

Chigate House, 157-159 High Street, Holywood, County Down, Northern Ireland, BT18 9HU

T 9 F+4

Our Ref: NI1019/TK

E-mail Phone: 028 90393969 10th November 2008

Ms Hilary Saunders
Senior Area Planning Officer
North York Moors National Park Authority
The Old Vicarage
Bondgate
Helmsley
York
YO62 5BP

AMEND

Dear Ms Saunders

Re: Proposed development at Enterprise Way, Whitby

Following our email correspondence dated 6th November 2008 please find enclosed 4 copies of an amended Site Plan drawing (06041 DL02). This drawing should replace the Site Plan drawings originally submitted to you on the 24th September 2008.

The Site Plan drawings submitted on the 24th September 2008 did not reflect the latest version of the Landscaping Plans for the site. We are therefore re-submitting the Site Plan drawing with the landscaping removed, everything else remains the same. Landscaping will be as per the landscape drawing originally submitted (Drawing Nr. 1019.5.01).

In addition, I enclose a copy of a letter from our client relating to their commitment to undertake energy reduction and conservation measures within the development. Our client is happy for the application to be approved subject to a condition stating that they will have to provide details of Renewable Energy Technology before construction will commence. Our client has enclosed with this letter some literature which is indicative of the types of technologies that would be investigated. The actual technologies used will be investigated fully in due course when more information is available as to the business usage of the various units.

I trust the following should enable you to now determine the planning application. Should you require any further details please do not hesitate to contact me.

Yours faithfully

RPS Planning & Environment

Tim Kerr Senior Planning Consultant TAMMPA

1 1 NOV 2008 **CB**

Encs:

4 x Proposed Site Plan (Drawing Nr. 06041 DL 02) Copy of letter from Client relating Renewable Energy Technology

Ireland | Northern Ireland | England | Wales | Scotland | Netherlands | USA | Australia RPS Ireland Ltd. Registered in Northern Ireland No. 20604. Citigate House, 157-159 High Street, Holywood, County Down BT18 95



Seaview Property Developments Ltd. 64 Main Street, Jonesborough. Newry. BT35 8HR

6 November 2008

Mrs. H. Saunders, North York Moors National Park, The Old Vicarage, Bondgate, Helmsley. YORK YO62 5BP

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Dear Madam,

RE: NYM/2008/0547/EIA - Enterprise Way Whitby

Further to your discussions with Tim Kerr of RPS who act on our behalf, we would like you to note that it was always our intention to introduce appropriate measures within the development to allow for energy reduction and conservation.

Please find attached some literature which is indicative of the types of technologies that would be investigated. The actual technologies used will be investigated fully in due course when more information is available to us on the business usage of the various units, and the suitability of the systems within the site and its location in the National Park.

We understand that a condition may be applied to the application in relation to these future measures, which we are happy to comply with.

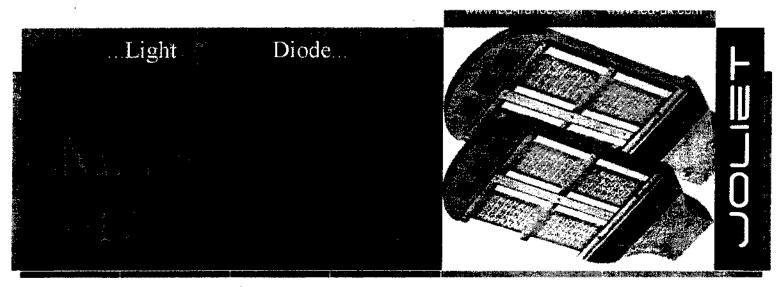
We thank you for your help with our application, if there is anything further you require then please do not hesitate to contact Tim Kerr.

