

An underwater photograph showing a diver with a bright light illuminating a large, rusted metal structure, likely a shipwreck, on the seabed. The water is dark blue and slightly murky.

# Annual Diving Incident Report

BSAC Incident Report 2023



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## Introduction

The incident report for recreational diving occurring in the UK and Overseas, for the calendar year 2023.

The majority of information contained within this report is also shown in graphical form. Please note that all data information is produced from UK data only and does not include overseas incidents unless noted as 'all incidents'.

The contents of this report are split into an overview of the year and then the details of eight incident categories plus some historical analyses. Within each category, the incidents are listed in the order of occurrence, not necessarily that of Incident Reference.

They are laid out in the following form:

### Month / year of incident

### Incident reference

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Brief narrative of incident

The nature of many diving incidents is such that there is usually more than one cause or effect. Where this is the case, the incident has been classified under the more significant cause or effect. For instance, an incident involving a fast ascent, causing decompression illness, will be classified under 'Decompression Incidents'.

Please read the details in this report and use the synopses to learn from them. The individuals who have provided this information have had the courage and generosity to record their experiences for publication so that we can use this information to avoid similar problems.

Finally, if you are unfortunate enough to have an incident, please help us maintain the most comprehensive recreational diving incident reporting system in the world by reporting it using our Incident Report form, available via the BSAC website or from BSAC HQ. As always, your anonymity is assured, and great care is taken to preserve the confidentiality of any personal information recorded in the BSAC Incident Report database.

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**Ben Peddie**

BSAC Data Analyst

**October 2024**

## Acknowledgements

Data for this report are collected from many different sources. We would like to extend our thanks and appreciation to the following for their assistance in its production and in ensuring its completeness:

- Maritime & Coastguard Agency
- MOD Superintendent of Defence Diving
- PADI Europe, Middle East and Africa
- Royal Society for the Prevention of Accidents
- Scottish Sub-Aqua Club
- Sub-Aqua Association
- CFT – Coomhairle Fo-Thuinn – Irish Underwater Council
- RAID – Rebreather Association of International Divers
- WAID - Water Incident Database
- Alison Dando for proofreading this report
- and, in particular, all of those divers and other sources who have taken the trouble to complete incident reports and share their learning experience with others

Cover photograph by Bob Anderson

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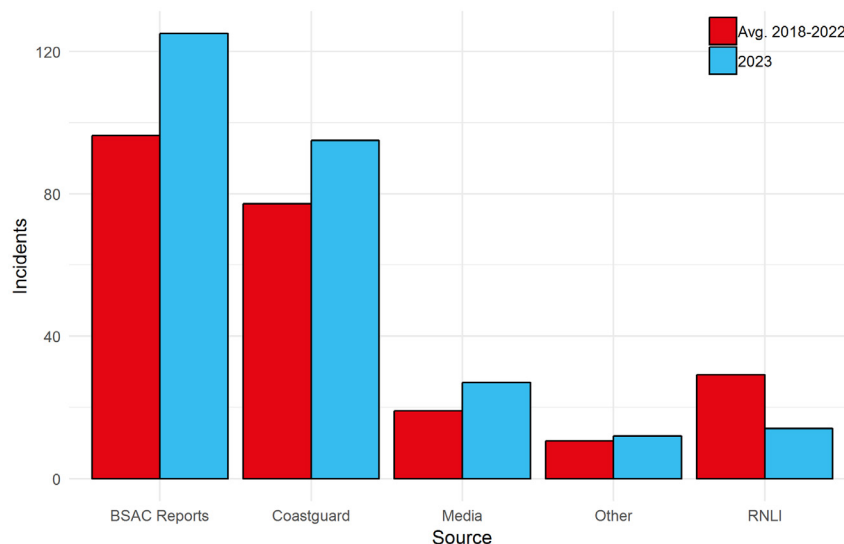
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## Analysis of the incident database

The incident report is prepared annually by BSAC as part of its responsibilities as National Governing Body for the sport in the UK. The report helps to support diving agencies and rescue services in providing information to inform strategic decisions and to divers and instructors on emerging trends and factors associated with incidents.

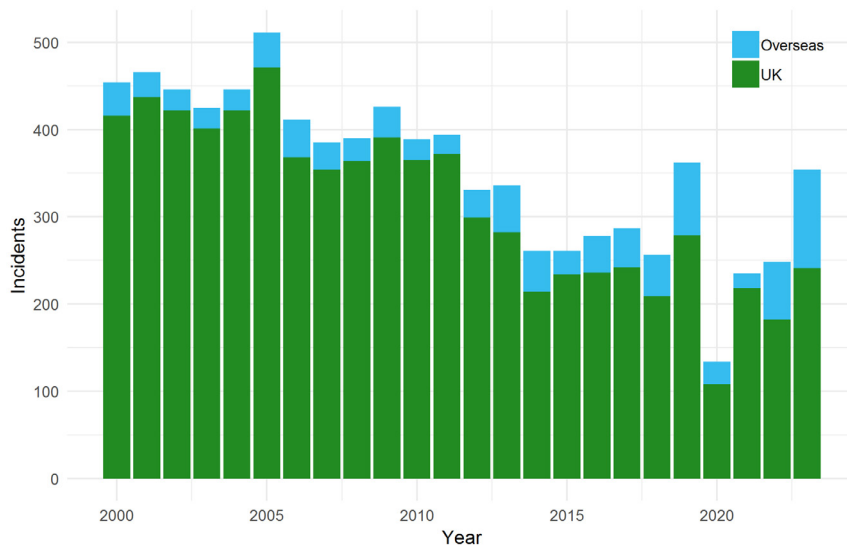
Data is collected on all recreational diving incidents in the UK from a number of different sources. Information comes from participants in our sport from all diving affiliations, from diving agencies in the UK and Eire and all the rescue services who have been involved in the support of divers. We are also provided with data in annual reports from the Maritime & Coastguard Agency, the RNLI, MOD Superintendent of Defence Diving, PADI Europe, Middle East and Africa; the Water Incident Database (WAID) and the Royal Society for the Prevention of Accidents. BSAC also commissions a media searching service to gather reports of incidents from press clippings and online media. A significant proportion of the data comes from the incident reporting forms provided online on the BSAC website.

In order to avoid reporting of the same incident twice due to multiple reports from different sources, the data is carefully triangulated by a process of detective work using the date, location and description of the incident. Figure 1 shows the sources from which the reports are derived which reflect total sources of reports even when we have received data from multiple sources.



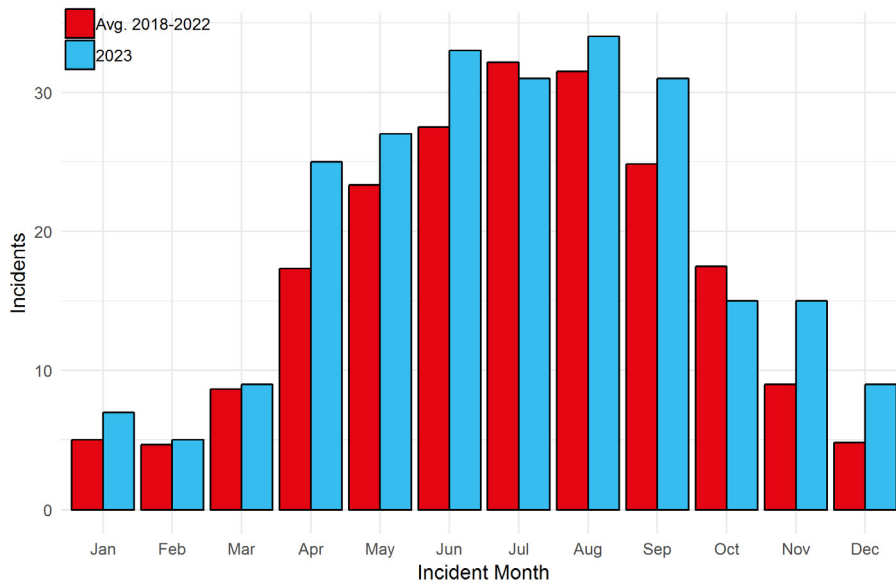
**Figure 1. The source of reports contributing to the BSAC Incident analysis**

The incident report does not include information on incidents that are commercial in nature, such as incidents involving professional scallop fishermen or operational work dives in harbours. Incidents involving this type of activity are managed by the Health and Safety Executive (HSE). However, we do record recreational instruction dives even when a commercial instructor is involved, as these incidents are relevant to our sport and can help inform future changes to training programmes and advice given to instructors and divers.



**Figure 2. Total number of UK and overseas reported incidents reported each year**

In the calendar year of 2023, we recorded 355 incidents, including 113 classified as overseas (Figure 2). As shown in Figure 2, the number of incidents in the UK reported since 2014 has remained remarkably static apart from the year of the pandemic when limitations on diving activity impacted the number of incidents recorded. In contrast to previous incident reports, this year we have chosen to show the level of reporting from overseas and the UK separately in the histogram. This demonstrates that apparent increases in reporting of incidents in 2019 and 2023 are largely due to more reports from overseas diving. In 2023, examination of the synopses will indicate that the overseas reporting is dominated by reports of failures to mask and fin straps. This increase either points to an escalated thoroughness in reporting from a cohort of divers or a problem with kit maintenance. Nevertheless, this report highlights the need to examine these items of equipment carefully for deterioration prior to starting diving activities, especially in climates where these straps are more prone to weathering.

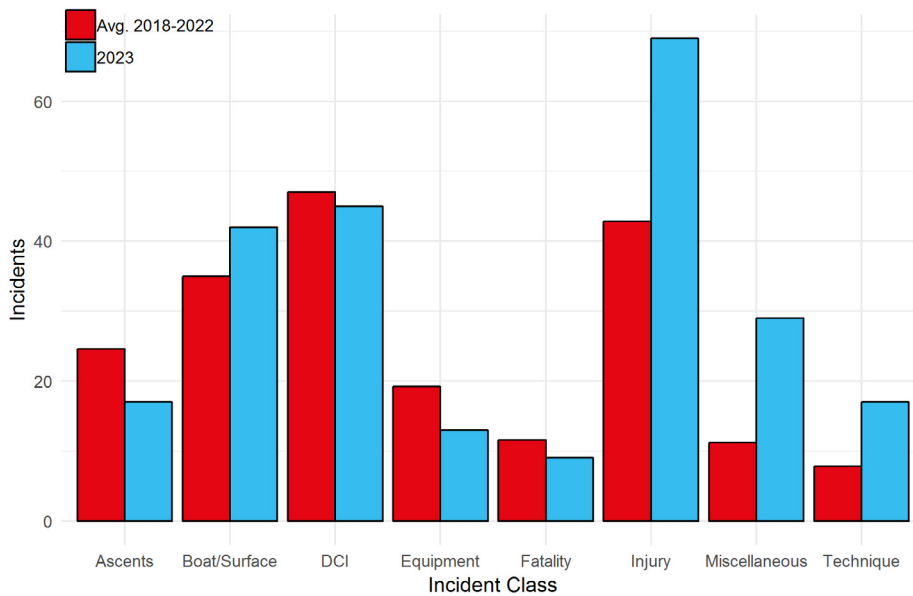


**Figure 3. Number of UK incidents occurring in each month of the calendar year**

## Incidents by Month

The number of incidents reported occurring in each month of the year in the UK is shown in Figure 3. This figure repeats the findings of previous years in that the distribution of incidents across the calendar year appears to follow the months of the years where most diving occurs. Put straightforwardly, the more diving activity, the more incidents occur. As identified in the last ten years, we see that the peak of incidents that used to occur early in the diving season has disappeared.

Unusually, we can see that there was a higher number of incidents in September than there have been in the last five years. In September of 2023, we experienced the warmest weather on record since 1984 and exceptionally light winds for the first half of the month. It is possible, therefore, to surmise that the increase in incidents was largely linked to an increase in diving activity in September. As a rule, we normally find that the more diving going on, the more diving incidents we record.



**Figure 4. Reported incidents by category**

## Incidents by Category

Each incident is analysed to identify the most serious factor involved; for example, if a fast ascent results in a DCI event, then the incident is placed in the DCI class. However, if a fast ascent results in no serious ill effects, then the incident is classed as an ascent-related event. Incidents which cannot be attributed to a single factor are placed in the miscellaneous category. The ascent category involves incidents where divers have made an abnormal ascent but survived and avoided DCI or another injury.

In 2023, the pattern of distribution of incidents across the different classes is similar to previous years apart from an increase in incidents classed as miscellaneous and injury. These categories tend to be used where we do not have enough information to classify them otherwise and points to an increase in incident reports with limited accompanying information. As has been noted in previous incident reports, we see several reports of false alarms with good intent from the MCA and a smaller number of instances where accident-avoidance advice has been given to divers. Again, we are extremely grateful that our emergency services are always prepared to assist us and are happy to receive earlier notification of a possible need for support, which may be stood down, than late notification which makes it harder for them to recover successfully.

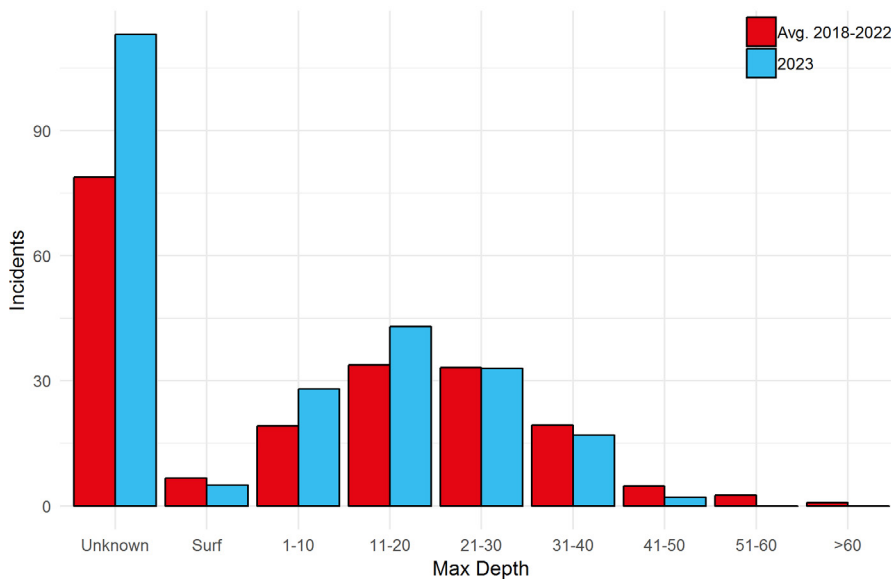
Regrettably, there were 9 incidents resulting in 9 diver fatalities this year; more detail on these fatalities is given later in the report.



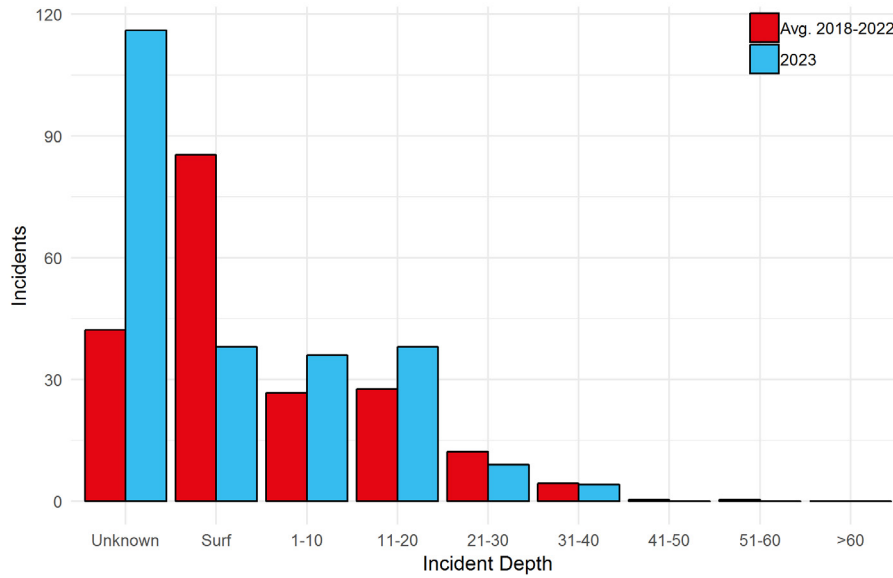
## Incident Depths

Figures 5 and 6 provide information on the depth of the dive at which the incident occurred and the depth at which the incident began, respectively. Due to the limited information gathered by some emergency services and in media reports about the dive profile, many of the incidents fall into the category of unknown. Over recent years, the number of reports in which the dive profile is not known has increased; however where we do have the information, we are able to demonstrate a picture which is largely consistent with previous years.

In Figure 5, the maximum depth of the dive during which the incident took place is shown, categorised into 10m depth range groups. In contrast, Figure 6 shows the depths at which incidents started. These two histograms are in common with the finding last year in reporting a decrease in the number of incidents starting on the surface, an increase in the number of incidents at which the starting depth and maximum are unknown.



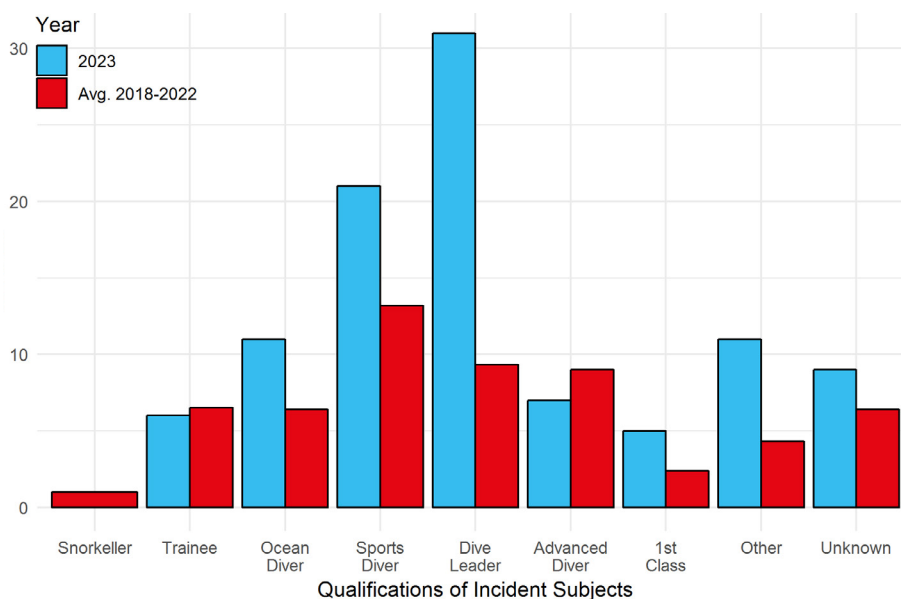
**Figure 5. Maximum dive depth (m) in which incident occurred**



**Figure 6. Depth (m) at which incident started**

## Diver Qualification

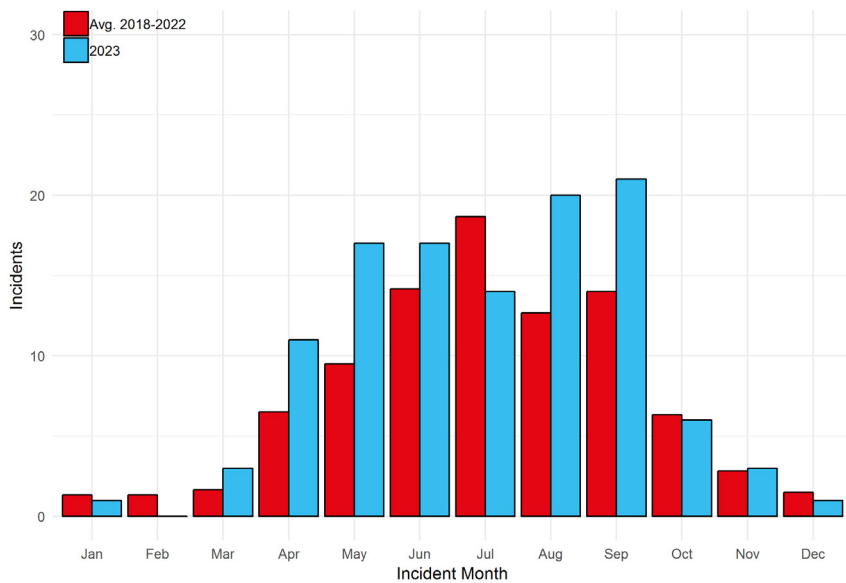
In Figure 7, we show the diving qualifications of the divers who were casualties in incidents in 2023. This year, we see a big increase in the number of Dive Leaders who were casualties relative to those holding other qualifications compared to previous years. We are unsure as to why this might be the case, especially as we have not seen a big increase in divers holding this qualification. However, it is perhaps a salutary lesson that no matter your qualification or experience you are not immune to becoming the subject of an incident and that we should never be complacent about our own safety or the safety of our buddies no matter how experienced they are.



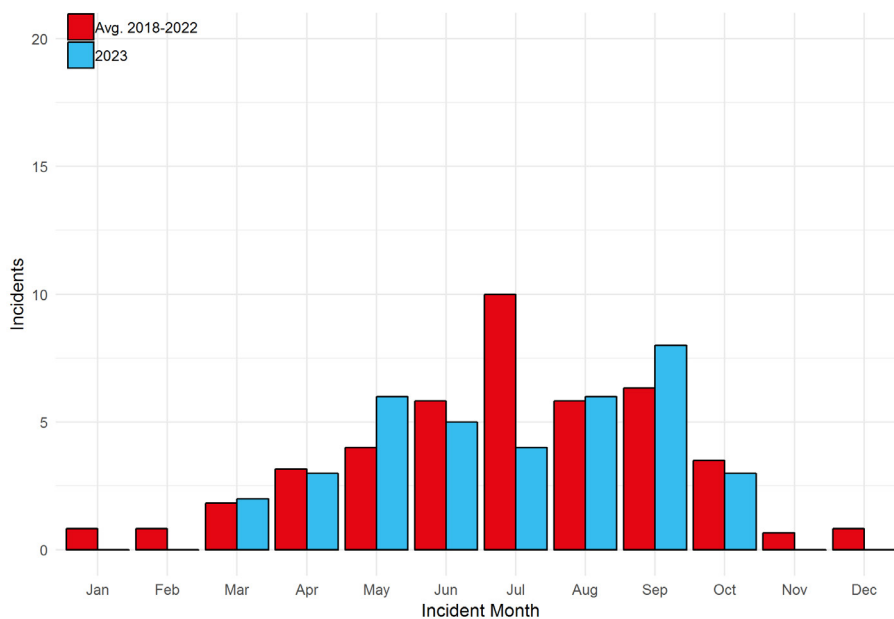
**Figure 7. Qualification of the casualty in the incident**

## Divers' Use of Emergency Services

This section reports on the extent to which divers have needed to call upon the assistance of our emergency services: the Coastguard, the RNLI and Rescue Helicopters. (Figures 8, 9 & 10). We are extremely grateful to the emergency services for the support they give to divers when they are in need. We frequently see that incidents requiring the recovery of a diver by helicopter involve both the Coastguard and the RNLI, and the coordination of these three rescue services to support us is very much appreciated. Here again, we see evidence of more incidents due to the elongated diving season into September, facilitated by the exceptional late summer.

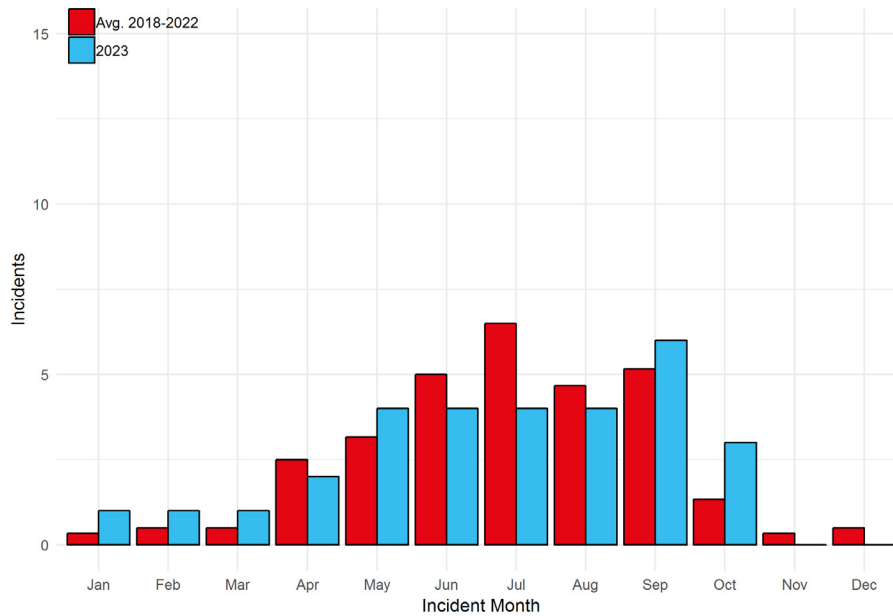


**Figure 8. Incidents involving the UK Coastguard Agency in each month of the incident year**

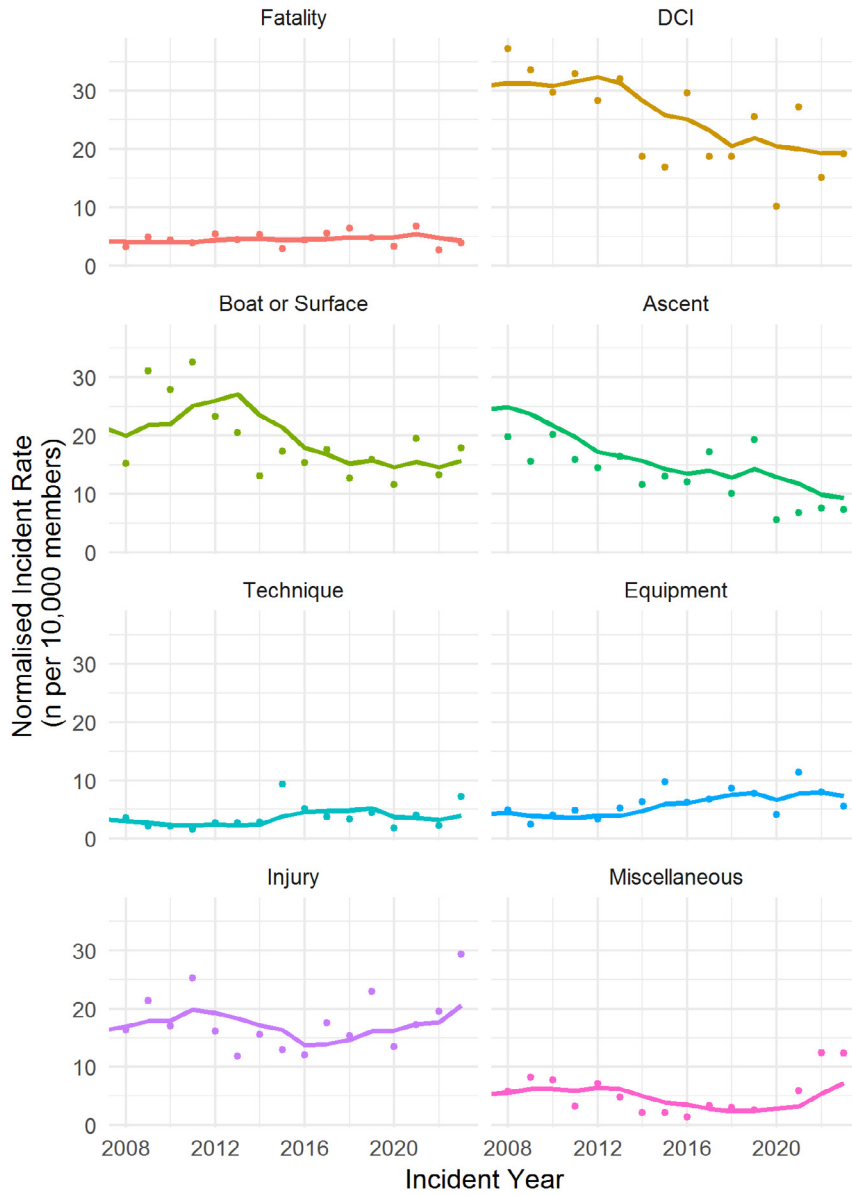


**Figure 9. Divers' Use of RNLI facilities in each month of the incident year**

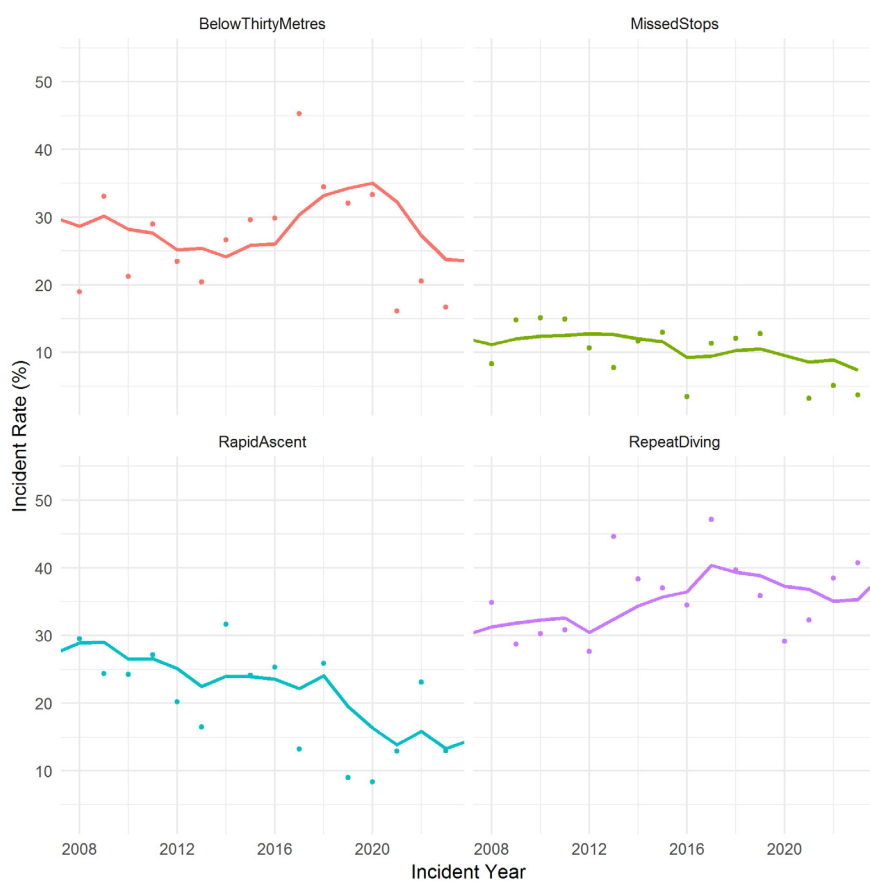
In 2023, the RNLI were called 37 times to help in the rescue of divers. Twenty nine of these were in May, June, July, August and September (Figure 9). Also in 2023, helicopters were called 30 times to help in the rescue of divers. Eight of these were in May, June, July, August and September (Figure 10). Again, we see that September was a particularly busy month for the rescue services in helping divers.



