

Rev No: 0.00	Risk Assessment	
Rev Date: 05 Feb. 2021	FR_2_04	

Task / Activity:	Black Swan USV Operations for Bridge Inspection	TRA No:	UHC23008-TRA002	Revision No:	0.00	Date:	23/03/2023
Vessel / Site:	Old Wye Bridge Chepstow						
Client / Project:	Old Wye Bridge Survey	HIRA Meeting	✓	Task Risk Assessment	✓	TRA / MOC	

TASK BASIC SAFETY REQUIREMENTS (BSRs) (X)											
1. Method Statements	✓	6. Inductions	✓	11. Supervision		16. Spill Kits		21. Good Manual Handling Techniques	✓		
2. Permit to Work		7. Competency	✓	12. Vessel Specific TRA's	✓	17. PUWER compliant		22. Safety Harness			
3. PPE	✓	8. Task Specific Training	✓	13. Barriers / Signs		18. Environmental Conditions	✓	23. Lockout & Tag out			
4. Life Jacket	✓	9. Awareness	✓	14. Equipment Certification	✓	19. MSDS & COSHH					
5. Familiarisation	✓	10.. Communication	✓	15. TBT	✓	20. LOLER compliant					

Acknowledgements for Legislation HSE/Marine (see PO3-4 Appendix1 Legal Register for guidance): / Industry Guidance / Company Documentation:	
UHC23008_Project HSE Pack	
UHC23008_MS002-Black Swan USV Ops_Old Wye Bridge Survey	

			Pre-Control Measures (Inc BSR) Risk Score			Control Measures		Post Control Measures Risk Score			Accountability / Responsibility Of
Activity	Hazard	Hazard Effect	P	S	R	Preventative & Protective Measures to be Implemented		P	S	R	
Unmanned Vehicle & Support RIB Launch or Recovery	Working near water. Working on unstable/muddy riverbanks. Working over mud. Working over steep slopes. Manual Handling	Injury to Personnel or death. Asset Damage Reputational Damage	C	5	H	Life jacket to be worn at all times. Equipment to recover personnel to be kept at the rivers edge at all times, throw lines, dog catchers etc. If working over mud, then use equipment to minimize sinking into mud such as 'mudders' footwear or temporary plastic footways etc. Avoid launch/recovery over any steep inclines. When working on slopes ensure that they are not sufficiently steep that personnel can loose control of their footing and slide down riverbank. Plan lifts, ensuring path is clear of obstruction. Reduce size of lifts or share loads where practicable.		B	5	M	Survey Party Chief

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Activity	Hazard	Hazard Effect	P	S	R	Preventative & Protective Measures to be Implemented	P	S	R	
Unmanned Vehicle Survey Operations.	Unmanned vehicle run off. Entanglement with fishing equipment, rope, underwater object or weed. Collision of amphibious vehicle or support RIB with 3rd party vessel. Loss of battery power on amphibious vehicle. (Dead vehicle). Loss of comms with amphibious vehicle.	Injury to Personnel or death. Asset Damage Reputational Damage Environmental impact Schedule delay	C	5	H	Support RIB to remain on standby for the unmanned vehicle and within sight to provide any required support. Power consumption and remaining power on amphibious vehicle to be monitored at all times. 3rd party vessel traffic, predominantly leisure traffic to be well understood by crew. Local WIFI network and radio comms to be maintained at all times. If loss of comms is found then operations to be suspended until loss of comms is explained and restored.	B	5	M	Survey Party Chief
Personnel Embarking / Disembarking Support RIB	Inadequate access & egress (MOB) Slips, Trips & Falls Manual Handling Transportation and use of petrol	Injury to personnel Asset damage Schedule delay Injury to personnel. Environmental damage. Reputational Damage	C	5	H	Life jacket to be worn at all times. RIB to be kept clean and non-slip Work areas to be kept tidy at all times. Fixed trip hazards highlighted by high visibility markings. Suitable footwear to be worn whilst on-board. No flip flops, bare feet, socks only or open toe sandals to be worn. Monitor weather conditions and deck/pontoon condition underfoot. Plan lifts, ensuring path is clear of obstruction. Reduce size of lifts or share loads where practicable. All filling of RIB outboard motor with fuel to be conducted off site within a fuel station. No re-filling of fuel to be planned on site. Spill kits to be available on site for any potential fuel leak or spill.	B	5	M	Rib Coxswain

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Activity	Hazard	Hazard Effect	P	S	R	Preventative & Protective Measures to be Implemented	P	S	R	
						COSHH assessment to be referred to when using or transporting Petrol fuel.				
Operation of the support RIB	Falling into water. Loss of propulsion. Other waterway users. Strong water currents. Weather conditions	Injury to personnel up to and including death by drowning. Support RIB unable to be controlled in watercourse. Asset damage Schedule delay Environmental damage. Reputational Damage	C	5	H	RIB Coxswain to be suitably qualified and certified for commercial operation of the RIB. All required PPE to be worn, including lifejacket. Support RIB to have secondary means of propulsion, (auxiliary electric outboard or oars). Coxswain to learn and understand the watercourse prior to arrival in order to identify other potential waterway users. Survey operations to be planned around periods of low river flow, typically less than 2 knots of flow. If flow increases mid survey then operations to be suspended and RIB to be recovered to riverbank. Clothing appropriate for the time of year and weather conditions to be expected to be worn. As a minimum this will include fire retardant coveralls, but in colder or wet conditions this should also include waterproof winter work clothing (flotation suit etc.) Staff on the riverbank to hold throw lines, dog catchers and other personnel recovery tools to assist in the event of someone falling into the water.	B	5	M	Rib Coxswain

	Name:	Rank/Position	Date
Assessment completed by	Simon Baldwin	Project Manager	23 Mar 2023
Assessment approved by	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap to enter a date.
Assessment reviewed by	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap to enter a date.

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			SEVERITY				
			Negligible	Minor	Moderate	High Potential	
						Serious	Major
Personnel (Injury or ill health)			No health effect	First aid case, minor health effect	Medical treatment case, restricted work case, Short term health effect	Lost time injury, medium term health effect	Multiple serious injurious, death, long term health effect
Environment (Guide volume of pollutant spill)			< 1 litre	Short-lived minor damage, > 1 litre	Short-lived, moderate damage, > 10 litres	Serious OR persistent damage, > 100 litres	Serious AND persistent damage, > 100 m ³
Equipment Damage / Business Loss (Reputation)			Less than £300. Negligible reputation harm media coverage	Less than £8,000. Minor localized reputation harm.	Less than £30,000. Adverse local reputation harm (media, port, etc.)	Less than £200,000. Adverse national media coverage	More than £200,000. Severe adverse national media coverage
			(1)	(2)	(3)	(4)	(5)
PROBABILITY	Very Unlikely (Unheard of. No knowledge of any such cases)	(A)					
	Unlikely (Unheard of. Not likely to occur but may occur)	(B)					
	Possible (Now and then, occurs occasionally)	(C)					
	Likely (Could occur more than once)	(D)					
	Very Likely (Could occur regularly)	(E)					

Low	Minimal risk. Work may commence. Additional practicable controls should still be used if they impose no significant cost or effort. Risk assessment can be approved by PIC.
Medium	Work may commence. As a significant level of risk remains after all controls have been implemented, there is need for increased vigilance and dynamic RA during the job. PEOPLE are what reduces the risk to ALARP. It may be necessary to nominate specific personnel to conduct or supervise the work. Risk assessment must be approved by the senior site representative.
High	Risk is unacceptable. Further controls are required before activity can commence.

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