Yours faithfully,



Hannah Gray. Director. NYMNPA

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Technical data			
Item Input Voltage	2 LED Module - JOL2	4 LED Module - JOL4 85 – 264 VAC	6 LED Module - JOL6
Frequency Power		47 ~ 63 H2	
Power Factor		> 0.9	*
Total Harmonic Distortion (THD)	1	< 20 %	
Power Efficiency		85 %	
LED Working Voltage		12/24 VDC	
LED Consumption	56W	112W	168W
Power Supply Consumption	10W	20W	30W
Lamp Global Consumption	75 W	150 W	225W
Hight Pressure Sodium Lamp	150 W (on 7m height pole)	250 W	400W
Equivalent	250 W (on 6m height pole)	250 **	40011
LED Luminous Efficiency	.	> 80 lm/w	
LED Initial Flux	5,000 lm (Tj= 25°C)	10,000 lm (Tj=25 ºC)	15,000 lm (Tj=25°C)
LED Maintain Flux	4,600 lm	9,300 lm	14,000 lm
	(Tj=60°C, Ta=25°C)	(Tj=60°C, Ta=25°C)	(Tj=60°C, Ta=25°C)
Lamp's Flux	4,200 im (Tj=60°C, Ta=25 °C)	8,400 lm (Tj=60ºC, Ta=25ºC)	12,600 lm (Tj=60%C, Ta=25%C)
Effective illuminated Area	Height = 6m : 20 Height = 8m : 26		0m : 33 x 13 cm 2m : 40 x 16 cm
Color Temperature (CCT)	Pure White: 5,0	00 ~ 7,000 K – Warm White:	3,000 ~ 4,000 K
Color Index (CRI)		Ra > 75	
Light Source		Emission (1Watt)	<u></u>
Light Distribution Curve	Asymme	etric (Bat Wing) / Rectangula	r Bearn
The maximum Light Intensity Angle			al Axis: 45° al Axis: 45°
	•		NYMNPA
			1 1 NOV 2008
Working Temperature		-30ºC ~ 50ºC	
Working Humi dity	10% ~ 90% RH		
Storage Temperature	10°C~ 85°C		
Working Life		> 50,000 Hrs	
Certification		CE, RoHS	
Light Body & Lampshade Material	· ·	Aluminium Alloy and PC	
Dimensions (mm)	540(L)x315(l)X90(H)	715(L)x315(l)X90(H)	890(L)x315(I)X90(H)

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Power consumption comparison between a JOL6 LED (168W) streetlight and a 400W HP Sodium Streetlight

Working 12 hours a day

	- HPS Streetlight	1915 Skeetlight	A Company of the Comp
Lamp power consumption	400W	168W	
Electrical defribution in the first terms	T THEM I T	Maning Pavel	
Comprehensive Cable Loss (6%)	24W	10W	
Transferrige Base (3K)	T TWA I T	134.83	
Reactive power compensation	0.85	0.99	
Total Camp 21 own control 11 11 11 11 11			
Daily consumption	7.85 kWh	2.58 kWh	Calculated by 12 hours a day
Particular Perfection of the Particular Part		19. 19. 18. 18. 18. 18. 18. 18. 18. 18. 18. 18	A LANGE WILLIAM LANGE LA
Consumption per year	2,867.21 kWh	942.35 kWh	Calculated on a 365.25 days basis
.10 year's consumption estimation	A MGPLATINA	L PARAMETAL	
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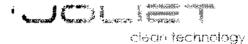
JOLIET LED STREET LIGHTING

Power consumption comparison between a JOL4 LED (112W) streetlight and a 250W HP Sodium Streetlight

Working 12 hours a day

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tion to the second seco		ACIA STRAPLED	Laborark
Lamp power consumption	250W	112W	
Comprehensive Cable Loss (6%)	15W	7W	
Reactive power compensation	0.85	0.99	
Total Lateral & Provincia Constitution of the			
Daily consumption	4.91 kWh	1.73 kWh	Calculated by 12 hours a day
Constitution month	149.26 KWh 127 116		Calculated on \$ 50.4 days basis
Consumption per year	1793.38 kWh	631.88 kWh	Calculated on a 365.25 days basis
10 year's consumption estimation	17,933.77 Kwh	5318.82 KWh	



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Power consumption comparison between a JOL2 LED (56W) streetlight and a 150W HP Sodium Streetlight

Working 12 hours a day

			Spinark .
Lamp power consumption	150W	56W	· · · · · · · · · · · · · · · · · · ·
		Witching Library	
Comprehensive Cable Loss (6%)	9W	3W	
Transformer (a.E. (b.)			
Reactive power compensation	Power factor : 0.85	Power factor: 0.99	
Daily consumption	2.94 kWh	0.86 kWh	Calculated by 12 hours a day
Tarking Barrion (1984)	34 (19.36 XWA) ()	2514Wh 7	Calculated on a 30 K Wiles basis
Consumption per year	1073.84 kWh	314.11 kWh	Calculated on a 365.25 days basis
10 year's consumption estimation	TO BOOK WAS A		



JOUET LED STREET LIGHTING

Power consumption comparison between a JOL28 LED Bulb (28W) streetlight and a 75W HP Sodium Streetlight

