block the PV from view from the village and public footpath by the brook. These will be planted adjacent to the low stone wall which borders the public footpath by the brook and will be planted at 5 foot tall. Another screen will be planted around the fence at 4 foot which will run from the entrance gate on the left hand side down to the border of the field to the South and across the border to the existing bushes. This will limit the impact of seeing the PV system in the field from the village and from the footpath.

Mr Brierley will also plant grass and wild flowers so a wild meadow will grow surrounding PV modules. This will enhance the visual appeal of this field that is currently bare soil.

The PV modules will be installed on individual mounting consoles that are anchored in position by using gravel as ballast. The modules (REW Premium+ 240W) and mounting consoles (version 5.2) are shown on their data sheets also included in this planning application. The modules are orientated in landscape, so the height of the modules is low; only 0.53m above the ground at the highest point. This method ensures that no concrete foundations are laid, thus is a sustainable construction technique and will not leave a legacy in the field should the system be de-commissioned in 30-50 years. The PV modules are an all black panel with a black frame to minimise the visual impact. The PV modules will be installed at 25° which is the optimum angle to balance energy capture and module density in the field. The PV array will be electrically connected to Worston House, with armoured cables running between the PV array and Worston House. The inverter will be situated in the basement of the property which is where the main incomer (electrical supply) enters the building.

The PV modules will not reflect light back at walkers when on Pendle Hill, 2km to the South. Glare from PV is sometimes (incorrectly) considered to be an issue. The PV modules use low-iron content glass which maximises the transmission of electromagnetic radiation and reduces the reflection. An anti-reflective coating is also put on the outside of the glass to disperse light in a diffuse manner if it is reflected. This is backed up by FAA:

Once the amount of sunlight is known, reflectivity from solar projects will vary based on the type of solar power system and its materials and design. Solar PV employs glass panels that are designed to maximize absorption and minimize reflection to increase electricity production efficiency. To limit reflection, solar PV panels are constructed with dark, light-absorption materials and covered with an anti-reflective coating. Today's panels reflect as little as 2% of the incoming sunlight depending on the angle of the sun and assuming use of anti-reflective coatings.

The Interim CAA Guidance-Solar Photovoltaic Systems issued December 17, 2010

http://www.faa.gov/airports/environmental/policy_guidance/media/airport_solar_guide_print.pdf p37

[accessed 01/02/12]

Access Statement

Access to the site is gained from the gate into the field on the Eastern side, at the end of the lane which runs past Riverside Cottage. Access will be required during the installation, which will all be on the property of Mr Brierley.

Access to the PV array is not required in the same context in which a conventional dwelling or other development may be once the installation is complete. Once the panels are installed and commissioned there will be no need to regularly service them so access will not be required.

The electronic equipment associated with the PV array will only be accessible to the owner of the property.

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Heritage Statement

The heritage value of this village lies mostly in its architectural and historical interest of the buildings as described in the Worston Conservation Area Management Guidance. The parts that pertain to this development are the views of Pendle Hill, Worston Brook as a wildlife corridor and aesthetic landscape area, trees by the brook and the meadow beside the Worston Brook which is site of the former bull ring, though little mention is made of the value of the landscape and the surrounding area. The proposed development will be low impact, with the modules facing away from the village, exposing only the back of the individual module mounting consoles made of black HDPE. This will be mitigated by the wild flower meadow to be planted around the PV modules and the addition of Thuja, an evergreen as a screening to the field. The planted Thuja will provide a continuous screen where the public footpath passes by the field along Worston Brook but at a height that can be seen above to maintain the openness of the area and views of Pendle Hill.

The views of Pendle Hill will not be affected on the North side of the Brook by the development either due to the low height of the PV modules (0.5m above ground at the highest point) or the new Thuja screening as this field is considerably lower than the viewing point in the car park adjacent to the Calf's Head Hotel. This field is also mostly obstructed by an abundance of trees on the North side of the brook, which further shield the field from view from the village. The structures will be low to the ground, especially when compared to a building, and will not be noticeable from most viewpoints.

