SSOW 002: Launching and Recovery of D&S IFCA's Vessels

Safe System of Work for:			**Launching and Recovery of D&S IFCA's Vessels –**	
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		Reviewed by:	Gavin Mayhew	

Key Objectives

- To understand the hazards and risks of towing, launching and recovering the D&S IFCA Patrol vessels and carrying out all necessary measures to ensure that safe working practices are carried out
- SSOW001 should be read in conjunction with RA6.
- Procedures are generally shared across the two D& IFCA Patrol vessels -PV David Rowe ad PV Enforcer and common to the smaller vessel Tinny used in estuaries. Photos and where appropriate text highlights difference.

General/ Main Hazards

 Slips and trips	 Crushing	 Manual handling	 Fuel	 Cuts and injury form sharp edges	 Overhead hazards	 Drowning	 Towing boat	 Entanglement in ropes or gear
 Angry/ hostile people	 Tidal conditions	 Sea conditions	 Collision with other vessels	 Underwater Hazards				

PPE Necessary							
 Safety Footwear	 Life jackets	 Protective/ warm gloves	 Appropriate coastal clothing /drysuits	 Wear sunscreen	 Body/vest Camera to be worn and operational during enforcement activity	 Helmets fitted with integrated comms system	 High viz reflective Vests to be worn by banksmen

Major Risks

- Launching and recovery of vessel using trailer involving the potential injury to persons and damage to structures,
- Launching and retrieving the patrol vessel involving potential risks of slipping, tripping, entanglement in ropes and trailer failure
- Potential for crushing should the vessel come off the trailer and
- Immersion if the vehicle and trailer losses traction on the slipway
- Fuelling of vessel leading to fire, and fuel spillage causing slips
- Crushing injuries
- Injury caused by tripping and slipping
- Floating and submerged obstructions
- Hostility / violence from public/ other road users
- Entanglement in ropes or lines.
- Injury from lifting and falling heavy objects and equipment
- Falling from height
- Cuts and injury from sharp edges
- Adverse environmental conditions – weather, tides
- Collision with other slipway users
- Pedestrians in the vicinity and managing them

Launching Patrol Vessels

Step	Procedure	Hazard or risk	• Control measure
1	Fuelling of vessel	Flammable fuel causing a fire risk Slips and trips due to spilled fuel and fuel hose	• Any fuel spills to be cleaned up immediately using sand or appropriate method • Filling up of vessel only to be undertaken at a suitable fuel station • Fire extinguishers located in accessible position • Fuel Spill kit is kept in the D&S IFCA vehicle used for towing
2	Ensure all PPE, used before, during and after the operation and inspection at sea, is maintained in good working order	Inadequate PPE could lead to injury, drowning, and medical conditons such as hypothermia or sun stoke,	• All Officers supplied with appropriate PPE • All PPE is maintained by Officers and replaced/ updated when necessary • Life jackets are serviced annually and a record kept . • Each officer undertakes a visual pre-wear inspection of their life jackets, following HSE guidance and similar to those procedures undertaken by other at agencies (e.g., Coastguard).
3	Undertake a check of the patrol vessel and the required equipment on each patrol	Failure to do a check could result in patrol vessel failure, inability to undertake the patrol as planned and danger to health and safety of crew. Working at height.	• Keep and complete a checklist of each patrol vessel prior to each patrol. • Keep an inventory of all patrol vessels' equipment with service dates, serial numbers (where appropriate) and location on board the vessel. • Ensure grab bag and flare pack is present and complete unopened – record seal number in IAuditor • Use ladder to access the patrol vessel when on trailer – the ladder should be secured to the vessel and on stable ground
4	Vessel is maintained and certified under MGN 280 .	Failure to do so may result in the vessel being unfit for sea and safe operation at sea, invalidate insurance	• Annual coding certification as required • Portable firefighting equipment is maintained and serviced annually in accordance with RS5306- part 3 -2017 • Boat engines are serviced regularly at required intervals (each 100 engine hours)

