

Guidance: Recovery of abandoned, lost and discarded fishing gear

The guidance should be read alongside MMO marine licence guidance for recreational divers to ensure both licence and other legislative requirements are fully understood and removals take place in a manner that minimises potential damage to the historic environment and marine species and habitats.

Competence, equipment and safety

Qualifications

All those undertaking diving operations should be sufficiently qualified with a relevant diving qualification body e.g. British Sub-Aqua Club (BSAC), the Professional Association of Dive Instructors (PADI) or 'Confédération Mondiale des Activités Subaquatiques' (CMAS).

All divers should be sufficiently qualified by their certifying organisation to the maximum depths required during the dive, including the use of gas mixes if required.

Leadership

Any removal activity should start with a clear briefing from the Project Manager ("the PM")

The dive and boat safety briefing should include all the normal information included in all dive day briefings, but must put special emphasis on site specific risks, additional risks from the planned tasks and reference a documented risk assessment highlighting the additional risks needed to be considered when removing fishing gear, e.g. entanglement. The briefing should cover:

- the objectives of the day and what each team will be doing
- the location of the dive site
- the location and type of fishing gear to be removed, determined from the survey
- special equipment required to remove the fishing gear
- consideration for less experienced divers and how these divers will be managed
- specific hazards likely to be encountered and how to manage the risks

All team members should attend this briefing. All project members should follow the instructions of the boat skipper or the PM.

Teams

Teams should conduct pre-dive checks as recommended by their diving organisation before entering the water. These checks should include checks on any additional or special equipment needed for the retrieval, e.g. gas

cylinders for lifting bags

The team must have a pre-agreed signal to halt any lifting or cutting operation, and a range of appropriate signals for likely actions during a retrieval.

Divers should ensure that their equipment is streamlined and that any potential entanglement points are removed.

Any inexperienced team members should be mentored before undertaking more complex retrieval operations.

Safety and lifting

Divers must not dive alone. The team members should work together to cut any entanglements and attach the lifting bags, but after this is complete, distinct pre-planned roles should be observed.

It is a critical safety aspect that only one team works on a particular piece of ALDFG at a time. Further to that, once gas is present in the lifting bags, only one diver should be involved in any further cutting or gas addition tasks.

Each team should have one diver who has the role of safety observer during the lifting phase and is not involved in the lifting work itself.

The team should have a pre-agreed signal to halt any lifting or cutting operation. This can take the form of light signal, a touch signal, or any other appropriate method. This signal can be given by any member of the team, resulting in an immediate cessation of the activity until the situation allows a resumption of the task.

Divers should carry sufficient additional gas for the use of lift bags. If using their breathing gas supply, use of this for inflation should be limited to shallow recoveries and small bags <20kg. For deeper recoveries and larger bags, an independent gas source should be used.

If the depth and time of the operation is enough that decompression stops are required, these should be pre-planned with a contingency plan, as per agency guidelines.

Removal

General principles

Divers engaged in recovery of ALDFG should respect the environment in which they are working at all times.

Divers should have a clear plan of where they intend to recover ALDFG by conducting survey dive(s) to work out how much and what type of litter is to be removed. Survey information should be used to generate plans that minimise impact to natural features, wildlife, archaeological remains or other objects

of cultural importance. More broadly, divers are encouraged to use their awareness of local endangered or sensitive species to avoid unnecessary disruption to their habitat (for instance, where the 'snagged' item is colonised at its base, it may be less-disruptive to cut above the area where species are present).

Smaller, low risk objects may be removed during the survey dive leaving larger items that require pre-planning for subsequent dives.

Divers should never interfere with active fishing gear. Removal or damage to such objects is strictly prohibited.

When ALDFG is being recovered, divers should endeavour to free any living organisms caught in the gear before it is removed, within the boundaries of the law regarding protected species. If this is not possible, then they should be returned to the water as soon as possible.

Dealing with entanglement

Natural features and living organisms

If an item of ALDFG is entangled in a natural feature such as rocks, reefs or other living organisms such as kelp, then the ALDFG should be cut free of the feature using suitable cutting implements. When cutting the ALDFG clear, forces applied to the features should be kept to a minimum to avoid damage.

During the lift, great care should be taken to ensure that no damage is done to the feature. This is achieved by adding sufficient gas to apply tension to the lifting bag straps, and a small amount of the ALDFG object, but not so much gas as to result in damage or disturbance to the natural feature or living organisms.

Whilst working on the ALDFG it is important to maintain good buoyancy control and to be aware of fins and dangling equipment that could inadvertently cause damage.

Wrecks

If an item of ALDFG is entangled in the wreck of a ship, aircraft or other manmade structure, then the ALDFG should be cut free of the structure using suitable cutting implements. It is important to remember that all military aircraft are protected places under the Protection of Military Remains act 1986.

When cutting the ALDFG clear, no force should be applied to the wreck to avoid damage. It should be possible to do this by following the best practice principles of a diving lift (i.e. using a small amount of lifting bag inflation to gain initial tension, cutting the item at the base of where it is snagged and using additional lifting capacity to remove the item).

When conducting removals, great care should be taken to ensure that no damage occurs. Buried gear should simply be cut free; digging of the seabed to identify the source of the gear is not recommended, as sediment disturbance

can impair visibility.

No part of the wreck or structure itself should be removed to the surface. It is not necessary to notify the receiver of wreck about the removal of ALDFG from a wreck unless the removal includes ALDFG from the wreck of a fishing vessel. In such instances details of the materials removed should be reported to the Receiver of Wreck within 28 days.

Picking and lifting

ALDFG that can be picked up by hand should be placed in a small bag or container and carried to the surface.

Care should be taken to ensure that any hooks or sharp edges do not injure the divers. Sturdy gloves are recommended for this type of work. It is recommended that an up to date first aid kit is stored on the support vessel.

For hand-picking, it is recommended that the total weight of the bag containing recovered items should not exceed 5kg when full. Additional weight can affect buoyancy and cause a hazard to the diver. The bag should never be attached to the diver by any clips or lanyards. This technique is typically restricted to small objects, monofilament lines and hooks and similar objects.

Suitable containers may be carried by the diver, where they do not pose entanglement hazards and will only contain lightweight litter and ALDFG.

Collections of smaller amounts of ALDFG that in total weigh in excess of 5kg should be placed in larger bags or containers and removed with the assistance of a lifting bag.

Objects can be cut into pieces for easier handling.

This technique is well suited to ropes and larger pieces of netting. The container or bag keeps the objects constrained into a smaller volume, reducing the risk of entanglement with divers when the gear is lifted to the surface.

Larger items

Large objects that cannot be moved into bags or containers should be removed directly using lifting bags.

The process of removing the ALDFG should follow the following sequence:

1. Cut obvious elements of ALDFG that are attached to seabed features.
2. Attach lifting bag(s) to appropriate points on the ALDFG using karabiners, slings or ropes.
3. Gently inflate the lifting bag to tension the lifting points.
4. Review the entanglement status of the object, and cut any more attachments.
5. Repeat steps 3 and 4 until the object is free of the seabed.
6. Clear the dive team from the immediate area.

7. Add gas incrementally to the lifting bag(s) until the object becomes just positively buoyant
8. Observe the object rising to the surface for as long as the visibility allows.

Disposal of Waste

Any ALDFG removed from the sea and recovered to land should be disposed of in a responsible manner. Planning for this phase of the work should be completed before any removal occurs.

Recycling of ALDFG is the preferred disposal route, but this is not always possible or practical. It should however be investigated for all projects. The project manager should consult with the relevant authorities regarding disposal.