



THE BRITISH SUB-AQUA CLUB

**FIRST CLASS DIVER
EXAMINATION**

PREPARING FOR THE PRACTICAL EXAM

**(Modules: DIVING TASK and
DIVING, PLANNING AND ORGANISATION)**

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Before considering how we can go about preparing ourselves for the First Class Diver Practical Exam, we need to know something about what is expected of a First Class Diver. The definition of a First Class Diver is a diver who:

- Has a high level of practical diving skills and knowledge
- Can organise groups of divers to achieve specific aims or objectives
- Can organise and lead major diving expeditions
- Has the skill to contribute to BSAC developments at a national, regional and branch level.

Unlike the other diving qualifications you may be used to, assessors specifically appointed by the First Class Diver Chief Examiner and conducted at venues that are also designated by the Chief Examiner conduct the assessment. There is no formal “practical course” for the qualification as divers at this level are expected to go beyond “taught skills” and be able to apply their own combination of skills and experience to the leadership and organisation of challenging diving.

However, as Advanced Divers with 100 additional dives, we are **already** a good way along the practical route to becoming a First Class Diver. However, we may have some further developing and polishing up to do. In this respect, the three most important aspects of this definition are “high level of diving ability”, “lead divers and expeditions” and “achieve specific objectives”. So our basic aims are (1) to further develop our diving skills; (2) to develop our leadership qualities so that we are able lead activities at a higher level and groups of divers; (3) to be able to focus our diving and organisational abilities to achieve tasks. In general, becoming a First Class Diver means coming out of our branches and gaining a broader experience of diving by learning from others at a similar level.

Many of the skills, needed to achieve these aims, we may already have, and some will need polishing up while others may need to be learnt afresh. These skills will involve practical activities (both above and below water); organisational and planning activities; leadership and decision-making. In this guide, we will look at how we can prepare ourselves in each of these three areas. Before we do this we should have look at what is involved in the practical exam.

The First Class Diver Practical Exam...

The practical part of the First Class Diver Exam consists of two modules. These modules are normally taken together over a weekend but may be taken separately.

Module 2 – Diving Task

This one-day activity is aimed at assessing the candidate’s abilities to lead a team of divers to conduct a specific underwater task usually conducted from a small boat. Such tasks might include survey, lifting or marine biology tasks, which are relatively complex and require full involvement of all divers within the team. The task will be determined by the examiners and will be carried out at a venue designated by the First Class Diver Chief Examiner.

Module 3 – Diving, Planning and Organisation

This one day activity is aimed at assessing the candidates abilities to lead a team of divers to conduct an adventurous days diving, usually conducted from a large boat. This element will involve all divers within the team and will have some specific objectives such as the discovery of new dive sites, the generation of a dive guide etc. It will also involve challenging diving under relatively tight time constraints such that the candidates' leadership skills can be assessed. The day's objectives will be determined by the examiners and will be carried out at a venue designated by the First Class Diver Chief Examiner.

The exam usually takes place over a weekend starting from Friday night and continuing through to late Sunday Afternoon.

Diving Task makes use of diving from small boats and involves us carrying out an underwater exercise using a team of divers. Underwater surveys (for example, of small wrecks), search and recovery exercises and underwater activities using ropes, are typical types of exercises. During this day you will be working alongside the other candidates to plan and execute the task assigned to the group by the examiners. The task will be assigned to you the evening before and you will have a one-hour planning session, with the examiners looking on, to work together as a group and come up with a plan. You then have the rest of the evening to finalise the plan, collate equipment get any preparations done. The next day, the group will execute the plan. During the day, the examiners will be monitoring your surface skills (e.g. boat handling, position fixing), your underwater skills (e.g. carrying out work underwater, personal diving skills, dive leadership) and your leadership/managerial skills (e.g. contribution to the organisation and planning of the project, leading the team of divers, decision making, dealing with emergency situations).

Diving, Planning and Organisation involves a days diving from a hard boat. Usually 6 candidates and 3 - 4 examiners are involved. The night before, as candidates, you get together for one hour to plan a days adventurous diving suitable for a group of First Class Divers. This will usually involve two dives over the 8-hour period. The aims of the dives are (1) to have an enjoyable days diving! (2) To allow the examiner to assess our dive leadership abilities and (3) to contribute to a team project involving some specific objectives (e.g. produce a survey of a part of a wreck; catalogue the marine life on a deep underwater reef). During the day you will all have an opportunity to take on the roles of Dive Marshal and navigator and the examiners will explore your knowledge of practical seamanship.