Working 12 hours a day

Lamp power consumption 75 W 28W Electrical distribution 25 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Total Lamp & Fewer contamps of 1 Power factor: 0.85 Power factor: 0.99 Tot	10 year's consumption estimation	5.405 (Ma), (1.41)		
Lamp power consumption 75 W 28W Flexus & distribution 2	Consumption per year	540.57kWh	160.71 kWh	Calculated on a 365.25 days basis
Lamp power consumption 75 W 28W Flexibility distribution	Consumption out shortd	A A SHAPE		The state of the second
Lamp power consumption 75 W 28W Clestric destribution	Daily consumption	1.48kWh	0.44 kWh	Calculated by 12 hours a day
Lamp power consumption 75 W 28W Clestric destribution	interest force and the second		The water	
Lamp power consumption 75 W 28W Electrical distribution Francis (6%) 5W 2W		Power factor : 0.85	Power factor : 0.99	
Lamp power consumption 75 W 28W Electrical distribution Francis (6%) 5W 2W	Internet party in the second second			
Lamp power consumption 75 W 28W Electrical strings on the constant of the con		5W	2W	
	The state of the s		Service own services	
	Lamp power consumption	75 W	28W	Section Assessment Design A (74) (Character) - Laboratorial Information (Character) - Laboratorial Assessment (Character) - Laboratorial Assessmen



■ GEPVp-200-MS

200 WATT PHOTOVOLTAIC MODULE FOR 1000 VOLT APPLICATIONS

FEATURES

- 54 poly-crystalline cells connected in series
- Peak power of 200 watts at 26.3 volts
- Designed for optimum use in residential and commercial grid-tied applications
- 20-year limited warranty on power output, 5-year limited warranty on materials and workmanship*
- Junction box and 1.8 meter cable with easy-click Solarlok Connectors included

BENEFITS

- Output power tolerance of +/- 5%
- Robust, clear anodized aluminum frame with pre-drilled holes for quick installation

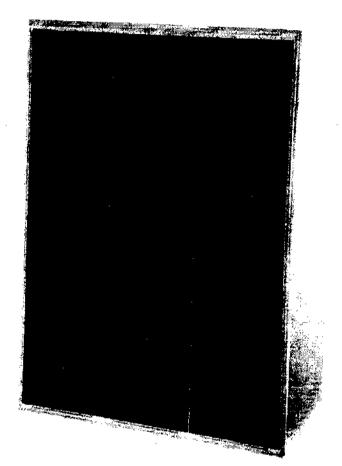
CERTIFICATION

The GEPVp-200-MS Module meets the following requirements:



IEC-61215 Second Edition

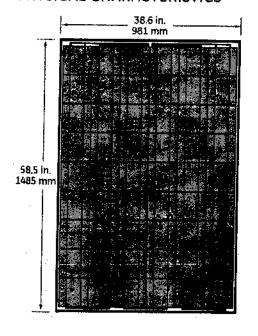
*Refer to GE Energy Product Warranty for specific details

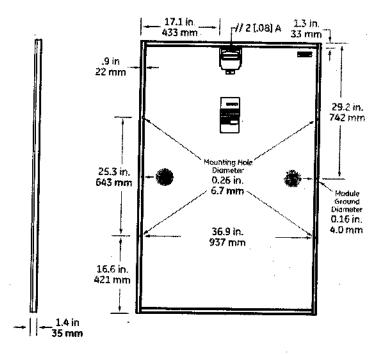


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PHYSICAL CHARACTERISTICS





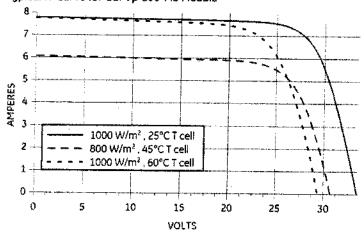
Physical Design Properties

Weight	39.0 lb (17.7 kg)
Weight (Wind) Bearing Potential	50 lbs/ft² [125 mph equivalent]
Hallstone Impact Resistance	1" @ 50 mph [25 mm @ 80 kph]

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ELECTRICAL PERFORMANCE

Typical IV Curve for GEPVp-200-MS Module



Typical Performance Characteristics

Peak Power (Wp)	Watts	200
Max. Power Voltage (Vmp)	Volts	26.3
Max. Power Current (Imp)	Amps	7.5
Open Circuit Voltage (Voc)	Volts	32.9
Short Circuit Current (Isc)	Amps	8.1
Short Circuit Temp. Coefficient	mA/°C	5.6
Open Circuit Voltage Coefficient	v/°c	-0.12
Max. Power Temp. Coefficient	%/°C	-0.5
Max. Series Fuse	Amps	15
Max. System Voltage	Volts	1000
Normal Operating Cell Temperature [NOCT]	deg. C	45

IV parameters are rated at Standard Test Conditions fitradilance of 1000 W/m², AM 1.56, cell temperature 25°Cl. As with all poly-crystalline PV Modules, during the stabilization process that occurs during the first few days in service, module power may decrease approximately 3% from typical movimum power due to a phenomenon known as Light induced Degradation (LID). All measurements are guaranteed at the laminate leads NOCT is measured at 800 W/m², 20 deg. C ambient, and 1 m/s windspeed.