**Figure 10. Divers' use of SAR helicopters in each month of the incident year**



**Figure 11a. Incident rates linked with an indicated causative factor using BSAC membership as a proxy for estimated participation in the sport. Trendlines are a 5-year rolling average.**



**Figure 11b. DCI incident rates by factor involved, using BSAC membership as a proxy for estimated participation in the sport. Trendlines are a 5-year rolling average.**

In figures 11a and 11b, we aim to account for the variation in the data due to the small number of incidents associated with any one factor and the variation in the amount of diving. Therefore, to bring out meaningful trends in the data, we use BSAC membership numbers as a proxy for the level of diving taking place in the UK and then present incident rates using a 5-year rolling average. Here, we are looking for factors associated with incidents that may merit the attention of those agencies designing training programmes and issuing safety advice.

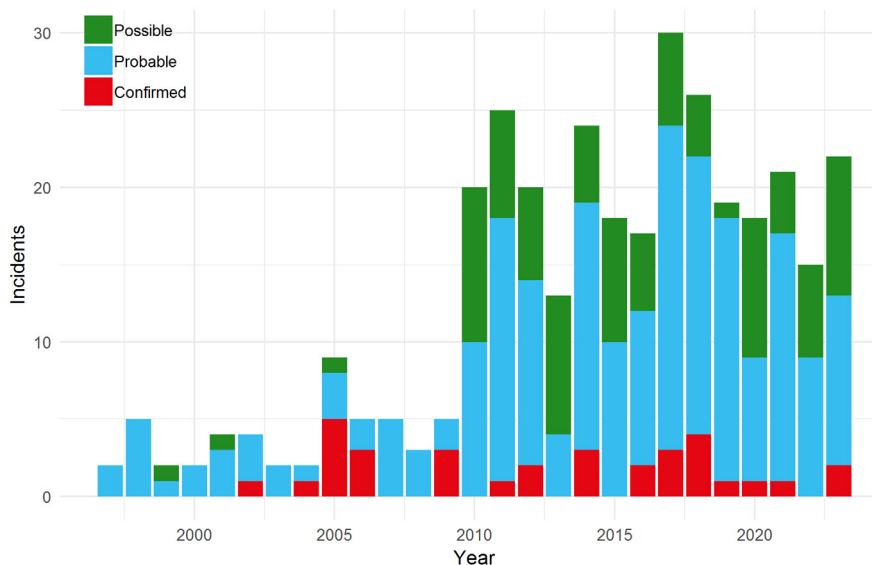
Figure 11a confirms previous conclusions that we are continuing to see fewer incidents of DCI and fast ascents in the incident reports. Where DCI has occurred, we scrutinise the data to identify causative factors in Figure 11b, and we helpfully note that we are seeing less DCI associated with diving deeper than 30 m, rapid ascents and missed stops. There has been a lot of emphasis placed on improving buoyancy control and dive planning to reduce the frequency of fast ascents and missed stops and reduce the risks of deeper diving. With a reduction of the impact of these three factors on the frequency of DCI, and that in the background, most diving involves more than one dive in the day, the relative impact of repeat diving on DCI will inevitably increase.

## Immersion Pulmonary Oedema (IPO)

We have recently refined our process for indicating that IPO is relevant to an incident and retrospectively categorised each incident as confirmed where we have professional confirmation or probable when three or more of the criteria are present and possible in which one or two of the criteria are present. Because evidence for a confirmed IPO is sometimes available from a coroner's report, which then escalates incidents previously categorised as probable become confirmed, and the database and the analysis are amended. Figure 12 will, therefore, sometimes reflect additional information that has recently been reported for previous years.

The criteria which lead us to believe that an IPO is implicated are:

- Diver is underwater with breathing difficulties when not exercising particularly strenuously. Breathing difficulties indicated by rapid, uneven, or heavy breathing or coughing uncontrollably with or without bloody sputum.
- Indication of difficulty of breathing when on the surface.
- Confusion, swimming in the wrong or random directions.
- Inability to carry out normal functions whilst appearing to have to concentrate on breathing.
- Belief that a regulator is not working properly.
- Indication of 'out of gas' when their regulator(s) are found to be working correctly and with adequate gas supplies.
- Divers refusing or rejecting an alternate source when 'out of gas'.



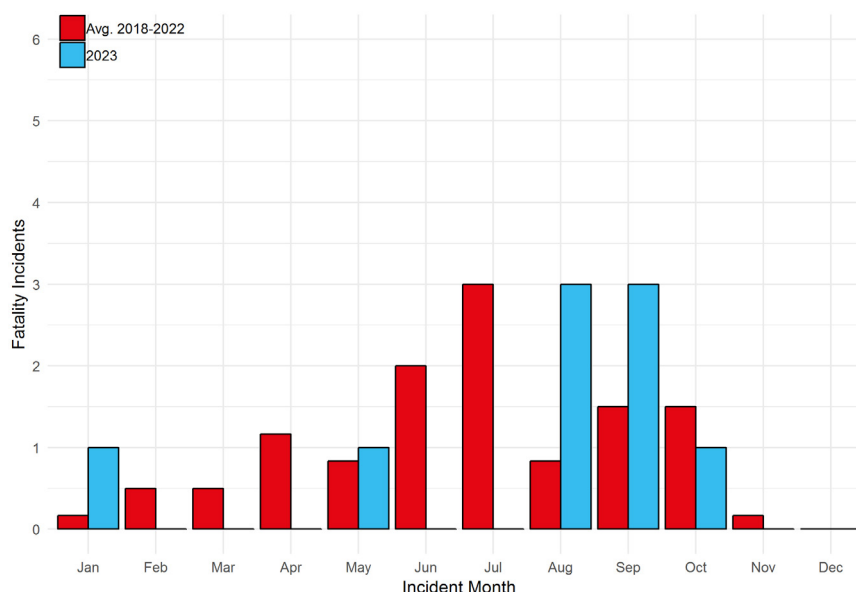
**Figure 12. The frequency of confirmed, probable and possible cases of IPO 1997 to 2023.**

Although IPO has been understood in military rebreather divers and triathlon competitors for some time, awareness of IPO and its occurrence in divers, snorkellers and open water swimmers is now helpfully growing. Like divers and snorkellers, open water swimmers are now also advised not to swim alone, and as a community, they are increasingly cognisant of the risk of IPO. Certainly, it is now advised that anyone experiencing symptoms of IPO whilst engaging in any one of these sports should refrain from entering the water again to swim or dive until medical advice has been sought. It is now understood that anyone who has experienced even mild symptoms of IPO is much more likely to be affected again upon immersion in water. The BSAC website hosts two blogs with further information on IPO by DDRC and by Peter Wilmshurst. Figure 12 shows that since 2010, divers reporting incidents are more likely to report on criteria now associated with IPO, where previously it was largely the medical profession who would note a diagnosis of IPO.

Due to improvements in training programmes, divers are becoming more aware of IPO, and the advice remains that if you experience any breathing difficulties underwater, you should terminate the dive, ascend safely and exit the water. In addition, if you recognise any of the factors in a buddy, then assist them from the water as quickly as it is safe to do so. Once out of the water, the casualty should sit, be given oxygen and medical advice sought. It is hoped that the early identification of problems which may indicate IPO may reduce the chances of an incident becoming more serious.

## Fatalities

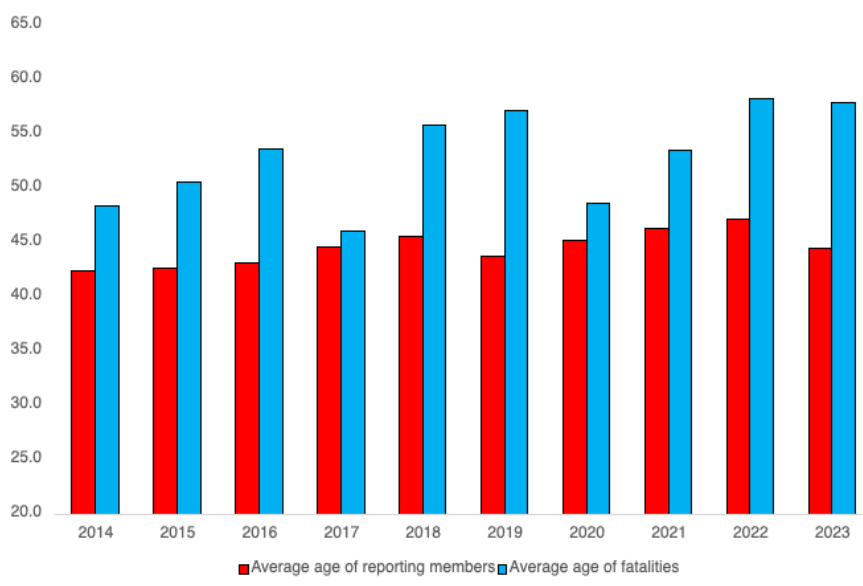
Sadly, 9 fatal incidents occurred in the UK during the 2023 incident year involving the death of 9 divers. Figure 13. shows the fatalities by month compared to the average by month for 2018-2022.



**Figure 13. Fatal incidents in 2023 by calendar month compared to previous 5 years.**



Analysis of the fatal incidents showed that the average age of the people who died was 58 years. For the last ten years, the average age of people recorded in the incident database who were not casualties has been increasing. This year, for the first time, the average age has actually decreased to 44 years. Over the last ten years, the average age of divers who have died is 8.5 years older than the diving population diving at the time; this indicates that age is a strong factor in the likely survival of divers involved in incidents. However, there is insufficient information available to define the cause of the fatal incidents reported in the database this year.



**Figure 14. The average age of divers who have died compared with the average age of divers accompanying them over the last ten years.**

In 2019, we investigated the efficacy of the rescue techniques divers are trained to implement in the event of an emergency. Five years on, we decided to revisit the data and further refine the analysis to ensure that incidents where training was occurring were discounted from the analysis. In the case of the use of alternative air sources (AAS), we looked for the use of an octopus or an equivalent AAS and the associated successful recovery of the casualty to the surface without having to utilise a free ascent. In 83% of cases, the use of an alternative air source resulted in the successful recovery of the casualty to the surface. In all cases where Controlled Buoyant Lift (CBL) was used, the outcome was that the casualty was successfully recovered to the surface. Where recovery to the surface by CBL was followed by the application of CPR, one in three of the resuscitations were successful. Where CPR was used without oxygen, 28% of the casualties regained consciousness, and where CPR was supplemented with oxygen, this success rate increased to 30%. In 9 out of 30 cases of

resuscitation where a defibrillator was used, the casualty regained consciousness. For completeness, these 30 cases included cases where unfortunately the AED advised no shock. The efficacy of these resuscitation techniques is much higher than that expected from resuscitation in a non-clinical setting and are indeed on a par with resuscitation success in clinical settings. This almost certainly due to the increased likelihood that the casualty is in need of resuscitation due to asphyxiation because of drowning rather than other medical causes and, therefore, has an increased likelihood of successful resuscitation.

The result of this analysis is a reflection of the excellent training programmes delivered by excellent diving instructors who, in turn, ensure divers are well trained in rescue techniques. There is little doubt that the competency with which divers deploy these rescue techniques saves lives.

**Table 1. The efficacy of rescue techniques used in reported incidents**

Technique	Reported use	Successful outcome <sup>3</sup>	Success rate
Alternative Air source Used <sup>1</sup>	180	149	83%
Controlled Buoyant Lift <sup>1</sup>	98	98	100%
Controlled Buoyant Lift + CPR <sup>1</sup>	33	11	33%
CPR alone <sup>1</sup> (where CPR is used without Oxygen or an AED)	65	18	28%
Oxygen-enriched CPR alone <sup>1</sup> (where no AED is used)	30	9	30%
AED defib use <sup>2</sup>	30	9	30%

**1**analysis from data from 2014-2023 inclusive

**2**data extracted from the entire database

**3**successful outcome defined, for AS, as the casualty reaching surface without having to use free ascent; for CBL as the casualty reaching surface and for resuscitation techniques as the casualty regaining consciousness

## Conclusions

Key conclusions of the BSAC Incident report 2023 are:

- The number of incidents continues to be closely linked to the amount of diving occurring, and diving activity has returned to pre-pandemic levels in 2023.
- Very sadly, this year there were 9 fatalities resulting from 9 diving incidents.
- When needed, divers deploy rescue techniques which enable casualties to be recovered to the surface and perform resuscitation with an efficacy that exceeds expectations for success in other non-clinical settings.

- Experience and qualifications do not necessarily provide protection from the possibility of becoming a casualty in a diving incident.
- Divers are becoming more aware of the symptoms of IPO and need to ensure that they have received medical advice before returning to sports which involve immersion in water.
- Some incidents could possibly have been circumvented had those involved followed a few basic principles of safe diving practice. 'Safe Diving' published by BSAC summarises all of the key elements of safe diving practice. In addition, many of the unavoidable incidents are prevented from escalating into something more serious by the prompt utilisation of rescue skills and the rapid support of the rescue services. Examples of all these can be found in the synopses provided.

# Synopses

## Fatalities

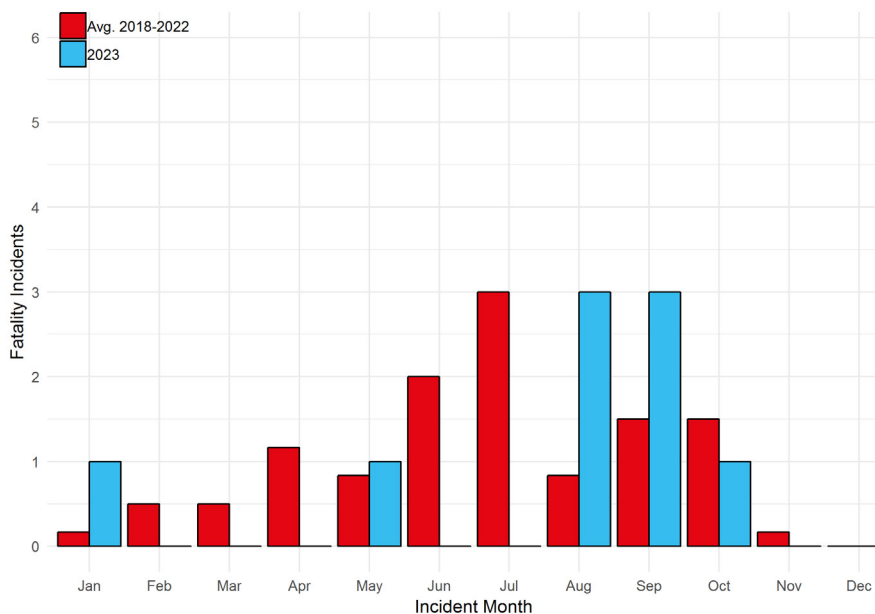


Figure 14. The month of occurrence of fatalities

### January 2023

23/002

Following a dive to a maximum depth of 21m, a diver became unresponsive at a depth of 18m. The diver's buddy brought the diver to the surface and shouted for help. The onsite rescue boat and crew attended and recovered the diver aboard and found him to be unresponsive and not breathing. CPR was initiated whilst the boat returned to shore, where the unconscious diver was transferred to shore and resuscitation attempts, including oxygen-enriched rescue breaths, continued, assisted by volunteers who were visiting the site that day. Paramedic and air ambulance crews attended and provided additional support before transporting the diver to hospital by ambulance. The diver did not survive.

other craft. The Coastguard called off the search the afternoon of the next day after no sign of the diver could be found. (media report).

### May 2023

23/037

A diver failed to surface following a wreck dive on an offshore island. The Coastguard initiated a large-scale search for the missing diver involving four lifeboats, three helicopters, a fixed wing aircraft, Coastguard rescue teams and several

### August 2023

23/090

A qualified diver entered the water with his instructor for a training dive for compass and DSMB skills, accompanied by another qualified diver. The group descended to a maximum depth of 17m, with an average depth of 11m. After completing the skills training, the group were undertaking an exploratory dive. The diver had reached 100 bar in his 15 lt cylinder and the group ascended to 9m where they were to undertake a 1 min simulated deco stop. The diver suddenly started to fit and he let go of the DSMB reel and his regulator dropped from his mouth. The instructor tried to provide an AS and when this was not possible, he immediately recovered the diver to the surface and called for help. The pair surfaced around 7m from a ramp and two open water swimmers immediately assisted, towing the unconscious diver to the ramp. He was recovered from the water and CPR was commenced, whilst the emergency services were called. The on-site

team provided an AED but no shock was advised and so CPR continued until the ambulance service arrived and took over. Resuscitation efforts were made for over an hour but unfortunately the diver could not be revived and was declared deceased at the scene.

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**August 2023** **23/335**

The Coastguard responded to a request to support medical transfer of a diver in need of medical assistance. Unfortunately, the diver did not survive. (Coastguard report).

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**August 2023** **23/098**

The Coastguard was alerted to a missing diver and initiated a major sea and air search for the diver. The diver was spotted and pulled from the water some 5 hours later and pronounced deceased.

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**September 2023** **23/267**

Two divers entered the water for a pleasure dive to a maximum depth of 5m. At some point, the pair became separated, and the buddy subsequently encountered an instructor with a group of students, who knew both divers, and alerted him to the missing diver. The instructor surfaced with his group and the buddy and it was established that the diver had been missing for some time as they had become separated at the start of the dive. The instructor shouted to the shore cover, who confirmed they had not seen the diver on the surface or leaving the water. The instructor directed the surface cover to check the missing diver's car and the surrounding area in case he had left the water unseen, but no sign of the missing diver was found. The students were escorted back to shore and the instructor organised two experienced divers to act as a buddy pair, including the diver's buddy, to search underwater. The pair were instructed to descend to a 7m platform and then follow an underwater guideline to a 5m platform, which had been the divers' planned route. The instructor then descended to the 5m platform and followed the same route from the opposite direction. Whilst following this route, the instructor found the missing diver unconscious on the guide rope between 4-6m depth, not breathing and with no

regulator in his mouth. The instructor raised the unconscious diver to the surface, inflated his BCD and made himself buoyant as well. He shouted for an ambulance to be called, whilst towing the casualty as quickly as possible towards the shore. Help was given to recover the casualty from the water and two other divers commenced CPR. The emergency services arrived but unfortunately the diver did not survive.

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**September 2023** **23/103**

Two divers were diving from the shore, keeping the rocks to their right-hand side until they got to a blind gully where they followed to its end. They then reversed their route to start their return, having achieved a maximum depth of 14m. After between 30 and 35 min into the dive, one of the divers suddenly made a rapid uncontrolled ascent to the surface, followed shortly by his buddy. On reaching the surface, with a total dive time of 35 min, the diver told his buddy he could not breathe. The pair were approximately 150m from their exit point and the buddy began towing the diver back to shore whilst shouting for help. During the tow, the diver lost consciousness and as they neared the slipway, some divers from another group dragged the diver from the water. They started to administer oxygen and performed CPR whilst someone called the emergency services. Amongst those administering CPR were three nurses and a medic, with two of the nurses working in A&E. As well as CPR, an AED was provided and attached to the diver and, over the course of about 20 min, received six shocks from the AED, but subsequently, there was no shockable rhythm. The emergency services attended, including ambulance, RNLI, air ambulance, Coastguard and police. The ambulance crew continued CPR until a doctor arrived on scene and pronounced the diver deceased.

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**September 2023** **23/121**

A diver was reported missing by a dive vessel. The diver and their dive buddy had ascended to their final scheduled decompression stop at 3m below the surface. The divers were conducting a drift decompression away from the available shot line but their presence was indicated by their DSMB, the line of which was clipped to the casualty's

BCD. The DSMB was visible to the diver's charter boat waiting on the other side of the wreck site, but it was not sighted by the crew of another charter vessel which was motoring towards the wreck buoy to deploy divers. The crew of the diver's charter boat saw the DSMB disappear under the second charter boat. Subsequently, one of the two divers failed to resurface. The Coastguard was notified and tasked two lifeboats and a helicopter to search for the diver, assisted by several other craft. The search was eventually called off and the diver believed to be deceased. The diver was located underwater 18 days later and recovered by a Royal Navy dive team. (Media report.).

**October 2023**

**23/134**

The Coastguard was alerted to two divers involved in an incident on a vessel, which was making its way to a pier. The emergency services attended and one diver was taken to hospital for treatment but the other was declared deceased at the scene. (Media report).

# Decompression incidents

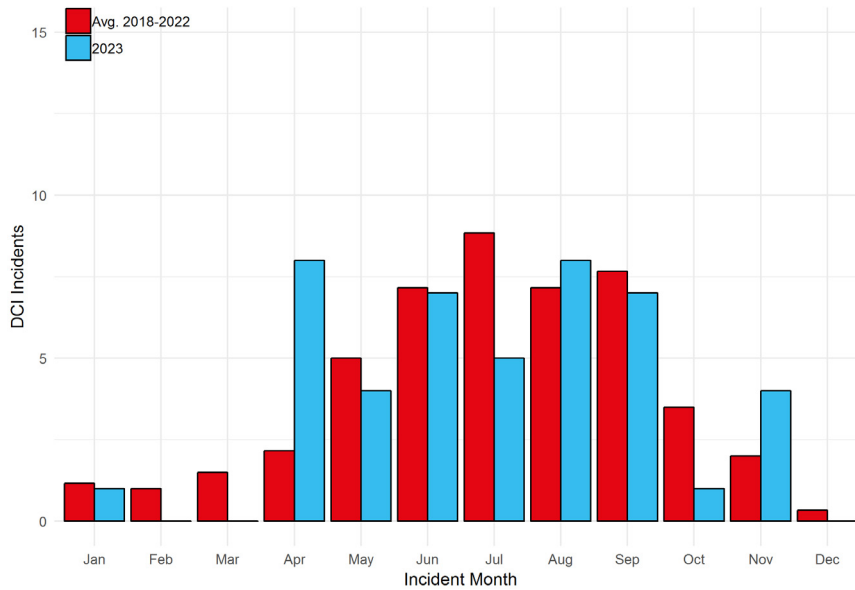


Figure 15. The month of occurrence of DCI

## January 2023

23/056

A diver, using a semi-drysuit, and her two buddies had completed two dives with a water temperature of 7C. The first was to a maximum depth of 21m with a total duration of 35 min, including stops at 10m for 1 min and 6m for 3 min. After a surface interval of 98 min, a second dive to a maximum depth of 23m for a total duration of 35 min, including stops at 10m for 1 min and 6m for 14 min. Some days later the diver noticed what she thought was a slight bruise on her right elbow but did not relate this to diving. The following weekend, she realised the bruise was still there and she had begun to feel breathless and fatigued. Three days later, she contacted a recompression chamber to discuss her worsening symptoms and was invited to attend the chamber to discuss the condition. After examination, the diver received recompression treatment with two further follow up treatments.

before ascending, with a total dive time of 46 min. After a surface interval of 134 min, the pair conducted a dive to a maximum depth of 11m for a total duration of 46 min. The following day, the student's parent phoned to say the student was unwell and as the instructor was not available, another member advised she should contact a recompression chamber for advice. The chamber staff advised attending for assessment and the student received recompression treatment, which resolved most symptoms, but the student required two further treatments over the following two days.

## April 2023

23/042

A student was on his first day of open water training with an instructor. The student completed the first dive to 6m, practising buoyancy control and mask clearing with a maximum depth of 7m

## April 2023

23/292

Coastguard received a report of diver suffering from DCI. (Coastguard report).

## April 2023

23/022

A pair of divers planned to dive an underwater wall to a maximum depth of 27m. One diver had a 15 lt cylinder of air, a 3 lt pony of air and her buddy had twin 10 lt sidemounts. Both divers carried a 7 lt stage cylinder with nitrox 51 for deco and planned to use them from 51m to the surface. On descent, the diver had trouble controlling her

buoyancy and felt she was being tipped forward, with air migrating to her feet. Around 10m and 3 min into the dive, the diver was struggling to maintain position and depth. Her buddy took hold of her, dumped buoyancy and tried to stabilise the diver. During this time, the pair had descended to a maximum depth of 14m. The diver then twice attempted an inversion exercise but this did not succeed in resolving the situation. The diver then started to ascend rapidly, still being held by her buddy, who was unable to control the ascent. The pair made an uncontrolled ascent direct to the surface, omitting any safety stops and surfaced with a total dive time of 6 min. Once on the surface, one of the two RHIBs realised there was an issue and recovered the diver aboard. The diver complained of a sinus-type headache and was placed on oxygen and laid down. After about 15 min on oxygen, the diver began to complain of tingling fingers, which eased when her drysuit wrist seal was removed. The diver remained on oxygen for 60 min until the RHIB returned to shore, by which time all symptoms had resolved. Her buddy experienced no symptoms but breathed from her nitrox 51 for 60 min until return to shore. The pair decided not to dive again that day and returned to their accommodation for a shower. After a shower, the diver began to experience 'pins and needles' and a nettle stinging like feeling in her lower left arm, wrist and hand. She was placed on oxygen again and laid down and the BHA helpline called for advice. The diver was advised to attend a recompression facility for assessment and the diver remained on oxygen for the one hour journey. After assessment, the diver was recompressed for four hours, which resulted in a resolution of all symptoms and the diver was discharged and returned to her accommodation in the early hours of the morning.