Getting Started...

It is much more fun if our exam preparation is carried with other people. For example, our diving club can become involved: we could plan, organise and lead expeditions or underwater projects for them. Additionally, we can link up with other First Class Diver candidates in our area and prepare jointly. Our First Class Diver Regional Co-ordinator, Regional Coach, Overseas Liaison Officers or the First Class Diver Chief Examiner can provide us with names of others sitting this exam. We can prepare alongside other First Class Divers or we could organise joint expeditions with other clubs or divers in our area. The important thing is that we gain as broad a range of experience of other divers and diving techniques as possible. We can supplement these activities with attendance at courses.

There are three broad areas that we need to prepare ourselves: (1) surface and underwater diving techniques; (2) planning and organisational abilities and (3) leadership. The first of these purely involves skills, which we can learn, and practise. The second involves some skills which we can learn but also may require some development of our own personality. The final area is highly dependent on our personality and, for some of us, may require us to develop our own personality to be able to achieve the necessary leadership skills. This might seem a difficult task at first sight but, remember that, as Advanced Divers, many of the necessary qualities and skills will already be there and for those that are not, we will see later how we can develop these skills.

Of course, how much preparation and what type of preparation we require will depend on our own personal circumstances. Some of us may need more than others and so our first task is to identify those areas of weakness that we may want to develop.

Self-Assessment - Diving Skills

For each of the areas of diving skills listed below, give yourself a mark from 1-10 on how you consider your expertise in each skill to be rated. Be honest with yourself, as this will help you to identify those areas in which you need to apply more attention to your preparation. Make a short comment for each area to explain why you have given yourself this mark.

- Planning a dive
- Safety checks on boats; location of safety gear
- Assessment of the site, weather conditions and expertise of personnel
- Dive Brief
- Your own personal equipment (condition and configuration) and kitting up efficiency
- Dive Fitness
- Underwater confidence and competence especially on deeper or demanding dives
- Ability to operate equipment/tools/ropes underwater
- Underwater Navigation, wreck orientation and general awareness underwater.
- Making decisions underwater
- Monitoring time, depth, diving gas and buddy.
- Care with following the dive plan.
- Dive Leadership
- Response to emergency situations underwater
- Ascent and descent procedures and rates.
- Decompression diving and decompression stop techniques
- Debrief
- Boathandling Skills
- Response to emergency situations in boats
- Position fixing and navigation
- Dive Marshalling
- Ancillary diving techniques (e.g. shot line deployment)
- Boat equipment including electronic navigational and depth positioning systems
- Seamanship including rope work

Having made this list, we can now use it as a guide to focus on those areas, which need most work. We can keep coming back to this self-assessment during our preparation to monitor our own progress in these areas. Our comments will help to identify specific areas for improvement. If we want, we can also get together with other First Class Divers (and candidates) and ask them to comment on how we've rated ourselves in each area.

Now we need to look at our planning and organisational skills.

Self Assessment - Planning and Organisational Skills

For each of the areas of planning and organisational skills listed below, give yourself a mark from 1-10 on how you consider your expertise in each skill to be rated. Be honest with yourself - do you cover all these aspect of planning and organisation on every dive. Make a short comment for each area to explain why you have given yourself this mark.

- Planning safe adventurous diving activities
- Planning and organising an efficient timetable for a days diving
- Planning suitable sites and diving for all types of diving
- Planning for the requirements for all personnel
- Planning tides, slack water and other essential factors necessary for the execution of safe enjoyable diving
- Planning a route at sea
- Planning alternatives for bad weather, boat problems, diver problems etc.
- Organising safe adventurous diving activities
- Organising personnel into safe and enjoyable diving pairs or groups
- Organising the safe layout and equipment stowage in boats
- Organising appropriate diving, boating and safety equipment
- Organising route planning and communication of the plan to the skipper/cox
- Organising appropriate safety and emergency actions
- Personal organisation

During our preparation we can focus on those areas we feel need developing and, by occasionally returning to this project, monitor our progress towards our goals. We can also seek advice from other First Class Divers (or candidates) as to the accuracy of our own self-assessments.

Now we need to look at our leadership skills. This is, by its very nature, a more personal look at ourselves and we need to be particularly searching and honest.

Self-Assessment - Leadership Skills

For each of the areas of leadership skills listed below, give yourself a mark from 1-10 on how you consider your expertise in each skill to be rated. Be honest with yourself - do these comments apply to you on every diving trip. Make a short comment for each area to explain why you have given yourself this mark.

