



# Mast Inspection

Client:

Location:

Date:

Inspected by:

Verified by:



<b>Client</b>	
<b>Location</b>	
<b>Size</b>	
<b>Installed by</b>	Energy3
<b>Mast Manufacturer</b>	Energy3
<b>Anchor Types</b>	
<b>Inspection Date</b>	29 <sup>th</sup> May 2009
<b>Inspector Name</b>	

<b>Weather Conditions at Time of Inspection</b>	<ul style="list-style-type: none"> <li>• Clear day with dotted cloud.</li> <li>• Temperature 10-11 °C</li> <li>• Low winds (~2-3m/s) from a North Easterly Direction (confirmed with hand-held meter)</li> </ul>
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<b>Inspection Criteria</b>	<b>Comments</b>
Site Access	Site accessed through Glen Gynk Station. Track in good condition all the way to mast. Chains not required.
Mast Inclination	Mast was inspected as vertical and checked with a spirit level.
Anchors	Anchors & back-stays (waratahs) in good condition and showed no signs of movement.
Guy Cables	All guy wires in excellent condition (were replaced November 2008). Guy tensions were checked – OK (no adjustments required).
Wire Rope Grips	All grips present and in good condition. All checked for tightness and are OK.
Mast Base Plate	Base plate in excellent condition with no signs of corrosion or movement.
Mast Base Connections	All fixings secure and checked for tightness. Bolts free from corrosion.
Guy Rope Connections	All connection shackles are present and in good condition. Checked for tightness – OK.
Instrument Enclosure	Instrument enclosure is in good condition. Please note that the enclosure is mounted quite high up the mast (approx. 2.5m AGL) – a small ladder must be taken to site for access. No signs of water ingress, corrosion or damage. Door seal in good condition. All cable glands present and tight. Back plate is mounted securely and instrument fixings also secure.



Telemetry	Modem (Wavecom) functioning OK – function tested by dial in from Energy3 office prior to and after inspection. Aerial and mount in good condition.
Instruments	<ul style="list-style-type: none"> <li>• Anemometer and vane both functioning well and in good condition. Real time readings checked against hand held weather-meter (anemometer) and boom alignment/magnetic compass (vane).</li> <li>• MOSFET Switch function tested – OK.</li> <li>• Solar regulator (Kemo model) in good condition – output 13.6V.</li> <li>• Battery (17Ah) in good condition – 13.58V. bracket.</li> <li>• Solar panel in excellent condition and functioning well (output 19.46V). Solar panel brackets starting to show some signs of surface corrosion.</li> <li>• All other brackets in good condition.</li> <li>• All wires terminated with bootlace ferrules and fixed securely (as installed)</li> <li>• Aerial cable was loose so this was cable tied back to the mast.</li> <li>• Datalogger Clock was different to laptop clock by -6 seconds (see screenshot below). No adjustment made.</li> </ul>

RecNum	0	CSI R	0.00
TimeStamp	14:07:38	STNO	3,064.00
W SPD10M	2.97		
W DIR10m	49.25		
CR510 Deg	13.17		
BAT VOLTS	13.51		
sin	0.76		
Angle 90	139.25		
cos	0.69		
sin10min	0.58		
cos10min	0.81		
Ave WD	35.26		
G SPD 10m	3.17		
G Dir 10m	44.78		
CELL ON	0.00		
CELL OFF	20.00		
MINS 60	7.00		
MINUTES	1,407.00		



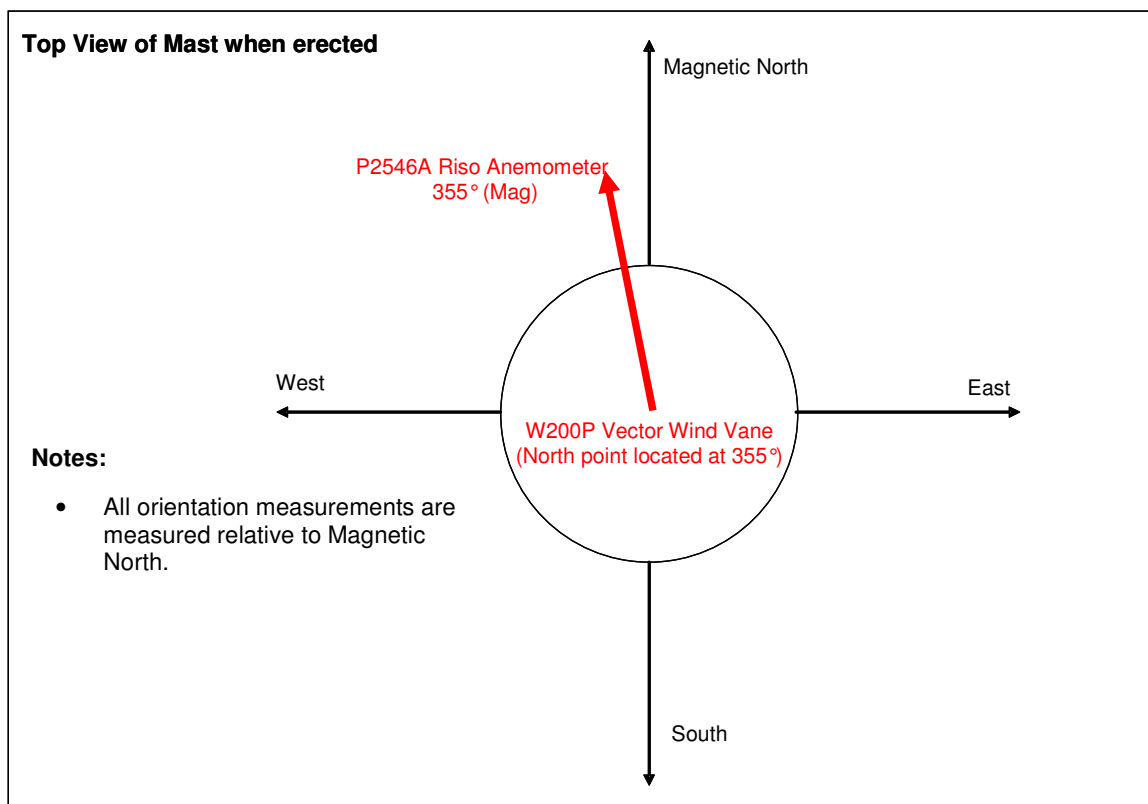
Site Security	Fencing in good condition. Minor repairs made where necessary. No sign of stock intrusion or damage to mast area.

<b>Recommended Actions To Mast &amp; Anchors</b>	<ul style="list-style-type: none"> <li>• Inspection recommended in 6 months time, no immediate action required.</li> </ul>
<b>Guy Ropes &amp; Connections</b>	<ul style="list-style-type: none"> <li>• Inspection recommended in 6 months time, no immediate action required.</li> </ul>
<b>Instrumentation</b>	<ul style="list-style-type: none"> <li>• Inspection recommended in 6 months time, no immediate action required.</li> </ul>
<b>Site Security</b>	<ul style="list-style-type: none"> <li>• Inspection recommended in 6 months time, no immediate action required.</li> </ul>



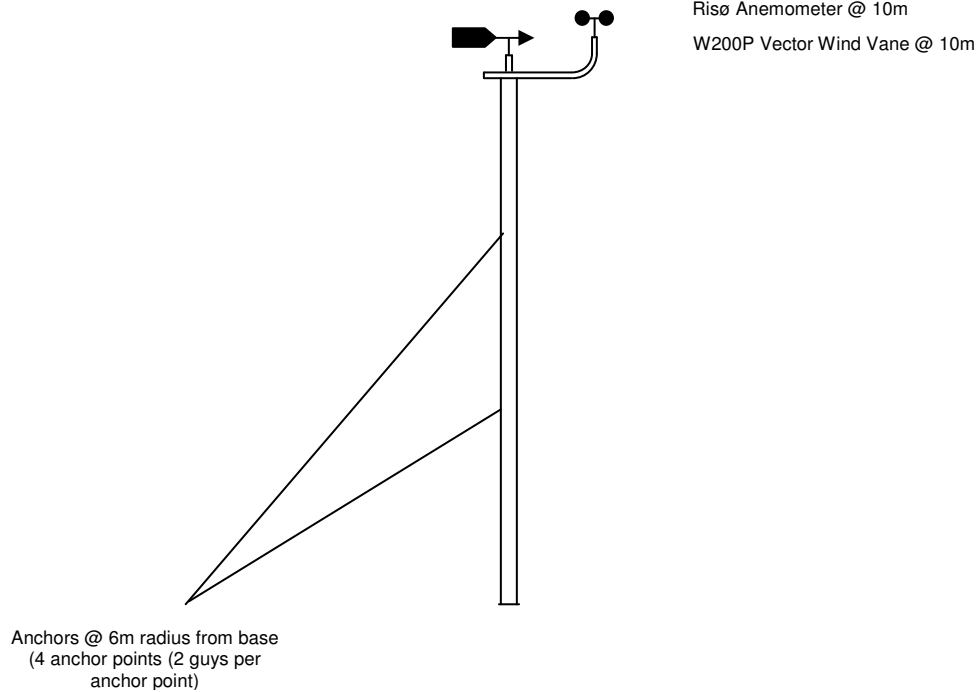
<b>Other</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>
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### Boom Orientation





## Mast Schematics



## Instrument Location and Serial Numbers

Instrument	Serial Number	Location
Vector W200P Wind Vane	Unknown	10m AGL
RISO P2546A Anemometer	Unknown	10m AGL 355° (Mag)
Solar Panel	2286064	Attached to mast 3.5m AGL
Aerial	N/A	Attached to mast 3.5m AGL
Campbell CR510 Data logger	10227	Attached to mast 2.5m AGL
Wavecom Modem	3320553356096890	Attached to mast 2.5m AGL
Solar Regulator	Kemo	Attached to mast 2.5m AGL
SIM card data number	021 346 876	Installed in Modem

**Photos**



**Mast Base Plate in Excellent Condition**



**Typical Guy Point Showing Back Stays**



**Instrument Enclosure in Good Condition**



**View of Boom**



**View up Mast**



**Mast Viewed from a Distance**



**View of Mast from All 4 Quadrants**