GE Energy 231 Lake Drive Newark, DE 19702 302-451-7500

ge-energy.com/solar

5FA-1486/PC (05/06) Photo: PSP30596-03





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PROVEN ENERGY

Energy THAT DOES NOT COST the EARTH

Proven Energy are passionate about delivering reliable, sustainable energy through our award winning range of wind turbines.



The high performance Proven Turbine is the result of 25 years of innovative research and development, and has become an international market leader, renowned for quality and durability. Key to our success is the unique design of the Proven blade, which adapts to the wind, optimising performance and safety even in the strongest winds.

With over 800 installations worldwide, the Proven Turbine delivers affordable energy security to a wide range of applications. Proven Energy work with Corporate bodies, Government agencies, Local Authorities, Community groups and Householders to provide sustainable energy solutions. Installing a Proven Turbine system will cut fuel consumption and reduce carbon emissions. We hope it will make you as passionate about Green Energy as we are.



The Proven 2.5 has been powering lights at this remote station for 13

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Proven 6kW outperforms Solar PV in the heat of Saudi Arabia

3

Proven Special Build Turbines are designed to withstand -60°C

PROVEN Reliability

Providing robust, low maintenance electricity generation, Proven Energy's internationally patented turbine has undergone rigorous testing at sites exposed to extreme conditions. Successfully installed in diverse climates, Proven Turbines are generating electricity in the extreme cold of the Arctic Circle and the desert heat of Saudi Arabia.

Offering reliable energy generation for a wide range of clients, customers include Telecommunications (Orange, BT), Retail (Sainsbury's), Utilities (Network Rail), Oil companies (BP, Shell) as well as individual households, architects and Local Authorities.



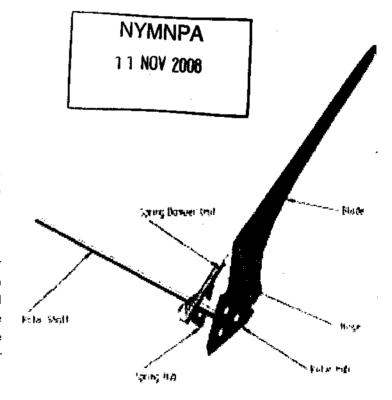
Winner of Channel 4 'People's Choice' Building of the Year Award. Sainsbury's, Greenwich

DESIGN & Performance

The patented Proven Flexible Blade System enables the turbine to generate power in light or strong winds. The unique system, a combination of innovative design and the latest techniques in advanced composite technology, allows the blades to bend and flex.

Sustained performance maximises your investment

As the wind gets stronger, the blades twist to reduce their aerodynamic efficiency. This allows the Proven Turbine to keep a high output even in the fiercest storms, unlike many turbines which need to stop producing to protect themselves in high wind speeds. The blades will also regulate their speed, preventing damage, should there be a disconnection of load from the turbine, due to a power cut or electrical fault.



QUOTE "We experienced a super typhoon with recorded top speeds of more than 60m/s (135 mph). The Proven WT2500 ot Taku high school, which is mounted on top of the school got the typhoon straight ahead and survived while still running."

Mr Hartmut Hansson Hantec Ltd. Japan (Proven Energy Distributor).

LOW NOISE & low maintenance

Designed to minimise noise and maintenance the Proven turbine has a direct drive generator, which operates without a gearbox.

The generator load is continually monitored to keep blades rotating at a low speed, whilst optimising power output. Proven Turbines probably have one of the lowest blade tip speeds of modern small turbines, minimising sound.



Taku High School, Japan. Roofmounted

"The Proven doesn't roar away but swishes gently. Most of the time it is inaudible because of noises generated by the wind blowing." Tim Cotter Energy Advisory Officer Falkland Islands.

Development Corporation.

"The amazing thing was that the wind blowing past the buildings made more noise than the turbine,... a mere 100 feet away." Rick Solinsky, Proven Energy Customer, USA.

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The result is that noise from the turbine is reduced to the swish of the blades turning in the wind, virtually unnoticeable compared with

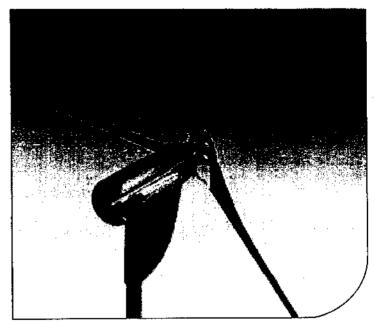
background sound. Arrange a visit to an existing turbine to hear for yourself. (Details of Visitor sites can be found on our website).