The existing meadow at the site of the Old Bull ring is an open expanse of land which is an attractive feature to the Worston area. The addition of a wild flower meadow to this field surrounding the PV modules will also make this field a beautiful landscape, with added functionality of providing clean renewable energy to a house that already has low carbon technology installed such as the ground source heat pump.

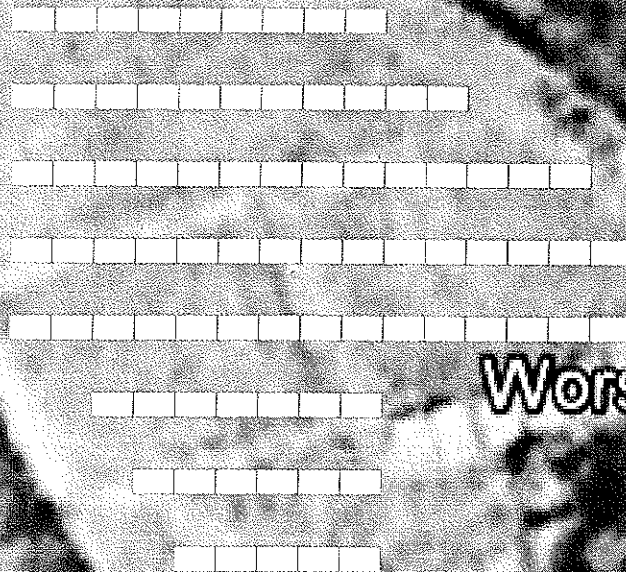
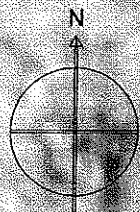
It should also be noted that while this area is a conservation area, it is not a pristine lowland fringe farmland area as it used to be the site of extensive limestone mines on Crow Hill, to the NE of the village.

To summarise this proposal will not harm the heritage characteristics of this area, which should be justification enough to allow this planning application as described in the National Planning Policy Framework.

320120424P

System Size: 82 x REW 240W
= 19.68kWp or 139m²
Modules inclined at 25degrees

Worston, BB7 1QA, UK



Enegi plc
www.enegi plc.com
Tel: 01772 643 900

9A - 9B Hurstwood Court
Lancashire Business Park
Centurion Way
Leyland PR25 3UQ

Project
Worston House

Title:
Proposed 20kWp Module Layout -
Landscape Ground-Mounted system

Client: Mr J Brierley

Location: Worston House Worston, BB7 1QA

Drawn by: SS Date: 12/04/12

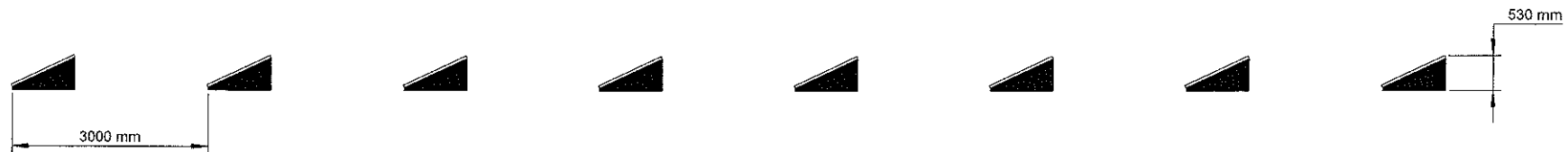
Drawing number: Worston-PML-20kWp-L

Scale: 1:200 @ A3

Rev:

System Size: 82 x REW 240W
 = 19.68kWp or 139m²
 Modules inclined at 25 degrees

320120424P



Energi plc
 www.energiplc.com
 Tel: 01772 643 900

9A - 9B Hurstwood Court
 Lancashire Business Park
 Centurion Way
 Leyland PR25 3UQ

Project: **Worston House**

Title: **Cross section drawing 20kWp-
 East View**

Client: **Mr J. Brierley**

Location: **Worston House, Worston, BB7 1QA**

Drawn by: **SS**

Date: **24/04/12**

Drawing number: **Worston-CS**

Scale: **1:100 @ A4**

Rev:

REW PREMIUM PLUS™

REW PREMIUM PLUS™ UM 96 MONOCRYSTALLINE 215 - 240 W

With the Premium Plus™ module series, REW SOLAR® have now positioned ourselves to deliver the leading high-performance, silicon-crystal-based module. Research and development have enabled this module to attain the highest yields, which means that now we are probably the first company worldwide to be able to offer silicon modules with a generating performance which is always above the nominal value. Today we can even guarantee added performance at anytime of between +7% and +12% of the nominal performance. In other words only the nominal performance is charged for. Increased performance of 9% on average is complimentary, yield risk therefore no longer exists. With this module, less favourable customer projects are now achieving the highest yields.