**April 2023**

**23/293**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

**April 2023**

**23/294**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

**April 2023**

**23/025**

Two divers had completed two dives the previous day; the first to a maximum depth of 17m and a total duration of 53 min, including a stop at 6m for 3 min, followed after a surface interval of 193 min, a second dive to a maximum depth of 20m for a total dive time of 11 min. The following day, after a surface interval of 23 hrs, the pair entered the water from a charter vessel to dive a wreck. The pair descended the shotline and began to explore the wreck in poor visibility of around 2m. The pair met other divers swimming in the opposite direction and moved off the wreck to avoid them and swam into a cloud of disturbed silt and were unable to relocate the wreck. In poor visibility and a slight current, one diver was provided a buddy line by his buddy which he attached to his BCD. The pair continued to dive on the seabed and reached a maximum depth of 29m, with the diver collecting some scallops. After about 27 min, the diver signalled to his buddy that something was wrong and gave the ascend signal which the buddy returned. The pair had agreed prior to the dive that the diver would hold the buddy's DSMB open whilst he inflated it but on handing the diver his DSMB, he just allowed it to drape over his arm. The buddy then attached his reel and deployed his DSMB himself. During deployment, the reel jammed as the wrist strap became entangled in the line and pulled the buddy about a metre off the seabed. He was able to drop back down and pull the line through the reel until the DSMB reached the surface and the line went slack. The buddy decided to ascend without trying to reel in the line onto the snagged reel and signalled the diver to ascend. The diver took hold of the line above the buddy and began their ascent at 32 min into the dive. During the ascent, the buddy's computer signalled a fast ascent warning 6 times but the computer ascent profile examined after the dive showed an overall ascent rate of 8m/min from the seabed to 8m. At 8m, the ascent warning signalled and the buddy was unable to control his ascent. He ascended directly to the surface from 8m, with the diver, who was 2m above him, ascending directly to the surface from 6m, with a total dive time of 37 min. On surfacing, the buddy inflated his own BCD and then noted the diver's head was very low in the water and



he had not inflated his BCD. The buddy inflated the diver's BCD and placed him on his back and noted his regulator was not in his mouth. The diver then vomited and brought up some fluid, then started coughing up phlegm and blood. The diver was motionless apart from the coughing. The buddy gave an emergency signal to the boat, which was nearby, and after trying to tilt the diver's head to allow the phlegm to drain away, began to tow the diver to the boat and round to the diver lift. The buddy helped the crew to get the diver onto the lift and as the lift was raised, the buddy line which was still attached snapped and the buddy was able to swim away from the lift. When the boat returned to recover the buddy, he had become entangled in his DSMB line, which was floating around him on the surface. A crew member descended on the lift and unentangled the buddy and he was recovered aboard. The skipper had alerted the Coastguard, who tasked a helicopter and lifeboat to assist the vessel. The diver had been placed on oxygen and was airlifted to hospital for treatment. The buddy was returned to shore by the lifeboat, where he was met by an ambulance and assessed by paramedics, and released as no symptoms were identified. The diver received recompression treatment and was discharged the following day.

**April 2023**

**23/295**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

**April 2023**

**23/296**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

**May 2023**

**23/034**

A Coastguard rescue team were returning from a previous incident when they were tasked to assist with the evacuation of a diver suspected of suffering from DCI. The team attended a local harbour to meet with a charter vessel and to transfer the injured diver to a helicopter landing site to allow the diver to be airlifted to a recompression chamber. (media report).

**May 2023**

**23/041**

A rebreather diver and his buddy were preparing to dive a wreck in approximately 16m from a club RHIB. The diver was observed to be making some effort to kit up. On entering the water, the pair descended a fixed shotline, but the diver resurfaced alone shortly after and then immediately submerged again. The diver surfaced again very shortly after, observed by the crew on the RHIB, who signalled the diver who did not respond. The RHIB came alongside the diver and it was clear he was in some distress. The two crew de-kitted the diver, which took some time as the diver was becoming increasingly tired and unable to help them. The crew secured his equipment alongside and recovered the diver aboard with considerable effort. Immediately after recovery of the diver, a group of three divers surfaced and were able to swim to the RHIB and recover aboard. The diver's buddy had remained underwater, assuming the diver would join him and had deployed a DSMB, which the boat crew used to signal him to ascend by pulling on the DSMB and repeatedly revving the engine. The diver was conscious but unable to communicate, was vomiting and complaining of head and ear pain and tiredness. The emergency services had been called by phone and an ambulance was arranged to meet them at their launch point. On return to harbour, the diver was unable to stand and continued to vomit and was transferred to a pontoon in preparation for the arrival of the emergency services. An ambulance arrived within 5 min, followed shortly after by a Coastguard rescue team and a helicopter landed nearby. The diver was airlifted to a recompression chamber, where he was diagnosed with an arterial gas embolism, possibly occurring before the dive or during the successive ascent. He was also found to have a stretched eardrum. Following recompression, the diver was discharged a few days later with advice to have a follow-up assessment for any lasting issues by his GP. The diver's computer had recorded a descent to a maximum depth of 9m followed by an immediate ascent and then a further descent to 3m before a final ascent, with a total underwater time of 2 min.

**May 2023**

**23/043**

An instructor trainer was leading a group of trainee instructors during an open water course. During the course, the group had completed 3 underwater training sessions. The first to 6m for a total dive time of 12 min, the second, after a surface interval of 46 min, to 6m for a total dive time of 16 min. The final dive in the series was conducted after a further surface interval of 45 min and to 6m for a total dive time of 15 min. During this dive, the skills lesson was controlled buoyant lift involving 4 partial ascents of between 1.5 and a maximum of 3m, before a final slow ascent to the surface. The instructor felt fine after diving other than a slight twinge in her shoulder which she assumed was muscular. About three hours later, the instructor noticed a strange "Icy hot" sensation in her hands and after 20 min, when the symptoms did not subside, she called a recompression chamber for advice. She was advised to attend the chamber for a check-up. The check-up showed no signs of DCI but she was treated on an RN62 table with 2 additional treatments over the next 2 days. The weird feeling in her hands reduced slightly following the first treatment, but further treatments did not make a difference and a slight residual weird feeling persisted after treatment.

**May 2023**

**23/306**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

**May 2023**

**23/307**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

**June 2023**

**23/059**

A student and his instructor were diving a wreck as part of his depth progression training to 25m and was due to deploy a DSMB from 20m at the end of the dive. The pair descended a shotline to the wreck, with both divers using 15 lt cylinders of air and both wearing drysuits. The majority of the dive was conducted around their maximum depth of 25m, before ascending to 20m on top of the wreck to deploy the DSMB. The student attempted to deploy his DSMB but was unable

to do so as he was too buoyant. The instructor indicated for him to sort his buoyancy first before trying again but as he continued to have difficulty controlling his buoyancy, the instructor took over the deployment of the DSMB to allow the student to focus on his own buoyancy. The pair started to ascend slowly but the student was under-weighted, and unable to control the air in his drysuit, ascended rapidly direct to the surface from 20m, surfacing with a total dive time of 27 min. The instructor made a controlled ascent to the surface and met back up with the student on the boat. During the trip back to harbour, the student was sick over the side of the boat, attributed to the result of shock and panic. The student did not display any symptoms of DCI until the middle of the night when a recompression chamber was called for advice and the diver attended the chamber and was recompressed the following day.

**June 2023**

**23/053**

A diver using a rebreather completed a dive to a wreck from a boat to a maximum depth of 36m for a total duration of 64 min, including a total of 15 min decompression at 10m and 6m. On returning to shore, the diver was noted to look unwell and lethargic. The diver was placed on oxygen and looked after by a hyperbaric doctor who was on the same trip. The doctor assessed the diver and decided that an ambulance should be called to transfer him direct to a recompression chamber for treatment.

**June 2023**

**23/065**

On the second day of a training session after a surface interval of 16 hours, an instructor and two students conducted a training dive to a maximum depth of 18m, navigating past a number of underwater features. Sometime into the dive, one of the students complained of the cold as the bottom water was considerably cooler at 12 deg C than the surface water at 21 deg C. The instructor led the students shallower, following the wall of the site. At a depth of 14m, the second student appeared to shudder and started coughing, and as the instructor approached her, she pointed to her regulator. The instructor offered his AS but the student refused and the instructor signalled to

about the dive and both students confirmed OK. The student with regulator problems attempted to swim rapidly direct to the surface, but the instructor slowed her ascent and then completed a controlled buoyant lift between 6m and 3m to carry out a safety stop. The student continued to indicate a problem and continued her ascent. The instructor aborted the safety stop and all divers returned to the surface with a total dive time of 13 min. On surfacing, the instructor checked his computer which showed no stops were required. The student was panicking, and after being calmed down by the instructor, explained that she had breathed in water through her regulator as she had not gripped it properly in her mouth. The student was taken back to shore, and once she had calmed down,, was helped to exit the water. No divers reported any signs or symptoms of DCI or other condition post-dive and during the debrief, students were advised to monitor for symptoms. The following morning, whilst driving home, the instructor noticed a tingling in his left hand and right foot, which he occasionally suffered from, due to a medical condition. The tingling became worse as he continued to drive and spread to his wrist, which started to feel different from normal issues. The instructor drove to A&E where he was admitted and put on oxygen and referred to the recompression chamber for treatment. The diver received a 4 hour recompression treatment, during which all symptoms resolved and did not return. The diver received a 2 hour treatment the following day and was discharged.

**June 2023** **23/312**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

**June 2023** **23/140**

Two divers who held qualifications that did not allow mandatory decompression stop diving were on a week-long liveboard trip and had been reminded they could not carry out dives with mandatory decompression stops. On the first dive of the week, the pair returned to the dive boat having completed 6 min of decompression stops. They were spoken to again about the limits of their training by the trip leader but laughed

it off and were reminded not to do it again. The following day after a surface interval of 19 hours, the pair conducted a dive to a maximum depth of 36m. They were seen at a depth of 9m deploying a DSMB mid-water, which they were not trained in, when one of them lost buoyancy and was seen trying to swim back down and then was on the surface. Later, once back aboard the charter vessel, the diver was seen by the skipper to be scratching his back and, on inspecting, was found to have a rash. The vessel returned to shore, and the diver was taken to a chamber where he received recompression treatment and was advised to have a check for a PFO.

**June 2023** **23/066**

The Coastguard was contacted by a dive vessel who required medical assistance for a diver with symptoms of DCI. The Coastguard tasked a lifeboat to attend, and on arrival, two crew went aboard the dive vessel to care for the diver whilst the vessel made its way back to harbour, escorted by the lifeboat. Once in harbour, the diver was transferred to the lifeboat to be treated by paramedics before being transferred by ambulance to a heliport for transport to a recompression chamber by helicopter. (media report).

**July 2023** **23/074**

The Coastguard was alerted to a diver believed to be suffering from DCI in a marina. The Coastguard tasked a Coastguard rescue team, ambulance and helicopter to attend the marina. On scene, the diver was treated by paramedics and the air ambulance crew before being airlifted to a recompression chamber.

**July 2023** **23/089**

A diver and his two buddies completed two dives without incident. The first to 22m for a total dive time of 63 min and after a surface interval of 145 min, a second dive to a maximum depth of 21m for a total dive time of 54 min. Both dives included safety stops at 5m for 3 min. The group packed up and started to travel home. 20 min after surfacing, the diver began to feel nauseous and the symptoms progressively worsened during the

drive home, including vertigo, skin rash, nausea and vomiting and diarrhoea. The emergency services were contacted 55 min after surfacing and an ambulance was on scene within 15 min and the diver was given oxygen. His symptoms gradually resolved on oxygen during transfer to hospital, and he was subsequently transferred to a recompression chamber where he was recompressed, responding well to treatment.

### July 2023

23/265

A student was on a deep diving course with another student and two instructors. The group swam out on the surface to a buoy marking an underwater wreck and rested before starting their descent. At 12m, the second student felt unsure about the dive and was brought back to the surface by one of the instructors whilst the student and the other instructor continued their descent to the wreck at a maximum depth of 21m. The student completed some exercises and then went on a circuit of the wreck at 21m before ascending to the deck level at 18m, where they were rejoined by the other instructor. The group conducted a circuit of the wreck at deck level and then checked their computers, which all were within no decompression limits and commenced their ascent at 18 min into the dive. The group took 5 min to ascend to a safety stop at 6m before surfacing, with a total dive time of 27 min. The student had successfully completed the course and after a surface interval, arranged a second pleasure dive with her father to a maximum depth of 14m without incident and with a slow, controlled ascent. Approximately 45 min after the second dive, the student reported to the dive team that she had a headache and was feeling a 'bit wobbly' and was placed on oxygen for 30 min. Feeling slightly better but not 100%, she was sent home with her father and a supply of oxygen and a recompression chamber was contacted during the journey for advice. The centre checked to see how she was, and she reported feeling better, but on returning home, she felt unwell again and attended the chamber for treatment. The diver received a five-hour recompression treatment, with a follow-up treatment for two hours the next day and was discharged with advice not to dive for a few weeks.

### July 2023

23/092

A diver and two buddies completed two dives, the first to a maximum depth of 22m for a total duration of 43 min, including a safety stop at 6m for 10 min and, after a surface interval of 134 min, a second dive to a maximum depth of 23m for a total duration of 54 min, including a safety stop at 6m for 8 min. During the drive home, the diver noticed his upper right back was itchy and hot to the touch. On arrival home, around 2 hours after surfacing for the final time, the diver observed a mottled rash across his upper back. 45 min later the rash was subsiding and so he monitored for other symptoms. The rash disappeared later that evening. Four days after the dives, the diver sought advice from a recompression chamber by email and a telephone consultation was arranged two days later. The doctor advised no diving for 30 days. The diver's buddies suffered no symptoms.

### July 2023

23/096

A diver completed two dives, the first to a maximum depth of 12m for a total duration of 38 min, including a safety stop at 5m for 3 min and, after a surface interval of 300 min, a second dive to a maximum depth of 12m for a total duration of 38 min, including a safety stop at 5m for 3 min. On both dives, the diver experienced an uncontrolled ascent direct to the surface mid-dive. The cause was considered to be due to possible interference from the BCD pressing on their new drysuit and its direct feed. The diver was alright on the surface after diving, and no ill effects were noticed post-dive or on the following day, when the diving was blown out. On returning home, the diver felt tired and out of sorts so contacted the diving officer who was also on the dive weekend and was advised to call a recompression chamber for advice. The diver was advised to attend the chamber and she received a precautionary recompression treatment.

### August 2023

23/112

A diver was on a diving trip conducting 2 dives per day. On the fourth day, she conducted the first dive starting 20 hours 11 min after the last dive the previous day, to a maximum depth of 29m for a total duration of 46 min, including a safety

stop of 3 min at 6m. After a surface interval of 97 min, she conducted a second dive of the day to a maximum depth of 22m for a total duration of 46 min, including a safety stop of 3 min at 6m. Later that day, after diving, she felt there was something not quite right with her back and asked another diver on the trip to take a look. She was told that there was a red rash and that it looked like a skin DCI. To the diver it felt slightly numb and tingly. She returned to her accommodation and started breathing oxygen, whilst a call was made to a diver emergency helpline for advice. The doctor took some details and then ordered an ambulance to take her to rendezvous with a helicopter that the airlifted then diver to a recompression chamber for treatment. The diver was recompressed and then kept in hospital for the remainder of the night for observation. The following day, the diver was examined by a doctor and the rash had disappeared, and the diver was discharged with advice to have a check for a PFO. Subsequent contrast bubble echo cardiogram confirmed the diver had a PFO.

#### August 2023

23/095

A diver had completed a series of dives over three days. Day 1 involved two shore dives, the first dive to a maximum depth of 32m for a total of 74 min, including required decompression stops of 8 min at 5m. On surfacing, the diver and his buddy had drifted a considerable distance and it took 50 min to swim back to their entry point. After a surface interval of 240 min, the second dive was to a maximum depth of 31m for a total duration of 53 min, including a safety stop of 3 min at 5m. The pair then joined a charter vessel for the next two days diving. Day 2, the first dive was to a maximum depth of 23m for a total of 51 min, including 1 min required deco stop and a safety stop of 3 min at 5m. After a surface interval of 164 min, the second dive was to a maximum depth of 23m for a total duration of 50 min, including 1 min required deco stop and a safety stop of 3 min at 5m. Day 3, the first dive was to a maximum depth of 26m for a total of 57 min, including 1 min required deco stop and a safety stop of 3 min at 5m. After a surface interval of 155 min, the second dive was to a maximum depth of 27m for a total duration of 32 min, including 1 min required

deco stop and a safety stop of 3 min at 5m. On completion of the last dive, and on getting back on the boat, the diver felt breathless with dry, chesty cough and a tight and sore abdomen. This quickly escalated within min, suddenly feeling very weak, tired and nauseous. The diver sat down and then found himself lying on the deck being administered oxygen. He was fully coherent, answering questions and moving his body as instructed; he just felt very tired. The Coastguard was contacted and a lifeboat was tasked to rendezvous with the charter vessel to transfer the diver. The diver had to be carried on and off the lifeboat, unable to stand up as felt too unwell. The diver was transferred to hospital by the lifeboat and an ambulance. Several tests and examinations were carried out before the diver was transferred to a recompression chamber by ambulance for recompression treatment. The diver received recompression treatment on an extended table 62, followed by a further treatment the next day. After further observation overnight, the diver was discharged the following day.

#### August 2023

23/087

A Coastguard helicopter was launched to recover a diver who was in difficulty. The diver was airlifted to hospital for treatment. (Media report)

#### August 2023

23/093

A diver was on a five-day trip diving from a charter vessel. On the second day, he had completed two dives the first to a maximum depth of 21m for a total duration of 47 min, including a stop at 6m for 3 min and after a surface interval of 120 min a second dive to a maximum depth of 22m for a total duration of 30 min, including a stop at 6m for 3 min. On returning to harbour, the diver noticed that he had a pain in his elbow and thought he had knocked it and that the pain would go away. The pain remained the following day but he conducted two dives. The pain remained that evening but did not feel like the normal pain from a knocked elbow. Together with the dive manager, the diver called a diver helpline and was put through to a doctor, who agreed it was unlikely to be DCI but if the pain continued, to try oxygen and to call back if the pain subsided whilst on oxygen. By this time it was midnight and the diver was reassured

and so went to bed. The doctor advised not to dive for the rest of the week, which the diver followed but went out on the boat with the rest of the divers. At the end of the day, the diver's elbow was still sore and he decided to try oxygen, within minutes of being on oxygen, the pain went away. The diver called the helpline and spoke to the doctor explaining the outcome of being on oxygen and the doctor requested the diver attend the chamber. The diver made his way to the chamber the following morning, and although investigation of his dives did not reveal any reason for the condition, recompression was advisable. The diver received recompression treatment with full resolution of symptoms and the diver was discharged.

**August 2023**

**23/111**

An instructor had been conducting entry level diver training over three intensive days, including multiple AS and controlled buoyant lift ascents. After returning home on the third day, the instructor started to experience symptoms of DCI and went to a recompression chamber where he received treatment. Later the same day, his two students also reported to the chamber and received recompression treatment the next day. All three divers received repeat treatments over the following three days.

**August 2023**

**23/331**

Coastguard received a report of diver suffering from DCI and tasked a lifeboat to assist. (Coastguard & RNLI report).

**August 2023**

**23/332**

Coastguard received a report of a diver suffering from DCI. The Coastguard tasked a lifeboat to attend, and on arrival, the lifeboat transported the diver back to harbour and passed to the ambulance service for onward transport to hospital. (Coastguard & RNLI report).

**August 2023**

**23/099**

A diver using twin 12 lt cylinders with air and a 7 lt stage with nitrox 50 for deco was diving with a buddy using a CCR. The pair conducted a dive

to a maximum depth of 31m on a wreck with a planned total run time of 60 min. Underwater conditions were excellent with good visibility and no current. After approximately 40 min, they began their ascent. The diver carried out a gas switch to his nitrox 50 at 21m and conducted a stop at that depth for 2 min before ascending to a 6m stop. On reaching 6m the diver momentarily ascended to 4m before descending back to 6m. The time above the 6m ceiling was approximately 30 sec. The diver later explained that he had used a little gas in his wing to compensate for being a bit over-weighted and, as he normally used his suit, and forgot to release the gas on ascent. The diver completed 20 min of required stops at 6m and then ascended without further incident. The divers were picked up by the boat. Approximately 15 min after surfacing, the CCR diver complained of bad stomach pain and looked pale and clammy. He tried unsuccessfully to use the heads on the boat, then lay down. When the diver went to check on him, it was noticed that a rash had developed on his shoulders and he complained of tingling in his fingers and a pain in his shoulder. He also reported that the stomach pain had mostly gone. He was put on oxygen and a recompression chamber contacted. On their advice it was decided to head back to port, half an hour away, then drive to the chamber, another hour away. By the time he had reached the chamber, most of the symptoms had resolved. He was put into the chamber, but the increasing pressure caused the stomach pain to return, so the treatment was aborted. After further investigation at the local hospital, no problems could be detected with his stomach and all other DCI symptoms had cleared so he was sent home. The doctor said the stomach pain was unlikely to have been caused by DCI but could possibly have been triggered by the pressure change.

**September 2023**

**23/268**

A diver was part of a group of 12 divers diving from a charter boat over three days. The diver conducted one dive only on each of the first two days, and then two dives on the final day. The diver omitted 2 min of safety stops on the first day but completed all safety stops on subsequent dives and conducted slow ascents on all dives.

After unloading the boat and stowing kit, the diver started their journey home. Approximately 20 min into the journey, the diver developed symptoms of DCI and phoned 999. He was airlifted to a recompression chamber where he received a 6 hour recompression treatment for a suspected spinal DCI. The diver received further recompression treatments over the next four days, and although he responded well to treatment, he has been advised not to dive again.

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**September 2023** **23/342**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

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**September 2023** **23/107**

A diver and his buddy completed a wreck dive to a maximum depth of 42m for a total duration of 35 min, including stops at 6m for 8 min. On recovery aboard their boat and de-kitting, the pair had a cup of tea and a slice of cake. Approximately 20 min after surfacing, the diver began to feel unwell, saying he felt 'wobbly and not right'. The diver was laid down on the engine hatch and given oxygen. The Coastguard was called to request assistance, and after securing equipment, the boat made best speed back to harbour. A casualty assessment was conducted and the diver reported he was struggling to see and feeling really sick. He then vomited, at which point oxygen was stopped until he had stopped being sick. As the diver was deteriorating, the Coastguard was contacted again, requesting a helicopter evacuation to a recompression chamber. The boat was prepared for a helicopter lift but arrived back at harbour first and had to wait 15 min for the helicopter to arrive, during which time a Coastguard rescue team (CRT) brought a stretcher and lifted the diver off the boat and transferred him to an ambulance. The helicopter landed around 400m away and the diver was transferred by ambulance and then airlifted to a chamber by helicopter. The diver received a table 6 treatment with follow up treatments over the next three days before being discharged home and expected to make a full recovery.

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**September 2023** **23/351**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

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**September 2023** **23/122**

During travel to a diving holiday aboard a liveaboard dive boat, a dive group stopped for an evening meal. One of the divers reported feeling bloated and did not enjoy eating, which was abnormal for him. Another member of the group recalled hugging him and was surprised how hard his belly felt. The group joined the boat the following day and started diving the next day. The diver completed the first dive to a maximum depth of 33m using nitrox 24 with a total dive time of 61 min, including a decompression stop at 6m for 15 min using nitrox 50, and a second dive to a maximum depth of 26m using nitrox 34 with a total dive time of 62 min. The diver continued to feel bloated. The next day, completed two dives, the first dive to a maximum depth of 35m using nitrox 28 with a total dive time of 60 min, including a decompression stop at 6m for 10 min using nitrox 50, and a second dive to a maximum depth of 35m using nitrox 30 with a total dive time of 54 min, with no deco but considerable time spent shallow on the wreck breathing nitrox 50. The diver continued to feel bloated and realised he had not passed any urine all day so drank over 3 lt of fluids during the remainder of the day. On the third day, the diver completed two dives, the first dive to a maximum depth of 45m using nitrox 26 with a total dive time of 60 min, including a decompression stop at 6m for 18 min using nitrox 80, and a second dive to a maximum depth of 32m using nitrox 30 with a total dive time of 60 min, including a decompression stop at 6m for 10 min using nitrox 80. Despite considerable fluid intake, the diver had still not passed water and felt tired and out of breath. The next day, the diver felt increasingly unwell and decided not to dive and was starting to experience bouts of vertigo, especially when standing. The diver was advised to contact a recompression chamber for advice and was advised to contact a GP. On examination, the diver was found to be hypertensive and, although not producing urine, an ultrasound scan showed no fluid in the bladder and he was advised to go to hospital as a matter

of urgency. The diver was admitted to hospital and was found to have severely impaired renal function and was administered IV antibiotics and fluids and quickly improved. Once stabilised, he was seen by a hyperbaric doctor who advised he should be treated for DCI and was given oxygen. The diver was transferred to a recompression chamber and given a 9 hour recompression treatment.

### September 2023

23/355

Coastguard received a report of diver suffering from DCI. (Coastguard report).

### September 2023

23/269

Whilst preparing his equipment and checking his air, a diver said that his air tasted funny, and his cylinder was replaced. The diver conducted three dives without incident. Sometime after completion of the dives, the diver complained of a pain in his arm and shoulder and was taken to hospital, where he was given paracetamol and sent home. The diver subsequently contacted a recompression chamber and was advised to attend. The diver received a four hour recompression treatment and was discharged home.

### October 2023

23/132

A diver and his two buddies conducted a dive on a wreck from a RHIB to a maximum depth of 30m. At the start of the dive, the diver was noted as having some difficulty descending, and he had to duck dive to get down. He had brought additional weights on the boat but elected not to add additional weight. After descending to the wreck, the diver checked his drysuit dump valve by fully opening it, which normally results in two to three clicks before stopping. But on this occasion the valve just rotated and did not stop. The diver asked his buddies to check the valve and it seemed to dump gas when pressed, so the diver decided to continue. After about 20 min, the diver signalled he wanted to ascend. The lead diver deployed a DSMB and the group started an ascent from 23m after 24 min. During the ascent, the diver felt increasingly more buoyant despite manually operating the dump

valve, and at 15m, the lead diver made himself negative whilst operating the diver's valve, and both sank back to 23m. They ascended again and the diver attempted to control his buoyancy by venting gas from his neck seal but this did not work and only resulted in flooding the suit. The diver suffered an uncontrolled buoyant ascent, missing 2 min of required decompression stops. After recovery aboard the dive boat, the diver was placed on oxygen and the Coastguard called. The Coastguard tasked a lifeboat and rescue helicopter, and the diver was subsequently transferred to a recompression chamber where he received recompression treatment. The diver's drysuit dump valve was subsequently found to have been faulty, but he was also believed to have been under-weighted. The lead diver and the second buddy both made a normal ascent and conducted safety stops at 6m for 3 min.