USER friendly.



Proven 6kW, Gambia

Proven designed controllers run the system automatically and display power output from the turbine, without the need for you to have specialist skills. The power connectors and turbine brake are easily accessible at the base of the mast. On installation you will receive an easy to follow user guide, which will tell you all about your turbine. Annual maintenance checks, which can be carried out by a local distributor, are recommended for optimum performance.



PRODUCTS

Proven Energy produce a series of 3 turbines to offer sustainable energy solutions to a wide range of applications. With many years' experience, we value the importance of intelligent site selection and can help you choose the right system for your needs. Proven Energy, and our distributors, offer a complete system service, from site assessment and system design to supply, installation and maintenance.

Proven 2.5

Generates 2.5kW, and is a similar height to a telegraph pole. The Proven 2.5 can make a substantial contribution to the power required by electrical appliances in a standard 3 bedroom house (excluding heating). The robust 2.5 is also ideal for small lighting systems (Network Rail Stations, Sainsbury's) and offshore power (Shell North Sea Oil Platforms).



Proven 6

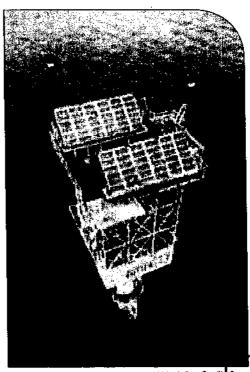
Produces 6kW of power, suited to a wide range of clients. The Proven 6 will supply electricity to a standard 4 – 6 bedroom house (excluding heating), with the potential to sell excess electricity back to the national grid. Schools are using the Proven 6 to generate electricity as well as educate their students, and multiple turbines can be used to power offices or retail units (BP Service Stations).

Proven 15

Available from Spring 2007, our largest model will produce 15kW. The Proven 15 will supply a 6 – 10 bedroom house, with the potential to sell excess electricity back to the National Grid, or supply a group of smaller houses. The Proven 15 is also ideal for commercial applications such as agriculture, larger telecoms towers, small industrial units and mini wind farms.

Proven 600

The Proven 600 is our most compact turbine. Producing 600W it is ideally suited to generating reliable power for unmanned sites. For further information on this product please contact your local Proven Energy Distributor.



Proven 2.5 powering unmanned North Sea Gas Platforms

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Turbines generate the electricity used to produce your lurbine, Wardhead Park, Proven Head Office



Special Solutions

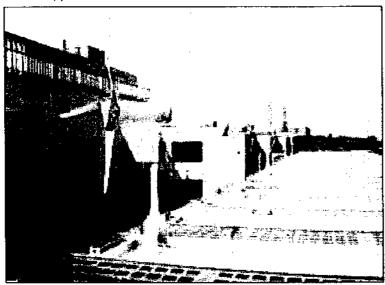
Special solutions call for special products.

Proven Energy work with leading architects and designers to install turbine systems for sustainable housing, local authority projects. industrial units, offices and schools. Each system is designed to your individual requirements, incorporating controllers, delivery and installation.

Grants towards installation are available for householders, community organisations, schools, the public sector and businesses.

Generating electricity from a wind turbine contributes to reductions in CO2 Emissions and Climate Change Levy Charges.





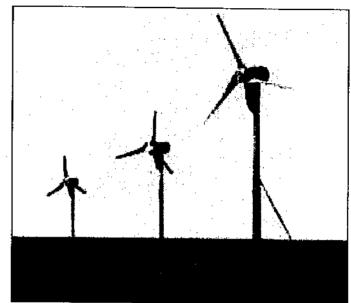


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SYSTEMS & Applications

All Proven Turbines are available in three standard systems, which manage how the electricity produced is used.

- 1) Grid Connect: The electricity produced is fed directly into your fuse box or distribution board, providing power to your premises. Any surplus electricity produced can be exported to the National Grid, and sold to an electricity provider. Convenience and the opportunity to sell excess electricity have made this the most popular system.
- 2) Battery Charging: Energy produced by the turbine is stored in a large battery, to provide a power supply. This is most beneficial in remote locations which are not connected to the National Grid, or rely on a diesel / oil generator. Installing a turbine can reduce fuel consumption by up to 95%.



From left to right Proven 2.5kW on 6.5m tower; Proven 6kW on 9m tower, 6ft tall man and Proven 15kW on 15m tower

3) Direct Heating: Energy produced by the turbine is directed to hot water tanks, storage heaters or under-floor heating, rather than providing electricity to feed into your power supply.