Our Premium series is manufactured by the leading German plant builder Centrotherm on their fully automated production lines (no hand soldering or adhesive fittings). Quality control is carried out by independent specialists who ensure that our customers benefit from top industrial performance.

We are able to guarantee these performance rates for many years. After 25 years we still guarantee 90% of the nominal performance and after 30 years we continue to guarantee 85% of the nominal rates. After that we still expect highly respectable returns for many years to come. This constitutes a level of customer protection unparalleled on the market today.

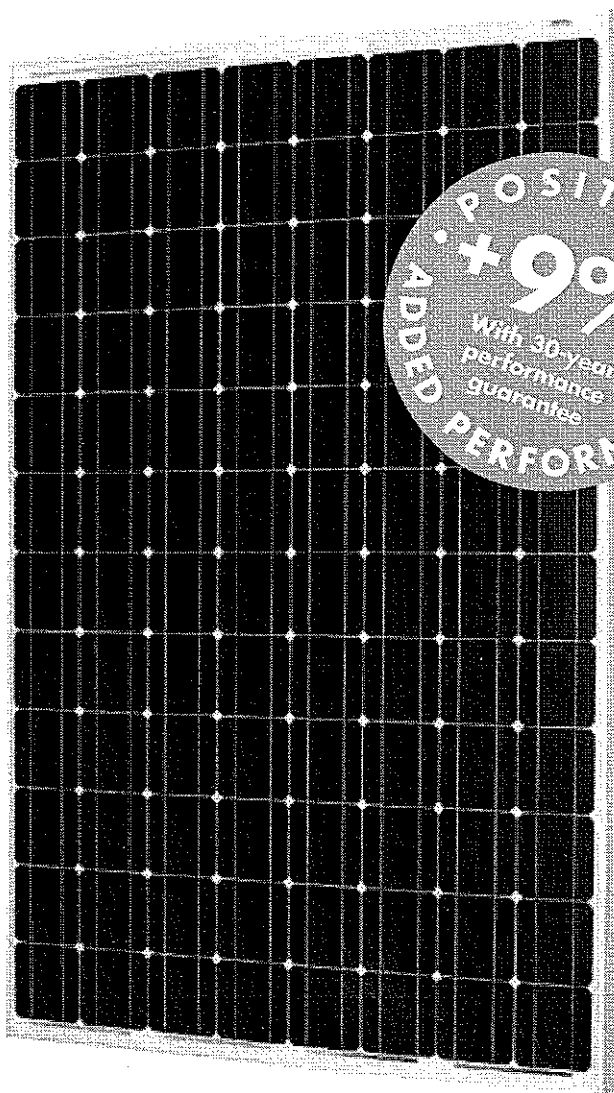
The Premium Plus™ module series bears the performance and safety certificates from world recognised test institutes and is in full conformity with all relevant National and International standards. Mechanical load resistance, electrical safety and long-lasting durability are constantly guaranteed.

Premium Plus™

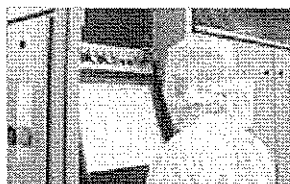
Guaranteed yield for many years

THE ADVANTAGES:

- Positive only performance of +7% to +12%
- Top yields from a compact module surface
- Unique performance guarantee of 30 years
- Production monitoring by the technical inspection bodies (TÜV) Rheinland
- 4 Bypass diodes
- Fully automated module production
- Electroluminescence & Flash tests on every single module
- Highly efficient German engineering