### November 2023

23/145

A diver, using nitrox 32, and his two buddies, one also on nitrox 32 and the other on CCR, conducted two dives from a charter vessel without incident. The first was to a maximum depth of 35m and a total duration of 60 min, including 10 min of decompression stops at 3m. After a surface interval of 150 min, the second was to a maximum of depth of 27m and a total duration of 56 min. Approximately two hours after the last dive, the diver began to feel some discomfort and an hour later suddenly vomited. A diving doctor was contacted and the diver was checked for a skin rash which was found to be present. Oxygen was provided about 15 min later, after the oxygen set was recovered from the dive boat. The diver was transported to a recompression chamber 30 min later, where after examination, he received recompression treatment for six hours with full resolution of symptoms.

### November 2023

23/146

On the fourth day of a diving holiday on a charter vessel, a diver and his buddy, both using nitrox 30, completed two dives without incident. The first was to a maximum of depth of 40m and a total duration of 41 min, including 6 min of decompression stops at 6m. After a surface interval of 180 min, the second was to a maximum



of depth of 31m and a total duration of 41 min, including stops of 3 min at 6m. Following the last dive, the diver complained of an ache in his shoulder shortly after surfacing. The charter boat skipper checked the diver over and found clear signs of a skin rash and bruising on his shoulder. The diver reported having had a tight squeeze on the descent which had bruised him in the area of the drysuit dump valve. The diver was immediately administered oxygen and a duty diving doctor was notified whilst the vessel returned to harbour. On arrival in harbour, the diver was transferred to a hyperbaric chamber and, after assessment, received recompression treatment for six hours with resolution of the rash but the bruising remained.

**November 2023**

**23/150**

A diver had completed a single dive two days previously, to a maximum depth of 25m and a total duration of 74 min, including 18 min of mandatory decompression stops at 6m. Two days later, the diver completed a dive to a maximum depth of 34m for a total dive time of 39 min, including 7 min at 6m, although her computer had only indicated 3 min, and a safety stop at 3m for 3 min. Approximately 15 min after surfacing, the diver complained of a rash and a slight pain, like an ache, in her breast and stomach area but stated this was not particularly painful nor uncommon for her. She had experienced similar before and had attributed this to a tight-fitting drysuit and twin-set. Fellow divers aboard the charter boat examined the rash about 10 min later and thought the rash indicated a skin DCI. The divers marked the extent of the rash with a pen and took photos to show to medics before putting the diver on oxygen. The charter boat set course for harbour approximately 40 min away. During the trip back to harbour, the pain subsided and the rash became less red but did not clear completely. The skipper was asked to radio the Coastguard to arrange a medic to meet them on return to harbour. On arrival, the boat was met by a Coastguard rescue team, who transferred the diver and her buddy to a recompression chamber. The diver received a recompression treatment for 4 hours 40 min. She was discharged with no remaining symptoms but developed some bruising the next day and was

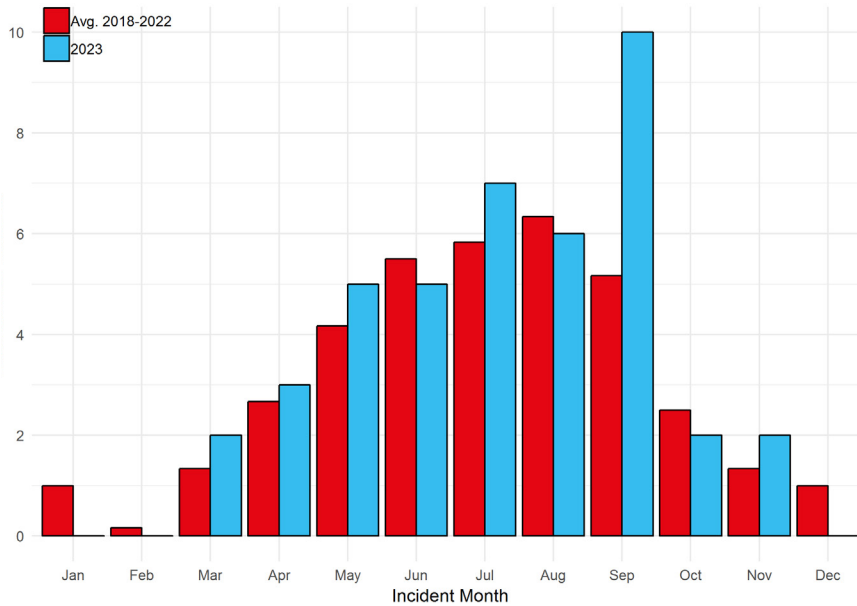
extremely fatigued. The diver did not dive again for the remainder of the trip and was advised not to dive again until she had a medical assessment and a check for a PFO. The chamber doctor had stressed the benefit of taking photographs of any rash before placing the diver on oxygen as the skin often changes after going onto oxygen.

**November 2023**

**23/360**

Coastguard received a report of diver suffering from DCI. (Coastguard report).

# Boating and surface incidents



**Figure 15. The month of occurrence of Boat or Surface incidents**

## March 2023

23/008

A dive charter boat suffered engine problems whilst it had 10 divers in the water. The Coastguard was alerted and a RNLI lifeboat was tasked to attend. On arrival on site, the dive vessel had safely recovered all 10 divers and the crew were working to repair the engine. The lifeboat was secured alongside the vessel until repairs were completed and the vessel was able to return to harbour under its own power, escorted by the lifeboat. (media report).

cooling water, and started repeatedly without any difficulty over the next 45 min whilst waiting to relaunch. On launching, the engine started and ran well. No problems were evident, so the planned trip went ahead. It took approximately one hour to reach the site, which was close to shore but required a significant dog leg around a headland to reach. The engine ran well throughout this transit. Once on site, a shotline was deployed, and as the first divers prepared to kit up, the engine stopped and could not be restarted. The starter motor engaged and turned the engine over but would not fire. The boat's anchor was deployed and as all aboard were safe and the boat in a sheltered position, 30 min were spent trouble shooting. Fuel was proven to be reaching the engine, the starter motor was engaging correctly. Although it was in place, the engine was behaving as if the kill cord had been removed. The kill switch was manipulated, and further attempts made to start the engine to no avail. At this stage, the fault was determined to be beyond the ability of anyone aboard to resolve, and probably electrical. The local Coastguard could be heard on the VHF working both a 'Mayday' and 'Pan Pan' at the time. The location of these incidents was plotted on a chart and the 'Mayday' was within 5nm while the 'Pan Pan' was a much greater

## March 2023

23/290

Coastguard received a request to respond to a diver in the water. (Coastguard report).

## April 2023

23/019

A RHIB with four divers aboard suffered engine failure whilst at sea. The RHIB recently had work carried out on the throttle assembly and fuel had been drained and replaced after being stored for several months. The boat was launched from the boatyard where it was stored but the engine failed to start whilst alongside the slipway and was recovered for investigation. The engine started while on the trailer, with hose supplied

distance away. A decision was made to call the station by phone on a non-emergency direct line so as not to further congest the working VHF channels. Coastguard were provided with the RHIB's position, situation, phone number and call sign. They elected to continue to communicate by phone, making several phone calls to update the divers on the situation, including that there would be a delay in receiving assistance due to the ongoing 'Mayday'. Once the 'Mayday' was resolved, the Coastguard called again and advised the lifeboat was on the way to help and would be in touch by radio shortly. RNLI arrived 15-20 min later and towed the boat into the nearest safe harbour. The boat was recovered by tractor over the beach and towed to the boat yard for repair.

**April 2023** **23/023**

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A group of 4 divers were joining a diver shuttle catamaran, which in addition to a diver lift had a boarding ramp at the bow for embarking from a beach. The dives earlier in the day had been cancelled due to a swell and the wind direction onto the shore. For the afternoon dive, they were kitted up on shore and as the boat came to shore bow on, it lowered the boarding ramp and another party entered the boat first. The group then began to board one at a time, carrying their mask and fins. As the third member of the group was stepping aboard, the boat was pulled away from the shore by the backwash of the swell and then was hit on the stern by a large wave. The diver fell off the boarding ramp to one side and landed in the water; she was on her side and unable to right herself and regain her footing. The boat was then moved forward again by the waves towards the diver and the skipper put the engines in reverse and moved clear of the diver. The fourth diver was fully kitted and unable to assist but the diver was assisted to de-kit and helped to her feet by other people on the beach. The diver was suffering from shock but was otherwise uninjured.

**April 2023** **23/028**

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A RHIB had been prepared for launch, after which the majority of divers in the group went to park their vehicles. Sea conditions were calm and so the two remaining members of the group decided to launch the boat. As they walked down the slip,

one of the divers realised that their suit was not done up but proceeded with the launch anyway and the boat floated off the trailer without difficulty. The diver was standing in knee deep water. Whilst the other diver removed the trailer, another member of the team turned up on the adjacent pontoon and asked the diver to throw the painter to avoid the diver having to climb into the boat. Whilst he prepared to throw the painter, the diver stepped off the end of the slip into deep water and was swamped with water up to his neck. The boat was secured and the diver exited the water to find that only his chest was soaked and he had remained dry from the waist down.

**May 2023** **23/297**

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The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard & RNLI report).

**May 2023** **23/033**

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Reports were received of an overdue freediver who had not returned to shore. A lifeboat and Coastguard rescue teams were tasked to search for the freediver. The freediver was subsequently found safe and well in a car park near the location. (media report).

**May 2023** **23/036**

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The Coastguard tasked a rescue helicopter and two lifeboats following a call from a dive vessel that had reported two of their divers had not returned to the vessel. As the lifeboats arrived on scene, it was confirmed that the dive boat had located and recovered both divers approximately 1.5 miles from the original dive site. Both divers were safe and well. (media report)

**May 2023** **23/299**

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The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard & RNLI report).

**May 2023** **23/302**

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The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard report).

**June 2023**

**23/049**

The Coastguard was contacted by friends of a diver who became concerned about an overdue diver. The Coastguard tasked two lifeboats and a rescue helicopter to conduct a search of the area and also broadcast a 'Mayday relay' on VHF channel 16. A local sailing vessel spotted the diver 1.9 miles from their last known position just as the two lifeboats were about to begin their search. One of the lifeboats arrived on scene and recovered the diver from the water, and after an initial assessment, agreed to stand the helicopter down and transferred the diver to his vessel and escorted them back to harbour. (Coastguard and RNLI reports).

**June 2023**

**23/309**

Coastguard received a report of diver overdue and missing. (Coastguard report).

**June 2023**

**23/062**

A group of divers were returning to harbour on a charter vessel in the early evening when they were hailed by a dive RHIB with 4 persons aboard. Once alongside, the people on the boat reported that they had five divers missing and overdue, having been in the water for about an hour. The people on the boat had no idea where the divers had gone in, no accurate times or how long they were overdue. There was no visible rescue equipment aboard, they did not know how to use the VHF and did not have any visible GPS. The charter boat skipper alerted the Coastguard and started to search downstream to where the current would likely have taken them. After a period of searching, three DSMBs and a strobe were spotted and three of the missing divers were recovered. The charter vessel set off again and a short time later 2 further DSMBs were spotted on the horizon and the two remaining missing divers were recovered and the Coastguard notified. The Coastguard had tasked a lifeboat and a rescue helicopter, although the helicopter was not seen and as the charter boat started to make way back to harbour to rendezvous with the divers' RHIB, the lifeboat was seen making full speed towards them and escorted the vessel in case of any issues.

Once inside the harbour wall, the charter vessel transferred the lost divers to their RHIB, into the angry but relieved embrace of their partners.

**June 2023**

**23/311**

The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard report).

**June 2023**

**23/313**

The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard report).

**July 2023**

**23/069**

A group of divers planned to dive from a RHIB. After travelling to their planned dive site, they found the conditions to be less than favourable and so decided to dive a wreck in a more sheltered location. On arrival on the wreck site, the boat was anchored to the wreck and two pairs of divers entered the water with a planned maximum dive time of 60 min. Approximately 40 min after the divers had entered the water, the wind changed direction, meaning the site was no longer protected by the land. The two remaining crew in the boat tried to recall the divers by revving the boat engine but there was no sign of the divers surfacing. As they approached the hour mark, the crew were becoming increasingly concerned at not seeing any DSMBs. They continued to monitor the site for 10 to 15 min further when one of them thought he spotted DSMBs down wind. They put a buoy in on the site and headed in that direction, only to discover it was an orange lobster pot flag. As they returned towards the site, they thought they saw further DSMBs, only to discover each turned out to be lobster pot flags, estimating there must be more than 50 in the area. At this point, the divers had been in the water for 80 min and were overdue by 20 min. The cox'n made a 'Mayday' call to the Coastguard. The Coastguard tasked two lifeboats to the scene and shortly afterwards the Coastguard radioed the boat to confirm that the lifeboats had recovered the 4 divers safely. The boat then started to recover their anchor, and as they were doing this, one of the lifeboats came alongside to check they were OK. They also reported that the divers were safely

back ashore, and advised that it would be better to return the boat to harbour and then drive round to collect the 4 divers.

**July 2023**

**23/082**

A group of nine divers were diving from a liveaboard charter vessel. They were deployed one after the other under the direction of the deck crew inside a cove in front of a cave entrance and instructed to swim through an archway, keeping to the left hand side, and after exiting, to deploy a DSMB and swim away from the wall to be collected. After dropping in the water, the divers formed buddy pairs and one trio. The last pair to enter the water swam into the cove and found surface conditions were choppy and the current quite hard to swim against but was still safe to surface swim in. As they arrived at the cave and the lead diver signalled to descend his buddy indicated another diver from the group who was clinging to the rocks. On approaching the diver and asking him what the issue was he explained that he was hyperventilating due to the stress of the swim. The lead diver tried to calm the diver down to slow his breathing and suggested that if they submerged below the swell, it would be easier for them all. The diver seemed to calm down and the lead diver signalled them all to descend to 5m and he and his buddy did but the distressed diver did not. The lead diver ascended again and the diver said his breathing did not feel right and he started to hyperventilate again and could not get down. The lead diver decided to tow the diver away from the rocks as the waves were crashing over them and try to tow the diver through the archway so the boat could pick them up. The lead diver towed the diver approximately 50m but it became clear that it was too far to tow him through the archway. He swam further into the cove and sent his buddy to the edge of the cove to signal the boat to come and pick them up. The buddy signalled that the boat had responded and was coming and then went to assist the lead diver in towing the diver to the edge of the cove. By this time, the boat had launched its small tender which came alongside to collect the distressed diver. Removing his equipment and recovering him from the water took some time. Once the diver had been dealt with, the lead diver

and his buddy swam to the charter boat and were recovered. The divers had been in the water for 40 min, with a brief descent to 5m.

**July 2023**

**23/319**

The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard report).

**July 2023**

**23/321**

A RHIB, with divers already in the water, was preparing to drop three divers on a shotline for a wreck dive when the engine cut out. Attempts were made to restart the engine but did not succeed and the boat was drifting towards an island so the anchor was deployed. The engine was not turning over and it was suspected to be either a fuel or a battery problem. The boat fuel tank gauge showed full but was topped up from spare fuel tank aboard but the engine still would not start. The battery was changed but this did not solve the problem. The RHIB was in contact with a charter boat also on the same wreck and the skipper agreed to pick up the RHIB's divers once they surfaced, whilst the crew continued to try to restart the engine. The Coastguard was informed of the situation and advised that assistance was on route. The crew tried numerous times to restart the engine and the battery was starting to lose power, when suddenly the engine turned over and restarted. The Coastguard was informed and stood assets down and requested confirmation once the vessel had returned safely to harbour. As they were preparing to depart, the charter vessel suggested they take the RHIB's divers to a nearby harbour for transfer due to the uncertainty of the RHIB engine. The boats set off, but the RHIB engine lacked power and they could not keep up with the charter vessel. The charter vessel returned and took the RHIB under tow to the nearby harbour, where fresh fuel was obtained to top up the fuel tank. On restarting the engine, the cox'n took the RHIB out for a trial around the harbour but it still would not operate properly until suddenly it kicked in with full power. The RHIB was taken out of use until the problems with the engine and/or fuel lines have been identified, repaired and tested.

**July 2023**

**23/322**

Coastguard received a report of diver overdue and missing. (Coastguard report)

**July 2023**

**23/324**

The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard report)

**July 2023**

**23/104**

The Coastguard requested two lifeboats be launched in response to a dive vessel that had reported nine divers who were missing/overdue. A local fishing vessel also responded to assist. The divers surfaced shortly afterwards and were safely accounted for. (Media report).

**August 2023**

**23/115**

A diver was on a diving trip aboard a boat but was unable to dive for the first few days. Later in the trip, the diver planned to join three other divers and advised the crew that he may have difficulty clearing his ears and so would abort the dive if necessary and return to the boat, which the crew acknowledged. The four entered the water and began their descent down a shotline but at 3m the diver signalled that he could not clear his ears and would ascend again and abort the dive, whilst the other three continued. On the surface, the diver attempted to signal the boat but it did not respond and the diver was drifting away from the shotline in the current. The diver deployed a signal flag but a fog had descended on the area, obscuring the boat from the diver's view. After an hour, the three divers surfaced and, on returning aboard, the boat the crew realised the diver was missing and raised the alarm. The skipper tried calling on the VHF radio but could not get a response and so called the Coastguard by phone. The Coastguard tasked a lifeboat and a rescue helicopter and advised the skipper to allow the vessel to drift in the current. The boat crew took up lookout positions with binoculars and the lifeboat arrived shortly afterwards. After a further hour, the diver was spotted simultaneously by both boats and the helicopter. The dive vessel recovered the diver aboard and offered him hot

food and drink. The diver was calm and joking but the lifeboat crew insisted on taking him ashore for a medical check-up.

**August 2023**

**23/329**

Coastguard received a request to respond to a diver in the water. (Coastguard report).

**August 2023**

**23/232**

During a second dive of the day, it was noted that both fuel gauges on the dive boat were showing 10-15% remaining fuel. The divers were recalled and the vessel returned to port to refuel. On refuelling, it was found that less than half a tank remained and that the gauges were faulty. The boat returned to the dive site and completed the remaining planned dives. The fuel gauge problem was reported for subsequent repair and the boat was refuelled every day for the remainder of the expedition.

**August 2023**

**23/333**

Coastguard received a report of diver overdue and missing. (Coastguard report).

**August 2023**

**23/338**

Coastguard received a report of diver overdue and missing. (Coastguard & RNLI report).

**August 2023**

**23/339**

Coastguard received a report of diver overdue and missing. (Coastguard report).

**September 2023**

**23/101**

A dive RHIB had recovered divers from a wreck dive and were on passage back to harbour with five persons aboard. Whilst on passage, a sea fog descended, reducing visibility to around 100m. The cox'n reduced speed sufficiently to be able to see any obstacles. They came across a kayak and a small RHIB and, due to the reduced visibility, stopped to check if both were OK to continue or needed any assistance, but both were content to continue. The cox'n had the GPS chart plotter zoomed in to show a nearby reef but after

checking the kayak and small RHIB, he zoomed the plotter out to be able to see their current position relative to their destination harbour and noted that they had been following the coast closely and were too far in. He decided to keep the plotter zoomed out to provide the broader picture and set off again at reduced speed. Shortly after setting off, the boat grounded on the submerged reef, which, due to the calm conditions and little tide, had no breaking waves or any other signs of its presence. After the initial impact, the boat engine stalled and the boat continued to travel for a few seconds before coming to rest, grounded in shallow water on a falling spring tide. All aboard were uninjured in the collision. The engine was lifted and four people stepped off the boat to reduce weight and aid recovery off the reef. The boat was able to be maneuvered into slightly deeper water but still grounded so the engine was lowered and restarted. Three of the four people got aboard and the fourth helped push the boat whilst the engine was used as well to refloat the boat. The fourth person was then recovered from the reef, and once in clear water, the engine was inspected. It was found that three of the propeller blades were damaged, but the engine was usable at slow speeds and able to return to harbour.

#### September 2023

23/102

A lifeboat was launched to assist a dive boat that had gone aground on rocks on a rapidly falling tide. Two fish farm boats, a small fishing vessel and a pleasure craft all stood by in case assistance was required. It was established that the vessel would not be able to be floated off until evening and so it was decided to take all non-essential persons off the boat. One of the fish farm boats transferred 11 divers to the lifeboat and then returned to help the crew to set an anchor and then transferred the crew to the lifeboat. The lifeboat returned to harbour with all aboard and returned with four crew from the dive boat a few hours later as the tide was rising. The 4 crew were transferred back to the grounded vessel by the lifeboat's daughter craft and prepared the vessel for refloating. The two fish farm boats assisted and the lifeboat stood by as the boat refloated and was checked for damage, then escorted the vessel back to port.

#### September 2023

23/343

The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard report).

#### September 2023

23/344

Coastguard received a report of diver overdue and missing. (Coastguard report).

#### September 2023

23/346

The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard report).

#### September 2023

23/349

Three divers surfaced from a shore dive to be informed that an incident (Incident No. 23/103) was ongoing at their planned exit point and they could either wait to exit or swim to an alternative exit point. As the alternative would entail a surface swim against a strong current, they initially opted to wait, but were subsequently informed that the primary exit was needed for a lifeboat, which had been called. The group began swimming towards the alternative exit but encountered a strong current and, after 20 min, were making no headway despite exerting themselves. The group decided to descend and use the shelter of underwater gullies to work their way around to the exit. After 10 mins underwater, one of the group signalled he was out of gas and was provided with an AS by one of his buddies, and the group surfaced. On the surface, the wave motion had increased and the out of gas diver became distressed and exhausted and so was towed, still breathing from the AS, towards the alternative exit point, where they were met by others from their group who assisted the exhausted divers from the water. The swim from the original exit to the alternative was estimated to have taken 30-45 min.

#### September 2023

23/117

A dive vessel reported two divers overdue by 15 min and the vessel experiencing engine trouble and unable to search. The Coastguard tasked two lifeboats and helicopter to search, and once on scene, the helicopter located the divers on the surface and directed the lifeboat to them. The

lifeboat recovered the divers aboard and returned them to shore, whilst the second lifeboat took the vessel under tow back to harbour. (Media report).

### September 2023

23/352

The Coastguard responded to reports of a diving vessel with machinery failure. (Coastguard report)

### September 2023

23/353

Coastguard received a request to respond to a diver in the water. (Coastguard & RNLI report).

### September 2023

23/108

A pair of divers had been deployed from a RHIB for a dive on a wreck. The RHIB then patrolled the site at a distance of around 200m. Once the divers had been in the water for 25 min, the engine tone changed and then stopped. After repeated attempts to restart the engine, the anchor was deployed and after further repeated attempts, the engine still would not start. The Coastguard was contacted and a lifeboat tasked to assist. On surfacing, following a dive to a maximum of 15M for 45 min, the divers were able to swim to the anchored boat and were recovered. On arrival of the lifeboat a towing bridle had been prepared and was passed to the lifeboat and the RHIB towed back to harbour.

### October 2023

23/359

The Coastguard responded to reports of a diving vessel drifting or dragging anchor. (Coastguard report).

### October 2023

23/252

A RHIB's aluminium mast cracked whilst at sea. On investigation, long-term metal fatigue was identified as the cause of the weakness. The mast and vessel were 20 years old and in constant use. The mast was replaced during a winter refit.

### November 2023

23/143

A group of divers planned to dive from a usually sheltered cove. But when they arrived on site, they found that the weather conditions were not appropriate, with the wind blowing directly

into the cove. In considering backup options, a local managed dive site was fully booked and so they drove to a nearby beach to find the sea apparently calm with waves no more than 0.4m and no noticeable wind, although forecast for 7-12 knots. The forecast was predicted to deteriorate within 2-3 hours and it was decided there was a window for a single short dive. A group of three divers entered the water at 1015, at which point the wave height had increased to 1m, and two buddy pairs entered at 1025, with the wave height now 1-1.3m and at the limit of what the dive manager felt was comfortable. The first group then resurfaced and swam back to shore, one diver arriving and exiting the water by 1030 and reported that the visibility ranged between 0.2-1m and the waves were close to a safe limit. The dive manager then decided to recall all divers as the other two pairs had yet to descend. The divers had been briefed to exit with fins off and to crawl up the beach with masks on and regulators in until they were clear of the surge. Three of the divers did this and exited without difficulty. The other three attempted to crawl up with their fins on. The dive manager and an instructor went to the edge of the shore out of the surge to support the divers with help with their kit. The remaining divers were being dragged around in the surge and were unable to get out, with the waves increasing in size rapidly. The three divers eventually managed to crawl to a point where they appeared to the shore support. They were out of the swell and both went to assist one diver who was fatigued and starting to panic, and helped to de-kit him and help him up the beach. The instructor then returned and helped another of the divers at the edge of the swell with the help of one of the other divers who had already exited. The remaining diver was having difficulty with his equipment snagging and had given up trying to de-kit himself, so the dive manager and another diver worked quickly to de-kit him and remove his weightbelt. Just as they did this, they were hit by a 2m wave out of nowhere, knocking the dive manager off his feet. The dive manager's jumper was snagged on the diver's cylinder and he lost his glasses; he ripped his jumper to avoid the snagging and was hit by a few more large waves before all got clear of the water. The dive manager was drenched but



all equipment was recovered, with the exception of a weight belt, one fin and the dive manager's glasses. Once everyone was clear of the water, the dive manager made everyone rest, and all were monitored for shock and hypothermia. The dive manager and instructor changed their clothes as the instructor's legs were soaked and the dive manager completely wet through. The group then packed away their equipment and went to a warm café for a debrief, noting that the sea conditions had died down again within 20 min.

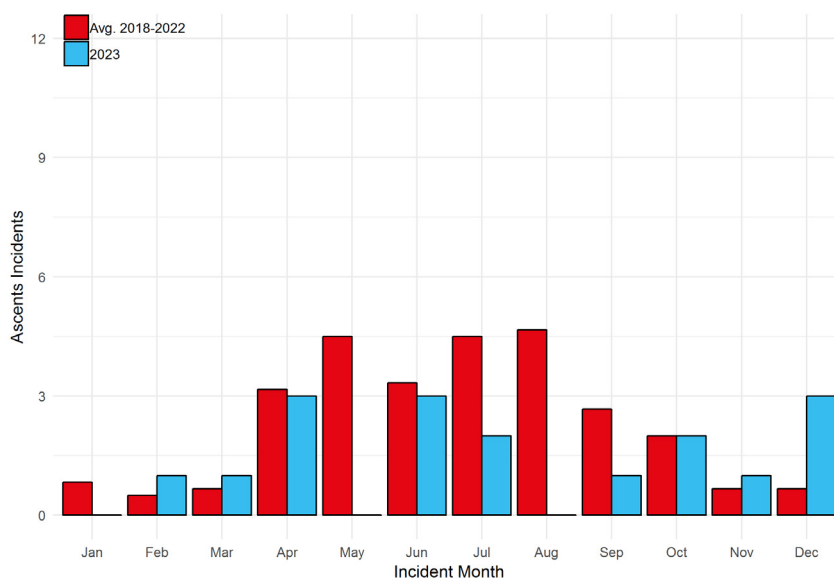
**November 2023**

**23/361**

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Coastguard received a report of diver overdue and missing. (Coastguard report).

