

# British Divers Marine Life Rescue Risk Assessment



Risk Assessment Title **Large whale disentanglement & training**

Risk Assessment Number **BDMLR/**

Risk Assessment Date **20/09/2018**

Risk Assessment Review Date **20/09/2020**

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## How this Risk Assessment works

*Risk is a combination of the potential accident **SEVERITY** resulting in death, serious injury, minor injury etc. and the **LIKELIHOOD** of that accident occurring i.e. very unlikely up to almost certain.*

*The risks are calculated using the 5 Gate Risk Matrix below where Hazards are identified and an **INITIAL RISK** is calculated. Control Measures are then put in place to eliminate, or reduce the initial risk and then recalculated as the **RESIDUAL RISK**. This residual risk should be considered **ALARP (As Low As Reasonably Practicable)***

*This Risk Assessment should be considered as a generic assessment and has tried to take into account as many hazards as can be considered as foreseeable within our thresh hold of operations. Safety is the responsibility of each individual attending an incident and a site specific Risk Assessment should be carried out for each task required to be undertaken.*

NUMERICAL VALUE	LIKELIHOOD	SEVERITY
1	Very Unlikely	Minor Injury with no time off work
2	Unlikely	Injury and/or up to 3 days off work
3	Likely	Injury resulting in over 3 days off work
4	Very Likely	Major Injury resulting in long term absence
5	Certain	Death

## Likelihood

5	5	10	15	20	26
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5
	1	2	3	4	5

Severity



TASK	HAZARD	L	S	IR	RISK CONTROLS	L	S	RR
<b>Launching CRRC</b>	<b>Manual Handling injuries</b>	3	3	9	Use correct manual handling techniques, get assistance from Level II's	2	2	4
	<b>Man Overboard</b>	2	5	10	Always maintain 3 points of contact and wear life jacket	2	2	4
	<b>Engine Overboard</b>	2	2	4	Ensure that engine is lowered down on a rope with sufficient bodies to secure	2	1	2
	<b>Fuel Spill</b>	2	1	2	Ensure tank cap and breather are tightly shut	1	1	1
	<b>Tube Leak</b>							
	>Valve	3	1	3	ensure valve has not frozen or plunger has become stuck	2	1	2
	>Puncture	3	2	6	Keep tubes away from all sharp object	2	2	4
	<b>Engine Breakdown</b>							
	>Fuel starvation	2	1	2	Ensure fuel bulb is primed	1	1	1
	>Fuel Contamination	3	1	3	Keep breather valve closed during transport and when on support vessel	1	1	1
	>Rotten Fuel	5	1	5	Discard fuel after use	1	1	1
	>Damage to Fuel Line	2	1	2	Carry spare fuel line & bulb on support vessel	1	1	1
	>Engine Seizure	3	4	12	Ensure correct 2 stroke oil mixing ration is used. Ensure fuel is 2 stroke mix	2	2	4
	>Engine Flooding	3	2	6	Keep plug socket and wire brush with support vessel to clean spark plugs	2	1	2
<b>Loss of boat</b>								
>Towing	3	3	9	Ensure towing bridle is securely attached at both ends	2	2	4	
>General	3	3	9	Ensure, bow and stern lines are securely attached	2	2	4	

ALARP

TASK	HAZARD	L	S	IR	RISK CONTROLS	L	S	RR
<b>Assessing Cetacean</b>	<b>Snagging on trailing gear</b>							
	>Engine Snagging	5	5	25	Keep engine lock off, do not approach with engine running. Lift engine when near whale	2	2	4
	>Standby vessel snagging	5	2	10	Keep standby vessel back atleast 400m	2	1	2
	>Human Snagging	5	5	25	Keep feet and legs clear of any trailing gear. Always stay in the boat	2	5	10
	<b>Whale Roll Over</b>							
	>Pulling gear towards CRRC	4	5	20	Always be observant and warn CRRC if gear comes towards boat	4	2	8
	>Whale crushing CRRC	3	5	15	If wahle observed to roll, vacate the area immediately until roll has stopped	2	2	4
	<b>Tail Flukes</b>							
	>Striking CRRC	3	4	12	crew to duck below level of tubes	3	2	6
	>Striking LWDT Level III's	3	5	15	Always watch for tail flukes and wear helmet & PFD	2	2	4
	<b>Pectoral flippers (humpback)</b>							
	>Striking CRRC	3	4	12	crew to duck below level of tubes	3	2	6
	>Striking LWDT Level III's	3	5	15	Always watch for pectoral flippers and wear helmet & PFD	2	2	4
	<b>Man Overboard</b>							
>Fall onto whale	4	5	20	Maintain tight grip of tube life lines	2	5	10	
>Fall into trailing gear	4	5	20	2nd Level III to hold onto Level II carrying out assessment over tube	1	5	5	

