

# Shedding Light On The Dark Side

Over the next six editions of **SCOTTISH DIVER** Gordon Mackie will demystify the world of technical diving and encourage those tempted by the 'dark side' to take their sport to the next level ...



WHEN ASKED to define 'technical diving', it used to mean diving with gas or diving with multiple cylinders. Now that Nitrox and twinsets are regular features of recreational diving, the main difference between recreational and technical diving is that the latter always involves having a plan while the former usually involves shore or boat diving without any planned run-time, calculation of air requirements and planning for worst case scenarios such as exceeding planned depth and time or losing decompression gas.

Over the next six issues I will cover topics including dive planning and computers, self sufficiency, twin set configurations, accelerated decompression using high O2 Nitrox mixes, Trimix and Rebreather diving.

**If you don't plan the gas required for the dive – you are not a technical diver.**

All the skills required for technical diving are the same as for recreational diving and the training is an incremental step on from the training that you have

already undertaken. The big difference is in the mind set and in the attention to detail that goes into the prior planning.

You also need to have perfect buoyancy skills as your diving may involve several decompression stops and you must be able to hold stop depth to within 0.3 metres. A buoyancy and trim workshop will hone these skills, get your weighting sorted and give you the confidence and competence to move on to the next level of practical skills.

**Why would you want to take up technical diving? What is the point in doing deep dives?**

Well, for most divers the answer is wrecks, the shallow wrecks suffer from storm damage and most have been plundered by air divers over the years. Thankfully, Scotland has many wrecks that were not able to be marked by transits as they are far from land and these are now being dived under strict 'no take' rules, so they are looking as good as the day they sank and will stay that way. The *Pathfinder*, *Exmouth* and *U12* are good examples of the kind of dives between 40 metres and 65 metres that can be dived safely by technical divers, using Trimix to keep a clear head and good technical dive planning and practices to add safety and confidence to your dive.

**Equipment Required**

As you will learn, the rule for kit is 'If you need one, take two', this applies to all essential items such as mask, DSMB & reel, dive computer, torch. It also means that you don't take anything that you do not need

on the dive. A technical diver should be streamlined and tidy, without kit dangling from every D-ring and looking like he has been dipped in glue and rolled round the dive shop! A technical diver also does not have to be completely dressed in black!

In the past, deep diving and cave diving forced enthusiasts to find ways of carrying enough gas to complete their dives and to find configurations that allowed them to isolate faulty gas supplies and fix problems in water without assistance from buddies. This has led to the availability of wing and harness systems, stage cylinder mounting rigs, mixed gas computers and undersuits that allow for dive durations of over two hours, even in winter. The latter is very important as loss of core body temperature leads to reduced blood supply in the extremities and finally to hypothermia.

As technical diving is not a discipline that can be picked up every May and used on the odd weekend up to September, I always ensure that students start with a good base layer, undersuit and drysuit to ensure that they are dressed for success!

**Open Circuit or Rebreathers?**

These will be topics for future articles to try to tease out the pros and cons to allow informed decision. Open Circuit Trimix is just building on existing scuba skills while Rebreather diving is starting from scratch and learning a whole raft of new skills. An Open Circuit Trimix fill could cost £50 or more for one dive while the reduced gas consumption of a Rebreather Trimix dive means that you may only use £5 worth of gas on the same dive. The downside is the cost of the Rebreather itself.

I hope that this intro has set the scene for future articles and that I can answer your questions and help you make an informed decision on whether to move over to technical diving.



Technical diver on wreck.  
Image courtesy of Mike Clark