- Friendly and approachable
- Flexible attitude and willing to think of/accept other ways of doing things
- Involve all of your team rather than doing everything yourself
- Support the activities of other team members when they are in charge
- Take control of situations to make things happen
- Guide and help others in your team
- Judge the abilities of others, give credit for when they can achieve and support when they can't
- Organise people without them or you getting ruffled
- Knowledge of efficient emergency actions
- Able to assess a situation and make a quick, efficient, workable decision
- Able to look ahead and be aware of developing situations

- Understanding of other peoples difficulties
- Refrain from getting angry even when things are going badly
- Able to say no

During our preparation, we have the opportunity to pay attention to our own performance in each of these areas and, by returning to this project from time to time, monitor our own progress. Seeking honest (but friendly!) advice, on our self assessment marks, from other First Class Divers and from those whom we are leading on expeditions, can give us a better understanding of those skills we need to develop further.

Starting our preparation...

By the very nature of diving as a practical sport, most of our preparation will involve going diving and we need to make ourselves available accordingly. Having said that, some of our preparation can be done in the comfort of our own homes. In the next sections, we will develop a preparation plan which involves diving, dry activities and interaction with other divers to enhance our skills in the three areas of diving, planning/organisation and leadership. Firstly, let us see what pre-existing resources we can draw on.

Courses and Contacts

Courses:

- Get a copy of the BSAC Programme of events or the BSAC Web Page (<http://www.bsac.com>) and see if it would be appropriate for you to attend any specialist courses. (Remember that you will have done many of the courses for your Advanced Diver qualification but you may choose to fill in some gaps or expand into specialist diving areas).
- Check whether any Royal Yachting Association (RYA) Courses are appropriate.

Contacts:

- Find out from your First Class Diver Regional Co-ordinator, Regional Coach or FCD Chief Examiner about other First Class Diver candidates in your area
- Find out whether any First Class Divers live locally and would be prepared to help.
- Find out if your Regional Coaching Team is organising any appropriate events (such as diving trips, expeditions, practical courses)
- Make contact with someone who knows the First Class Diver exam venue so that you have someone to call upon for local knowledge
- Contact the BSAC Regional Expedition Diving Scheme (REDS) via your Regional Coach to find out whether any of their expeditions fit your plans and diving desires. These expeditions often involve experienced divers from a variety of backgrounds and offer considerable potential to develop diving and organisational skills as well as some good diving!
- Get together with the team of people you've found, go for a dive together and discuss how you might proceed together with your preparation.

Having set up our contacts, we need to plan some time for practical preparation that could involve our contacts or our own branch divers. The amount of time we allocate for practical preparation will depend on our own situations. The following might be a typical example of one way we could go about it:

- We could lead a weekend small boat diving with our branch with specific objectives such as spending part of the time organising and executing some adventurous dives and the remaining time gaining experience of practical techniques (including dives with a purpose or underwater work objectives)
- We could team up with our experienced contacts and carry out a weekend small boat diving with specific objectives of working as a team to develop and practice diving, planning and leadership skills.
- During the normal branch diving activities, we could offer to lead and marshall as many branch dives as possible. If we chose a wide variety of dives (small boat, hard boat, deep dives, decompression dives, new dive sites, new wreck sites etc.), our members would be quite happy!
- We could offer to organise and lead a days diving for another club or group of divers.
- We could organise a weeklong hard boat diving expedition for our own club during which could develop our skills.
- We could organise a few days or a weeklong hard boat trip with our experienced contacts with the specific objectives of polishing up our First Class diving skills.

Of course this is only an example and we must tailor our program according to the time we have available and to our preparation needs. At any rate - it's a good excuse to get some good diving done! During the course of these diving activities we can make time to carry out some of the practical activities suggested below. In addition to these, we can spend some time on "armchair" activities in the comfort of our own homes.

Getting fit

A First Class Diver doesn't need to be really fit - but everything is so much easier if you have a reasonable level of fitness. The easiest way is to dive regularly!

- Aim to dive regularly
- Assess your level of fitness and, if necessary, supplement your exercise diet with some swimming or other forms of training

A work up dive

Carry out a days diving with some friends or your experienced contacts. The aims of this days diving are to check out your equipment, equipment configuration and refresh some diving techniques.