Step	Procedure	Hazard or risk	• Control measure
5	Use only known and approved launching and recovery sites unless otherwise agreed	Failure to use recognised launching sites could lead to lack of knowledge and understanding of the tides, currents stability of the substrate at site and unknown underwater hazards which could lead to damage or to trailer and vessel and potential injury to persons, and structures.	• All Officers are trained in procedures. • Launching sites are known to Officers and agreed prior to setting off. • Check list is completed and recorded in IAuditor • Follow RA6. • If an unknown (not used before) slipway is to be used adequate research will be conducted before arrival on site to ensure it is appropriate.
6	On arrival at launching location allow time for wheel bearings to cool prior to immersion in sea/estuarine water	Failure to allow a cooling period could lead to damage to the bearings leading to damage and failure of the trailer and potential the vessel, vehicle other road uses, persona dn structures.	• All officers have full driving licenses • All Officers are trained in launching procedures. • Follow RA6
7	Assess state of the tide, wind direction and sea state and condition of slipway prior to launching	Failure to check conditions could lead to difficulties launching, loss of control of trailer and vessel during launching and damage to trailer and vessel. .Slips and trip may occur due to slippery ground.	• Follow RA6 • Officers to review tidal state and wind conditions at planned launching location prior to launching • Coxswain to determine at point of launching whether it is safe to do so and have determined an alternative site should conditons appear to be unsafe.

Step	Procedure	Hazard or risk	• Control measure
8	Uncouple from towing vehicle if this is required to launch (front hitch) and use of chocks is essential to maintain position of vessel and trailer. . If font hitch is used (infrequently for specific manoeuvring) ensure the front hitch is in place by aligning the securing hols between the hitch and the vehicle hitch holder. Secure in place with the pin.	Loss of control of trailer and vessel leading to potential damage to assets, persons and structures	• Chocks have been previously stowed in vehicle to be used when necessary (Figure 17) • All Officers are trained in launching procedures
9	**The following pre – launching procedures must be followed:** • Disconnect electrics • Trailer lights are compressed/retracted for launching (Figure 2) • Remove prop bags (Figure 1) • Remove PV tie down strops, but Winch and bow line to remain connected (Figure 6) • Coxswain of the PV to conduct final checks and walkaround prior to immersion • For PV Enforcer ensure bung is in place and kill cords are in place (Figures 3 & 4) • Coxswain and crew on board the PV • Communication between coxswain and driver through the helmet integrated comms	All checks must be conducted. Failure to do so could lead to loss/ damage to the vessel, tailer and other structures , and injury to Officers, members of the public in the launching area.	• All Officers are trained in pre-launching and launching procedures. • All officers wear helmets with an integrated communications system installed to aid communications during the pre-launching and launching procedures. • Check list through IAuditor is conducted by Officers. • Officers use access ladder if required (Figures 12 & 12a). • RA6 is followed by officers

Step	Procedure	Hazard or risk	• Control measure
	system and minimum of visual to be maintained at all times • Ensure drain socks are pulled into upright position to prevent water ingress		
10	**The following launching procedures must be followed:** • Driver to lower the combination of the trailer and vessel, until water level reaches wheel arches or until coxswain indicates sufficient depth and vehicle is stopped • Coxswain to start all engines and ancillaries and conduct required equipment checks • Coxswain to lower and engage engines (providing safe to do so) to hold position on trailer and indicate to driver to release the winch line (Figures 7 & 8) • Coxswain to indicate to crew for the release of bow line when ready (Figures 8 & 9) • Coxswain to engage astern and move off trailer • Lower drain socks if used	All procedures must be followed. Failure to do so could lead to loss/ damage to the vessel, tailer and other structures , and injury to Officers, members of the public in the launching area	• All Officers are trained in pre-launching and launching procedures. • All officers wear helmets with an integrated communications system installed to aid communications during the pre-launching and launching procedures. • RA6 is followed by officers