Whether you are interested in reducing domestic electricity bills, powering a telecoms site on the top of a hill, or generating green electricity to power your business Proven Energy can work with you to find a sustainable energy solution, that fits your needs.

Want To Know More?

For more information, including costs for example systems, Case Studies and Technical Fact Sheets, or to find details of your local dealer, please visit www.provenenergy.com



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Proven Patented Furling

In winds of above 12m/s or 25mph, the Proven's blades twist to limit power in response to high rpm

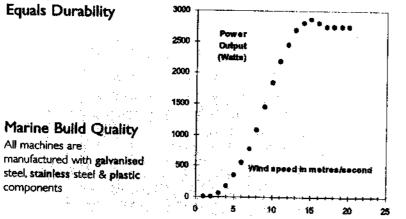
Low Speed **Equals Durability**

Marine Build Quality

steel, stainless steel & plastic

All machines are

components



Technical Specification Sheet

MODEL Cut in (m/s) Cut Out m/s) Survival m/s)

Rated (m/s) Rotor Type No. of Blades

Blade Material Rotor Diameter(m)

Generator Type

Battery charging Grid connect with Windy Boy Inverter

Direct Heating Rated RPM Annual Output² Head Weight (kg) Mast Type

Hub Height (m) WT Found (m) Winch Found (m) Tower Weight (kg) Mechanical Brake Noise 2 5m/s Noise @ 20m/s Rotor Thrust (kN) Sample of

commercial customers

Proven 25 (25kW)

None 70

Downwind, Self Regulating

Polypropylene

Brushless, Direct Drive, Permanent Magnet 24 or 48V DC

230Vac 50Hz or 240 Vac 60Hz 240Vac 2,500-5,000 kWh 190

Tilt-up, tapered, self-supporting. no guy wires (Taller guyed towers

also available on request)

6.5 or 11

1.6x1.6x1 or 2.5x2.5x1

0.65x0.65x0.65 or fx1x1

241 or 445 Yes

40 dBA 60 dBA

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British Telecom

Scottish Youth Hostel Association

British Rail

Irish Lighthouse Authority UK Lighthouse Authority

T-mobile Orange

Shell Exploration Saudi Aramco

metre/second = 2.24 miles per hour=3.6kph

2. Output range is quoted to cover typical average wind speeds (annual). Lighter wind sites with typical 4.5m/s will produce lower end of range. Higher wind speed sites e.g. 6.5m/s average will produce upper end of range.

3 All readings taken with an ATP SL-25 dBA mater at the base of the tower at a height

A car passing 20m away @ approx 40 mph is 70-80dBA



Proven Patented Furling

In winds of above 12m/s or 25mph, the Proven's blades twist to limit power in response to high rpm

7000

Low Speed Equals Durability

Fower Output (Wetts) 4000 2000 Wind speed in metres/second

Marine Build Quality

All machines are manufactured with galvanised steel, stainless steel & plastic components

Technical Specification Sheet

MODEL
Cut In (m/s)

Cut Out m/s) Survival m/s) Rated (m/s)

Rotor Type No. of Blades

Blade Material Rotor Diameter(m)

Generator Type

Battery charging Grid connect with Windy Boy Inverter

Direct Heating Rated RPM

Annual Output² Head Weight (kg)

Mast Type

Hub Height (m) WT Found (m) Winch Found (m) Tower Weight (kg) Mechanical Brake Noise @ 5m/s Noise @ 20m/s

Rotor Thrust (kN) Sample of commercial customers Proven 6 (6kW)

Downwind, Self Regulating

3 Glassthermoplastic Composite

5.5

Brushless, Direct Drive, Permanent Magnet

48V DC

230Vac 50Hz or 240 Vac 60Hz

200

6,000-12,000 kWh

600

Tift-up, tapered, self-supporting, no guy wires (Taller guyed towers

NYMNPA

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also available on request)

9 or 15

2.5×2.5×1 or 3×3×1.2

1x1x1 or 1.5x1.5x1

360 or 656

Yes 45 dBA

65 dBA

10

British Telecom

Scottish Youth Hostel Association

British Rail

Irish Lighthouse Authority
UK Lighthouse Authority

T-mobile

Orange Shell Exploration

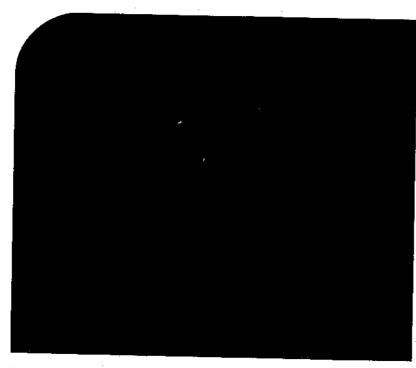
Saudi Aramco

1 metre/second = 2.24 miles per hour=3.6liph

2 Output range is quoted to cover typical average wind speeds (annual). Lighter wind sites with typical 4.5m/s will produce lower end of range. Higher wind speed sites e.g. 6.5m/s average will produce upper end of range.