Similar image



Subject to modifications/technical improvements

REW PREMIUM PLUS™

Electric parameters

REW Premium Plus™ Type	RPP215 UM96	RPP220 UM96	RPP225 UM96	RPP230 UM96	RPP235 UM96	RPP240 UM96
Rated power (P _{mp}) [W]	215	220	225	230	235	240
Rated voltage (U _{mp}) [V]	47.3	47.6	47.7	47.8	47.9	48.0
Rated current (I _{mp}) [A]	4.97	5.04	5.14	5.23	5.33	5.42
Open-circuit voltage (U _{oc}) [V]	59.1	59.3	59.6	59.9	60.0	60.1
Short circuit current (I _{sc}) [A]	5.42	5.52	5.62	5.73	5.82	5.89
Cell Efficiency [%]	16.5	16.8	16.8	17.2	17.2	17.5
Module Efficiency [%]	13.8	14.1	14.4	14.7	15.0	15.3

* Availability of the performance class will be checked on enquiry

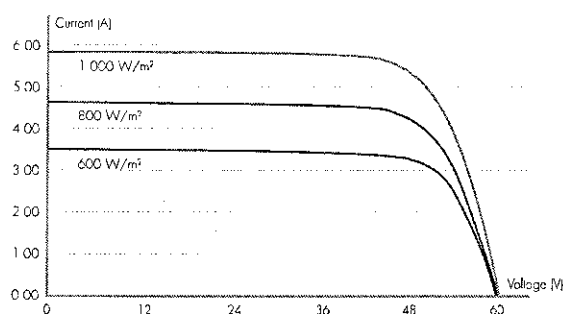
Power tolerance	+7% to +12%
Cell type	monocrystalline
max. system voltage [V]	1 000 (EU) / 600 (USA)
Operating Temperature	-40° C to +85° C

Performance figures under standard test conditions. Radiation strength 1 000 W/m² Air Mass 1.5 cell temperature 25° C Deviation from U_{mp} (V) I_{mp} (A) U_{oc} (V) and I_{sc} (A) of ±10%

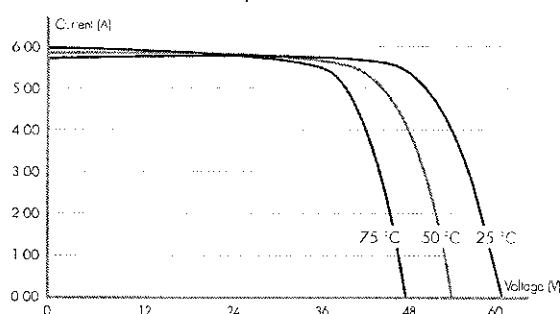
Temperature coefficient α (U _{oc})	-0.35% / °C
Temperature coefficient P _{max}	-0.40% / °C
Temperature coefficient β (I _{sc})	0.065% / °C
NOCT	47 ± 2° C

Characteristic curve

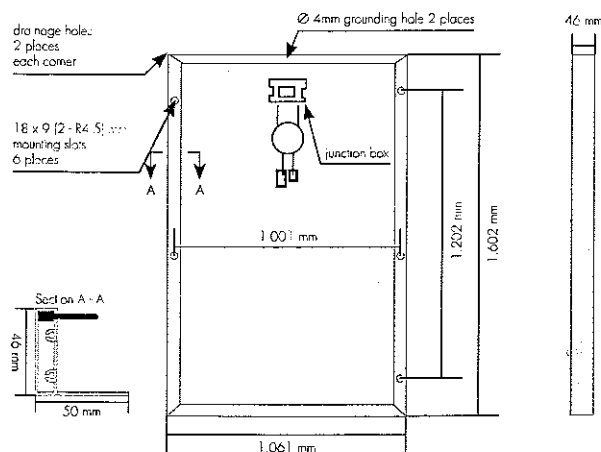
I_V Curves at different irradiance



I_V Curves at different temperature



Technical drawing



Data subject to amendment. As a result of constant development and production improvements, the specifications and information in this technical data sheet may be amended without prior announcement.