- Make sure all equipment is working and set up
- Practice equipment procedures (e.g. deploying a delayed SMB) until they operate smoothly
- Practise rescue skills (e.g. controlled buoyant lifts and use of alternative air sources).
- Check that your equipment configurations are properly set up for carrying out all of these diving procedures safely and comfortably (e.g. are AAS hoses long enough and correctly positioned, are gauges and computers visible during a CBL etc.)
- Practice the use of slates, lifting bags, reels and ropes underwater. Check that all of this ancillary kit can be carried safely is configured so as not to interfere during rescue skills and can be deployed or used efficiently.
- Design a flexible system so that ancillary kit can be clipped on or removed easily to accommodate the needs of a particular dive
- After the dive, sort out or reconfigure any problematic kit.

Plan a small boat diving weekend - “Armchair project”

Make a detailed plan of a weekend small boat diving expedition. This plan can be used as the basis of a weekend expedition for your club. Cover all aspects from the accommodation and catering to the diving and operational activities. Plan to involve a variety of dive sites to cater for the different experience levels and interests of the divers in your group. Choose a suitable location. Perhaps the First Class exam venue might be suitable!

- Obtain charts and tide tables for the area
- Find out about local accommodation, facilities, sources of diving gas etc.
- Research suitable sites. Make use of the chart, a local informant or local diving guide books
- Obtain the necessary information for diving activities (tides, slack water, launching etc.)
- Obtain the necessary information for finding sites (routes/compass bearings at sea, transits, lat/long, GPS fixes)
- Plan the equipment necessary for the trip and dives
- Plan a team underwater exercise involving setting up equipment underwater
- Plan a detailed timetable for the weekend
- Plan a sequence of adventurous dives including a deep dive involving decompression stops
- Develop back up plans for all eventualities
- Use your planned weekend expedition as a real branch diving expedition!

Plan a weeklong diving expedition based from a hard boat - “armchair project”

Make a detailed plan of a weeklong hard boat diving expedition. This plan can be used as the basis of an adventurous expedition for your club. (It does not necessarily need to be a week - choose a time period that fits in with your club activities). Cover all aspects from the accommodation and catering to the diving and operational activities. Plan to involve a variety of dive sites to cater for the different experience levels and interests of the divers in your group and aim for some adventurous diving. Choose a suitable location. Perhaps the First Class exam venue might be suitable!

- Obtain charts and tide tables for the area
- Find out about local accommodation, facilities, sources of diving gas, recompression facilities etc.
- Research suitable sites. Make use of the chart, a local informant or local diving guide books
- Obtain the necessary information for diving activities (tides, slack water, launching etc.)
- Obtain the necessary information for finding sites (routes/compass bearings at sea, transits, lat/long, GPS fixes)
- Plan the equipment necessary for the trip and dives
- Plan a team underwater exercise such as a survey of part of a wreck
- Plan a team surface exercise such as a sounder search for a new wreck, reef or pinnacle
- Plan a team emergency drill such as recovering an unconscious diver into a hard boat
- Plan a detailed timetable for each day of the week
- Plan a sequence of adventurous dives
- Develop back up plans for all eventualities
- Use your planned weeklong expedition as a real branch diving expedition!

Small boat familiarisation

A First Class Diver will need to be a competent small boat handler. If you've not attended a BSAC or RYA boat-handling course as part of your Advanced Diver Training, this is an essential step. A First Class Diver should have passed the Diver Cox'n award. Additionally, a First Class Diver will need to know what to do in an emergency situation and, perhaps, need to be an amateur engine mechanic!

- Familiarise yourself with the controls, layout and safety equipment in the small boat
- Check basic items e.g. fuel, instructions for use of flares, anchor(s), warps etc.
- Check you know how to operate electronic equipment (e.g. radio, GPS) and that it is working
- Make sure diving kit is stowed in such a way as to balance the boat
- Get into the habit of carrying out a thorough check of a boat before you set off
- Refresh your boat handling skills (e.g. picking up divers, man overboard etc)

Small boat dive

Lead a group of divers on a small boat to carry out a deep; adventurous dive involving planned decompression stops. Perhaps make use of the deep, decompression stop dive you planned in your "armchair" plan.

- Plan, organise and obtain the required equipment and diving personnel.
- Plan your procedure for decompression stops, including putting spare diving gas cylinders on the shot line, procedures for divers missing the shot, emergency actions etc.
- Practice different decompression techniques such as setting up a decompression bar
- During the dive, concentrate on your dive leadership skills, underwater navigation and awareness of what is happening around you underwater
- Afterwards carry out a self-assessment and seek comment from others – list improvements that could be made and successful strategies that could be used again

Small boat team underwater exercise

Carry out the underwater team exercise you planned previously.