ALARP

TASK	HAZARD	L	S	IR	RISK CONTROLS	L	S	RR
<b>Grappling Cetacean</b>	<b>Engine Snagging</b>	5	5	25	Keep engine lock off Keep safe distance and approach from 4 or 8 o' clock position Lift engine as soon as grapple has snagged	2	2	4
	<b>Throwing Grapple</b>							
	>Grapple Striking Coxswain	3	5	15	Always throw forward and left Helmets must always be worn	1	2	2
	>Boat Puncture	3	3	9	Keep grapple in protective pouch	2	2	4
	>Rope Entanglement	3	3	9	Keep rope flaked in bag or bucket	2	1	2
	>Man Overboard	2	5	10	Adopt correct throwing posture	1	5	5
	<b>Striking Whale</b>	4	3	12	Always throw over the whale Throw safe distance behind tail flukes	2	1	2
						2	1	2
	<b>Loosing grapple</b>	3	2	6	Ensure carabiner is attached correctly Keep tight grip of control line Recover as soon as possible	1	2	2

ALARP

TASK	HAZARD	L	S	IR	RISK CONTROLS	L	S	RR	
<b>Attaching Control Lines and Buoys</b>	<b>Nantucket sleigh ride</b>								
	>Rope Burn	5	2	10	Always wear thick leather or neoprene gloves	2	2	4	
	>Limb Strain	3	3	9	2nd Level III to assist during strenuous operations	2	1	2	
	>Fatigue	5	1	5	Swap out Level III's if required	2	1	2	
	>Man Overboard	3	5	15	Keep gear and ropes over side of CRRC, do not let lines cross CRRC	1	5	5	
	>CRRC Damage	3	3	9	Keep control line over double hypalon section on bow tube	2	2	4	
	>CRRC Bow Down	3	2	6	Keep water levels in CRRC to a minimum	2	2	4	
	>CRRC Flooding	3	2	6	Empty CRRC by use of transom auto bailers if flooding occurs	1	2	2	
	>CRRC Broach	3	3	9	Release control line if CRRC broaches. Keep crew clear of any lines	2	2	4	
	>CRRC Capsize	2	5	10	Surface with arm abovehead in fist. Keep clear of any floating lines	2	3	6	
	>Grapple detaching	2	4	8	Always wear helmet, duck below tube level if grapple detaches	2	2	4	
	<b>Hauling in gear</b>								
	>Rope Burn	5	2	10	Always wear thick leather or neoprene gloves, do not let rope slip through hands	2	2	4	
	>Rope entanglement	4	5	20	Keep hauled gear outside of CRRC except for section where buoys to be attached	1	5	5	
	>Snagging on CRRC Internals	3	5	15	keep hauled gear outside of CRRC except for section where buoys to be attached	1	5	5	
	>CRRC Damage	3	2	6	Keep gear over double hypalon patch on CRRC bow tube	2	2	4	
	<b>Tying loop in Gear</b>								
	>Trapping Hand / Finger	2	5	10	Do not allow fingers to enter any loops or knots in trailing gear	1	5	5	
	>Human Entanglement	2	5	10	Keep body parts clear of rope entanglements in any hauled gear.	1	5	5	
	<b>Attaching / Deploying Buoys</b>								
>Restricted deck space	5	2	10	Only keep required equipment on CRRC. Keep remaining kit on support vessel	3	1	3		
>Manual handling strain	2	3	6	Use correct MH techniques. Get assistance if required	1	1	1		
>Struck by exiting buoy	3	3	9	Throw attached Buoys over side of CRRC, do not allow to exit over bow	1	3	3		
>Rope entanglement	3	3	9	Keep all ropes coiled and neatly stowed.	2	2	4		
>Hand Injury by Wichard Carabiner	2	1	2	Wear thick gloves and avoid pinch points	1	1	1		
>CRRC Entanglement	3	5	15	Keep all ropes and line clear of snagging points on CRRC inc. Engine & internal fittings	1	5	5		
>Human Entanglement	3	5	15	keep buoy and control line clear of CRRC crew. Avoid coils on deck that could snag feet	1	5	5		
>Man Overboard	2	5	10	Wear helmet & PFD, deploy Buoys over side, maintain tight grip of life lines on CRRC	1	3	3		

