

**KW6**

# Planning Support Document

Certification Number TUV 0008





## **IMPORTANT**

This document is intended as an aid to complete planning applications. It includes product information normally required for UK planning applications. For additional information please contact

**[wind@kingspan-renewables.com](mailto:wind@kingspan-renewables.com)**

## Contents

Product specifications  
Noise  
Aviation  
Siting  
Technical drawings

## Product specifications

### Rotor

Type: Downwind, 360 degrees free yawing  
Speed control: Self-regulating  
Blades: 3 blades, passive coning and pitch control  
Rotor diameter: 5.6m  
Rated speed: 11m/s  
Rotor thrust: 10kN

### Generator

Type: Brushless permanent magnet, direct drive  
Output: Grid connect, battery charging (48V)

### Tower

Type: Self-supporting monopole  
Hub height: 9m, 11.6m and 15m (hinged or hydraulic tower)

### Pad foundation

3.80m x 3.80m x 1.00m (max.)  
Root option also available

### Weights

Wind turbine: 600kg

### Performance

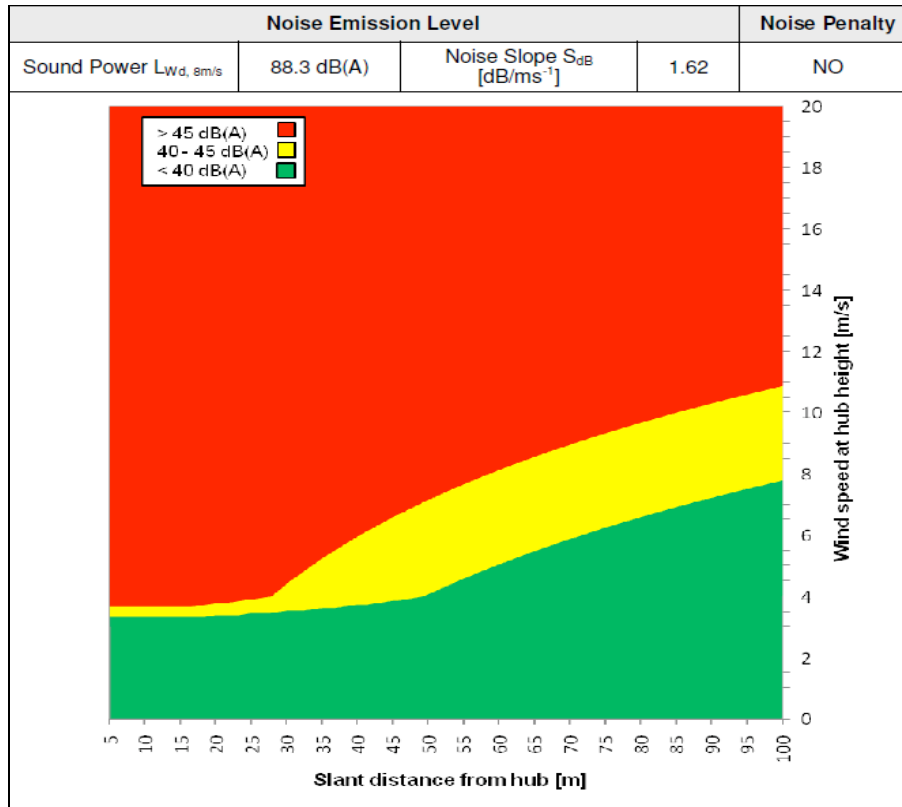
Cut-in wind speed: 3.5m/s  
Max wind speed (survival): Designed to Class 1 (70m/s), Tested to Class 2 (59.5m/s)  
Rated Power: 5.2kW (at 11m/s measured at hub height)  
Peak Power: 6.1kW  
RAE: 8,949kWh as certified by TUV NEL (at 5m/s measured at hub height)

### Build materials and colours

Frame: Galvanised steel, grey (not visible)  
Blades: Glass thermoplastic composite, black or white  
Covers: Plastic. Black (RAL 9005) or White (RAL 9003)  
Towers: Galvanised steel, grey

## Noise

The following noise map is a declaration of the sound power level, including noise slope tested according to BWEA standard 29th Feb 2008 which amends IEC 61400-11 for the purposes of acoustic testing of small wind turbines.