- Brief your divers carefully
- Choose a specific site and aim to locate it accurately
- Try a dry run on the shore first
- Organise your team so that everyone has a role and knows exactly their part in the operation
- Aim to use ropes/reels/lifting bags or other items of kit as part of your exercise
- Concentrate on enabling your team to make the exercise happen - don't just do it yourself. Clear, concise instructions help
- Debrief your team and produce a report on what you achieved and how you achieved it
- Afterwards carry out a self-assessment and seek comment from others – list improvements that could be made and successful strategies that could be used again

Small boat emergency - "armchair project"

Set yourself some of the following emergency scenarios and make notes on how you would cope with them and what action you would take. Divide your page into three

sections: assess, plan and act. For each scenario list the (1) factors you would need to assess (e.g. what resources are available, who is available to assist, what assistance the casualty needs, are there any other casualties etc); (2) Come up with a logical plan as to how you would deal with the situation including how you might deal with any unforeseen complications; (3) List how you would put your plan into action using the personnel and resources available. It would be a good idea to involve your experienced contacts and use this as a discussion session to help to develop your ideas.

- An overdue diver
- A diver who has surfaced with a diving disorder such as DCI
- Boat engine malfunction 3 miles offshore
- The weather blows up while divers are down
- You come across a disabled yacht
- One of your personnel sustains a serious injury
- Choose your own scenarios (perhaps getting ideas from your experienced contacts or other branch members or your own experiences!)

After you have written down your plans of action, go through each scenario again. Imagine you knew beforehand that that incident was going to happen, with that knowledge write down what you would do to prevent the scenario from happening or minimise its effects

Small boat emergency practical

On a small boat dive with your branch or experienced contacts, have a go at practising some of the scenarios you planned. (Remember: assess, plan and act). Aim to act as the rescue manager yourself and try to remedy the emergency by organising others to become involved rather than doing it all yourself.

Small boat seamanship - “armchair project”

Make use of the comfort of your own home to develop some of your seamanship skills.

- Practice a range of knots until you can competently tie enough knots to cover a range of different uses. Remember to practice them well as you may need to tie them in a rocking boat!
- Revise your lights, buoys, weather states, weather forecast information
- Follow the weather forecasts daily and “get a feel” for the types of weather that different forecasted weather systems produce

Small boat seamanship practical

While you are out on small boat dives take the opportunity to develop your seamanship skills.

- Try out various knots in everyday boating situations to gain further practice at doing them.
- Watch the weather conditions and note how it relates to the forecast you obtained earlier
- Watch the behaviour of your boat in different sea and wind conditions (head sea or following sea)
- Note how differences in the loading of your boat affects its performance
- Think ahead and try to predict what you might do if the weather changes for the worst

- Be aware of developing situations around you - keep a constant monitoring on fuel/oil, personnel, stray ropes or equipment, objects in the water, other shipping, rocks/reefs/shoreline, where you are going, timing, weather etc.

Small boat navigation - “armchair project”

For a planned small boat dive, have a look at the chart of the area and familiarise yourself with your planned route.

- Plot your course on the chart and transfer bearings, courses approximate times etc. to a route card that you can take with you to sea
- Note down any position fixing information (transits, GPS positions, bearings.)
- Note any obstructions, rocks, shallow waters, navigation markers
- From land features on the chart, try to work out what the route will look like and identify buildings and features. Note them on your route card.
- Plan emergency routes to deal with boat problems or diver problems
- Plan what you would do in the eventuality of fog engulfing the boat

Small boat navigation practical

During a days diving, navigate your boat along the route you have planned previously.

- Look out for land features you have noted down and try to recognise them
- Make use of a steering or other compass to navigate your boat along its course
- Make use of electronic navigational aids to follow your course
- Plot your position at periodic intervals on a chart (make use of electronic navigators, compass bearings, transits).
- Note down how much fuel you have used during each of the legs of your passage
- Experiment with different navigational.
- Try out your emergency routes
- Simulate navigating in fog by putting a towel over your head and, using a steering compass or navigator, give clear instructions to the Cox

Large boat familiarisation

During a hard boat days diving, try to familiarise yourself with all aspects of hard boats. If you develop a friendly relationship with your hard boat skipper (perhaps by providing them with custom!), try to find out as much as you can about the boat.