Mechanical parameters

Outer dimensions (L x W x H)	1 602 x 1 061 x 46 mm
Cell dimensions	125 x 125 mm
Number of cells	96 (8 x 12)
Weight	21 kg

Performance warranty (minimum capacity)

Performance warranty on 95%**	12 years
Performance warranty on 90%**	25 years
Performance warranty on 85%**	30 years

** of the module's rated power

Tested conformity acc. to:

IEC 61215, IEC 61730, CE, ISO 9001, UL, MSC



Product information

Description

PV Mounting system for flat roofs

ConSole mounting systems are the ideal solution for installing PV modules quickly and cost-effectively on flat roofs. The ConSole system also withstands high wind loads thanks to the simple and customized weighting down approach using ballast such as gravel, footway flagstones or similar materials.

The respective ballast weight depends on the building height, the location, the local wind conditions and snow loads, as well as the state of the foundations.

The ConSole can be installed on flat roofs with a light pitch of max. 5° and on the ground.

Large air slots on the perimeter of the ConSole allow optimal air ventilation of the modules.

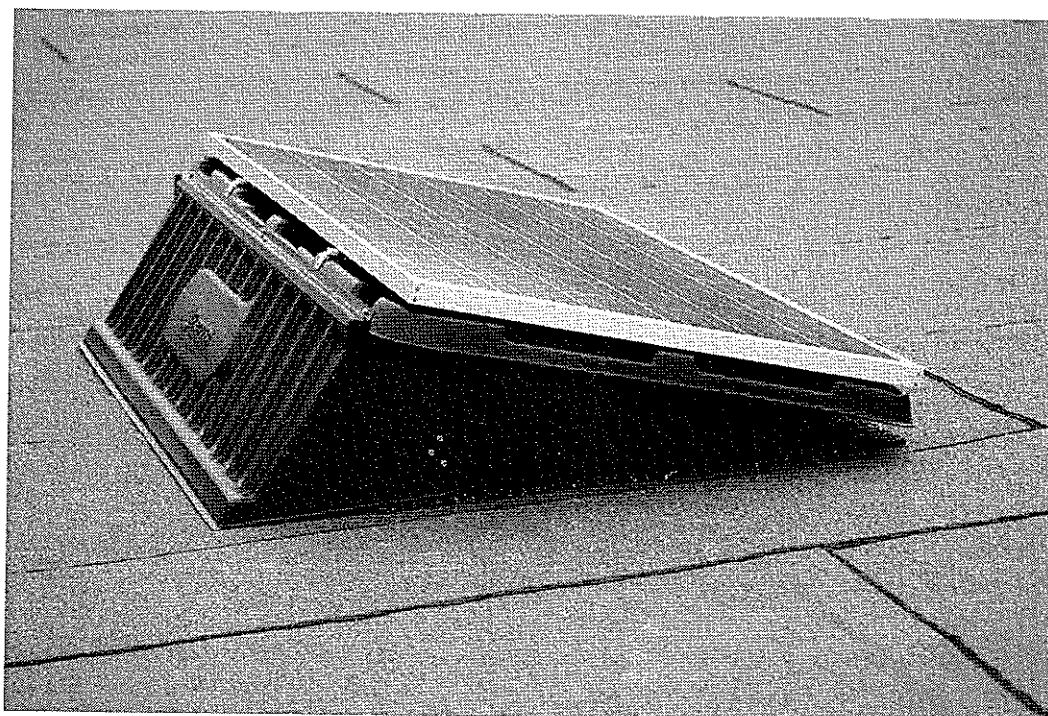
The new ConSole+ with improved aerodynamic design and lower pitch requires a lower ballast.

When the optional Streamliner+ is mounted at the back of the ConSole+ most exposed to the wind, the ballast level can even be more reduced.

Optimal load distribution avoids any concentrated loads on the roof surface and no roof penetration nor modification is required.

The lower pitch of 15° of the ConSole+ allows a reduced distance between rows.

A new ConSole Clip and self-drilling screws are making the mounting of modules faster and easier.