Step	Procedure	Hazard or risk	• Control measure

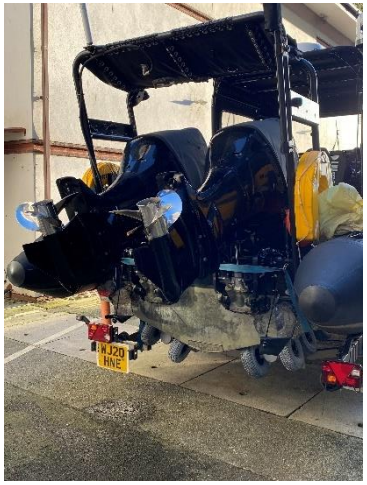

Figure 1 PV David Rowe propellor bags removed

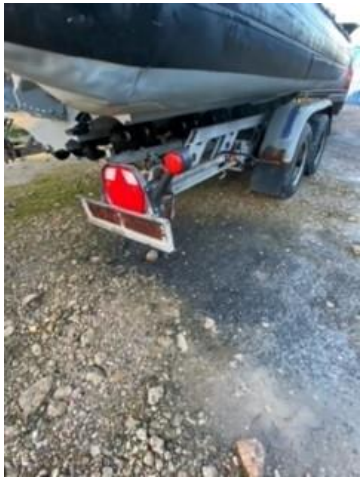

Figure 2 PV Enforcer trailer lights compressed for launching

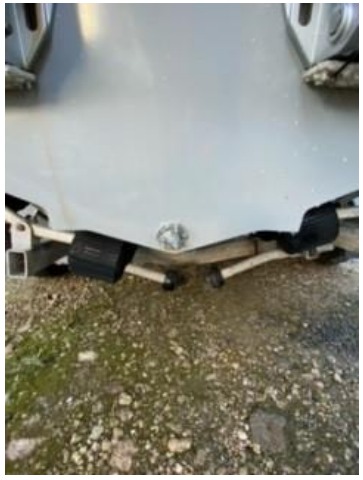

Figure3 PV Enforcer bung in place

Figure 4 PV Enforcer Console kill cords in place

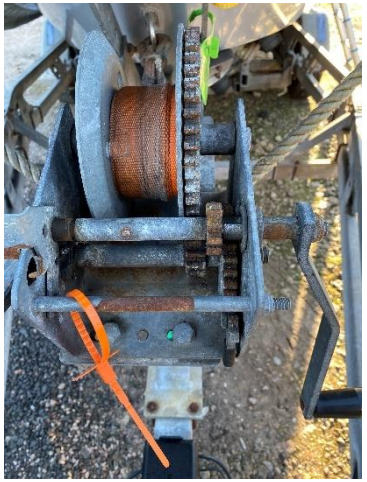

Figure 5 PV Enforcer Winch handle disengaged

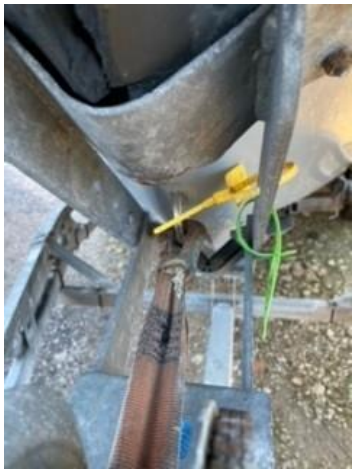

Figure 6 PV Enforcer Winch line attached

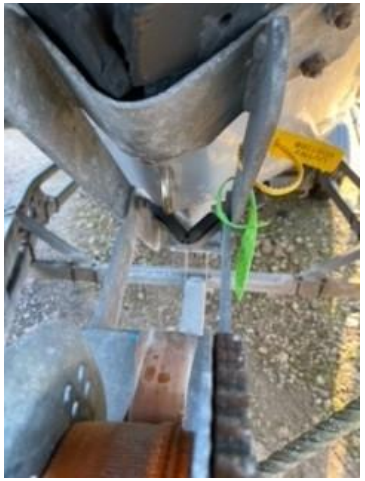

Figure 7 PV Enforcer Winch line unattached

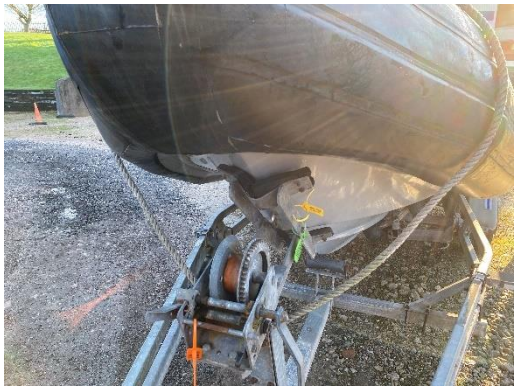

Figure 8 Enforcer Winch unattached , bow line over winch ready for launch

Step	Procedure	Hazard or risk	• Control measure

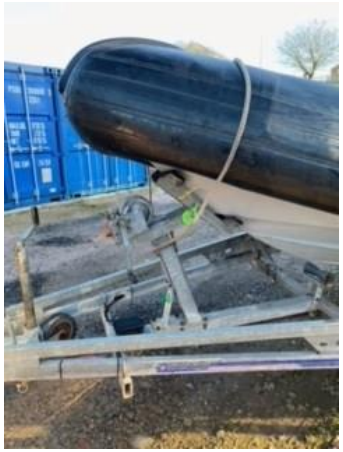

Figure 9 PV Enforcer bow liner over winch for launching (sideview)