# Ascents



**Figure 16. The month of occurrence of Ascent related incidents**

## February 2023

23/010

Three divers had booked to dive from a charter vessel. The day before, one of the divers discovered a problem with his drysuit and considered dropping out. Later that day he was able to source an alternative suit to wear, however, he had left his own kit elsewhere due to planning to cancel, so he sourced the equipment he needed from the club stores. The following morning started with the diver leaving home at 0430 to arrive in time for ropes off at 0930. Equipment was prepared and loaded in plenty of time, with the diver using a 15 lt cylinder of nitrox 30 and a pony cylinder with air. One of his buddies was using twin sidemounts with air and deco stage of nitrox 50, whilst the third diver was using a CCR with air diluent. The group planned a dive on a wreck with a maximum depth of 32m and total 60 min run time. On site, the divers entered the water from the charter boat and the CCR diver descended but only noticed the other divers had not followed when he reached the bottom of the shotline. He waited in the vicinity for them to descend. The diver was under-weighted and was provided extra weight by the skipper and then he and his remaining buddy descended and reunited with the CCR diver after a separation of several

min. The dive proceeded uneventfully, and after 30 min, the diver signalled to the others that he was cold and ready to ascend. He deployed a DSMB but the reel jammed and was released. His CCR diver then deployed his DSMB and the ascent commenced. The diver carried out an unusually slow ascent, and despite close monitoring and encouragement from the CCR diver, remained slow despite finning excessively and adding and releasing air from his BCD. The open circuit buddy was monitoring from a safe distance but ready to assist if necessary. After a short period, the diver switched to his AS, later reported to ensure he had inflation gas available on the surface, and the open circuit buddy offered his AS, and the CCR diver moved out of the way. The ascent remained slow so the CCR diver gave the diver his DSMB to provide some positive support and assisted him to start ascending. The ascent took 10 min from 30m to 11m and stalled at 11m for 2.5 min with a subsequent overshoot of their stop depth before descending back down. The diver was unable to complete his indicated decompression stops and ascended to the surface, followed by his open circuit buddy, with both of them omitting some decompression stops. On returning to the boat, both divers were monitored for signs and symptoms of DCI, with none presenting,

although the diver was very cold as the result of a leaking suit. The open circuit buddy chose to breathe down the CCR diver's oxygen cylinder as a precaution but the charter boat skipper discouraged any further first aid as neither diver was symptomatic. Neither diver reported any symptoms developing during the evening or the following day.

### March 2023

23/016

Two divers conducted a dive to a wreck to a maximum depth of 30m, in very low visibility, with both using nitrox 32. After 31 min, the pair decided to ascend on a DSMB. One of the divers deployed his DSMB, but too much line paid out, and the second diver became entangled and made a rapid ascent, and a consequence and the pair separated. During the rapid ascent the diver managed to cut the line at a depth of 15m. He then made a slower ascent to 6m, where he completed a decompression stop of 4 min at 6m followed by a safety stop of 3 min at 6m. The diver surfaced and experienced no ill effects. His buddy made a normal ascent and had no decompression requirements. Both divers were monitored when back aboard the boat, but no symptoms appeared.

### April 2023

23/021

A diver and her two buddies, having dived eighteen hours previously, were diving an underwater wall from a charter vessel. After achieving a maximum depth of 23m, towards end of the dive they were at a depth of 10m and the diver paused to take a photograph just above her buddies. Air migrated to the diver's feet and despite trying to roll out of it and dump air, she was unable to do so. The diver tried to slow her ascent down by grabbing kelp but was unable to do so and ascended directly to the surface, omitting safety stops. On the surface, the diver was struggling for breath and hyperventilating whilst floating on her back. The diver did not signal the charter boat, which at the time was trying to divert a fast RHIB from driving across the dive site and over the top of the divers. The passing RHIB's wake rolled over the dive site and washed over the diver, who did not have her regulator in. The charter boat skipper responded and a crew member entered the water to recover

the diver to the vessel and once aboard, she was administered oxygen and first aid. The diver's buddies had witnessed the ascent, but it occurred too quickly for them to intervene and so they deployed a DSMB to mark their position and carried out a normal ascent. The Coastguard was contacted and the remaining divers were recovered over the next 30 min. The Coastguard arranged a link call with a doctor and several options for evacuation were considered before a Coastguard helicopter was tasked. The diver was assessed aboard by the helicopter paramedic and although DCI was discounted, the possible seawater aspiration meant the diver was airlifted to hospital for assessment and was kept in overnight under observation and given medication as a precaution. The diver was discharged and returned to the vessel the next day.

### April 2023

23/020

Having completed two dives a day for the preceding four days, two pairs of divers planned to dive as a team on a wreck, with the first pair descending to the top of the wreck and then descend to a depth of 37m and then film the second pair as they descended towards the large guns located at that point. Diving at the same time was another diver, who was not diving as part of the grouping. All five divers entered the water from a charter vessel at the same time and the first pair descended the shotline. The second pair were about to descend when the diver who was not part of the group asked for assistance as he could not reach his inflation hose. One of the pair swam to him, passed him his hose and the diver descended. The second diver of the pair had remained on the shotline and his buddy had to swim back against an increasing current and on reaching the shot, indicated he needed to catch his breath. This delayed the descent by 2 min, assistance to the other diver had taken 3 min. The pair then descended and reached the top of the wreck at 25m, where they checked air and both had 180 bar remaining. The pair descended towards the guns to see if the first pair were still there, but on arrival neither could see any sign of the other divers. As the pair were significantly overdue, they assumed the first divers had ascended to the top of the wreck.

As they began their ascent, the diver who had helped felt his weightbelt start to slip from his waist and he crooked his legs to trap the falling belt between his knees. He breathed out fully and sank towards the point where his buddy was ascending and tried to attract his attention by punching him in the arm. Concerned about losing his belt commenced an ascent towards the top of the wreck at 25m, expecting his buddy to see and follow him. The buddy did not recall the punch but had turned around, and not seeing the diver, had followed a separation procedure by ascending directly to 25m off the wreck due to the current. He deployed his DSMB and ascended completing a safety stop at 6m for 4 min and surfaced with 80 bar remaining in his 15 lt cylinder. The diver, meanwhile, had ascended to the top of the wreck but his change of posture during the ascent meant his weightbelt had slipped off and he had to grasp it. He tried to hook the weight around his neck and start an ascent but this caused his legs to start to rise and he inverted. He was unable to try and refit the belt as the 7 lt stage cylinder of nitrox 36 was in the way and the current was increasing. Whilst the diver was considering his options for a safe ascent, he saw the lights of the first pair of divers and swam towards them and indicated the problem. One of the pair led the diver slightly inside the wreck so that should the weight be dropped, the diver would only rise slightly before being held by the overhead environment. Whilst the weightbelt was being refitted, the diver switched to breathe from his stage cylinder with nitrox 36 and this helped calm him down, aiding the refitting of the belt. Once refitted, the diver intended to deploy his DSMB but was prevented from doing so as the assisting diver kept hold of his right arm and was offering his AS. She had noted that the diver's main cylinder contents was down to 60 bar without realising that he was breathing from the stage cylinder which had 180 bar remaining. Meanwhile, the fourth diver had deployed his DSMB and the diver ascended with him and completed a stop at 9m without a problem. But at the end of the stop, the diver was unable to dump sufficient air and ascended directly to the surface. The diver inflated his BCD and the dive charter boat started to make its way towards him and recovered the diver. The diver's total dive time was 14 min and a

maximum depth of 37m. The diver was monitored and no signs or symptoms of DCI were evident at the time or during the following day.

**April 2023**

**23/029**

A pair of divers completed the first dive of the day without incident to a maximum depth of 31m for a total duration of 37 min, including a stop at 6m for 4 min. After a surface interval of 80 min, the pair entered the water again, with one diver having changed cylinders from a 15 lt to a 12 lt. An aluminium stage cylinder carried for the deeper first dive was discarded as unnecessary for the planned shallower second dive, which was planned as a drift dive. The pair entered the water from a charter vessel and descended under an SMB, although one of the divers had requested to also deploy his DSMB at the end of the dive for practice. The dive proceeded uneventfully and the pair reached a maximum depth of 23m whilst collecting scallops. After 26 min, the diver planning to deploy his DSMB noted his computer no deco time had reached zero, signalled to ascend and began to deploy his DSMB. Meanwhile, his buddy sent a bag of scallops to the surface using a lift bag. Whilst he was doing this, he turned away from the diver and when he had deployed the lift bag, he could no longer see the diver. The diver reappeared shortly after and indicated that his reel had jammed and he had been pulled up and registered a fast ascent before he released his DSMB. The diver's computer was now showing he had several min of decompression stops to complete and he became flustered and their breathing rate increased. The pair started their ascent after a bottom time of 32 min and the diver's computer indicated a total ascent time of 13 min. The pair slowed their ascent at 9m and completed a stop at that depth for 2 min, with an indicated ceiling depth of 3m. On starting their ascent again, the diver was unable to control his buoyancy and ascended directly to the surface taking 80 sec from 9m, missing the remaining decompression stops. The buddy was unable to assist and completed his own decompression stops, surfacing 5 min later to find the diver already back aboard the charter boat with their condition being monitored. Neither diver experienced any abnormal symptoms. On

subsequent examination, the DSMB reel was found to have been in a locked position and incapable of being deployed correctly.

**June 2023**

**23/052**

Two divers prepared to carry out a shakedown dive as both had new equipment, including using a stage cylinder for the first time. One diver's BCD inflation hose was faulty and so was left disconnected and the diver decided he would orally inflate his wing. He was also using an old drysuit that was tight and limited movement. The pair entered the water and descended to approximately 3m to check each other and agreed to descend and continued to a maximum depth of 10m. At this point, the diver was struggling to control his buoyancy with oral inflation of an unfamiliar wing and attempted to compensate by adding air to his drysuit. The diver overcompensated and began to rise, having intentionally allowed some air to migrate to his feet for trim. The diver rose towards the surface but managed to halt his ascent at approximately 2m by dumping all air from his wing. He could still see his buddy below him and tried to signal 'not happy' but suspected this was not clear due to him using his arms to try and right himself from a head down position. On coming upright, the diver lost all buoyancy by his suit venting rapidly through the neck seal of his old and tired suit. The diver began to descend rapidly and one fin became dislodged due to the previous overinflation of his suit feet. The diver attempted to control his descent by inflating his suit again and trying to orally inflate his wing but this was difficult as the diver was now becoming breathless. His buddy caught hold of him and helped to stabilise the diver, and taking hold of his harness, carried out a controlled buoyant lift to the surface. On the surface, the buddy supported the diver whilst they swam to the nearby shoreline, and after stabilising himself by holding onto the side, the buddy orally inflated his wing. The diver was very breathless at this stage and pushed back his hood and removed his mask, but his buddy instructed him to refit his mask and regulator and continue holding the side. After a few min, the diver's breathing had settled and the pair were able to make their way along the side of the quarry and exit by the adjacent

steps and sat and rested on a kit-up bench. The diver was breathless and showed signs of discomfort but quickly recovered and suggested they re-enter the water but his buddy refused and so the pair de-kitted and debriefed the dive.

**June 2023**

**23/072**

A diver and his buddy were diving a wreck at a maximum depth of 31m. After a bottom time of approximately 29 min, the pair started to ascend and the buddy deployed his DSMB from 11m. There was some confusion caused by a DSMB being launched from below them and other divers' bubbles causing disorientation. The diver began to float upwards and surfaced without completing decompression stops required by his dive computer. His buddy completed 5 min of required stops plus 3 min of safety stops. On recovery to the boat, the diver explained the problem to others aboard. No symptoms were apparent and the diver was given nitrox 50 to breathe. The diver breathed the nitrox 50 for 12 min until a nitrox 70 became available and then switched to breathe that. The diver was given water and monitored, including checks for signs of skin rash, for the next few hours. Other than one bout of sickness, attributed to seasickness and the gagging effect of using a regulator, he experienced no symptoms of DCI. No symptoms were reported, and the diver did not dive again that day.

**June 2023**

**23/076**

A diver and her buddy had visited two underwater wreck features at a depth of 20m when, after about 30 min, she indicated she felt cold and signalled her buddy that she wanted to ascend. The diver then had a rapid ascent from 17m. She was given first aid by the on-site staff and given oxygen for 30 min as a precaution. She was advised not to dive again that day and to drink plenty of water.

**July 2023**

**23/081**

A diver and her buddy were diving from a club boat to a maximum depth of 17m with a slight current. Due to the current and concern for diver separation, a buddy line was used. On preparing to ascend, a DSMB was deployed and both divers

started to ascend. The ascent turned rapid, going beyond normal safe limits and safety stops were omitted. Both divers ascended at the same time, although reported this was more due to the current than the buddy line 'pulling the other diver' up. On the surface, the divers were picked up by the boat and placed on oxygen. Once other divers were collected, the boat returned to shore. Once ashore, both divers remained on oxygen and were examined; both appeared fine with no symptoms. Following discussion with the dive manager and club DO a decision was made to go to local medical centre for a medical opinion. Both divers remained on oxygen whilst travelling to the medical centre, where the divers were examined. The local medical staff consulted with a diving doctor and both divers placed were placed under observation while on 80% oxygen. Six hours after surfacing, the divers displaying no symptoms and feeling normal so were discharged.

**July 2023**

**23/083**

A diver and his buddy had descended to a maximum depth of 23m. After 12 min, the diver had air migrate to his feet and became inverted. His buddy brought him to the surface using a controlled buoyant lift in what was a faster than normal ascent and omitted any safety stops. On the surface, the diver was breathless and felt panicked and received treatment from the site staff, including being administered oxygen.

**September 2023**

**23/105**

A diver had completed two dives earlier in the day, the first to a maximum depth of 24m for a total duration of 29 min, including a safety stop at 6m for 3 min. Then after a surface interval of 151 min, a second dive to a maximum depth of 23m for a total duration of 40 min, including a safety stop at 6m for 3 min. The diver then conducted a third dive after a surface interval of 165 min to a maximum depth of 22m. As he approached the end of the dive, he took out his DSMB and started to deploy it. As he was inflating the DSMB, it started to rise. The diver did not realise that his regulator mouthpiece had got caught in a loop of the DSMB line and was pulled up direct to the surface with his DSMB from a depth of 18m omitting any safety stops. The diver was

recovered aboard the dive boat but reported no adverse effects. His buddy followed their own controlled ascent to the surface.

**October 2023**

**23/340**

A diver had completed the first dive to a maximum depth of 13m for a total duration of 37 min. After a surface interval of 106 min, the diver conducted a second dive to a maximum depth of 15m. Towards the end of the dive, the diver was navigating towards an exit point. At approximately 11m, he started to deploy his DSMB as planned, using his long hose regulator while breathing from his AS. The diver only managed to get a small amount of gas into the DSMB, and despite assistance from his buddy, most of the gas was missing the open end of the DSMB. Whilst he was concentrating intently on the DSMB, the diver began to drift up, but slowed his ascent with the help of another buddy and continued trying to deploy the DSMB after regaining control. On releasing the DSMB, the free regulator became entangled and dragged the diver to the surface, omitting a safety stop. The diver was assisted from the water and the on-site staff informed of what was happening. The diver's computer was checked, and no warnings were displayed and the ascent rate was OK, only omitting the safety stop. A diver medic was contacted, and the diver was placed on oxygen, assessed using a five-minute neuro exam and emergency response card and monitored for signs and symptoms. The diver complained that his shoulder was a little achy but that it could be a muscle knot from before the dive. The diver medic called back and, after an update on the diver's condition, agreed he could stop breathing oxygen. The diver was checked the following day and reported no further symptoms.

**October 2023**

**23/130**

A diver and his buddy on a charter trip had completed a series of dives, the last the previous day to a maximum depth of 37m for a total duration of 28 min, including stops at 9m for 1 min and 6m for 5 min. After a surface interval of around 270 min, the pair dived a wreck at a maximum depth of 37m. Prior to the dive, the diver had removed 2 kg and informed his buddy of this. The buddy did not question it,

even though the dive was planned to carry out decompression with accelerated stops using nitrox 50, using nitrox 36 as his bottom gas. Towards the end of the dive, the diver began to struggle with his buoyancy as his cylinder became lighter and, during the ascent, made an uncontrolled ascent direct to the surface from 22m. His buddy, who was diving on air, required 11 min of decompression. He deployed a DSMB and completed his stops, then surfaced to find his buddy had been recovered aboard the dive vessel and had been placed on oxygen. The diver remained on oxygen for 180 min but no signs or symptoms of DCI occurred and no further action was taken.

### November 2023

23/154

An instructor and two students were on a training day for a drysuit workshop. The students had completed a previous dive practising skills to a maximum depth of 7m for a total duration of 30 min, including a safety stop of 3 min at 6m. After a surface interval of 160 min, the group entered the water for a second dive to a maximum depth of 13m and part way into the dive, whilst at a depth of 11m, one of the students lost control of his buoyancy and made an uncontrolled ascent direct to the surface, omitting a safety stop. The instructor and the second student aborted the dive and ascended direct to the surface with a total dive time of 20 min, the instructor choosing to omit a safety stop to ensure the first student was OK. It was believed that the direct feed to the student's drysuit was leaking gas slowly into the suit. All divers were monitored but no signs or symptoms of DCI were noted.

### December 2023

23/160

A diver was undergoing training for SMB use with an instructor as part of a group of four divers. The group had been to a maximum depth of 18m and were at 14m when the student lost control of his buoyancy as air migrated to his feet and began to ascend. The instructor spotted the ascent and ascended, catching the diver at about 8m and was able to halt the ascent. The pair completed a safety stop at 6m and then ascended to the surface. The other pair remained at 12m and paired up to complete their dive. During the

debrief, the student indicated that they had got the line from the SMB reel wrapped around their fins, causing the rise but the instructor had not seen any evidence of this.

### December 2023

23/162

An instructor and two students had completed a training dive to a maximum depth of 20m earlier in the day. After a surface interval of two hours 40 min, the group entered the water to practice AS skills, including an ascent, and for one student to practice leading the other around a wreck to a maximum depth of 22m. After about 15 min, the group returned to the bottom of a shotline at 17m to conduct the AS ascent. The shotline was to serve as a reference during the ascent. The AS proceeded well initially, and the ascent started but then quickly started to accelerate, and the group rose 10m in 40 sec. During this ascent, the donor was higher than the out of gas diver, and the regulator was pulled from her mouth. The instructor noticed this and recovered the regulator, put it back into the diver's mouth and purged it. But it was pulled out again shortly after so the instructor provided his own AS whilst the ascent continued as the diver was being pulled up by the donor. As the group reached 5m, the diver once again lost the regulator as she was being pulled away from the instructor so he let go of the shotline and ascended direct to the surface with the diver, who no longer had any gas supply and conducted a free ascent. On surfacing, the instructor supported the diver clear of the water and shouted for help. The diver also shouted, which reassured the instructor that she was able to breathe again. The instructor then found he was being pulled under the water and looked down to see the donor who had her regulator in her mouth. He pulled her up to the surface and then inflated his BCD so he could support both students. The donor diver was panicking at this stage, whilst the other student was relatively calm. The site rescue boat arrived and the crew asked who was the priority. The instructor indicated that the out of gas student had taken water in and should be prioritised so they started to help de-kit her. The crew then decided that the other diver had become the priority as she was distressed and panicking. As the crew recovered

the panicked diver, the instructor reassured the out of gas diver and checked she was OK before she was also recovered to the boat. The instructor said he would make his own way to shore so as not to delay the rescue boats return to take the two students back for medical attention. The divers were assessed in the site medical room and cleared to leave as no signs or symptoms of any diving-related injuries were found, but they were provided with an incident sheet and contact details for a recompression chamber, just in case. During a debrief, the student acting as out of gas for the AS drill reported when taking the donated regulator, she was getting water initially, but on reflection she had not purged the valve. She continued to get more water with each breath and found it increasingly difficult to breathe, and attempted to recover her own regulator but was unable to. She tried to signal 'something is wrong' but neither the instructor nor the donor appeared to notice and shortly after that, the donor's regulator was pulled from her mouth. The donor subsequently reported that she had been concentrating on her computer and ascent rate and had not noticed her buddy was having difficulties. She also checked her regulator mouthpiece and could find no evidence of a hole or tear that could have led to a wet breathe.

**December 2023**

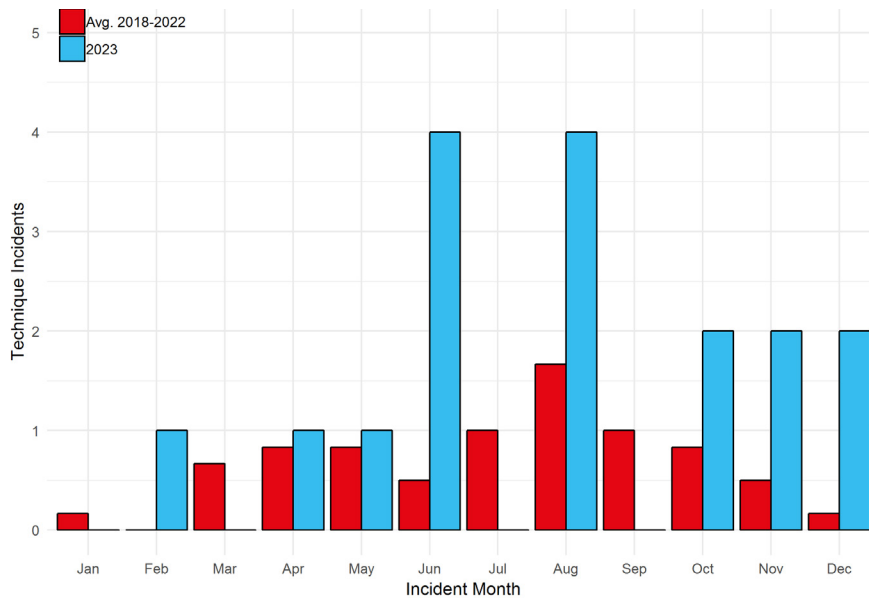
**23/163**

Two divers, both using 15 lt cylinders with air, entered the water for an exploratory dive to a maximum depth of 22m. After navigating past a number of features, the lead diver navigated towards a wreck, at which point his buddy indicated she had 140 bar remaining. The lead diver continued but missed the wreck due to a compass error. By this time, the buddy had 100 bar remaining, which was their planned turnaround point, and so the lead diver started back towards shore and to shallower water. At this point, the buddy seemed to have problems with her buoyancy with air in her drysuit legs and unable to right herself. The lead diver led her to a fixing point on the bottom that she could hold onto and right herself. The lead diver heard sounds of bursts of air similar to a BCD inflator, but his buddy had both her hands on the fixing point at the time, so it was not her. The buddy recovered

her buoyancy and the pair made for the exit point to finish the dive, with the buddy indicating she had 90 bar remaining. The lead diver began ascending to 14m, but the buddy seemed to have further difficulty with her buoyancy. First, she ascended too slowly and then ascended above the lead diver before sinking back to the bottom, where she remained for a concerning period of time before she ascended to rejoin the lead diver again at 16m. The lead diver had forgotten the intention to end the dive and continued leading the buddy up a shelf at about 44 min into the dive with 60 bar remaining in his cylinder. Shortly after the buddy signalled a problem with her air pressure, but her signals were confusing. The lead diver checked her contents, which appeared to show zero, so he immediately offered his AS, which the buddy took and started to breathe from. The buddy was on the wrong side for a comfortable breathe and so the pair manoeuvred to an appropriate positioning, but the mouthpieces still kept pulling from her mouth and she started to panic. The pair then made a fast ascent direct to the surface, omitting safety stops and surfaced with a total dive time of 47 min. On the surface, the AS was pulled partly from the buddy's mouth and the lead diver orally inflated her BCD to make her positively buoyant. The buddy shouted for help, and the site rescue boat was quickly alongside and recovered the buddy. After checking the lead diver was OK to make his own way to shore, the boat returned to buddy to shore and took her to the medical room where she was assessed by the site duty medic. The diver was administered oxygen, checked out and advice sought from a recompression chamber but she was released with advice and contact details for the chamber. The buddy reported that the continuous abnormal sound of air had started around the time she started to have problems with her buoyancy. Examination of the equipment found a faint hissing coming from the first stage, but they were unable to identify the source. A further test immersing the rig in water identified gas escaping from pin holes in the high pressure hose of varying intensity.



# Technique-related incidents



**Figure 17. The month of occurrence of technique related incidents**

## February 2023

23/005

A pair of divers conducted a dive to a maximum depth of 15m. During their ascent up a fixed but slack shotline one of the divers became entangled in the shotline, as the pair approached a 6m safety stop. His buddy managed to unentangle the diver without having to cut the rope and surfaced without further incident, with a total dive time of 40 min. Both divers had been carrying knives and had plenty of gas remaining at their stop depth.

water. The group entered the water and swam to the shotline and began their descent to a wreck. The overseas diver had some difficulty sinking and was assisted by the experienced instructor to descend initially and then sank rapidly to the seafloor. The second instructor followed but did not intervene, and the experienced instructor chased after the diver and caught her just as she hit the seabed at 17m. The experienced instructor then passed control to the second instructor to lead the dive, who decided to lead the group away from the wreck to avoid the risk of a loss of buoyancy control causing collision with the wreck. The inexperienced drysuit diver continued to have problems with her suit control and bounced between 13m and 16m despite the efforts of the more experienced instructor to control her, with the assistance of the second instructor. At one point, with both instructors trying to assist the drysuited diver, another diver passing tried to assist, thinking that her cylinder had come loose and after the ensuing chaos both instructors agreed to abort the dive. The second instructor led the group back to the wreck, intending to use the shotline to control the ascent. The experienced instructor kept hold of the drysuit diver with one hand whilst attempting to deploy his DSMB with

## April 2023

23/136

An overseas diver had joined a diving trip on a liveboard using a drysuit for the first time. On the first day the diver completed two orientation dives with an instructor and a further dive on the morning of the second day with the same instructor. For the afternoon dive, they were joined by another instructor who was returning to diving after a break and had low confidence in his dive leading abilities. The first instructor, who was more experienced, suggested that the second instructor could lead the dive under their supervision to help rebuild their confidence, but they would ensure the inexperienced drysuit diver would be supervised into and out of the

the other. The second instructor spotted a rope draped over the wreck and placed the drysuit diver's hand on it and then made them use this to control their ascent to a suitable point to conduct a safety stop. The experienced instructor then deployed his DSMB, and the group completed a safety stop at 5-6m for 3 min and surfaced with a total dive time of 30 min to a maximum depth of 18m. It was subsequently identified that the borrowed drysuit was far too big for her, making it almost impossible for her to control her buoyancy properly.

### May 2023

23/064

Three divers planned to dive a wreck. One of the divers was familiar with the wreck but was noted for a lack of attention to his buddies and was better to be followed and so was appointed dive leader. The group descended the shotline and once on the top of the wreck, the dive leader and one of the other divers were noted to be kicking up quite a lot of silt. The dive leader set off along a covered walkway on the wreck, followed by the other diver whilst still stirring up silt. The third diver chose to swim outside the walkway but at the same level. The dive leader then turned and went inside the wreck, followed by the other diver and the third diver tried to grab his fin to stop them but was a little too far away. The third diver waited for the water to clear then looked inside the wreck but could see no sign of the pair. There was a short swim through to the opposite side of the wreck, where there was a clear exit, or a turn to the right to go further inside the wreck. The diver decided to swim across the swim through, keeping the exit in view all the time while looking to see if she could find her buddies and then exited at the other side. She then swam the length of the wreck looking for bubbles but could not find any. When she got back to the point where she had exited the wreck, she still could not find her buddies and so deployed her DSMB and ascended. On reaching the surface, she could see the pair's DSMB already on the surface. On debriefing, the dive leader had not indicated he intended to enter the wreck and he was also unaware that the second diver was not qualified to enter overhead environments.

### June 2023

23/148

An instructor and his student were joined by another diver to dive as a trio. The diver was also an assistant instructor, and so the instructor believed they could operate self-sufficiently whilst he was teaching the student but remain attentive to the group, monitor their instruments and report appropriately. The instructor had specifically requested the diver report if their gas contents reached 100 bar. Underwater visibility was 6-8m and the diver did not keep close to the training pair and instructor struggled to get her attention to signal her to come closer. When he managed to catch her attention, he found that her contents were down to 50 bar and he signalled that the group should ascend immediately, using the already deployed DSMBs. The diver immediately swam off. The instructor and his student ascended their DSMB lines and were able to see the diver on the surface and not panicked, so conducted a normal ascent. Once back ashore, it was determined that the diver had swum away to find one of the fixed shotlines attached to various underwater features on the site and had ascended directly to the surface without conducting a safety stop. The diver had 25 bar remaining in her cylinder and explained that her gauge had dropped instantly from 100 bar to 50 bar. The group had been to a maximum depth of 24m for a total dive time of 31 min and no ill effects were experienced following the dive.