A full report is available upon request from [planning@kingspan-wind.com](mailto:planning@kingspan-wind.com)

## Aviation

All wind turbines have the potential to be detected by radar systems, and in some cases this can cause problems for the providers of air traffic control services, such as the local civilian or military airport, or NATS En Route.

The best solution is to ensure there is no radar line-of-sight from the upper tip of the wind turbine to the radar. In the event that the wind turbine site is in radar line-of-sight to an airport radar, Kingspan Renewables recommends you discuss the siting with the airport authority early in the planning process. The airport authority can often advise how best you may mitigate the impact of the wind turbine, so early discussion is recommended. Similar early discussions will also assist in identifying any MoD or NATS En Route concerns.

It is worth noting that the presence of other wind turbines does not automatically mean an application is acceptable, as cumulative impact may also be an issue.

## **Siting**

Siting and installation of your wind turbine must comply with “Installing small wind-powered electricity generating systems” (CE72) and “Microgeneration Installation Standard” (MIS 3003) which reflect the industry’s best practice.

Energy Saving Trust publication “Installing small wind-powered electricity generating systems” (CE72) can be downloaded from:

**<http://www.energysavingtrust.org.uk/Global-Data/Publications/Installing-small-wind-powered-electricity-generating-systems-CE72>**

The Microgeneration Certification Scheme publication “Microgeneration Installation Standard” (MIS 3003) can be downloaded from:

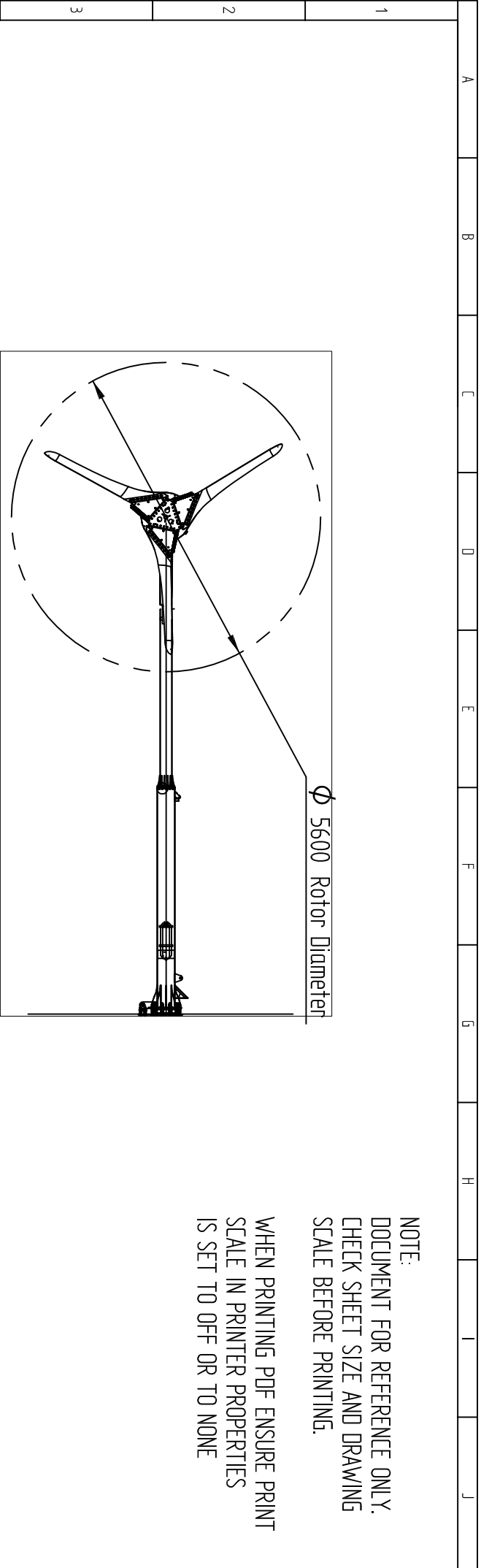
**<http://www.microgenerationcertification.org/admin/documents/MIS%203003%20Issue%202.0%20Micro%20Wind%202010.08.26.pdf>**

## Technical Drawings

The following technical drawings are scaled elevations for the wind turbines listed below:

- KW6 on 9m tower
- KW6 on 11.6m tower
- KW6 on 15m tower

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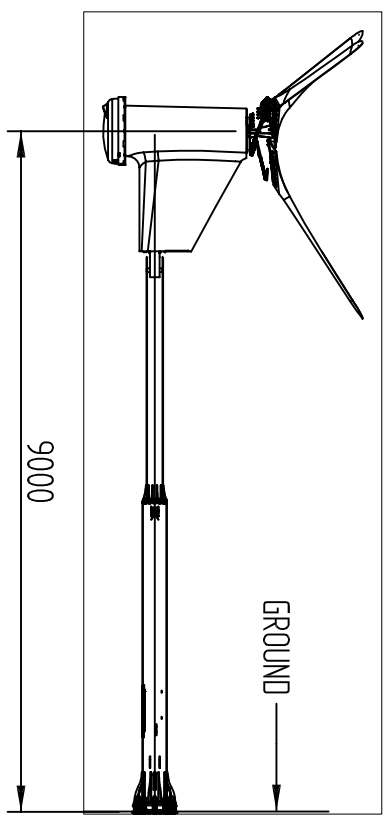


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**WEIGHTS:**  
Tower = 754Kg  
Turbine Head = 600Kg

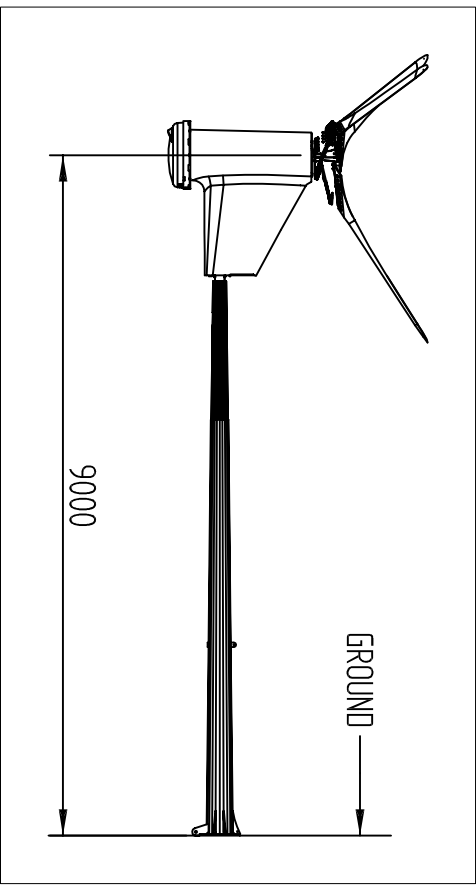
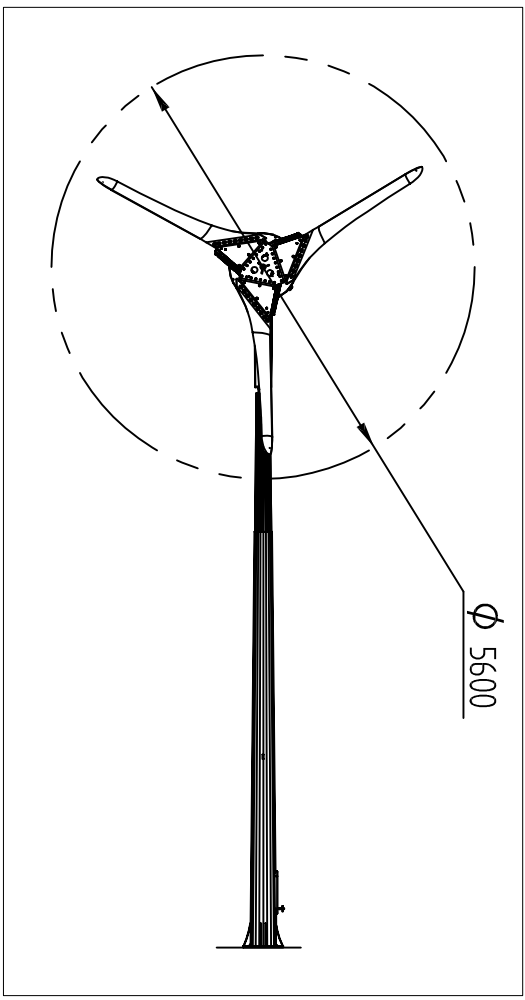
**COLOUR:**  
Tower and Frame – Galvanised Grey  
Covers – White, RAL9003  
Black, RAL9005