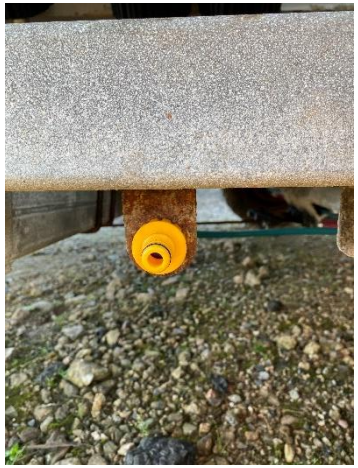

Figure 10 PV Enforcer Wheel bearing flush valve 1

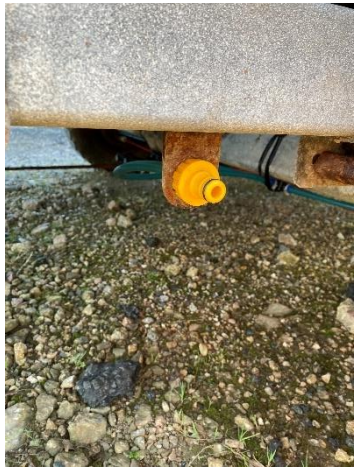

Figure 11 PV Enforcer Wheel bearing flush valve 2

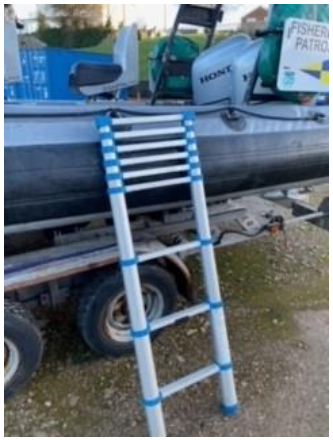

Figure 12 Access ladder PV Enforcer

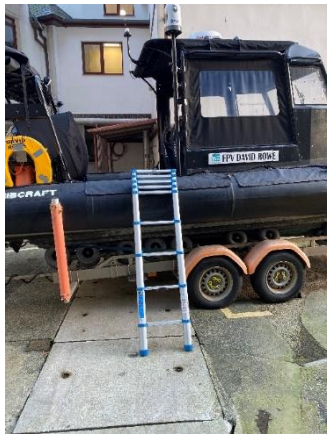

Figure 12a Access ladder PV David Rowe

Recovery of Patrol Vessel

Step	Procedure	Hazard or risk	• Control measure
11	• Driver to assess slipway and state of tide and wind for suitability on arrival	Failure to check conditions could lead to difficulties in recovering the vessel, loss of control of trailer and vessel during recovery and damage to trailer and vessel. Slips and trips may occur due to slippery/wet ground.	• Officers to review tidal state and wind conditions at planned recovery location prior to recovery of vessel • Officers to determine at point of recovery whether it is safe to do so and have determined an alternative site should conditons appear to be unsafe. • Wherever possible, and there is sufficient crew, a crew member should act as banksman
12	**The following pre-recovery procedures must be followed:** • Disconnect trailer electrics from vehicle and allow cooling prior to immersion • Trailers light must be compressed/ retracted for recovery • Establish and maintain comms with Coxswain • If required to uncouple from towing vehicle, use of chocks is essential • Position trailer in water, select neutral and apply handbrake • Indicate to coxswain ready for approach • Remain observant at all times, being aware of people and vessel movements	All checks must be conducted. Failure to do so could lead to loss/ damage to the vessel, tailer and other structures , and injury to Officers, members of the public in the recovery area	• All Officers are trained in pre-recovery and recovery procedures. • All officers wear helmets with an integrated communications system installed to aid communications during the pre-recovery and recovery procedures. • Check list through IAuditor is conducted by Officers. RA6 is followed by officers

Step	Procedure	Hazard or risk	• Control measure
	• Indicate direction to coxswain if required to ensure approach is central • Coxswain to position vessel centrally on trailer • Coxswain to take direction from driver until vessel is in correct position		
