

<b>BOAT</b> Name <b>GRACE O'MALLEY</b> Sail Nr <b>099</b>	<b>GPH</b> <b>545.0</b>	<b>HULL</b> Length Overall <b>11.990m</b> Maximum Beam <b>3.828m</b> Displacement <b>4,818kg</b> Draft <b>2.784m</b> IMS Reg. Division <b>Performance</b> Dynamic Allowance <b>0.000%</b> Fwd Accommodation <b>No</b> Hull Construction <b>Cored</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>COOKSON 12</b> Designer <b>FARR</b> Builder <b>COOKSON</b> Series <b>01/1995</b> Age <b>10/2001</b> Age Allowance <b>0.487%</b> Offset File <b>PAZAZZ.off - 18/11/2016 15:32:44</b> Measurement by <b>Anderson - 05/12/2016</b>		IMSL <b>10.813m</b> VCGD <b>-0.637m</b> Sink <b>19.82kg/mm</b> RL <b>11.217m</b> VCGM <b>-0.505m</b> WS <b>26.73m<sup>2</sup></b> LSM0 <b>10.495m</b> Displacement/Length ratio <b>4.1679</b>



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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>528.5</b>			<b>592.2</b>		
Time on Time	<b>1.1352</b>			<b>1.1398</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>619.7</b>	<b>484.8</b>	<b>428.3</b>	<b>794.9</b>	<b>593.5</b>	<b>520.2</b>
Time on Time	<b>1.0893</b>	<b>1.3924</b>	<b>1.5760</b>	<b>0.8492</b>	<b>1.1373</b>	<b>1.2975</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>904.6</b>	<b>737.9</b>	<b>657.4</b>	<b>630.5</b>	<b>619.4</b>	<b>612.1</b>	<b>601.4</b>
52°	<b>598.0</b>	<b>499.7</b>	<b>467.4</b>	<b>455.1</b>	<b>449.2</b>	<b>445.9</b>	<b>435.5</b>
60°	<b>567.6</b>	<b>484.6</b>	<b>456.7</b>	<b>441.3</b>	<b>433.3</b>	<b>428.5</b>	<b>417.5</b>
75°	<b>545.6</b>	<b>475.6</b>	<b>447.3</b>	<b>424.6</b>	<b>408.2</b>	<b>399.7</b>	<b>392.0</b>
90°	<b>554.1</b>	<b>470.5</b>	<b>444.3</b>	<b>421.7</b>	<b>397.9</b>	<b>379.1</b>	<b>358.7</b>
110°	<b>551.1</b>	<b>466.1</b>	<b>430.9</b>	<b>401.7</b>	<b>383.9</b>	<b>367.5</b>	<b>340.8</b>
120°	<b>566.5</b>	<b>471.9</b>	<b>433.7</b>	<b>399.6</b>	<b>371.7</b>	<b>349.9</b>	<b>318.6</b>
135°	<b>626.3</b>	<b>504.1</b>	<b>455.0</b>	<b>420.5</b>	<b>386.0</b>	<b>351.8</b>	<b>293.8</b>
150°	<b>741.7</b>	<b>589.3</b>	<b>500.3</b>	<b>456.6</b>	<b>425.2</b>	<b>393.9</b>	<b>332.0</b>
Run VMG	<b>856.4</b>	<b>680.5</b>	<b>577.4</b>	<b>518.1</b>	<b>478.2</b>	<b>446.1</b>	<b>383.3</b>

**Certificate**

Number **275800**  
ORC Ref **AUS00001433**  
Issued On **05/07/2018**  
VPP Ver. **2018 1.00**  
Valid until **30/06/2019**

**Crew Weight**

Default 738kg  
Maximum **850kg**  
Minimum\* **638kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Non Spin GPH	<b>585.0</b>	<b>1.0256</b>
Non Spin OSN	<b>568.2</b>	<b>1.0560</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>880.5</b>	<b>709.2</b>	<b>617.4</b>	<b>574.3</b>	<b>548.8</b>	<b>529.1</b>	<b>492.4</b>
Circular Random	<b>747.8</b>	<b>605.0</b>	<b>529.1</b>	<b>485.0</b>	<b>456.8</b>	<b>436.7</b>	<b>407.4</b>
Coastal / Long Distance	<b>878.1</b>	<b>668.2</b>	<b>561.3</b>	<b>503.7</b>	<b>469.0</b>	<b>438.7</b>	<b>387.4</b>
Non Spinnaker	<b>818.8</b>	<b>655.5</b>	<b>566.9</b>	<b>514.5</b>	<b>481.2</b>	<b>458.2</b>	<b>425.8</b>