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B		TEAM FLANGE BOLTED VARIANT ADDED		31/03/11		404		SHT3		AM		AM							
C		Drawing Border Updated		09/11/11		WA				PH		PH							
REV		DESCRIPTION		DATE		EGR		REV		ENG		REV		SRE		ENG			
REVISION HISTORY																			
GENERAL NOTES										DEBURR ALL SHARP EDGES WELD SYMBOLS TO BS4999 PRT 2C WELDING TO BS EN 1011-2 GALVANISING OF COMPONENTS TO CONFORM TO BS EN ISO 1461									
										Project: 409 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS 1 PL -40° 2 PL -40° 									
Kingspan Renewables Ltd. www.kingspanwind.com										DRAWN: SC CHECKED: A MN DWG NO: SCALE: 1:100 WEIGHT: SHEET 4 OF 5 Released for									
NAME										TITLE									
DATE										KW6 on 9m Flange Bolted Tower									
MATERIAL:										Finish:									
Customer No.										Material:									

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**WEIGHTS:**  
Tower = 326+127 = 453Kg  
Turbine Head = 600Kg

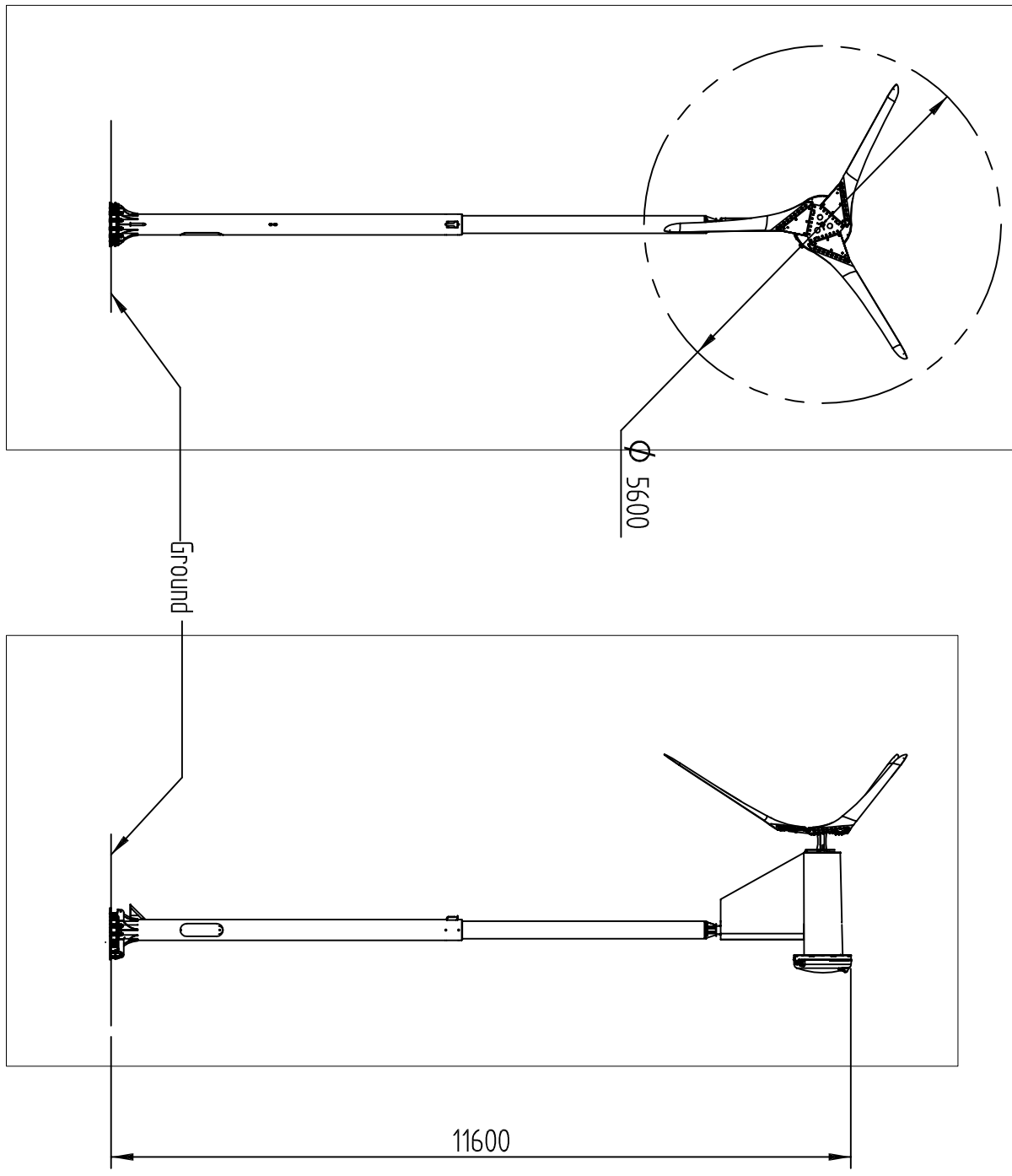
**COLOUR:**  
Tower and Frame – Galvanised Grey  
Covers – White, RAL9003  
Black, RAL9005