### June 2023

23/113

An instructor and a qualified diver entered the water to conduct training for another grade, accompanied by a qualified diver who wanted to practice with his new sidemount and long hose configuration. Following an unremarkable dive to a maximum depth of 20m, the instructor signalled to ascend. The sidemount diver questioned if it was to ascend to a safety stop and the instructor indicated the ascent would be direct to the surface. All three agreed to ascend but as the instructor and sidemount diver ascended a couple of metres, the student had not left the bottom. The pair descended and signalled the student again to ascend and the same sequence repeated, with the student remaining on the bottom. The pair descended again and the sidemount

diver signalled the student to see if there was a problem. The student signalled OK and ascended around a metre before dumping all the air from her drysuit and sinking again. The sidemount diver turned to look at the instructor and was surprised as the instructor signalled out of gas. The sidemount diver donated his AS on a long hose and held onto him and then descended to the student and raised her using a controlled buoyant lift, whilst maintaining an AS donation to the instructor. The three ascended to the surface together and left the water safely. During a debrief, the student explained she was afraid of ascending too quickly and had been dumping too much air to allow any kind of ascent. The instructor declined to explain the cause of running out of gas. The group conducted a second dive the same day without further problems.

**June 2023**

**23/078**

Two divers entered the water from a boat close to the shotline. One diver's DSMB had unravelled and she focused on stowing it again instead of getting to the shotline. During this time, she drifted approximately 50m from the shotline. Her buddy, meanwhile had swum direct to the shot. The skipper had advised him to descend and meet his buddy on the bottom at 14m once he had recovered the diver and returned her to the shotline. After the diver had sorted out her DSMB, she did not have the strength to swim back to the shotline, despite the calm conditions and so the skipper opted to go and collect her. The diver misunderstood the skipper's intentions and so descended without any reference point, hoping to find her buddy on the wreck. After several min, the diver was unable to find her buddy and surfaced without deploying a DSMB, despite there being other boats in the area. The diver's total dive time was 10 min to a maximum depth of 14m. The skipper did not allow the diver to dive again that day.

**June 2023**

**23/114**

Two divers met to plan a decompression dive. One diver wanted to plan a dive using some new planning software on his personal computer. He calculated that the dive would require 6 min of required decompression stops. The other diver

planned the dive using BSAC '88 tables and came to the same conclusion. The pair then calculated the amount of gas they would require to complete the dive. The two divers entered the water to conduct the dive following the plan. However, towards the end of the dive as they approached 6m, both divers' computers sounded an alarm, indicating they required to complete a stop at 9m for 1 min followed by 22 min at 6m. Both divers were concerned that they may not have sufficient gas to complete the stops but descended to complete the 9m stop followed by clearing their stops at 6m and completing an additional safety stop. They surfaced with just sufficient gas remaining.

**August 2023**

**23/157**

Three divers, two using open circuit with nitrox 30 and decompression stages of nitrox 50 and the third using a rebreather, were diving a wreck from a charter vessel. They reached a maximum depth of 35m and spent 18 min between 35 and 30m before ascending to the top of the wreck at 18m. The group then explored this area of the wreck, with the open circuit divers using their nitrox 50 decompression mix and cleared their decompression requirement over 28 min. One of the open circuit divers then deployed his DSMB with the other open circuit diver watching. As it deployed, the DSMB line snagged the diver's regulator and started pulling him towards the surface. Fortunately, the DSMB was not well inflated and his buddy was able to hold onto his fins, allowing the diver sufficient time to untangle the line from his regulator and let it go to the surface. The group ascended and completed a safety stop at 6m for 8 min as a precaution and surfaced with a total dive time of 65 min.

**August 2023**

**23/233**

A pair of divers completed a dive to a maximum depth of 30m for a total duration of 46 min, where the plan had been for a maximum 40 min dive time. The divers overran the dive plan by 6 min due to a diver not fully understanding their dive computer settings and so incurred additional stops. The divers completed all required stops at 6m.

## August 2023

23/234

A diver conducted a dive to a maximum depth of 30m, leaving the bottom at 24m with 100 bar remaining in their main cylinder. The ascent was very slow and the diver appeared to have difficulty maintaining their buoyancy and trim whilst using the DSMB reel. The diver used excessive gas during the ascent and switched to their redundant 'pony cylinder' supply at 6m stop and remained on the pony to the surface. Total dive time was 32 min.

## August 2023

23/120

A group of 4 divers entered the water from the shore for an evening dive, and as the light was fading, all were equipped with a torch and a backup. One diver was familiar with the site and so took the lead as the site was unknown to the rest. Buddy pairs were agreed but as visibility had been reported as poor, they agreed to go in as a group of 4. On entry there was a lot of silt and kelp in the shallows. During the dive, the group reached a maximum depth of 10m. Towards the end of the dive, the leader checked the group and found there were only two others visible. The group conducted a brief search for 1 min using torches to check for the missing diver and then surfaced and alerted the shore cover, who checked for signs of bubbles and torch beams but found no sign. After 10 min, there was still no sign of the missing diver and the Coastguard was alerted and a Coastguard vehicle arrived within min. At that moment, the diver surfaced safe and well and explained he had continued with the dive as he thought the rest of the party was behind him. It was his first evening dive, and he had become disoriented by the poor visibility. The diver received further training.

## October 2023

23/138

Two divers had completed two dives from a charter vessel the previous day. The first to a maximum depth of 35m for a total duration of 56 min, including a decompression stop of 12 min at 6m and, after a surface interval of 102 min, a second to a maximum depth of 33m for a total duration of 48 min, including a decompression stop of 8 min at 6m. The next day, after a surface

interval of 18 hr 35 min, the pair entered the water for a wreck dive to a maximum depth of 34m. At the end of the dive at a depth of 25m, one of the divers deployed his DSMB, but due to the current, it deployed a significant amount of line. The diver was concentrating on reeling in the excess line and lost control of his buoyancy and made a rapid ascent direct to the surface, missing 6 min of required decompression stops. The diver was recovered aboard the dive boat and placed on oxygen. The buddy made a normal ascent but also missed a similar amount of decompression stops and was also placed on oxygen. Both divers remained on oxygen for around four hours, and neither presented with any signs of DCI. The diver did not dive again for the remainder of the trip, and his buddy refrained from diving for 24 hrs. The diver had been diving a new configuration, which he had previously only used for 12 dives, and so dumping gas was not yet second nature whilst concentrating on other tasks.

## October 2023

23/139

Three divers prepared to dive to practice DSMB deployment. One diver insisted on fitting her fins before entering the water instead of in shallow water, as advised by the instructor. The diver fell over and needed assistance to get up due to the weight of the cylinder, but insisted she wanted to continue with the dive. Each diver in the group deployed a DSMB at the surface to practice, ensuring they kept their distance from each other to avoid any risk of entanglement. The group descended to 3m, but the other two lost sight of the diver who had fallen, and the instructor surfaced to find her upside down and tangled in her DSMB line. The instructor could not see any sign of breathing bubbles from the diver's regulator so grabbed her and lifted her to the surface using a controlled buoyant lift. The diver had been breathing and alert but had been unable to untangle herself. The instructor untangled the diver and suggested she abort the dive, but the diver insisted on continuing and said she could not understand why she had been unable to sink as her weighting had remained the same. The third diver had not noticed the commotion and had remained at 3m so the instructor signalled him to surface. The party regrouped and then descended

and completed a dive to a maximum depth of 12m for a total duration of 40 min without further incident.

#### November 2023

23/152

Two instructors had two students each on a separate platform in close proximity and in sight of each other, teaching drysuit skills. One instructor was teaching an inversion drill when he lost a fin whilst demonstrating. The instructor recovered his fin but struggled to refit it. The other instructor witnessed his difficulty and signalled his student to remain on the platform whilst he swam 2m to assist the instructor to refit his fin. The two instructors then returned to their respective students and completed training, surfacing with a maximum depth of 7m and a total dive time of 35 min, including a safety stop at 6m for 3 min.

#### November 2023

23/153

Two instructors had two students each on a separate platform in close proximity and in sight of each other, teaching drysuit skills. One student was practising an inversion drill when he lost a fin. The instructor attempted to prevent the student from sinking but had not noticed he had lost his fin. The other instructor noticed the struggles and watched them to ensure all was OK. After several seconds of struggling with little success, the other instructor swam over and indicated the problem to the first instructor and helped recover and reattach the lost fin. They then indicated a more appropriate point on the platform to practise the inversion skill. The two instructors then returned to their respective students and completed training, surfacing with a maximum depth of 7m and a total dive time of 25 min, including a safety stop at 6m for 3 min.

#### December 2023

23/167

A qualified diver was on his first day of UK diving using a drysuit for the first time with an instructor. The first dive of the day was to a maximum of 20m practising buoyancy and drysuit skills with a total duration of 41 min. After a surface interval of 98 min, the pair started a second dive to continue to familiarise themselves with conditions and

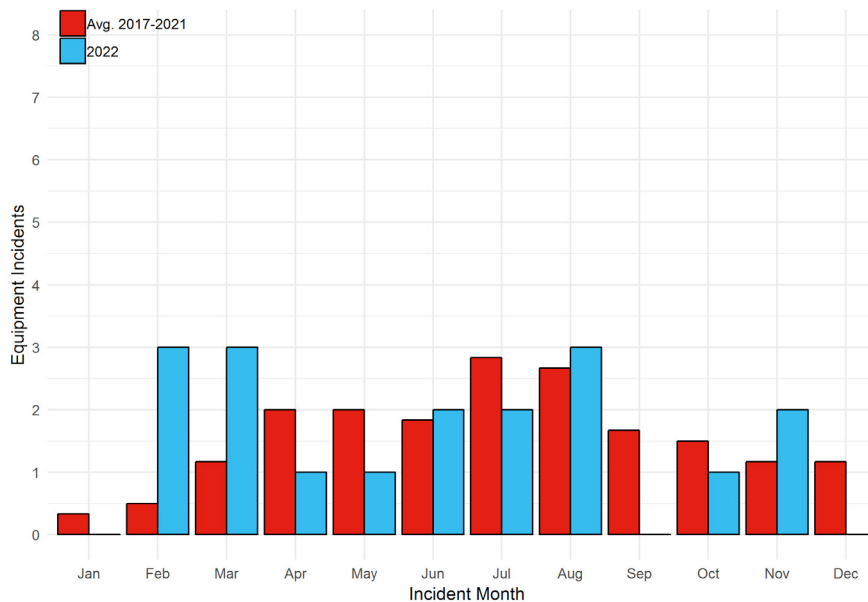
visit several features of the site. After about 25 min, the instructor asked for a gas check and the student had 150 bar remaining in his 12 lt cylinder which matched the instructor's twin 7 lt, and they started their return route. As the swim back, the diver had some buoyancy issues which they resolved and then continued. As they moved further and were about to start their ascent, the instructor noticed the diver's gauge reading almost zero and immediately provided his AS and the pair ascended to a 5m shelf. The instructor had 100 bar remaining at that point and there was no panic, so the pair completed a safety stop at 5m for three min and surfaced without further problems. During the debrief, the diver mentioned that he had tried to signal to the instructor when he had 20 bar remaining but the instructor had either missed or misunderstood the signal.

#### December 2023

23/128

Two divers planned two dives to practice skills and agreed approximate times and depths. For the first dive, one diver used nitrox 36 and the other air. The pair descended to a maximum depth of 7m and practised sidemount drills with a total dive duration of 67 min. After the dive, both divers refilled their cylinders with air. After a surface interval of 60 min, the pair entered the water for a second dive and descended to a maximum depth of 22m to a wreck where they practised the use of torches inside the wreck. As they prepared to ascend, the pair compared computers and found that one indicated no stop while the other required a three min decompression stop. The diver who had used nitrox 36 on the first dive realised that he had not altered his computer to air for the second dive, so it was not accurately modelling his decompression status. The pair ascended following the more conservative computer reading and completed a 3 min stop at 6m followed by a further 3 min safety stop.

## Equipment-related incidents



**Figure 18. The month of occurrence of equipment related incidents**

### February 2023

23/156

As part of a group visiting an inland site, two experienced divers were assigned to take two newly qualified divers into the water to develop their skills and experience and completed the first dive to a maximum depth of 10m for a total duration of 30 min. During a surface interval, the dive manager discussed the plan for a subsequent dive to a deeper depth. The experienced divers highlighted that the less experienced divers had both used quite a bit of gas on the previous dive and it was recommended that 15 lt cylinders should be used. However only three were available and the inexperienced divers were unsure about taking the larger cylinders as they had not used them before and were concerned how it would affect their buoyancy. As a result, one of the inexperienced divers used a 12 lt, whilst the rest all took 15 lt. The group entered and swam on the surface to a buoy marking a wreck and, on arrival, found several other divers gathered at the same buoy. Whilst waiting for a clear route to descend, one of the experienced divers suggested to the diver with the 12 lt that she descend breathing from his AS to help her conserve gas. The group descended to the wreck and the diver switched back to her own regulator

once on the bottom. The group then explored the wreck before returning to the shotline for their ascent. As they ascended towards 6m to complete a safety stop, they found several groups of divers already conducting safety stops around 6m, which unnerved the inexperienced divers. Whilst they were waiting to conduct their stops, the experienced instructor, who had encouraged the use of his AS during the descent, experienced a free flow from his regulator and was provided an AS by the other experienced diver. The group then ascended directly to the surface, squeezing between the other divers above them. The group then swam ashore without further issues. Water temperature was less than 10 deg C.

### March 2023

23/014

An instructor was accompanied by a student for a DSMB lesson and a second qualified diver. The group descended to a maximum depth of 12m and the student began practising DSMB deployment with the other diver acting as his buddy. The other diver began experiencing breathing difficulties, panicked and bolted to the surface, followed by the instructor and student. On surfacing, the instructor inflated the diver's BCD and calmed her. She complained that her regulator was not giving

her air. On subsequent investigation, it was found that the cylinder valve had not been fully opened and caused the restricted gas supply.

### March 2023

23/058

During a course, an instructor noted a number of faults with a student's equipment configuration. During an equipment configuration and preparation session, the student had a twin 12 lt cylinders of air with a single piece harness and 7 lt stage cylinder of nitrox 50, which was considered an appropriate configuration, although it was noted the diver had no weights capable of jettison in an emergency. The instructor noted that the isolator on the stage regulator was new and the student was unfamiliar with its operation. One of the pillar valves on the twin-set was not functioning properly and so was turned off, and the drysuit inflator was temperamental as there was a compromised O-ring which was changed later that day after the confined water sessions. The instructor then led a confined water training session with the student and another, together with a supervising instructor trainer, to a maximum depth of 7m and a total duration of 29 min. Towards the end of the lesson, the student deployed his DSMB as part of the training, which he deployed OK but experienced a bit of vertical movement due to his drysuit inflator being stuck. The student managed to disconnect the hose and control his ascent to avoid reaching the surface. After a surface interval of 203 min, the group conducted a second confined water training dive to a maximum depth of 12m for a total duration of 28 min. Overnight, the student replaced the O-ring on his drysuit inflator and changed his DSMB reel. The next day, after a surface interval of 20 hours and 21 min, the group undertook a training dive to a maximum depth of 28m. Training progressed well during the bottom phase and towards the end of the dive at a depth of 15m, the student went to deploy his DSMB and discovered the buoy and the reel were not connected. The student tied a knot underwater to join them, which added to his task loading as he was already close to the run time for his simulated run time, and he conducted quite a bit of vertical movement in the water during deployment. Once deployed, the ascent progressed until a planned gas switch

was practised. When the student switched to his stage cylinder, he was unable to obtain any breathing gas as the isolator valve was closed. The diver switched back to his back gas but used the regulator from his closed pillar valve and so was out of gas. He was provided gas from his fellow student's decompression stage cylinder. The student was able to compose himself and then switch back to his breathable back gas regulator and completed his simulated decompression stop. After exiting the water safely and de-kitting, the instructor debriefed the group and gave each student detailed verbal and subsequent written feedback.

### April 2023

23/046

Three divers completed the first dive of the day to a maximum depth of 17m with a total duration of 26 min including a safety stop at 6m for 3 min. After a surface interval of 127 min, the trio entered the water, and as they descended, one diver pulled his BCD inflator hose to dump air and it came undone from the body of the BCD, allowing the BCD to dump all buoyancy within it. The diver then used his drysuit only to adjust his buoyancy and the group continued with their dive. The divers completed their dive to a maximum depth of 17m and surfaced without further incident with a total dive time of 29 min. On investigation, it was found that the inflator hose had become detached without apparent reason and was screwed back in, and the diver advised to check it routinely to ensure it remained secure.

### May 2023

23/031

A rebreather diver had prepared his rebreather the night before. He completed the first dive of the day from the shore in the morning to a maximum depth of 10m and a total duration of 49 min. The diver completed prechecks before he and his buddy then joined a charter vessel. Whilst preparing to dive, the diver's rebreather fell off the bench onto the floor, and after picking it up, redid all checks. The unit passed positive and negative checks for 3 min each and the only damage appeared to be to the cage shield. The diver and his buddy entered the water for a second dive after a surface interval of 154 min. During the descent, the pair did bubble checks

at 7-8m with no leaks evident. They descended down to a maximum depth of 35m and then slowly made their way back up the rock face, occasionally swimming through a bit of current. Whilst swimming back, the breathing from the rebreather went tight and the ADV was not firing. The diver checked the ADV by operating the valve manually, which worked but it did not last long. The diver conducted a series of checks but could not isolate the problem and so bailed out onto his aluminium 80 stage cylinder with nitrox 30, which had 180 bar, and switched his computer to low set point. He went to deploy his DSMB but his buddy had already deployed theirs and the pair began their ascent, pausing briefly at 20m where the diver changed his computer to open circuit bailout. The computer indicated that no decompression stops were required and so the pair ascended direct to the surface and got back aboard the boat. Subsequent checks of the rebreather found that the bottom of the scrubber was full of water just covering the bottom of the absorbent.

**May 2023**

**23/030**

A group of 4 divers had completed a previous dive on the day to a maximum depth of 15m for a total duration of 45 min. After a surface interval of 120 min, the group entered the water from a charter RHIB to dive a wreck. The dive proceeded uneventfully to a maximum depth of 23m. During the ascent at the end of the dive, one of the divers' drysuit inflation hose was leaking slowly and as a result he was unable to control his ascent and ascended direct to the surface omitting safety stops. The ascent was no more than 15m/min.

**May 2023**

**23/044**

A diver had requested his cylinder be filled with nitrox 32 in preparation for diving to a maximum depth of 15m at the weekend. A qualified gas blender at the clubhouse vented the cylinder in preparation for partial pressure blending. A label with the requested mix was attached, together with the amount of oxygen to be added and the air fill to top off. The cylinder was filled with oxygen and then air, with the gauge on the blending panel reading 230 bar. As this was the final batch of the evening, the operator left the

whip connected whilst the cylinder cooled prior to a final top off. The diver returned to collect his cylinder at the end of the night, but the operator had departed. Another qualified blender disconnected the filling whip and analysed the gas in the presence of the diver, which indicated a nitrox mix of 36.9% oxygen, which was recorded in the compressor logbook. Three days later at a quarry training day, the cylinder was found to have only 80-100 bar of gas and so was set aside and not used and later returned to the clubhouse for investigation. On subsequent analysis, the cylinder was found to contain 48.9% oxygen. The analyser was found to be working correctly but the filling whip used, which was 14 months old, was found to be partially blocked and is believed to have caused the main panel gauge to indicate the cylinder was full when it wasn't. The other two filling whips were unaffected. The affected cylinder was filled with air and analysed and the resulting blend was found to be approximately 32% oxygen.

**May 2023**

**23/166**

A diver and his two buddies were the last group to enter the water on an offshore reef. The diver was the last down the shotline, which he followed descending with minimal finning. On reaching the bottom at 8m, the diver found that he had line wrapped around his legs. The diver lay on the bottom for 30 sec checking to see if he could see his buddies before turning to untangle the rope. As he turned, he could feel one of his buddies untangling the rope, and once clear of the rope, the group continued with the dive surfacing after a total of 45 min to a maximum depth of 8m. After being recovered aboard the boat, the diver advised the cox'n not to deploy too much loose line in future.

**June 2023**

**23/197**

On collection of equipment from a loan pool, a dive computer was found with low battery warning and a further computer had no serial number. The computer with low battery exchanged at the stores and a new serial number sticker attached to the other computer.



**October 2023**

**23/161**

A student was with an instructor to conduct DSMB training; the student using a single cylinder of air and the instructor on a rebreather. The dive was to a maximum depth of 18m and the DSMB was successfully deployed, and the pair ascended to an 8m shelf. About 30 min into the dive, having been at 8m for 7 min, the diver signalled out of gas and the instructor provided his AS. Once stabilised, the instructor noticed that the diver had 100 bar showing on his contents gauge and so handed the student his own AS to breathe from, which they took and started breathing. Very quickly, the student gave an out of gas signal again and returned to the instructor's AS. The pair then ascended direct to the surface, omitting a safety stop. After leaving the water and de-kitting, the diver's equipment was checked. It was found that the cylinder valve was not fully turned on, allowing the diver to get some air but not sufficient.

**November 2023**

**23/256**

A qualified diver, whilst conducting training ascents for controlled buoyant lift and AS, lost a fin which was potentially caught on the shotline. The missing fin was only noticed at the surface, and the depth of water was too deep to return. A subsequent dive team conducted a search, but in almost nil visibility, but the fin was not found.

**November 2023**

**23/151**

A diver and her buddy had completed 2 dives earlier in the day without incident. The first was to a maximum depth of 7m and a total duration of 35 min, including a safety stop at 6m for 3 min. After a surface interval of 15 min, a second dive to a maximum depth of 7m and a total duration of 25 min, including a safety stop at 6m for 3 min. After a surface interval of 280 min, the pair prepared to dive a third time and conducted a buddy check, where the more experienced buddy checked the diver's integrated weights were secured and her drysuit inflation was operational. After entering the water and starting their descent in a horizontal position, at 6m one of the diver's weight pouches fell out and the buddy replaced it and checked it was

secure. The pair then continued their descent to a maximum depth of 19m, at which point the diver indicated a problem with her drysuit inflation. The buddy checked it and found it was sticking on slightly so he disconnected it and then reattached it to confirm that it was no longer leaking air in. The pair continued but moved back up to 13m to be closer to multiple shotlines for an easier ascent. Approximately 10 min later, the inflation valve occurred again. The buddy checked it and then advised the diver to avoid pushing the inflation valve hard and to just tap it. The buddy demonstrated and the diver mimicked and signalled she was happy to continue. 5 min later, the fault occurred again and so the buddy decided to abort the dive and they swam to an underwater platform at 6m to carry out a safety stop before ascending to the surface without further incident. Once ashore, all equipment was checked and there were no apparent faults.

**December 2023**

**23/159**

A diver had collected a set of regulators from a kit store. On arrival at the dive site, the assistant dive manager asked about the regulators. The student identified that the regulators had been given to them and that they were safe to use and so allowed the diver to continue to use them on her planned dive. The diver reported having some difficulty breathing during the dive. Following diving, the assistant told the dive manager that the regulators had been out of service for an unknown period. The dive manager removed the regulators from the diver and advised the assistant that they should not have allowed them to be used.

## Illness or injury-related incidents

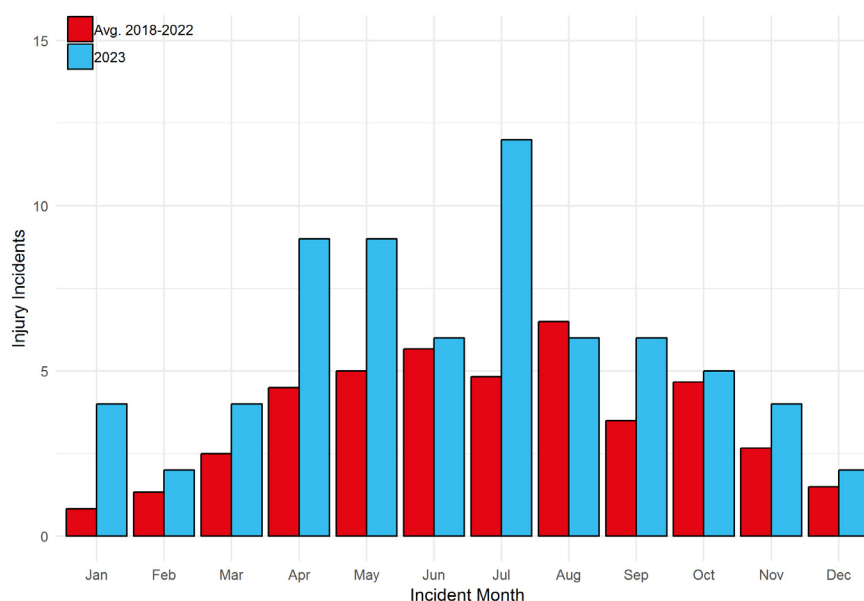


Figure 19. The month of occurrence of incidents involving injury

### January 2023

23/125

A student had signed up to start diver training. On completing the medical form, she noted that she had to declare any medications and so did this with the club Diving Officer, who advised that she was on a low dose and it would be fine to continue training. During training, the student experienced various issues, including confusion, feelings of panic and nausea but was advised that it was nothing to worry about. She also had apparent difficulty in comprehending the skills being taught, which caused some annoyance from her instructor. This led her to seek out a different instructor in the club, which allowed the diver to gain her diving qualification. In preparation for a diving trip abroad, the diver was sent a medical form by the dive centre and, having declared she was on medication, she was advised she needed a medical certificate signed by a doctor. On consulting a doctor privately, she was informed that he would not sign her off to dive due to the severe effects of the medication, although he would discuss the matter with a colleague. After consultation, the doctor confirmed that he would sign the diving medical certificate but placed restrictions on a maximum depth of 20m, temperature limits and a requirement to keep well hydrated.

### January 2023

23/001

A pair of divers, one using air and his buddy using nitrox 27, had completed a dive to a maximum depth of 31m, with a total dive duration of 50 min, including a decompression stop at 6m for 5 min, without incident. Approximately two hours after the end of the dive, the diver who had used air experienced numbness and tingling in his left leg. The symptoms persisted and staff at a hyperbaric chamber were contacted for advice and the diver was advised to attend for assessment. After an assessment at the chamber the diver received a single course of treatment in the chamber as a precaution. The symptoms did not alter and it was determined to be muscular-skeletal injury.

### January 2023

23/009

An instructor had previously acted as a casualty during a rescue management course and had descended to a maximum depth of 5m for a maximum of 2 min before surfacing, with one of the pair simulating a burst lung. A short time later, the instructor and a student entered the water to conduct a dive leader lesson. The pair descended to a maximum depth of 23m and the dive was for a total duration of 41 min. As the diver left the water and was approached for details of the

dive by the dive manager, he reported an awful dive that had left him cold, dizzy and nauseous. The instructor went to buy a hot drink, and the dive manager advised another member of the group to go with him. In the queue for a drink, the instructor was overheard saying to someone else that his air had a funny taste to it. The dive manager suspected contaminated air and, after consulting another more experienced instructor who agreed, placed the diver on oxygen for 10 min. The instructor then insisted he felt that better first aid would be to sit in a warm room with a hot drink. Oxygen was stopped and the instructor was escorted to a changing room and administered hot chocolate. After changing out of his drysuit and staying in a warm room, the instructor felt much better, although others observed he had a pale complexion and bloodshot eyes. The instructor decided not to dive again that day. He subsequently contacted the compressor operator who had filled his cylinders, and the operator acknowledged that the compressor filters had not been changed recently. Water temperature on the day had been 6-7 deg C.