- Find out where the boat safety equipment is stowed (VHF radio, lifejackets, life rafts, flares, first aid kit, anchor(s) and warps, oxygen etc)
- Have a look at the engine room - try to find out something about basic starting procedures, checking oil/fuel/coolant etc. You will not need to know how to do this for the First Class Diver exam but it doesn't hurt to have some extra knowledge in case the skipper is taken ill!
- Find out how the on board compressor (if any) works
- Find out the domestic aspects of the boat (e.g. toilets/heads, galley etc). As a First Class Diver, your expedition members will usually ask you rather than asking the skipper!
- Find out about operational aspects of the boat and its skipper. How does the skipper prefer to drop off/pick up divers? What type of shot/grapnel is used for wrecks and what is the procedure preferred by the skipper?

- See if the skipper will allow you into the sanctuary of his/her wheelhouse. Find out about the controls. See if the skipper will allow you to drive the boat. Learn from the skipper about the electronic navigational instruments, the operation of the radio(s), echo sounders, fish finders, radar etc.
- You will not be assessed on driving the hard boat as part of the First Class Diver exam but it is good experience and good fun!

Large boat dive

Using the dives you planned previously, carry out some adventurous dives on a variety of different types of sites. Include in your dives, deep dives and decompression dives.

- Act as dive marshall and leader of your hard boat dives
- Perfect hard boat entry and exit procedures
- Perfect techniques of deploying shots and decompression bottles from hard boats
- Concentrate on your dive leadership skills during the dive (including navigation, buddy monitoring, timing, decompression and general awareness of your situation underwater)
- Aim for more precision than you would normally achieve e.g. buoying the bow of a wreck rather just anywhere on the wreck
- Afterwards carry out a self-assessment and seek comment from others – list improvements that could be made and successful strategies that could be used again

Large boat dive surface team exercise

Using your team of divers carry out a surface team exercise. Make sure all members are involved. This exercise can be carried out during your surface intervals between dives.

- Select a team exercise which you planned previously
- Allocate tasks to all members of the team
- Aim to include in your exercise the following: locating a position, marking out an area with buoys, carrying out a grid search (e.g. a sounder search for a charted wreck), obtaining transits and electronic position fixes for your located object, marking the search area on a chart
- Afterwards carry out a self-assessment and seek comment from others – list improvements that could be made and successful strategies that could be used again

Large boat dive underwater team exercise

Using your entire team of divers, carry out an underwater task such as the one you prepared in previously. For example, you could survey the bow of a wreck making use of your divers to lay a line from the shot to the bow, take drawings and measurements of the bow, recover the equipment etc.

- Involve your entire team
- Make use of ropes, slates and measuring instruments underwater
- Aim for a clear briefing, clear instructions and clearly define the objectives of each dive pair
- Take appropriate safety precautions
- Collate your results and produce a written report
- Afterwards carry out a self-assessment and seek comment from others – list improvements that could be made and successful strategies that could be used again

Large boat diving emergency scenarios - “Armchair project”

Either on your own or with a group of other divers make notes on how you would deal with the following large boat emergency scenarios. Remember: assess, plan and act. Divide your paper into 3 columns listing (1) What things would you take into account before dealing with the scenario (assess) (2) Plan what you would need in terms of personnel and other resources and what you would do (plan) and (3) how you would go about putting the plan into action (act). Remember to involve your entire team and to plan your role as the rescue manager co-ordinating the rest of your team.

- Getting an unconscious diver aboard the boat
- The complete rescue of an unconscious diver from the time of surfacing to despatching in an ambulance ashore
- Preparing the hard boat for a helicopter to pick up a casualty
- An overdue diver
- Hard boat engine breakdown
- Dealing with the situation where the boat skipper is seriously injured
- Fire aboard the hard boat
- The fog comes down while divers are under
- Any scenario which you have thought up yourself

After you have written down your plans of action, go through each scenario again. Imagine you knew beforehand that the incident was going to happen, with that knowledge write down what you would do to prevent the scenario from happening or minimise its effects

Large boat dive practical emergency scenarios

During the surface interval of your hard boat dives, practice some simulated emergency situations such as you planned above. Make sure you carefully brief the other divers and the skipper to make sure that safety prevails during the scenarios.

Large boat seamanship practical

During your hard boat dives take time to find out about large boat seamanship.

- Find out how the boat skipper loads the boat and arranges the load in the boat
- Make sure all gear is tied down or securely loaded
- Make sure the boat is tidy and the decks are clear enough for people to move around safely
- Watch how the boat performs in different sea conditions. Try to “get a feel” for how the weather, wind and sea conditions are affecting the performance and safety of the boat and its passengers
- Find out how the boats anchoring systems work
- Find out how the boat is moored and where mooring ropes, boathooks etc. are stowed

Large boat navigation - “armchair project”

For a planned large boat dive, have a look at the chart of the area and familiarise yourself with your planned route.