<p>GENERAL NOTES</p> <p>DEBURR ALL SHARP EDGES WELD SYMBOLS TO BS499 PRT 2C WELDING TO BS EN 1011-2 GALVANISING OF COMPONENTS TO CONFORM TO BS EN ISO 1461</p>				<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS 1 PL -40° 2 PL -40°</p>		<p>Project: </p>		<p>SCALE: 1:100</p>	
<p>7 A COLOUR SPEC ADDED SCALING FOR PRINTING NOTE ADDED</p> <p>B TITAN FLANGE BOLTED VARIANT ADDED</p> <p>C Drawing Border Updated</p>		<p>13/01/11 3945 WVA AM AM</p> <p>31/03/11 404 SHT3 AM AM</p> <p>09/11/11 WVA PH AM</p>		<p>Project: </p>		<p>NAME: SC</p> <p>DATE: 07/04/10</p>		<p>TITLE: Kw6 on 9m Brake Folded, Slip Jointed Tower</p>	
<p>REVISION HISTORY</p> <p>DESCRIPTION DATE DCR REJ. ENR ENG</p>		<p>REVISION HISTORY</p> <p>DATE DCR REJ. ENR ENG</p>		<p>Project: </p>		<p>NAME: A MEN</p> <p>DATE: 07/03/10</p>		<p>Material: <input type="text"/></p> <p>Finish: <input type="text"/></p>	
<p>www.kingspanwind.com</p>		<p>Project: </p>		<p>Project: </p>		<p>SCALE: 1:100</p>		<p>Customer No. <input type="text"/></p> <p>Released for</p>	





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WEIGHTS:  
Tower = 1615Kg  
Turbine Head = 600Kg