### January 2023

23/004

A group of divers had completed diving and were returning to harbour in a RHIB driven by a non-diving cox'n. As the vessel approached the harbour upriver at slow speed, the cox'n slumped over the controls and collapsed towards one of the divers aboard. The cox'n was semiconscious and in obvious distress. The diver pushed the cox'n upright and took control of the vessel and then appointed two other members of the group who had medical training to attend to the cox'n and a further member to call the emergency services. The diver then called harbour control for permission to land the casualty at a ferry terminal, which would provide the best access for the emergency services. On coming alongside the slipway, the casualty was carried by the crew to the ferry control office and given oxygen and monitored. It was noted the casualty was extremely weak, especially on his left side and was drifting in and out of consciousness. A paramedic first responder attended and was joined shortly after by an ambulance crew who took over care of the casualty and treated him for suspected

transitory ischaemic attack (TIA) triggered by hypothermia. The casualty subsequently made a full recovery.

### February 2023

23/012

A group of three divers had completed a previous dive to a maximum depth of 8m for a total duration of 25 min. After a surface interval of 105 min, the group entered the water again to undertake a navigation exercise. They swam out on the surface to a marker buoy and descended to 13m at the top of a wreck sitting in 16m. The first diver commenced to follow a compass course to another underwater feature using a compass bearing published by the site operators. The diver had difficulty achieving an accurate bearing due to the proximity of the metal wreck, which led to a significant divergence from the planned route. The diver's behaviour was noted as beginning to become erratic with loss of buoyancy control leading them to keep dropping to the bottom and disturbing large amounts of silt. When one of the other divers attempted to assist, the diver pushed him away. Eventually the diver indicated they were lost and wrote on her slate for someone else to take over. The lead diver took over and decided to terminate the dive and started to lead the group back to the exit point. Along the way the group encountered a large airplane and the diver wrote in the algae on the wing 'TIRED' and then became unresponsive. The lead diver immediately initiated a controlled buoyant lift and recovered the diver directly to the surface, omitting any safety stops. On surfacing the diver was towed to the exit point where she was handed over to others to de-kit and recover her from the water. The diver was barely conscious at this stage, highly confused, and very cold. Hypothermia was diagnosed, and the diver was taken to the site facilities and handed over to the care of the site staff, who removed her drysuit and found her undersuit was soaking wet. She was taken to a boiler room, which was the warmest place on the site, and her undersuit was removed, and she was wrapped in blankets and provided hot water bottles. The diver made a recovery over about 30 min. It was subsequently discovered that cotton garments the diver was wearing under her drysuit were holding cold water next to the skin.

## February 2023

23/007

A diver was filling a 232 bar, 3 lt CCR oxygen cylinder using an air-driven booster pump from an oxygen blending panel. The cylinder pressure approached 200 bar when the diver went to close the valve that regulated the pump driver to stop pumping when a large flash and explosion blew the diver across the shed. On recovering himself he realised he was on fire and ran out of the building to seek assistance. The diver was quickly seen by the property owner and her cousin, who immediately started first aid with cold, wet cloths, and all emergency services were called via phone landline. An ambulance crew arrived and took over care and immediately placed the diver in a cold shower and proceeded to take control. The Fire Brigade were dealing with the fire and scene to make safe, although the property and equipment within it suffered substantial damage. The diver was taken by ambulance to a specialist hospital burns unit, where he received burns care. The diver made a substantial recovery from his injuries over several months.

## March 2023

23/013

An instructor and two divers entered the water for a training dive. Shortly after the start of the dive, the instructor decided to abort the lesson and returned to the shore to hand over his DSMB and then agreed with the students to just go for a dive. One of the students had been having trouble with her buoyancy and the other student had been having ear problems, so the instructor led the group to a 2m platform where the other student helped him transfer spare weight from his trim pouches to the first student's BCD pockets. The second student then led the dive along the wall to west of the training area, finning a little too quickly. The group arrived at an underwater feature and circled it five times before heading east to a wall drop off. The instructor signalled to do a gradual decent, heading along the wall to allow for second student's ears to have time to adjust to depth. The second student then descended directly to 15m before showing signs of trouble with his ears and ascended some 4-5m. The student's regulator then started to free flow slowly, and he spat his regulator out. The instructor moved closer expecting he would reach

for his AS, but he does not and so the instructor presents his AS in front of his mouth. The student takes the instructor AS and then rejects the AS and tries to breathe off his own regulator despite the free flow. The instructor tries to offer his AS again but the student again rejects it but doesn't try to do anything and just floats in position. The instructor then signals to the first diver that they are to ascend and he grips the second student's BCD and inflates his own BCD and conducts a controlled buoyant lift directly to the surface. On surfacing, the instructor checks the second student and finds he is breathing and able to talk but coughs up blood and blood clots and the first student signals for help. The instructor tows the casualty to the landing point and is met by other divers and site staff who take over the casualty whilst the instructor and first student de-kit.

## March 2023

23/017

A pair of divers commenced a dive and followed a slow descent down a slope as one of the divers had problems clearing his ears. At 17m, the diver aborted the dive due to his ears and the pair ascended back up the slope to 6m. They completed a safety stop for 1 min and then the diver bolted to the surface in less than 20 sec with a total dive time of 6 min. On surfacing, the diver's breathing was distressed and he wasn't responding to instructions to inflate his BCD and when asked, explained that his chest was hurting and he was having difficulty breathing. He then blacked out. His buddy towed him approximately 15m to an entrance platform and other divers assisted to de-kit the casualty and lifted him onto the platform, where oxygen was administered by site staff. The emergency services were called and a paramedic and air ambulance arrived. The diver was assessed by a doctor and was airlifted to a recompression chamber where he was assessed. The medical team determined that the diver had the start of a cold and had suffered a reverse block in the sinus around his eye, the pain of which had caused him to black out. The diver was released from hospital two days later.

## March 2023

23/018

Two divers started a dive and had descended to a maximum depth of 20m when one of them

started to struggle to get air. His buddy donated her AS and brought the diver to the surface with a controlled buoyant lift, omitting safety stops and surfaced with a total dive time of 11 min. The pair returned to shore and briefed the dive manager. On returning home, the diver found he had developed an unusual rash and contacted the dive manager, who advised contacting the BHA Diver Helpline. The diver was advised to attend a recompression chamber for assessment and the doctor at the chamber diagnosed a suit squeeze, with no recompression required.

**March 2023**

**23/015**

A lifeboat was tasked to attend to a freediver who had fallen unconscious in the water whilst freediving for scallops, off an offshore island where he had travelled with four friends in an inflatable canoe. A member of the group discovered him unconscious, not breathing and face down in the water after surfacing and she dragged him back to shore. When the lifeboat arrived on scene the casualty was located on rocks and two crew members went ashore in the lifeboat's daughter craft and immediately placed the casualty on oxygen before being transferred aboard the lifeboat and attended to by two paramedics who were aboard. The lifeboat made a fast transfer back to shore before the casualty was taken to hospital. The freediver made a full recovery. (media report).

**April 2023**

**23/171**

A diver and her buddy had completed a dive to a maximum depth of 20m for a total duration of 39 min. The water temperature was 7 deg C. Sometime after diving, she presented herself to the on-site first aid room feeling dizzy and complaining of a swollen face; she appeared very red in the face. She was administered oxygen and advised not to dive again that day and to stay warm.

**April 2023**

**23/291**

The Coastguard responded to reports of a diver in need of medical assistance. (Coastguard report).

**April 2023**

**23/026**

A group of divers had planned a shore dive at a coastal site but prevailing weather and sea conditions were unsuitable and the group moved along the coast to an alternative more sheltered site. Several pairs entered the water, whilst a shore party monitored the site using binoculars and walkie-talkies. Whilst divers were in the water sea conditions deteriorated and a pair of divers were seen to surface outside the bay in heavy waves, which were preventing the divers swimming back to shore and pushing them towards rocks. One of the divers swallowed seawater and indicated to her buddy she did not have the strength to swim back to shore and both divers signalled distress to the shore party. The dive manager phoned the Coastguard for assistance and one diver in the group offered to inflate his drysuit and swim out to the pair to assist. The diver then donned mask, fins and snorkel and swam out to the pair. The Coastguard tasked a lifeboat, which arrived on scene just as conditions were improving, and recovered the incapacitated diver aboard but her buddy and the rescue snorkeller declined any assistance. The lifeboat then moved to the next bay where two further divers from the group had surfaced and were swimming ashore but they also declined assistance. The incapacitated diver felt well but was taken to the lifeboat boathouse to be checked over. The dive manager was unsure if the lifeboat would have oxygen available and so sent two members of the group to the boathouse with the group's oxygen set. The diver was discharged shortly after with advice not to dive again that day. She had felt unable to swim against the waves and had swallowed some seawater but did not feel unwell. The group monitored her for the next 24 hours. Further diving that day was called off.

**April 2023**

**23/054**

A diver and his buddy, both using rebreathers, had conducted a dive to a maximum depth of 34m. Approximately 35 min into the dive, the diver signalled to his buddy that he was having an issue, deployed his DSMB and ascended rapidly to the

surface. He was seen to be convulsing underwater. The site rescue boat attended and found the diver was not breathing. He was recovered into the boat and CPR was started; the diver was breathing when the boat reached the rescue platform, where he was placed on oxygen and placed in the recovery position to remove blood from his airway. Doctors on site took over and an ambulance was called. Paramedics confirmed the diver had had a chest infection recently and he was taken to hospital by ambulance.

**April 2023**

**23/261**

A student was on a training course and conducted a slow descent, repeatedly slowing to equalise, to a training platform at 3m. Once on the platform, the student and her buddy were checked and both signalled OK. The student was asked to remove and replace her mask, with the instructor placing a hand on her BCD. The student removed and partially replaced her mask then suddenly bolted for the surface with her regulator still in her mouth, in the process knocking the instructor's regulator from their mouth. The instructor recovered their regulator and signalled the buddy to ascend, and both returned to the surface. On surfacing, the instructor inflated the student's BCD and held her close to check she was OK. Shortly after, the student went unresponsive. The instructor removed the student from the water and called for help from the on-site staff. The instructor removed the student's equipment and his own, and staff members arrived to help. The student was placed on oxygen, and at this point, she became responsive and more alert. The student was changed out of the rest of her equipment with help from her buddy and staff. The emergency medical services were contacted; the student with her buddy left in the ambulance and was taken to hospital for assessment and check-up.

**April 2023**

**23/027**

Three divers entered the water for a tour of a number of underwater features and descended to a maximum depth of 21m. After touring the first wreck, one of the divers was seen by the dive leader to flash his torch and believed to have indicated the direction to the next wreck with his

forefinger. It later transpired that he had been signalling to ascend. They navigated to a second and then a third wreck, at which point the diver signalled again with his torch and clearly signalled to ascend. The dive leader went to the diver and held onto him but he then fell backwards and sank to the bottom. The dive leader descended quickly before the silt could be stirred up and grabbed the diver's harness, inflated his wing and ascended direct to the surface. On surfacing, the dive leader fully inflated the diver's wing, checked he still had his mouthpiece in and started towing the diver towards the shore. He looked at the diver's face and his eyes were closed so he waved and shouted for help and the site rescue boat was quickly alongside and recovered the diver aboard. The dive leader informed the boat crew the third diver was still underwater and the rescue boat departed for the shore with the casualty. The dive leader could see bubbles breaking the surface and swam towards them, but they seemed to get further away until the third diver surfaced about 10m away and the pair then swam back ashore. Meanwhile, the rescue team had taken the diver to the site first aid room, placed him on oxygen and called the emergency services. The ambulance arrived a short time later and took the diver to hospital for further assessment. At hospital, the diver was checked over, but no cause or remaining symptoms could be found. The diver was kept in overnight for observation and released the following day. The casualty and dive leader had dived to a maximum depth of 21m and surfaced after 20 min.

**April 2023**

**23/347**

A diver was on a trip on a charter vessel and had completed two dives the previous day, the second to a maximum depth of 30m for a total duration of 27 min. The next day, he conducted the first dive to a maximum depth of 32m for a total duration of 30 min. After a surface interval of 333 min, the diver conducted a wreck dive to a maximum depth of 30m. During his safety stop, the diver experienced a restriction in the gas available from his regulator, even though his contents gauge showed he had 100 bar remaining in a 15 lt cylinder. He completed his safety stop and surfaced. He let his buddy know he was having

breathing difficulties and, on getting aboard the dive vessel, he also informed the skipper. He was placed on oxygen and although he had no pain, he was unable to take a deep breath. The Coastguard was alerted and on return to shore, the diver was transported by ambulance to hospital for treatment.

**April 2023**

**23/133**

A diver had been suffering from a lack of confidence, anxiety, and stress following an earlier incident of DCI. The diver's GP could not help and the last diving doctor he had seen had been generally dismissive of anxiety. The diver's family and friends had encouraged him to continue diving and have more enjoyable experiences to help rebuild his confidence again. The diver accepted an invitation to join a four-day diving trip on a liveaboard with a small group. Arriving at the dock, the group used trolleys to carry their equipment to the boat. The route was slippery, long and winding, the weather was dark and rainy, and the equipment in the anxious diver's trolley was so heavy that he strained himself and fell behind the others. Shortly after boarding the vessel, the diver felt uncomfortable during the boat manager's safety briefing and excused himself to go below deck, where he had an emotional breakdown. A member of his group found the diver and they spoke candidly about mental health. With his support, the diver spoke in confidence with the boat manager about his anxiety and asked to use the highest grade of nitrox available on his dives. The boat manager was supportive and assuring and the following day, encouraged by others around him, the diver completed his first dive, using nitrox 36 and completing a long safety stop at 6m. After returning to the boat, the diver felt aches and pains in his arms. At first, he feared it was a sign of DCI, but recalled the previous day's work to carry equipment to the boat and an earlier injury to his arms before agreeing to come on the trip. The diver declined to dive again that day, instead retiring to bed with painkillers. Later on, he suffered a second breakdown. The diver joined the boat skipper in the wheelhouse, where they had a frank conversation about both men's experience of anxiety and mental health.

The diver agreed to seek professional mental health support once he went home. Over the course of the trip, the diver gained confidence and participated in five more dives, each time using nitrox. By the end of the trip, many people on the boat, including the skipper, commented on the diver's cheerier attitude.

**April 2023**

**23/070**

A student and her instructor, accompanied by an experienced diver, were preparing for a training dive. The weather was sunny and felt warm in the sun. Following a briefing and assembling their equipment, they donned their drysuits, kitted up and completed their buddy checks. During a dry run for the AS part of the lesson, the student indicated that she felt very warm, slightly unwell and felt she was going to faint. The instructor and the experienced diver helped the student to de-kit and lay down and the instructor went to fetch water from his car. The student's drysuit was opened and additional support was sought from the on-site staff. After a few min, the student felt better and removed the top half of her drysuit and indicated they had not drunk sufficient that morning and was probably dehydrated. After resting for an hour, the student felt much better and was happy to continue. The dive proceeded without further incident and training was successfully completed.

**May 2023**

**23/039**

An instructor was preparing to take two students for their first open water training dive. The younger student became hot and increasingly flustered whilst kitting up and during the briefing and buddy checks. On entering the water, the instructor adjusted both students' weights in standing depth before commencing a controlled descent to a depth of 1m. The student immediately signalled that something was wrong and the instructor brought him to the surface using a controlled buoyant lift. The student was not responding verbally and not following instructions and so was towed back to shore and de-kitted. The student's guardian approached and provided him with an inhaler, which the instructor had no prior knowledge of. The student decided not to try and dive again that day.

**May 2023**

**23/038**

A diver was taken ill on day 9 of a 10-day diving expedition. The diver had completed a dive in the morning to a maximum depth of 20m and a total duration of 40 min. Sometime after the dive, the diver began to feel unwell, and as a retired medical professional, he was able to self-diagnose his condition and that it was unrelated to diving. Possible DCI was considered and a link call with a doctor and the diver was arranged through the Coastguard. The doctor agreed with the diagnosis and that it was not diving-related but required further investigation and treatment in hospital. The Coastguard arranged for the charter vessel to be met in harbour by an ambulance for onward transfer to hospital. Although the transfer time due to the remote location could be lengthy and a helicopter transfer was considered, it was deemed unnecessary. In hospital the diagnosis of an infection of the gallbladder was confirmed and it was also confirmed that it was unrelated to diving.

**May 2023**

**23/298**

The Coastguard responded to reports of a diver in need of medical assistance. (Coastguard report).

**May 2023**

**23/262**

A student under instruction was on a platform at a depth of 6m carrying out a regulator recovery skill when she panicked and started to ascend to the surface. The instructor ascended with her and calmed her down and they then returned to shore, where it was established that she may have swallowed some water. She was placed on oxygen and an ambulance was called.

**May 2023**

**23/045**

Two divers completed the first dive of the day to a maximum depth of 24m and a total duration of 44 min. After a surface interval of 95 min, the pair entered the water for a second dive and descended to a maximum depth of 23m. During the dive, the mouthpiece of one of the divers came loose and she swallowed some small amounts of water. The diver continued the dive but did not alert her buddy to the problem. Towards the end of the dive, the diver went to deploy her new DSMB, which had a crack bottle

attached, whilst her buddy observed her from slightly above, but she only inflated the DSMB a small amount. During the ascent, the diver continued to have problems with her mouthpiece letting in water and was having difficulty reeling in the DSMB. The pair conducted a normal ascent to 6m and completed a safety stop but the diver had some difficulty in controlling her buoyancy, varying in depth between 2-7m and she surfaced after 2 min. Her buddy could see her and the boat above him and surfaced after 3 min. The diver appeared very anxious and was breathing heavily. Her buddy and the boat crew helped her off with her kit and recovered her aboard. The diver explained her problem with the mouthpiece and that she had inhaled a lot of seawater throughout the dive and was concerned to have missed part of her safety stop. The dive had been to a maximum depth of 23m for a total duration of 34 min and an average depth of 17m. The diver was placed on oxygen and the Coastguard contacted to request assistance and a lifeboat was tasked to rendezvous with the RHIB. The RHIB started to make their way to harbour, which was 17 miles away. The lifeboat intercepted the RHIB and the diver was transferred and returned to shore to be transferred by ambulance to hospital where she was assessed, including a chest x-ray, which found no water in her lungs. No hyperbaric treatment required and she was discharged.

**May 2023**

**23/303**

The Coastguard responded to reports of a diver in need of medical assistance. (Coastguard report).

**May 2023**

**23/263**

A student was taking part in a four-day course, and had done well during pool dives, reaching a maximum depth of 3m in the pool with no discomfort. They began open water training, along with four other students, including his son, an instructor and safety diver. On the first open water dive, the group descended to a 6m platform using a descent line and were able to complete the required skills at this location before the group left the platform to begin an exploration of the dive site. At this point, the student had a slow ascent to the surface, which led to the instructor directing the remaining divers to



surface and reunite. The student mentioned ear pain but wanted to continue and was told to stop the dive at any point should he experience pain during the subsequent descent. The student was able to descend again and completed the remainder of the dive with no further issues, reaching a maximum depth of 12m. After the dive, the student mentioned his ear pain and was advised he could pause his training at any point and continue at a later date, but he was keen to continue on the course alongside his son. The student then took part in a second dive, successfully completing all requirements for this dive. After the dive and during the debrief, the student was in discomfort, and it was decided between the instructing team and himself that he would not attend the second day of open water diving and would instead seek medical attention for his ear that was now giving him pain. He mentioned at this point a previous ear issue that had not been identified on the medical form. The next day, the student updated that his doctor had diagnosed a perforated ear drum.

**May 2023** **23/304**

The Coastguard responded to reports of a diver in need of medical assistance. (Coastguard report).

**May 2023** **23/305**

The Coastguard responded to a request to support medical transfer of a diver in need of medical assistance. (Coastguard report).

**June 2023** **23/048**

Two divers had descended to a maximum depth of 20m. Towards the end of the dive, the divers were ascending a cliff in line with the exit platform when, at a depth of 7m, one of the divers experienced a pain in his chest and his breathing became erratic. The diver surfaced and was attended to by the site rescue boat and immediately placed on oxygen. The diver was able to walk to the first aid room but then complained his chest felt tight again, and an ambulance was called. The ambulance arrived 20 min later, and the diver was handed over to the care of the paramedics. An air ambulance subsequently arrived, but the paramedics and helimed crew

agreed the helicopter was not required, and the diver was taken to hospital for further checks.

**June 2023** **23/055**

A diver had completed a previous training dive with an instructor to a maximum depth of 6m and a total dive time of 35 min. After a surface interval of 60 min, the student and instructor conducted a second training dive to 6m. After about 19 min, the diver began to become short of breath and the dive was terminated. Back on shore, the diver was placed on oxygen and the breathlessness passed after 30 min on oxygen. The diver had recently had Covid-19 and was advised to see a doctor and potentially require an x-ray.

**June 2023** **23/193**

A diver complained of difficulty breathing during a dive to a maximum of 6m and aborted immediately. He was treated on-site and administered oxygen. A doctor was contacted for advice and recommended follow up assessment and the diver was suspended from diving. A subsequent medical review has diagnosed the diver was suffering from 'Long Covid'.

**June 2023** **23/310**

The Coastguard responded to reports of a diver in need of medical assistance. (Coastguard report).

**June 2023** **23/135**

A diver was on a week-long liveaboard trip. Two days before the end of the trip, the diver's drysuit zip had broken and the diver arranged to pick up a hired drysuit the following day, which was designated as a rest day. On the final day of the trip, the diver completed the first dive without incident to a maximum depth of 31m with a total dive time of 37 min, including a safety stop of 5 min at 6m. After a surface interval of 374 min, the diver entered the water for a second dive. The divers had been briefed by the skipper to conduct a negative entry due to the short window of slack water and divers should descend the shotline right away and regroup on the wreck. The diver had added 3 kg to his weightbelt and fully emptied his BCD and squatted to remove as

much gas from his drysuit as possible. On entry to the water, the diver submerged briefly and then surfaced due to residual buoyancy. The diver dumped gas from his drysuit and attempted to swim down and reached 3m, but there was still gas in his drysuit, and he returned to the surface in close proximity to the charter vessel. Another diver also on the surface shouted at the diver to move away from the vessel, which he was already in the process of doing. The diver was then pulled underwater into the path of the propellor. Despite attempting to get out of the way, the diver was dragged into the propellor and, whilst he tried to protect his head and body, the diver was hit several times on his right side, mainly in the hip, thigh and shin. The diver's regulator and mask were partially displaced, and he lost a fin. As the boat moved away, the diver was able to replace his mask and regulator and cleared them before inflating his BCD, as he was aware that the drysuit had been damaged and was letting in significant water at the ankle and knee areas. The diver called for help and the diver who had shouted the warning to him swam to him and fully inflated his BCD and checked he was conscious. The dive boat returned, and with assistance from the other diver, he was able to sit on the lift and be recovered aboard. The skipper asked if he was physically OK and whether he was able to wait for all divers to be recovered before returning to shore to seek medical attention. The diver agreed to wait and was helped out of his drysuit. The diver sat on a bench on deck with his leg raised as he had a gash on his right ankle oozing blood. After around 10 min, the diver began feeling cold and asked for a jumper and woolly hat, which were provided. Although in shock, the diver was not provided oxygen and was in significant pain. Once other divers had been recovered, one suggested the diver go inside and the boat returned to harbour, where they were met by an ambulance crew arranged by the skipper. The diver was able to climb a ladder with some difficulty and was checked by the ambulance crew who dressed his wounds, administered oxygen and oral liquid morphine. The diver was transferred to hospital where he was admitted overnight and given a CT scan, liquid morphine, stitching of ankle wound and glueing of a gash to his wrist. The diver was discharged the next day with a course of

antibiotics and pain relief tablets.

## June 2023

23/316

The Coastguard responded to a request to support medical transfer of a diver in need of medical assistance. (Coastguard report).

## July 2023

23/068

Two divers were part of a group diving from a charter vessel. Earlier in the day, the pair had completed a dive without incident to a maximum depth of 17m with a total dive time of 20 min, including a safety stop for 3 min. After a surface interval of 150 min, the pair prepared to dive a wreck, having agreed that one diver would go down the shotline first as she had difficulties clearing her ears and her buddy would follow. After entering the water, the pair swam towards the shotline and on the way, the second diver had a free flow from her AS but this was resolved. The first diver then had a problem locating her deflate hose; her buddy resolved this, and both signalled to descend. The first diver descended and continued, but her buddy descended to approximately 1m and found her regulator was flooding and providing her with water as well as air. She wanted to ascend but was unable to locate her BCD inflator hose. She then inflated her drysuit and surfaced but became entangled in the trail buoy line and whilst trying to disentangle herself, became inverted as air in her suit migrated to her feet, pushing her head underwater. In the inverted position, her regulator was again flooding and she could not get upright, and she could not recall anything after this point. The diver's struggles and inversion were noticed by the boatman and other divers preparing to dive. As the boat came alongside, one of the divers jumped into the water. He pulled the diver's legs down, raised her arm to dump gas from her drysuit and inflated her BCD wing. Initially the diver's arms were moving when he got to her, but she did not respond when he waved his hand in front of her face. He got the diver onto the diver lift at the stern of the boat and she was lifted to deck level. She was unconscious and had a grey colour. An ambulance paramedic was aboard and took charge of the resuscitation efforts with initial CPR and as she recovered, administered

oxygen. The diver was stable after approximately 25 min. The charter boat returned to the nearest harbour, where a lifeboat was waiting and the diver was subsequently transferred to hospital by ambulance for further tests and treatment. After making a good recovery, she was discharged later that evening. The first diver had continued her descent and although the visibility was poor and she could not see her, she believed her buddy was following. She conducted a slow descent, allowing her ears to equalise, and paused for about a minute just before reaching the wreck and then again on the bottom, taking approximately 6 min to descend. Unable to see her buddy, the first diver deployed her DSMB and drifted away from the shotline and then ascended with a maximum depth of 16m and total dive time of 18 min, including a safety stop at 6m for 3 min. On surfacing, the diver was recovered by another dive boat in the area and informed there had been an incident and that her boat had returned to harbour. The dive boat then recovered other divers who had been picked up by a fishing vessel and returned them all to harbour.

**July 2023**

**23/079**

A rebreather diver and his buddy were on an underwater archaeology course. They completed the first dive to a maximum depth of 13m and a total dive time of 43 min. After a surface interval of 62 min, the pair entered the water again, with the rebreather diver having a camera, although he had never used a camera underwater before. The rebreather diver completed a buddy check, including briefing his buddy how to conduct a controlled buoyant lift on a rebreather diver, but did not pre-breathe his unit as much as he should have done. The diver had set his setpoint at 0.5 instead of 1.3 as it was to be a shallow dive, which meant that his head-up display (HUD) would remain red throughout the dive, only turning amber at a PO<sub>2</sub> of 1 and green at >1. During the dive, the diver got used to the flashing red light and did not notice the flashing getting faster. The diver entered the water and swam underwater, adjusting his camera mount as he went and became distracted by this. The diver then realised that his HUD was flashing quickly and realised that his PO<sub>2</sub> was low. The last thing the diver

recalled was reaching to do a diluent flush, and he subsequently woke up face down and coughing up water in the on-site shop surrounded by paramedics. The diver's computer subsequently showed that 6 min into the dive, he ascended to the surface from 13m and then immediately sank back to the bottom, followed by a slow initial ascent to 10m and then a rapid final ascent to the surface with a total dive time of 8 min. The diver's buddy noticed the diver's camera dropping to the wreck, and after picking it up, saw the diver plummeting towards him and landing on his back on the wreck. The diver's breathing loop was out of his mouth and his lips were darker than usual and he was not breathing. The buddy swam over to the diver, tried to get a response and replaced his breathing loop, but with no signs of breathing started to inflate the diver's BCD, intending to send him to the surface and then follow, but nothing happened. The buddy then gripped the diver's harness firmly and used his own buoyancy to recover the diver quickly to the surface. On surfacing, the buddy tried to make the diver buoyant but was unable to, so started swimming for shore, shouting for help after he had gone 10m. The site rescue boat was launched and came alongside. The buddy removed the diver's bailout cylinder and handed it up into the boat but they were unable to remove the diver's harness and so cut the diver free and recovered the casualty into the boat. As he was pulled in, the diver made a noise and the crewman said he thought he was breathing and made for the shore. The buddy made his own way to shore and was placed on oxygen and checked over by a paramedic from the air ambulance before being transported to hospital by ambulance for further checks. The diver was airlifted by helicopter to hospital for further investigation and treatment. The diver was found to have no symptoms of DCI but had some fluid in his lungs and was treated for near drowning and kept in hospital on oxygen for four days before being discharged. After two weeks, the diver was still short of breath but improving each day. The diver was found to have entered the water without his oxygen cylinder turned on.