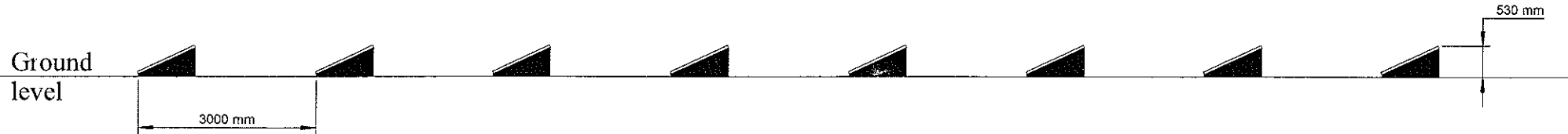
ConSole+ with Streamliner+

Technical specifications

	ConSole 4.1	ConSole 4.2	ConSole 5.2	ConSole 6.2	ConSole+
General					
System	mounting system for flat roofs, with ballast, no roof penetration				
Building type	industrial, agricultural, residential, ground, max. 5° pitch				
Flat roof type	bitumen roof, concrete roof, gravel roof				
Material	tub: HDPE; rails: aluminium; fastening: stainless steel				
Ambient temperature range	-30°C up to +50°C				
Module pitch	25°	25°	25°	25°	15°
Own weight (kg, approx.)	5,1	5,1	6,7	7,2	7,9
Width (mm, approx.)	1670	1250	1510	1730 *	1730
Depth (mm, approx.)	790	980	1000	980	1055
Height (mm, approx.)	445	560	540	540	390
Gap between ConSole rows (m)	> 1,2	> 1,5	> 1,5	> 1,5	0,4 to 1,2
Module					
Compatibility	framed PV module, IEC61215/61646 and IEC61730, with mounting holes in frame				
Orientation	landscape				
Length (mm)	1485-1910	1140-1490	1340-1750	1580-1970	1580-1730
Holes gap - width (mm)	661-780	895-1014	895-1014	895-1014	895-1014
(* with elongation rails, optional)	781-850*	1015-1085*	1015-1085*	1015-1085*	
Holes gap - length (mm)	500-1080	570-710	520-1190	690-1180	690-1180
Tests & certifications					
Wind resistance	Acc. Eurocode 1 "Impact on structures" EN 1991-1-4:2005 + nat. annexes				
TÜV (Germany)	yes	yes	yes	yes	in preparation
Content 1 SET					
ConSole tub	1x	1x	1x	1x	1x
U-profile aluminium 800mm	2x	-	-	-	-
U-profile aluminium 1035mm	-	2x	2x	2x	2x
Fastening profiles - module	M6	M6	M6	M6	M6
Fastening profiles - ConSole	M6	M6	M6	M6	Clips
Article-Nr. ConSole					
Pack 1 SET	520041	520042	520052-2	520062	520075
Pack 40 SETS	560041	560042	-	560062	-
Pack 80 SETS	-	-	570052-2	-	570075
Article-Nr. optional components					
Elongation rails set	460001 (for 1 ConSole)				
ConSole Clips (w/ Self-drilling screws)	920106 (for 1 ConSole), 940106 (for 10 ConSolen), 960106 (for 40 ConSolen)				
Streamliner+ (w/ Self-drilling screws)	- 520076 (1x) 560076 (80x)				
Services					
Product warranty	10 years				
Dimensioning	online ("Web Configurator")				
Support	telephone, online, on site				