- Plot your course on the chart and transfer bearings, courses approximate times etc. to a route card that you can take with you to sea

- Note down any position fixing information (transits, positions, compass bearings)
- Note any obstructions, rocks, shallow waters, navigation markers
- From land features on the chart, try to work out what the route will look like and identify buildings and features. Note them on your route card.
- Note down any information required for using electronic navigational aids (e.g. waypoints, positions etc.).
- Plan emergency routes to deal with boat problems or diver problems
- Plan what you would do in the eventuality of fog engulfing the boat

Large boat navigation practical

During a days diving, navigate your boat along the route you have planned above.

- Liase with your boat skipper and ask them to allow you to navigate the boat
- Look out for land features you have noted down and try to recognise them
- Make use of a steering or other compass to navigate the boat along its course
- Make use of electronic navigational aids to follow your course
- Plot your position at periodic intervals on a chart (make use of electronic navigators, compass bearings, transits, dead reckoning and running fixes).
- By noting down times beside your plotted positions, calculate the speed your boat is travelling at. How does this compare with the speed over the ground (SOG) shown by your navigator
- Note down how much fuel you have used during each of the legs of your passage
- Try out your emergency routes

Dive marshalling - “armchair project”

Using some of your planned large and small boat dives, make notes on how you would marshal the day's activities.

- Arrange with your personnel to meet at a specific time and place
- Give your divers a clear concise briefing of the days activities - make notes on what to do
- Organising and marshalling the loading of the boat is crucial to the success of the day - remember that first thing in the morning you need to get off to a slick start to maximise your surface interval, meet deadlines for slack water and ensure that the day goes smoothly. Make notes on how you will organise your divers and delegate tasks to ensure a swift departure.
- Make notes on what you will cover in your pre-dive briefings and post-dive debriefings
- Make detailed plans on how you would deal with emergency situations, decisions you would make in the event of the boat breaking down, the weather deteriorating etc

Dive marshalling practical

On your small boat and large boat dives take the opportunity to act as dive marshall.

- Get everyone together for a briefing
- Give a clear concise briefing, allocating clear specific tasks to each member of your diving team

- Organise the loading of the boat - aim for a high level of efficiency involving all of your team members. Carry out a last check before you leave to make sure that everything is packed.
- At appropriate times during the day (e.g. before dives or at times when you intend to change your plans) brief your team to ensure that everyone knows what is going on.
- Monitor the activities of your team to ensure jobs are done. Reward with encouraging remarks or chivvy along as necessary.
- Debrief your team when you have finished
- Keep a watch on all aspects of the days activities - be aware of developing situations (e.g. the weather deteriorating, the condition of the boat and divers) and make appropriate decisions

Leadership skills...

There are two types of leader - there are those of us who "lead from the front", who are always clearly visible giving instructions and who are obviously in charge - and those of us who "lead from the back", who are always guiding, coercing, and directing the activities of our team by working amongst them. Both methods of leadership are fine but probably the best approach for us is to use both techniques. We can stand out and direct our team in times when it is appropriate such as a pre-dive briefing or taking control during an emergency. At other times, such as during diving normal activities, we can take a more relaxed approach by co-ordinating, guiding and supporting individuals or groups to achieve our common aim of "making it happen". Some of us may find that our personality drives us towards one approach or the other. We must try to be flexible and try out the other approach. If we find neither approach very easy then we may need to concentrate on projecting ourselves more, even if its against our natural instincts, push ourselves into situations where we can take control. We can learn some of these skills by watching others lead and see if we can spot the two types of leadership. The important thing with leadership is that we command the respect of those in our team - even if they are more experienced than us. We must earn our respect - it doesn't come with the job or with any qualification - it is individual to us. We can earn our respect by treating people fairly and in friendly way, by being able to make a decision which is the right one, by having the right knowledge or skills when they are needed, by being able to take control at times when our team are looking for leadership and, above all, by not trying to bluff our way through things when we haven't got a clue what to do. A tall order, indeed!

The foundation of our abilities to be a good leader lie in the confidence we have in our own abilities as a diver. So the preparation, for the First Class Diver exam, we have been doing up to now will have enhanced that significantly.

Leadership skills - "armchair project"

Preparation is the key to developing the necessary confidence to be a good leader. You can prepare yourself to deal with some situations at home. The following situations might tax your leadership skills. Make notes on how you would deal with each situation. Perhaps you could get together with some of your experienced contacts to use this as a discussion session.