ALARP

TASK	HAZARD	L	S	IR	RISK CONTROLS	L	S	RR	
<b>Cutting Whale Free</b>	<b>Sharps hazard</b>								
	>Cutting fingers	3	4	12	Wear thick gloves and don't check for sharpness. They are sharp!	2	2	4	
	>puncturing boat	3	3	9	Keep knives in protective pouch until required	2	3	6	
	<b>Approaching whale</b>								
	>Engine Entanglement	5	5	25	Keep engine lock off and approach from 4 or 8 o' clock positions. Lift engine near gear	2	2	4	
	>Spooking Whale	5	5	25	Avoid sudden noise, gear changes or manoeuvres with CRRC	2	2	4	
	>Whale Roll Over	3	5	15	If whale rolls, abort approach and wait until situation has settled	2	2	4	
	>Whales Tail Flukes	3	5	15	Do not approach the whale if fluke slapping, wait until situation has settled.	2	2	4	
	>Whales Pectoral Flippers	3	5	15	Do not approach the whale if Pectoral flipper slapping, wait until situation has settled.	2	2	4	
	<b>Use of poles and knives</b>								
	>CRRC puncture	5	3	15	Keep knife clear of CRRC tubes. Attach float to pole and discard overboard for recovery	2	3	5	
	>Striking CRRC Crew	3	5	15	Watch pole swing. Always wear helmets.	2	2	4	
	>Man Overboard	3	5	15	2nd Level III to hold PFD harness of Level III cutting whale free	2	2	4	
	>Change in Whales Behaviour	3	5	15	Stop attempt, back off and reassess	2	2	4	
	>Fatigue	5	3	15	Swap over level III if required. Get assistance as required	2	1	2	
	>Injuring Whale	3	3	9	keep point away from whales skin and make slow controlled movements	2	2	4	
>Loosing Pole	3	2	6	Attach float and rope prior to use, for later recovery if discarded	2	2	4		

ALARP

TASK	HAZARD	L	S	IR	RISK CONTROLS	L	S	RR	
<b>Packing away equipment</b>	<b>Back Injury due to -</b>								
	>Lifting CRRC	3	3	9	Use minimum of 4 persons + MH techniques drain water from CRRC	2	2	4	
	>Lifting Outboard Motor	3	3	9	Use 2 persons to lift motor+ MH techniques	2	2	4	
	>Lifting Fuel Tanks	2	1	3	Use correct manual handling techniques	1	1	1	
	>Equipment Bags	3	2	6	Use correct manual handling techniques	2	1	2	
	<b>Hand injuries due to -</b>								
	>Working With Knives	3	3	9	Wear thick or kevlar gloves	1	1	1	
	>Wichard Carabiners	2	1	3	Keep fingers clear of pinch points	3	2	6	
	>Preparing Equipment	2	1	3	Be aware of pinch points when assembling kit	1	1	1	
	>Handling Ropes	3	2	6	Wear gloves to avoid rope burns	1	1	1	
	<b>Slipping Tripping -</b>								
	>Equipment	3	2	6	Keep walkways clear of equipment especially when working near quayside	2	1	2	
	>Loose Ropes	3	3	9	Keep ropes tidy and tied up	2	1	2	
	<b>Bodily injury due to slipping tripping or falling</b>								
	>Head injury	2	5	10	Always wear helmet during LWDT operations	2	1	2	
>Broken / twisted Ankle	2	4	8	Wear stout boots, check access & egress routes	1	4	4		
>Broken arms or legs	2	4	8	be aware of potential slipping or tripping hazards	1	4	4		
<b>Manual handling injuries</b>									
		3	3	9	Always use appropriate manual handling techniques	2	2	4	

ALARP