13	**The following recovery procedures must be followed:** • Crew to secure vessel with bowline and communicate with coxswain once secured • If possible, connect winch wire to bow. • If it is not possible to connect the winch wire to bow due to water depth, halt the recovery when the trailer is sufficiently out of the water (just out on the slipway) and connect the winch wire at the earliest opportunity. • Coxswain to put both engines in neutral, once vessel is secured switch engines off and trim up, communicating with driver once complete. • Coxswain to complete post use checks, take readings and record for log • Driver to conduct all round visual inspection prior to moving	All procedures must be followed. Failure to do so could lead to loss/ damage to the vessel, tailer and other structures , and injury to Officers, members of the public in the recovery area	• All Officers are trained in pre-recovery and recovery procedures. • All officers wear helmets with an integrated communications system installed to aid communications during the pre-recovery and recovery procedures. • All checks recorded on IAuditor • RA6 is followed by officers • Refer to SSW 001for towing procedures.

Step	Procedure	Hazard or risk	• Control measure
	off • Ensure vehicle has 4WD engaged, slowly remove trailer from water coming to a stop at the nearest safe location to allow disembarkation and to fully secure the vessel and ready the combination for towing e.g., Tie down strops, secure prop bags, extend lights, drop drainage socks etc. (Hitching and Towing procedures SSOW 001)		
14	• Shut off fuel lines and isolate the batteries (Figure 13)	Risk from fuel leak and potential fire. If batteries are not isolated could cause drain of power	• All Officers are trained in all aspects of recovery procedures including washing down. • Checks are logged on IAuditor.
15	• Full wash down with fresh water at the earliest opportunity to include trailer flushing and wheel bearings (Figures 10 & 11).	Saltwater ingress could lead to trailer failure which in turn could lead to trailer, vessel and vehicle damage, accidents or injury to other road users, persons, vehicles and other structures	• All Officers are trained in all aspects of recovery procedures including washing down. • Checks are logged on IAuditor.

Step	Procedure	Hazard or risk	• Control measure

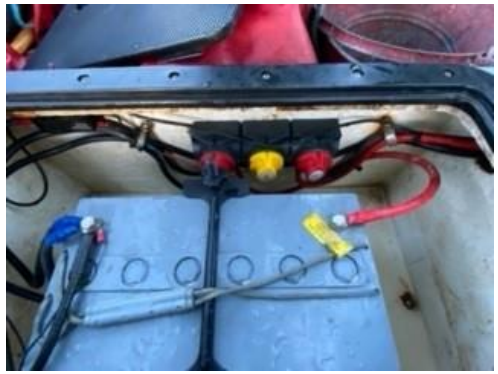

Figure 13 Batteries Off

Figure 14 Battery locker catch closed

End.