- You are in charge of a small boat, the weather has become marginal and some of your party are keen to dive while the others think it may be dangerous. How will you resolve the situation?
- A diver in your party has a faulty regulator that periodically free-flows and they insist on diving with it. What will you do?

- The experienced divers in your party wish to dive a deep wreck but you have two novices along who also want a dive. How will you resolve this?
- Take some of the emergency scenarios you discussed in previous projects and re-look at them in terms of the leadership skills you would need to deal with the incidents

Leadership skills - Delegation

One of the biggest difficulties that may face you in your role as a leader is having too much to do when a situation develops which requires action. If the workload is spread more evenly, it gives you more time to survey what is going on, to monitor the situation around you and to act as necessary. Furthermore, by involving your team in the diving activities they will be in a better position to know what to do if you ask them to perform a task when a level of urgency is required. You must, of course be careful to make sure that you don't do too much delegating and people accuse you of shirking your responsibilities! Also, when someone else is in charge be open to his or her instructions.

- During the normal diving activities you are organising take the opportunity to delegate tasks. Give constructive advice and help when required.
- When delegating is clear in your instructions. Use a person's name to make sure that the person knows that they have been selected for the task. Don't say "can someone pull that rope inboard..." this will either result in everyone trying to do it or, more likely, no-one doing it!
- Be clear and specific when you ask someone to do a task. It is better to say "Tony, can you load those four cylinders and stack them, upright, alongside the starboard gunwale ..." than "can someone load those cylinders onto the boat..."
- During an emergency situation, assess who you have available, plan how you are going to use them and give clear instructions to each of them specifically. Practice this on one of your emergency scenarios you planned earlier.

Leadership skills - Dealing with people

One of the crucial aspects of leadership is your interaction with people. Your ability as a leader will depend on you earning respect from your team, some of who may be more experienced than you are. During your days out diving with club members and other divers try to develop the following qualities in yourself.

- Be friendly and approachable to your fellow divers
- Try to treat everyone fairly - if someone has a grievance, listen to it and try to resolve it
- Allow your team members the opportunity to become involved in the decision-making processes but without allowing things to degenerate into an indecisive muddle.
- Give your team members credit for the activities they are doing and give them praise when they perform well.
- If your team members are struggling with something, intervene and give them help and advice.
- If a conflict situation emerges where one of your team members wants to do something that you consider is unsafe, stand firm in your decision and do not allow yourself to be bullied. Explain your reasons clearly to the diver.
- If a conflict situation emerges where one of your team members wants to do something differently to you, listen and evaluate their ideas. Consider the advantages and disadvantages of both and accept the best solution. Give the person credit for putting forward their idea and don't be afraid to back down on your own idea if the other is better.

- Most of all don't shout or get angry with your team members even if you do wish they'd taken up chess instead of diving!

Leadership skills - Being aware of developing situations

One of the most important skills required of a leader is to be able to spot situations developing. This allows you time to assess the situation, develop a plan and act on that plan. Many developing situations can be spotted hours before the problem arises. For example, poor organisation at the harbour can lead to a late departure for the dive site, which in turn leads to missing slack water, which in turn leads to divers being swept off a deep wreck, which in turn leads to missing divers, which in turn leads to a coastguard callout... As another example (which actually happened on a First Class Diver Exam!), a piece of rope lying at the stern of the hard boat was left dangling over the side. It went unnoticed amongst the general untidiness of the boat and it began to pay out over the stern ... the inevitable happened and it got caught around the prop. When diving you need to be monitoring everything around you -the divers, the equipment, the boat, the diving practices, the weather, the timetable such that you can clearly identify any potential problems which can be rectified early. On your days out diving on both small boats and hard boats, practice being observant and try to develop an understanding of which things have the potential to develop into a dangerous situation. Think ahead!

Leadership skills - Making decisions

One of the most important aspects of leadership is the ability to make decisions - and more importantly the correct decisions. Try to develop your decision-making abilities by using assess, plan and act. Assess the options and the implications of those options. Plan the best way of dealing with the options and then act on that plan.

- During your small boat and hard boat diving practice decision-making. At times when there is a difficult decision to be made, make notes on a slate of your assessment, your plan and your action. Discuss your decisions with your experienced contacts
- Try to spot decision opportunities as early as possible before they transform into a crisis.

Final Self-Assessment

Having gone through your First Class Diver preparation, return to the self-assessments you carried out at the start and re-assess yourself. Take any action required to fill in any remaining gaps. Constant monitoring of your progress will improve your abilities as a First Class Diver.