

Appendix 4 - Engineering Risk Assessment

Note: A drawing of the mooring system together with a parts list is to be submitted with this completed document (load ratings of components to be specified)					
					Leave margin clear
Q1	Has the behavior of the device and its finalised mooring system been modeled for the proposed FabTest deployment?				
Q2	What software was used for this model?				
Q3	Enter the coincident environmental conditions used in this model that correspond to peak mooring loads.				
	Hs		(m)		
	Wave direction		bearing		
	Wave type (regular, irregular, spectral)				
	Wind speed		(ms ⁻¹)		
	Wind direction		bearing from		
	Tidal current speed		(ms ⁻¹)		
	Tidal current direction		bearing		
	Mean sea level water depth		(m)		
Q4	Enter values for the following:				
	Displacement of the floating device		(tonnes)		
	Number of mooring limbs in system				
	Predicted peak single limb load (top end)		(kN)		
Q5	What factor of safety (FOS) is applied to the mooring system design with respect to the peak limb loads identified in Q4?				
Q6	At what elevation angle (from the horizontal seabed) does the peak seabed end limb load act?		(°)		
Q7	What length of chain (per limb) lies on the seabed when the floating device is becalmed and at low tide? If mooring limbs are of unequal lengths this must be specified on an accompanying drawing.		(m)		
Q8	Are load cells to be fitted into the mooring system?				
	What is the load range maximum of the load cells?				
	What is the manufacturers declared load limit?				
	Is a back-up line provided to safeguard against failure?				
	Does the back-up line conform to the FOS given in Q5?				
Q9	Have the floating hull and its mooring attachment points been designed to accommodate the top end mooring load stated in Q4 with the FOS as stated in Q5?				
	Comments				
	Margin for FabTest use				

Q10	Define the splay of the mooring system in terms of the size of the seabed area occupied e.g. 200 m diameter	<input type="text"/>	(m diameter)	<input type="text"/>
Q11	What is the predicted excursion radius of the moored floating device (peak loadings coincident with LAT)?	<input type="text"/>	(m)	<input type="text"/>
Q12	Is the floating device positively stable when free floating in the upright condition (pitch and roll angles = 0°)?	<input type="text"/>		<input type="text"/>
Q13	At what angles does the free floating device become unstable?			
		Pitch	<input type="text"/>	(°)
		Roll	<input type="text"/>	(°)
Q14	What are the predicted total vertical loads applied to the floating device by the mooring system during calm conditions?			
		LAT	<input type="text"/>	(kN)
		HAT	<input type="text"/>	(kN)
Q15	What is the reserve buoyancy at calm sea HAT?	<input type="text"/>	(m ³)	<input type="text"/>
Q16	Describe the construction, material and protective coatings of the hull	<input type="text"/>		<input type="text"/>
Q17	Describe the galvanic corrosion protection measures intended for the hull and the mooring system.	<input type="text"/>		<input type="text"/>
Comments		<input type="text"/>		
Margin for FabTest use		<input type="text"/>		