3 Air readings taken with an ATP SL-25 dBA meter at the base of the tower at a height of LSm.

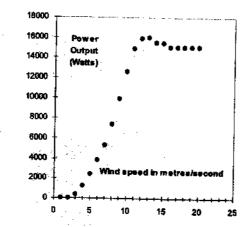
A car passing 20m away @ approx 40 mph is 70-80dBA



Proven Patented Furling

In winds of above 12m/s or 25mph, the Proven's blades twist to limit power in response to high rpm

Low Speed **Equals Durability**



Marine Build Quality All machines are manufactured with galvanised steel, stainless steel & plastic components

Technical Specification Sheet

MODEL	Proven 15 (15kW)
Cut in (m/s)	2.5
Cut Out m/s)	None
Survival m/s)	70
Rated (m/s)	12
Rotor Type	Downwind, Self Regulating
No. of Blades	3
Blade Material	Glassthermoplastic Composite
Rotor Diameter(m)	9
Generator Type	Brushless, Direct Drive.
	Permanent Magnet
Battery charging	48V DC
Grid connect with	
Windy Boy Inverter	230Vac 50Hz or 240 Vac 60Hz
Direct Heating	240V ac
Rated RPM	150
Annual Output ²	15,000-30,000 kWh
Head Weight (kg)	1100
Mast Type	Tilt-up, tapered, self-supporting,
•	no guy wires (Taller guyed towers
	also available on request)
Hub Height (m)	15 or 25
WT Found (m)	3.7x3.7x1.2 or 5x5x2
Winch Found (m)	1.5×1.5×1.2
-	(no anchor foundation for 25m)
Tower Weight (kg)	1478 or 2794
Mechanical Brake	Yes

Noise¹ @ 5m/s Noise @ 20m/s Rotor Thrust (kN) Sample of commercial oustomers

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British Telecom Scottish Youth Hostel Association

British Rail Irish Lighthouse Authority UK Lighthouse Authority T-mobile

Orange Shell Exploration Saudi Aramco

48 dBA

65 dBA

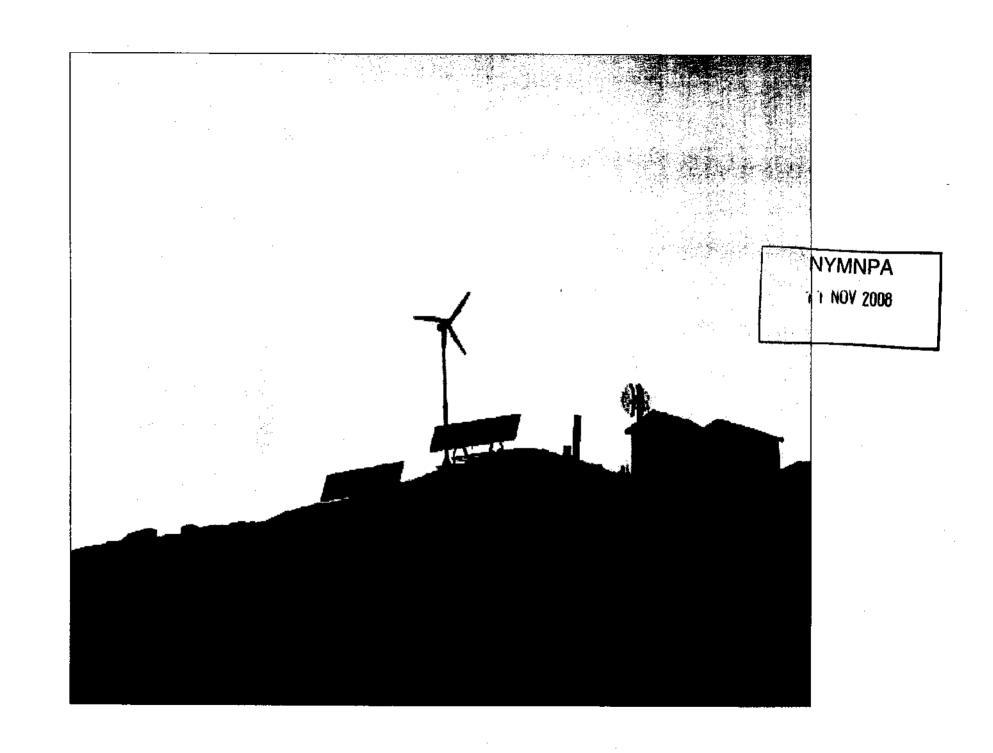
26

metre/second = 2.24 miles per hour=3,6kph

3 All readings taken with an ATP SL-25 dBA meter at the base of the tower at a height

A car passing 20m away @ approx 40 mph is 70-80dBA

Output range is quoted to cover typical average wind speeds (annual). Lighter wind sites with typical 4.5m/s will produce lower end of range. Higher wind speed sites e.g. 6.5m/s average will produce upper end of range.

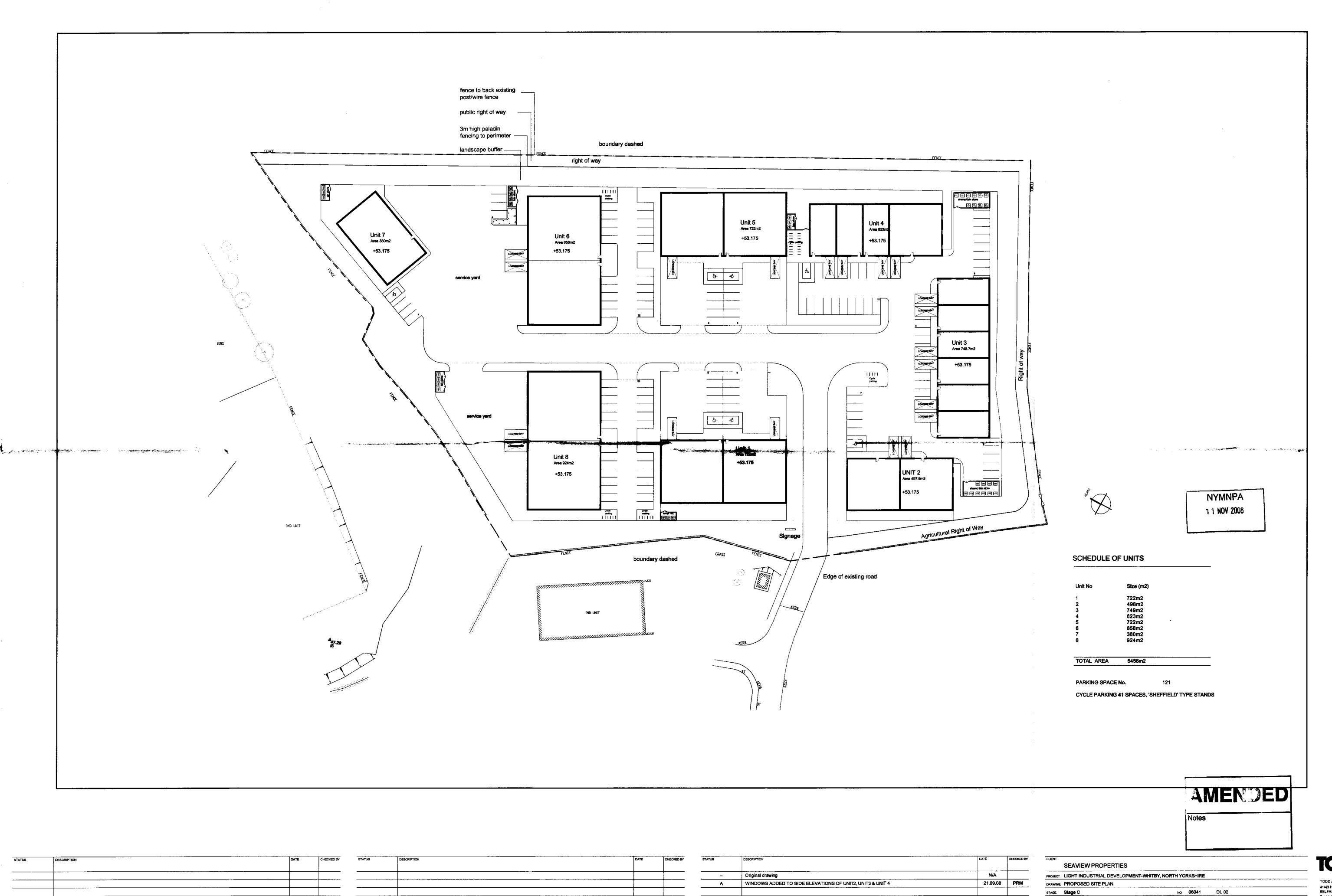


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PLOT DATE N/A

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