**Sails Limitations**

Headsails	Spinnakers
<b>6</b>	<b>4</b>

<b>Velocity Prediction in Knots for True Wind Speeds</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>42.0°</b>	<b>40.9°</b>	<b>38.2°</b>	<b>37.1°</b>	<b>36.4°</b>	<b>36.0°</b>	<b>35.9°</b>
Beat VMG	<b>3.98</b>	<b>4.88</b>	<b>5.48</b>	<b>5.71</b>	<b>5.81</b>	<b>5.88</b>	<b>5.99</b>
52°	<b>6.02</b>	<b>7.20</b>	<b>7.70</b>	<b>7.91</b>	<b>8.01</b>	<b>8.07</b>	<b>8.27</b>
60°	<b>6.34</b>	<b>7.43</b>	<b>7.88</b>	<b>8.16</b>	<b>8.31</b>	<b>8.40</b>	<b>8.62</b>
75°	<b>6.60</b>	<b>7.57</b>	<b>8.05</b>	<b>8.48</b>	<b>8.82</b>	<b>9.01</b>	<b>9.18</b>
90°	<b>6.50</b>	<b>7.65</b>	<b>8.10</b>	<b>8.54</b>	<b>9.05</b>	<b>9.50</b>	<b>10.04</b>
110°	<b>6.53</b>	<b>7.72</b>	<b>8.35</b>	<b>8.96</b>	<b>9.38</b>	<b>9.80</b>	<b>10.56</b>
120°	<b>6.36</b>	<b>7.63</b>	<b>8.30</b>	<b>9.01</b>	<b>9.69</b>	<b>10.29</b>	<b>11.30</b>
135°	<b>5.75</b>	<b>7.14</b>	<b>7.91</b>	<b>8.56</b>	<b>9.33</b>	<b>10.23</b>	<b>12.25</b>
150°	<b>4.85</b>	<b>6.11</b>	<b>7.20</b>	<b>7.89</b>	<b>8.47</b>	<b>9.14</b>	<b>10.84</b>
Run VMG	<b>4.20</b>	<b>5.29</b>	<b>6.24</b>	<b>6.95</b>	<b>7.53</b>	<b>8.07</b>	<b>9.39</b>
Gybe Angles	<b>143.6°</b>	<b>143.2°</b>	<b>150.6°</b>	<b>157.3°</b>	<b>172.2°</b>	<b>180.0°</b>	<b>147.4°</b>

**Class Division Length**

CDL = **11.016**

**Storm Sails Areas**

Heavy Weather Jib **34.06**  
Storm Jib (JL=10.32) **12.61**  
Storm Trysail **15.44**

**Owner**

<b>BOAT</b>	
Name <b>GRACE O'MALLEY</b>	Sail Nr <b>099</b>
File <b>2758</b>	Data in <b>meters/kilograms</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>17/12/2016</b>		SG <b>1.0250</b>	
FFM <b>1.400</b>	FF <b>1.399</b>	SFFP <b>0.431</b>	
FAM <b>1.064</b>	FA <b>1.067</b>	SAFP <b>11.559</b>	
W1 <b>16.3</b>	PD1 <b>49.0</b>	WD <b>13.010</b>	
W2 <b>38.4</b>	PD2 <b>106.0</b>	GSA <b>19.4</b>	
W3 <b>63.8</b>	PD3 <b>178.0</b>	RSA <b>6400.0</b>	
W4 <b>87.9</b>	PD4 <b>246.0</b>	PLM <b>2040.0</b>	
LCF from stem on CL / on sheer		<b>6.695 / 6.945</b>	
Maximum beam station from stem		<b>7.840</b>	
RM Measured		<b>165.4kg-m</b>	
RM Default		<b>144.3kg-m</b>	
Limit of positive stability / Stab.Index		<b>137.5° / 133.7</b>	
Freeboard at mast at 4.620		<b>1.220</b>	



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**IMS Measurement Certificate**

<b>RIG</b>			
Forestay Tension <b>Aft</b>	Spreaders <b>2</b>		
Inner Stay <b>None Fitted</b>	Runners <b>0</b>		
Carbon Mast <b>Yes</b>	Jumper Struts <b>None</b>		
Taper Hollows <b>No</b>	Jib Furler <b>No</b>		
Fiber Rigging <b>No</b>	Main Furler <b>No</b>		
Lenticular Rigging <b>No</b>	Without Backstay <b>No</b>		
Articulated Bowsprit <b>No</b>			
P <b>15.900</b>	E <b>5.550</b>	MDT1 <b>0.112</b>	MW <b>0.230</b>
IG <b>15.780</b>	J <b>4.620</b>	MDL1 <b>0.250</b>	GO <b>0.260</b>
ISP <b>17.855</b>	SFJ <b>0.000</b>	MDT2 <b>0.100</b>	BD <b>0.205</b>
BAS <b>1.580</b>	SPL <b>5.300</b>	MDL2 <b>0.188</b>	MWT <b>179.00</b>
FSP <b>0.070</b>	TPS <b>5.300</b>	TL <b>2.200</b>	MCG <b>5.660</b>

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Valid until <b>30/06/2019</b>	

<b>MIZZEN RIG AND SAILS</b>	
<b>N/A</b>	

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.457</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.115</b>		
Twin Screw <b>No</b>	PIPA <b>0.0035</b>		
ST1 <b>0.042</b>	ST3 <b>0.180</b>	ST5 <b>0.272</b>	
ST2 <b>0.180</b>	ST4 <b>0.112</b>	EDL <b>2.120</b>	

<b>COMMENTS</b>	
Bulb amended and displacement corrected to weighed weight ex Pazzal/ GO / 0451964872	

<b>MOVABLE BALLAST</b>	
<b>N/A</b>	



**Invalid for Racing**

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<b>CENTERBOARD</b>	
<b>N/A</b>	

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.160	1.16	2.05	3.46	4.51	51.29	52.21	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL			SL · (SFL + 4·SHW) / 6	
	17.70	17.70	17.70	9.60	8.97	139.74			
Asymmetric	SLU	SLE	SL	SHW	SFL	Area (r)	AS · (SFL + 4·SHW) / 6		
	17.75	17.75	17.75	6.50	8.60	102.36	111.43		

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
<b>HHB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Fly</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.15	0.75	1.40	2.55	3.66	4.73	15.05	37.55			13/05/2018	Unknow	
	0.96	1.72	2.80		4.73	14.36	37.42	Y			Unknow	
	0.13	0.68	1.25	2.39	3.52	4.66	15.16	36.11	Y	12/08/2014	Unknow	

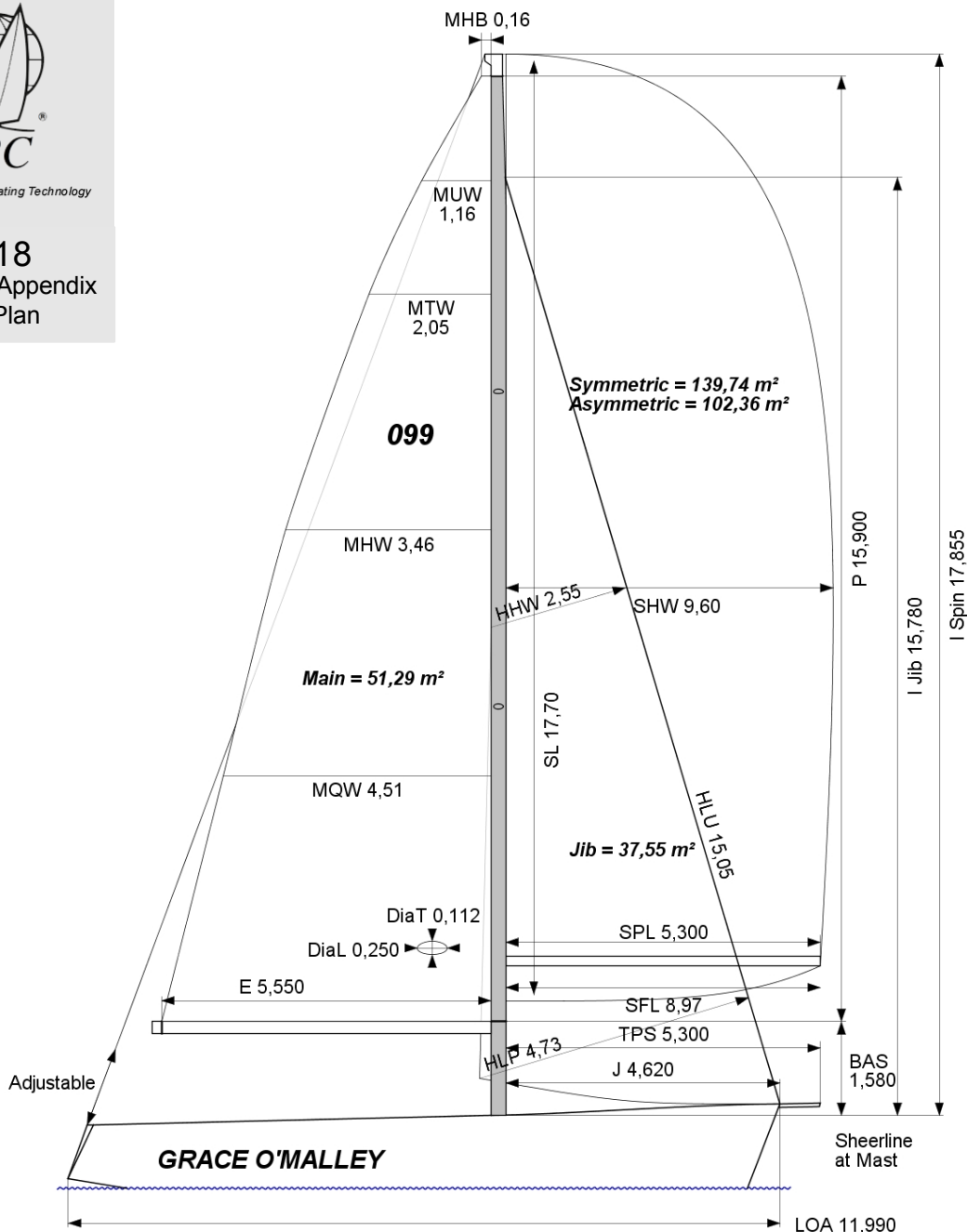
<b>MEASUREMENT INVENTORY</b>				
Measurer <b>Payne</b>				
Date <b>17/12/2016</b>				
Comment				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
1	Engine	YANMAR	40hp	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

<b>MEASUREMENT INVENTORY</b>								
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn</b>	<b>Description</b>
3	Tank	FUEL	S/S	95.0	8.79		25.0	
2	Tank	WATER	F/G	120.0	5.50		0.0	
1	Tank	WATER	F/G	120.0	5.50		0.0	
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>				
1	Battery	100.0	8.60	2 X 12v SEALED				
1	Misc	15.0	7.70	Oven				



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Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL (1)**

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
3	0.160	1.16	2.05	3.46	4.51	51.29	Ian Guanaria	13/05/2018		Unknown	

**HEADSAILS (3)**

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
J1	0.15	0.75	1.40	2.55	3.66	4.73	15.05	102%	37.55			Ia	13/05/2018	Doyle	Unknown	
2		0.96	1.72	2.80		4.73	14.36	102%	37.42	Y		Ian		Doyle	Unknown	
1	0.13	0.68	1.25	2.39	3.52	4.66	15.16	101%	36.11	Y		Mike Kirby	12/08/2014	Short	Unknown	

**SYMMETRIC SPINNAKERS (1)**

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
2015	17.70	17.70	17.70	9.60	8.97	139.74	I Guanaria	08/06/2016		Unknown	as per IRC 2016 Revaluation Form

**ASYMMETRIC SPINNAKERS (1)**

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
1	17.75	17.75	17.75	6.50	8.60	102.36	asym	Ian Guanaria	13/05/2018	Doyle	Unknown	