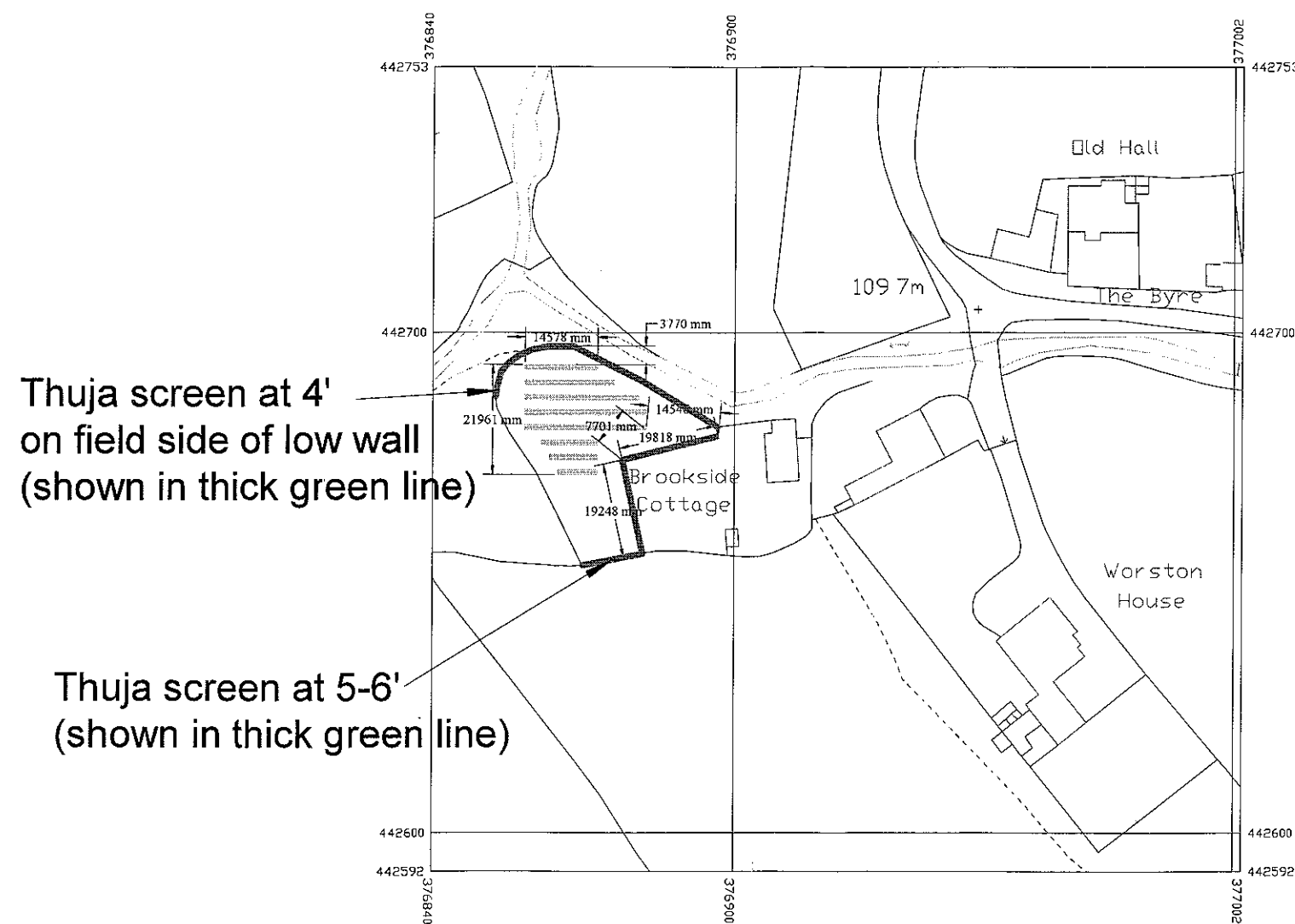
System Size: 82 x REW 240W
= 19.68kWp or 139m²
Modules inclined at 25 degrees

PV Modules are black coloured, with
a black frame



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 Energi plc www.energiplc.com Tel: 01772 643 900 9A - 9B Hurstwood Court Lancashire Business Park Centurion Way Leyland PR25 3UQ	Project: Worston House		Client: Mr J. Brierley		Scale: 1:100 @ A4	
	Title: Cross section drawing 20kWp- East View		Location: Worston House, Worston, BB7 1QA		Rev:	
			Drawn by: SS		Date: 24/04/12	
			Drawing number: Worston-CS			



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www.energiplc.com
Tel: 01772 643 900

9A - 9B Hurstwood Court
Lancashire Business
Park
Centurion Way
Leyland PR25 3UQ

Project:
Worston House

Title:
**Proposed Module Layout 2
With Thuja planting areas**

Client: **Mr J. Brierley**

Location: **Worston House, Worston, BB7 1QA**

Drawn by: **SS**

Date: **26/04/12**

Drawing number: **Worston-PML2**

Scale: **1:1250 @ A3**

Rev: