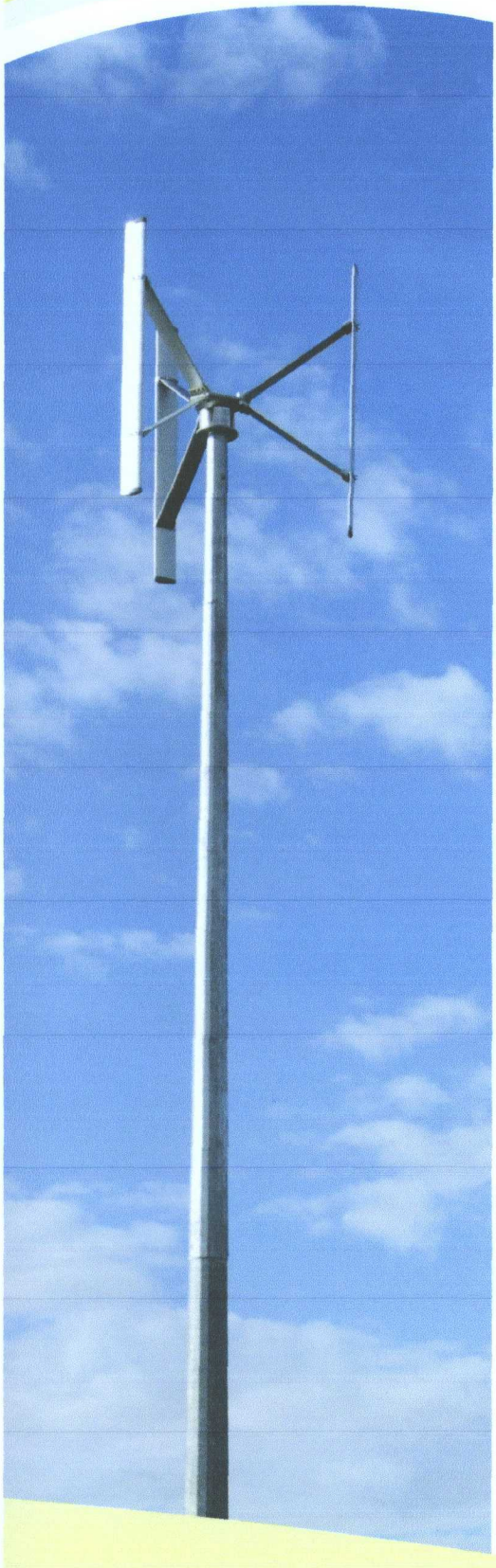
**PROPOSED WIND TURBINE**

REF.....PHOTO/001.....
PREAPP.....PM/09/10269/PREAPP
GREENHILL
TWYCROSS ROAD
SHEEPY MAGNA
Nr. ATHERSTONE
WARWICKSHIRE
CV9 3RS

vertical wind energy™



**The following specifications are based on a standard installation on a 10m hinged base mast; other types of non-standard installations (e.g. substantial roof mounted and other types and sizes of mast) are available.**

| | |
|---|---|
| **General:** | Start-up wind speed 3.5 m/s (8 mph). Triggers start up acceleration motoring to 100 revolutions/minute. |
| **Cut-in wind speed:** | 4 m/s (9 mph) – lowest power generation speed. |
| **Power at 13.2 m/s wind:** | 3.0 kW |
| **Max turbine speed:** | 300 revolution/ min/ overspeed brake trigger 310 revolution/min |
| **Shut-down wind speed:** | The machine will run through storm conditions |
| **Survival wind speed:** | 50 m/s, gusting to 71 m/s (112 mph to 159 mph) |
| **Noise:** | < 40 dbA |
| **Environmental protection:** | IP65 |
| **Annual Yield Range:** | 3000 kW/h to 8000 kW/h site dependent |
| **Braking:** | Primary speed control brake under semi-conductor control. Emergency shut down brake through resistors controlled by fail safe contactors with automated system check functions. |

www.vweltd.com

Tel: 0845 618 5388
Email: sales@vweltd.com

**Blades:**

| | |
|---|---|
| Blade length | 2.5m |
| Blade configuration diameter | 2.5m |
| Blade swept area | 6.25 sq/m |
| Material | Extruded, machined and anodized aluminium |
| Blade configuration weight | 90 kg |

**Generator:**

| | |
|---|---|
| Generator | 20 pole direct drive, permanent magnet |
| Generator weight | 44kg |

**Inverter:**

| | |
|---|---|
| Inverter | Power One PVI-3600-OUTD-UK-F-W Grid tied |
| Peak power output | 3.6 kW |
| Input voltage range | 50Vdc – 530Vdc |
| Output type | 230v 50 Hz, single phase AC, 16Amp |
| Rectification | Via a bridge rectifier |

**Support Structure:**

| | |
|---|---|
| Mast | Hydraulic or hand winched hinged base, multi faced conical sectioned or cabinet based tubular. Galvanised. Powder coated over galvanizing as an optional extra. |
| Hub Heights | 5m, 10m (standard), 12m and 15m |
| Foundations | Concrete slab, pilled raft or pre-cast concrete block. Anchored steel framed for roof mounting. |
| Mast weights | From 358 kg – 550kg |
| Mast footprint | Approximately 660mm x 660mm |

**Safety:**

| | |
|---|---|
| Control brake | Electrical resistor |
| Emergency shut-down brake | Electrical resistor |
| Parking brake | Electrical short circuit |
| Mast hinge | Primary bolt lock nut and secondary safety bolt |
| Electrical isolation | Lockable on both input and output |
| Circuit protection | Fuses, main control RCCD and DP MCB |
| Ant-islanding | Full ant-islanding and grid loss shut down |
| Standards | Compliant to BWEA Small Wind Turbine Performance & Safety Standard (29 Feb 2008), IEC61400-2, G83, BS 7671 2008, EN60204, EU EMC Directive. |

**Life:**

| | |
|---|---|
| Life expectancy | 20 years operation with service by competent trained personnel working to published schedules, requirements and methods. |

**Service interval:**

**Vertical Wind Energy Ltd does retain the right to change, amend or alter, any or all of these specifications without prior notice**

www.vweltd.com

Tel: 0845 618 5388
Email: sales@vweltd.com