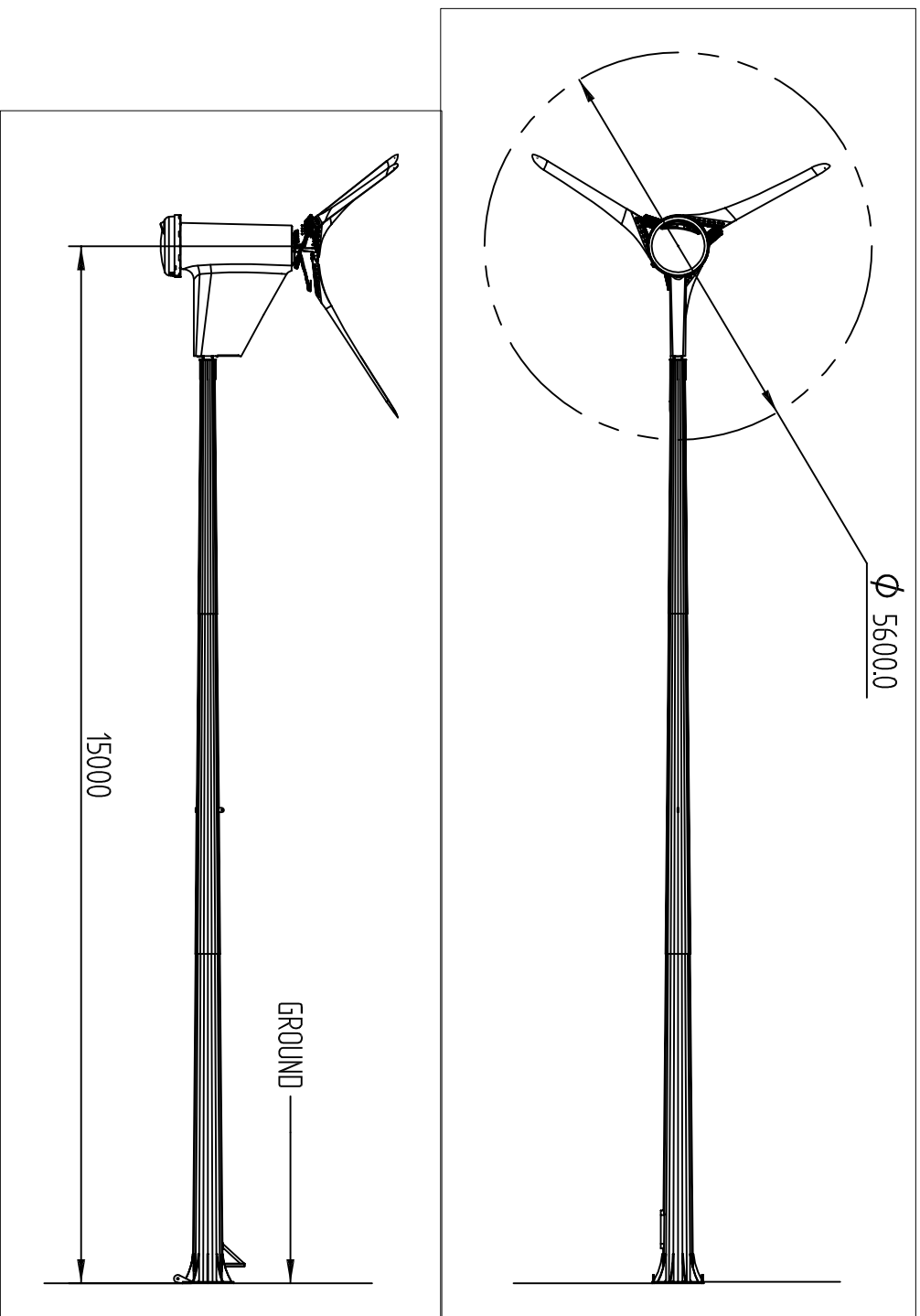
COLOUR:  
Tower and Frame – Galvanised Grey  
Covers – White, RAL9003  
Black, RAL9005

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B		115m FLANGE BOLTED VARIANT ADDED		31/03/11	404	SH13	AM	AM			
C		Drawing Border updated		09/11/11		WA		PH			
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REVISION HISTORY											 <p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS 1 PL = 0.1 2 PL = 0.01</p> <p>Project: Kw6</p> <p>Kingspan Renewables Ltd. <a href="http://www.kingspandwind.com">www.kingspandwind.com</a></p>
DRAWN		NAME		DATE		TITLE					
CHECKED		A MEN		07/03/10		Kw6 on 116m Flange Bolted Tower					
DWG NO				07/03/10		Material:		Finish:			
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**WEIGHTS:**  
Tower = 724 + 252 = 976kg  
Turbine Head = 600kg

**COLOUR:**  
Tower and Frame – Galvanised Grey  
Covers – White, RAL9003  
Black, RAL9005

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<p>GENERAL NOTES</p> <p>DEBURR ALL SHARP EDGES</p> <p>WELD SYMBOLS TO BS4999 PRT 2C</p> <p>WELDING TO BS EN 1011-2</p> <p>GALVANISING OF COMPONENTS TO CONFORM TO BS EN ISO 1461</p>																			
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Kingspan 		Kingspan Renewables Ltd		www.kingspanwind.com		SC		A MEN		07/04/10		Slip Jointed Tower		KV6 on 15m Brake Folded,		07/03/10		Material: Finish:	
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6		B		15m FLANGE BOLTED VARIANT ADDED		31/03/11		404		SHT3		AM		AM					
5		C		Drawing Border Updated		09/11/11		WA		VA		PH		SRE					
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3		REV		DESCRIPTION		DATE		EGR		REV		ENG		SRE					
2		REV		DESCRIPTION		DATE		EGR		REV		ENG		SRE					
1		REV		DESCRIPTION		DATE		EGR		REV		ENG		SRE					



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