**July 2023**

**23/199**

A diver was unable to clear their ears at a depth

of 4m, so aborted the dive and was unable to complete the course.

**July 2023**

**23/077**

Two ambulance crews and an air ambulance were dispatched to attend to a diver who had sustained injuries. The diver was taken to hospital by ambulance for further treatment. (Media report).

**July 2023**

**23/075**

A diver and her regular buddy were on a club trip with a group they had met on a previous overseas diving holiday, three months earlier. On the last dive of the previous trip, the diver had experienced a shortness of breath on ascending to the surface, which she was concerned had been due to mild panic. On the first dive of the current trip, the diver was wearing a new, well-fitting semi-dry wetsuit which required an additional 1 kg to get down. Her buddy carried the weight just in case it was necessary. The pair descended, and at about 15m, the diver indicated that something was wrong. Her buddy indicated to ascend, but at 13m, she then signalled OK and they continued the dive. The diver subsequently reported that she had become short of breath at 15m but attributed it to nerves that she was determined to overcome. The pair continued their descent to a maximum depth of 26m, and as instructed by the skipper, deployed a DSMB. Around 15 min into the dive, the diver signalled that something was wrong and she needed to abort the dive, although she had 180 bar of air remaining. During the ascent, the diver held onto her buddy's left arm, making it difficult for him to dump air efficiently, so the ascent was slightly irregular but within safe limits. On reaching 6m, the buddy signalled to conduct a safety stop and the diver replied OK. After just over a minute the signalled that she needed to ascend urgently and made a fast but controlled ascent to the surface, followed closely by her buddy. The diver later reported that she was concerned that she was becoming confused and less able to read her computer or operate her BCD controls. On surfacing the diver, said, "I can't breathe, I can't breathe" and then rolled over onto her back. Her buddy swam to her and inflated her BCD as her head dipped briefly below the surface. She was unconscious, unresponsive, not breathing

and completely limp, with her eyes and mouth open and appeared to have a slight nosebleed. Her buddy shouted her name but got no response and so signalled by waving to the boat, which was about 50m away and responded immediately, heading towards the divers at speed. The buddy administered six rescue breaths before the boat stopped alongside and the skipper handed him a rope. The buddy indicated that the diver was unconscious and the skipper lowered the diver lift. The buddy lifted the diver onto the lift and she was raised to deck level by the skipper and dragged onto the boat. The skipper then lowered the lift again and recovered the buddy. Once aboard, the buddy removed his kit and the skipper had already removed the diver's BCD and then went to broadcast a 'Mayday'. The diver remained lifeless and blue; her buddy commenced CPR for one minute and then checked for a carotid pulse but could not find one. He asked the skipper to bring the defibrillator and continued with CPR. When the skipper brought the defibrillator, the buddy stripped the diver to the waist whilst the skipper prepared the defibrillator. At this point, the diver started choking and so the buddy rolled her onto her side and cleared her mouth of blood-stained mucus. Meanwhile, the skipper assembled the oxygen kit and the buddy held the mask over the diver's nose and mouth, whilst repeating her name and reassuring her. The diver began breathing normally, coughing up watery, bloody mucus and vomited a small amount. The diver became conscious after 2 min of breathing oxygen and began screaming, as if in a dream. She was able to blink her eyes on command, and when a lifeboat and helicopter paramedic were aboard, she was able to correct her buddy when he was telling the medics what medications she was on. The diver was transferred to hospital, which had a hyperbaric unit in close proximity in case of DCI, by helicopter. On arrival, the diver was responsive but very shaken, cold and shivering and was warmed up with a bear hugger and warm fluids. She continued to cough frothy blood-stained sputum and an x-ray revealed signs consistent with Immersion Pulmonary Oedema (IPO). On examination, there were no signs of DCI. The examining doctor confirmed she had suffered from IPO and should not dive again or go wild swimming in the open water, owing to the high

risk of recurrence. The doctor also considered it likely that the incident of shortness of breath at the end of a dive three months previous was also likely to have been due to IPO as she had a previous shortness of breath at the end of a dive some years earlier. Neither the diver nor her buddy were familiar with IPO despite both being retired doctors.

**July 2023**

**23/215**

A diver was unable to clear their ears at a depth of 4m so aborted the dive and was unable to complete the course.

**July 2023**

**23/080**

A diver and his buddy were on the fourth day of a diving trip and had completed their first dive that day to a maximum depth of 17m with a total duration of 41 min. After a surface interval of 230 min, the pair entered the water from a boat and descended to a maximum depth of 19m. After approximately 30 min, the diver had difficulty controlling his buoyancy and he ascended directly to the surface in a faster than normal ascent, omitting safety stops and surfacing with a total dive time of 32 min. His buddy witnessed the ascent but was unable to intervene in time and so ascended normally but omitted his safety stops. The diver believed that having added an additional undersuit, he had not adjusted his weights, leading to him being under-weight at the end of the dive. The divers were recovered aboard the boat where the diver was placed on oxygen and the boat returned to shore. On shore, the diver was examined and appeared to be disoriented and struggling to balance, but his buddy displayed no symptoms. The Coastguard was contacted and liaised with a diving doctor and arranged for a local Coastguard team and ambulance to attend to the diver. The diver was taken by ambulance to a local medical centre. At the medical centre, the diver was kept on oxygen whilst medical staff consulted with a diving doctor, who recommended diver remain on oxygen for some hours for observation. At the end of this period, the diver discharged with no symptoms and feeling normal.

**July 2023**

**23/118**

A student was undergoing pool training with an instructor and another student. After about 30 min into the session, the group were surfacing when the diver lost consciousness at the surface of the pool. The instructor immediately took control of her and inflated her BCD. The diver regained consciousness but was confused and so the instructor took her to the pool side and called for assistance. The diver was stabilised and her dive equipment removed and she was able to exit the pool herself. Earlier in the pool, the diver lost control of her buoyancy whilst descending, and the instructor had to assist her. When asked about this afterwards the diver said she had felt dizzy even though she had signalled OK. The diver was advised to see her doctor and was subsequently cleared to continue diver training.

**July 2023**

**23/094**

A student was undergoing pool training with an instructor and another student. After about 30 min into the session, the group were surfacing when the diver lost consciousness at the surface of the pool. The instructor immediately took control of her and inflated her BCD. The diver regained consciousness but was confused and so the instructor took her to the pool side and called for assistance. The diver was stabilised and her dive equipment removed and she was able to exit the pool herself. Earlier in the pool, the diver lost control of her buoyancy whilst descending, and the instructor had to assist her. When asked about this afterwards the diver said she had felt dizzy even though she had signalled OK. The diver was advised to see her doctor and was subsequently cleared to continue diver training.

**July 2023**

**23/084**

A diver and her two buddies had completed the first dive to a maximum depth of 21m with a total dive time of 44 min, including a safety stop at 6m for 3 min without incident. During the descent for the second dive, the diver experienced problems clearing her ears after 6m and so conducted a gradual descent, equalising on each exhalation. The diver let water into her hood and continued

to gently equalise until she noticed her ears were not equalising fully after about 17m. The diver ascended to 14m, which helped reduce the problem and so she and her buddies continued their descent. At 17m her ears started to really hurt and she tried to equalise more forcefully. She heard a pop and became disorientated and so aborted the dive and ascended slowly with her buddies. She completed a 5 min safety stop at 6m and surfaced with a total underwater time of 15 min. The diver was recovered onto the boat and returned to shore. The emergency services were called and the diver given oxygen in case of DCI. The diver was met initially by first responders and a paramedic arrived 15 min later. After assessment, the ambulance crew were satisfied that DCI was not a risk and they were happy to discharge the diver on the understanding that if there were any changes she was to report to A&E. They advised the diver to consult her own GP. The diver subsequently visited her GP, who confirmed that no perforation or significant damage had occurred to the eardrum.

**July 2023**

**23/088**

A student and her instructor had completed one training dive to a maximum depth of 15m for a total dive time of 36 min, including a safety stop at 6m for 6 min. The student was using a hired semi-drysuit, which was tight around the neck, and at the end of the dive, had complained of difficulty breathing. On the day, it was cold and wet, and after around an hour on the surface, the student complained of being cold but not too cold to cancel a second dive. After a surface interval of 145 min, the pair entered the water for a planned short dive for some leadership skills and depth progression. The pair navigated to a couple of underwater features, with a slow descent as the student had some difficulty with ear clearing. On arrival at a depth of 19m, conditions were cold and dark and the pair decided to ascend. As they ascended, the student became animated and was trying to signal something. At 11m, the student became distressed and removed her regulator but did not reach for an AS. Her instructor recovered her regulator and pushed it back into her mouth. In the meantime, the student's mask had partially flooded, increasing her stress and she spat her

regulator out again and then bolted to the surface in a faster than normal ascent. The instructor followed and, on the surface, made the student and then himself buoyant. The student screamed "help me, help me" and the instructor began towing her to the shore, assisted by other divers who were in the water. The student continued to scream "help me, I can't breathe!" On arrival at the side, she was assisted from the water. The on-site team arrived with oxygen and, after moving her to the first aid room, assessed her and advised her to contact a diving doctor for further advice.

**July 2023**

**23/264**

A student on a training course completed two open water dives on the first day of open water training. The first to a maximum depth of 7m and a total duration of 25 min and the second to a maximum depth of 6m for a total duration of 33 min. On the first dive the student had signalled he had a problem with his ears and the group ascended a little and the student eventually managed to clear his ears. On the second dive a number of short ascents were carried out practicing AS ascent skills and on the second ascent the student had a reoccurrence of his ear problem and again managed to clear it. During a debrief the student made no mention of being in pain and left the site shortly after. The following day the instructor received a message that student would not be attending the second day as he had suffered a perforated eardrum.

**August 2023**

**23/086**

A diver and her buddy were on a dive when her regulator was snagged by a hook which formed part of what appeared to be a temporary fix to an underwater platform at a depth of 3-4m. The diver's regulator was pulled from her mouth, causing her to inhale water and the diver became inverted. Her buddy tried to provide his AS but the diver became unresponsive. Her buddy freed the entanglement and brought the unconscious diver to the surface and shouted for help. The buddy gave the diver two rescue breaths and then towed her to shore, where she was landed with the assistance of other divers on site. Oxygen was administered and the diver's neck seal was cut to free it from her neck; she regained consciousness

shortly after. The emergency services were called and attended within 10 min, and the crew took over treatment before transferring the diver to hospital for further treatment. The diver was admitted to ICU for 4 days before being transferred to a general ward for further treatment and recovery.

**August 2023**

**23/123**

A group of three divers prepared to dive from a RHIB. Two divers entered the water and the third believed he had been given the signal it was clear to enter, but he had not. As the third diver entered the water, he rolled on top of one of the divers already in the water and his cylinder stuck the diver on his head. The dive was aborted and the divers recovered from the water. The diver with the head injury was given first aid and on return to shore the diver attended A&E, where he received three stitches to close his wound.

**August 2023**

**23/266**

A group of 5 divers surfaced in a swimming pool reporting that their air smelled and tasted odd. Whilst carrying out initial tests, a regulator was purged, resulting in a visible cloud being released. The dive activity was closed and local companies contacted to service cylinders and the compressor. A recompression chamber was also contacted for advice for customers and guests; the advice was only to contact the chamber if symptoms developed. Later that evening, the instructor felt unwell and contacted the chamber for advice. He was told to attend and was given treatment for suspected carbon monoxide poisoning and was subsequently declared fit to dive following treatment. Air purity tests did not find evidence of excess carbon monoxide but did find high levels of water vapor. All cylinders and air banks were sent off for testing and cleaning and a new compressor was fitted with an air drying unit and weekly filter checks implemented.

**August 2023**

**23/165**

A diver entered the water after a surface interval of 120 min following a previous uneventful dive earlier in the day. The diver descended to a maximum depth of 20m without any problems.

Towards the end of the dive, the diver had ascended to around 8m when he experienced excruciating pain in his left ear. The diver descended slightly to alleviate the pain but became disorientated and found himself on the bottom still suffering from vertigo, which cleared quickly. The diver then resumed his ascent without any further difficulty with his ears and ascended directly to the surface, omitting any safety stops.

**August 2023**

**23/235**

A diver was unable to clear ears on descent to 3m and aborted dive.

**August 2023**

**23/149**

A diver had completed two dives from a charter vessel and had completed decompression stop dives on each dive, with a surface interval of less than two hours between dives. Both dives had been without incident. After returning to shore and it still being early in the day, the diver decided to go snorkelling and carried out a number of surface dives. The diver began to experience some visual disturbances, including a narrowing of his field of view. He had experienced the same problem in the past but unrelated to diving. The diver contacted a diving doctor at a recompression chamber and was advised to attend for examination. The diver attended the chamber but did not receive recompression treatment and was advised to have a test for PFO. The diver subsequently had a PFO test which was positive and had surgery to correct it and is waiting for a medical examination to determine it is safe for him to resume diving.

**September 2023**

**23/109**

A diver conducted a dive with his buddy to a maximum depth of 26m with a total dive time of 47 min, including a safety stop of 3 min at 5m, both divers using nitrox 30 for the dive and nitrox 53 for stops. The diver had a history of slow to clear ears with tight external ear canals that clog easily, previously leading to dulled hearing after a dive. But the diver had a routine to manage this and had not experienced any post-dive problems for 10 years. The diver followed a normal slow

descent and passed through a significant thermocline at 13m, changing from 18 deg C to 7 deg C. The pair had planned to descend to a maximum depth of 35m but at 26m, conditions did not look inviting and so the pair ascended to 24m. They then swam along at that level before ascending to conduct a safety stop at 5m, where the diver switched to his nitrox 53. On surfacing, the diver found his hearing significantly impacted and assumed it was water-logged ears. He had no symptoms of dizziness or pain but it became clear his right ear was the problem. On arrival home, the diver irrigated his ears but was unable to remove any excess wax from his right ear and started to apply an oil product to help remove it. The diver and his buddy completed two dives four days later without incident but the hearing loss was persisting. The diver sought medical advice and when outer ear investigation indicated no blockage or damage, consideration was given to inner ear DCI. The diver underwent recompression but this did not resolve the problem and DCI was discounted and that the problem was with middle ear and eustachian tube. The condition slowly cleared over the next couple of weeks.

### September 2023

23/350

The Coastguard responded to reports of a diver in need of medical assistance. (Coastguard report).

### September 2023

23/238

A diver complained of ear pain during a dive and was informed to try and clear their ears and continue. The diver later had stomach issues and was removed from the course. He reported to the medical centre the following day with increased pain in his ear, where a suspected perforated ear drum was diagnosed.

### September 2023

23/170

A diver, wearing a semi-drysuit, and her buddy conducted a dive on a wreck at a maximum depth of 31m for a total duration of 36 min. On surfacing, they could not initially spot their charter boat but there were other pairs within a 30m radius on the surface. The boat was eventually spotted at some distance towards a breakwater, but sighting was intermittent due

to a heavy swell. The boat gave no indication of having seen the divers or moving towards the wreck site. After approximately 15 min after surfacing, one of the divers began operating an air horn to try and attract the boat's attention. It was subsequently reported the boat crew were able to hear the horn. By this time, the diver reported that she was starting to feel cold and was starting to suffer from leg cramps and was assisted to relieve this by her buddy. After 20 min with no response from the charter boat, one of the divers activated his EPIRB and the signal was received and relayed to the harbourmaster who called the charter boat directly. The charter boat was able to respond and explained they were currently immobilised but would shortly be able to recover their divers, so there was no need for emergency services. It transpired that the skipper had attempted to retrieve the shotline but it had snagged in the vessel's bow thruster. The skipper had donned his drysuit to free the line from the thruster, resulting in the delay. After around 30 min after surfacing, the boat began making its way towards the divers, who were now gathered together in two groups. The boat approached one group at significant speed, resulting in those first approached being unable to hold on to the side ropes to avoid the risk of colliding with the others in the water. Once the boat was stationary, about half the group were alongside and the rest about 10m away, with the cold diver in the latter group. As divers began to be recovered aboard, one of the divers in the second group encouraged the cold diver to swim with him to the boat and ensured she was recovered next. One more diver was recovered on the lift before it failed, with the wire lift cable being frayed and became entangled with the motor and efforts to operate it failed. Whilst trying to operate the lift, one of the divers holding the lift platform received a mild electric shock. The skipper managed to secure the lift platform in a half-raised position, which was sufficient to allow divers to climb onto it and from there clamber aboard the boat. The cold diver was found lying on a bench seat in the cabin wearing a dry-robe and appeared unresponsive, answering in single words. The boat began making way to harbour and made a 'Mayday' call to which the Coastguard requested that they call via mobile phone to pass medical advice. The



diver was covered by a foil blanket and, following advice from a doctor, was offered oxygen, but she refused twice. On arrival in harbour two others in the group helped the diver change out of her semi-drysuit and put on warm dry clothing. A Coastguard rescue team and an ambulance arrived, and the diver was transferred to hospital where she was treated for hypothermia and released after a few hours and was able to travel home that evening.

### September 2023

23/116

The Coastguard was notified of a snorkeller who got into difficulties. The Coastguard tasked a lifeboat, rescue helicopter and Coastguard rescue team (CRT) to assist. On arrival, the CRT and lifeboat crew found the diver unresponsive, however she was being airlifted to hospital. (Media report).

### September 2023

23/356

The Coastguard responded to reports of a diver in need of medical assistance. (Coastguard report).

### October 2023

23/246

A diver complained of an ear problem and was seen by a medic and given antibiotics for an ear infection. They were restricted from diving until the course of medication was completed and the ear returned to a normal state.

### October 2023

23/131

A group of four divers had completed two dives on a falling tide. The first to a maximum depth of 5m for a total duration of 60 min and after a surface interval of 110 min, a second to a maximum depth of 3m for a total duration of 30 min. Towards the end of the second dive, one of the divers in the group began to experience a pain in the thigh from an old injury. As they were just less than 1m deep at the time, the lead diver signalled for the diver to surface with him and for the other two to stay underwater but remain in contact. The diver was unable to continue with the dive due to his leg pain and so the lead diver signalled the other two to surface and explained the situation. He then advised the two divers to

continue and indicated the direction they should take and they descended to continue their dive. The lead diver then told the diver they were going to swim ashore about 200m away on the surface. As the diver was still suffering from pain in his leg, he mainly used his left leg for swimming which then caused severe cramp, resulting in the diver suffering some distress. He then continued to swim using his injured right leg until that too suffered from severe cramp. The lead diver tried to ease the cramp by stretching the diver's legs but as soon as he stopped the cramp returned, worse than before. Feeling unable to tow the diver 190m to the shore, the lead diver signalled a nearby boat and towed the diver towards it and was able to persuade the crew to take them aboard and return them to harbour. The dive manager surfaced nearby and, noticing the divers in the boat, swam to them and was advised of the situation and agreed to join the other pair and escort them back to shore. The boat crew had notified the emergency services and returned the divers to a nearby marina where they were met by first responders who advised attending A&E for further assessment. At hospital the diver was diagnosed with a case of severe cramp.

### October 2023

23/127

Two divers had been on a wreck dive to a maximum depth of 35m both using nitrox 32. Towards the end of the dive, one of the divers indicated that something was wrong and both divers deployed their DSMB and commenced their ascent to their first decompression stop at 12m. The divers completed stops at 12m for 1 min, 9m for 1 min and 6m for 3 min. After clearing their decompression requirement, the diver who had signalled a problem on the bottom suddenly ascended rapidly to the surface. His buddy followed and, on surfacing, found the diver on their back, unresponsive and with vomit around their mouth. The buddy made the diver positively buoyant and signalled an emergency to the boat and started towing the diver in the direction of the boat. On arrival at the boat the buddy, with the assistance of the skipper, got the diver onto the diver lift and the diver was recovered from the water. Another diver in the group had surfaced by this time and hearing shouts coming from the

stern of the vessel, swam to the lift to find the skipper de-kitting the diver on deck and the buddy in the water. Once the lift was clear, the second diver was brought aboard the vessel and took over the primary survey of the diver, allowing the skipper to prepare the emergency oxygen, raise a 'Mayday' with the Coastguard and recover the buddy from the water. The diver was found to be unresponsive with vomit around their mouth and had a pale, ashen appearance. The second diver cut the diver's neck seal and cleared the diver's airway of obstructions and opened the airway with the diver taking short spontaneous breaths. The diver was offered oxygen but would not tolerate the facemask so it was held close to his mouth and nose on 15 l/min constant flow, allowing an increased level of inhaled oxygen. The diver then began to vomit a brown liquid and was rolled on their side to clear the airway before rolling back onto their back and then placed in the recovery position and continuously monitored. The Coastguard had tasked a lifeboat and a search and rescue helicopter to assist whilst the dive boat made best speed towards harbour. Approximately 30 min after surfacing, the diver started to show signs of improvement, initially responding to voice and then able to give their name. After a further 30 min, the diver requested to sit up and was able to tolerate the oxygen facemask and take small sips of water. The lifeboat met the charter vessel on route to harbour but the decision was made to continue aboard the charter vessel rather than risk a transfer at sea. The vessel arrived in harbour at the same time as the rescue helicopter landed nearby. The diver was, by this time, sat up, on oxygen and able to hold a conversation. The helicopter paramedic arrived and carried out a thorough survey of the casualty and a duty diving doctor was contacted for further advice. The doctor queried Immersion Pulmonary Oedema (IPO) and the diver was taken by road to hospital where it was later confirmed that the diver had suffered from IPO, thought to have been brought on by an undiagnosed chest infection. The diver was kept in overnight for treatment of the infection. Subsequent investigation and a series of tests by a lung specialist indicated that the diver may have had a lung infection as a result of Aspiration Pneumonia (AP). The specialist indicated that at depth, IPO and AP would have

presented in much the same manner.

**October 2023**

**23/126**

A student and his instructor had completed two training dives the previous day. The first to a maximum depth of 6m for a total duration of 52 min and, after a surface interval of 90 min, a second dive to a maximum depth of 13m for 40 min. The student was observed to have positive buoyancy issues on both dives as well as shallow breathing which may have contributed to the buoyancy problems, but this was not unusual for a trainee diver. The student did not report any symptoms after either dive. The following day, the student and instructor conducted a training dive to a maximum depth of 15m, with the majority of the dive spent around 12m and 5m towards the end of the dive, for a total duration of 44 min. On surfacing, diver reported a severe headache and found it difficult to concentrate. On exiting and de-kitting, the diver reported feeling nauseous and then subsequently vomited several times over the following hour. The diver stated the headache had started around 25 min into the dive but hadn't informed the instructor and had continued signalling that they were OK. The planned second dive was cancelled. By the time they returned home, approximately 3 hours after surfacing, the diver reported they felt better. Due to the previous day's dives, the diver had added an extra 2 kg, however frequent positive buoyancy issues were again observed as well as shallow or skip breathing. This had been discussed with the diver but they felt like they were breathing normally. The diver suffered similar symptoms following a subsequent dive a week later (see Incident No. 23/141).

**October 2023**

**23/255**

A diver complained of ear popping during a surface snorkel dive during a training course. The diver only identified a problem when he experienced yellow fluid coming from his ear later that evening and air coming from his ear when performing the Valsalva manoeuvre. The diver reported to a medical centre for further assessment.

**November 2023****23/142**

A student had conducted three training dives the previous weekend and suffered a severe headache after the third dive (see Incident 23/126). The student and his instructor entered the water for a refresher dive the next weekend, accompanied by two Dive Leader trainees. Prior to the dive, the instructor discussed breathing exercises, suit squeeze, temperature and relaxing with the student. The group descended to a maximum depth of 13m and a few positive buoyancy issues were observed, but the student's breathing seemed to be better than the previous dives. On surfacing, with a total dive time of 30 min, the diver reported a severe headache and vomited into the water several times before the group could exit the water. On exiting and de-kitted, the diver reported the headache and nausea getting worse and he continued to vomit. When questioned, he indicated that the headache hadn't started until around 20 min into the dive on the return leg. It had got progressively worse as the group reduced depth, culminating in a slightly quicker than normal ascent from the 6m safety stop to the surface, which at the time he had put down to buoyancy issues. Medical advice was sought from the on-site team who raised a report and telephoned the chamber to speak to a dive doctor. No indications of DCI were observed and it was advised that recompression was not necessary, and a follow up visit to a GP was advised. The diver's condition persisted for some hours and he still had the headache and some nausea seven hours after surfacing. The diver visited his GP and then subsequently a specialist diving medical doctor, where it was established that he had been using a nasal spray for allergies but had been exceeding the maximum dose and the spray included a vasopressor which had caused the nausea and headache. The diver was advised that he cannot use the spray and go diving in the future without leaving a suitable time (days) between the two. The diver stopped using the spray and resumed training, completing his qualification without any recurrence.

**November 2023****23/270**

A student on a deep dive course undertook a dive to 30m on a wreck from a dive boat. The instructor

noted signs of narcosis and buoyancy issues at the maximum depth of 30m, making it difficult for the diver to maintain buoyancy control. Visibility became poor, causing separation between the group of 8 and so the dive was aborted, and an ascent was started. Although a slow ascent was made, the student was unable to conduct a safety stop. On surfacing, there were no signs of DCI and the group returned to shore. Approximately two hours later, the student asked for advice as there were marks on his left shoulder. The diver was advised to go to A&E as a precaution, where he was placed on oxygen and kept overnight before being discharged with advice to avoid diving for a month.

**November 2023****23/257**

A trainee diver suffered a perforated ear drum whilst conducting a training course. The diver reported to a doctor on completion of the course with ear pain and was diagnosed with a perforated ear drum.

**November 2023****23/144**

A qualified diver and his instructor entered the water for a drysuit orientation. The pair started in a confined water area, and the diver was just about OK with a full cylinder. He completed recovery from inversion, somersault and roll over at the surface drills fine and then completed a few descents and ascents in the deeper area to a maximum depth of 4m and a total duration of less than 10 min. During a surface interval of 48 min, 2 kg of lead was added to the diver's weightbelt and they entered the water for another dive, with the diver able to descend without difficulty. The pair reached a maximum depth of 16m and swam around various points of interest, with the diver maintaining good positioning in the water. Just as the pair started to turn the dive, the diver suddenly shot up. The instructor chased after him but was unable to hold him and both ended up on the surface from a depth of around 14m and a total dive time of 17 min. The pair swam slowly on the surface to an exit point and left the water. The diver appeared fine but the instructor's dive computer was signalling distress due to the fast ascent and so the instructor decided to terminate diving for the day. The instructor

advised the diver's father to monitor him and any adverse symptoms to call a diver emergency helpline. In the morning three days later, the diver was complaining of a headache to his father and so was kept off school. After an hour or so the headache still remained and the diver also complained of his arms hurting. The father contacted a club member who advised him to call the diver helpline and the doctor advised the diver to attend for assessment. After examination, the doctor said he did not believe it was related to the dive but put the diver in a recompression chamber for two hours.

**December 2023**

**23/158**

A newly qualified diver was with a dive leader and two other buddies on a dive to a maximum depth of 15m. Around 25 min into the dive at a depth of 14m, the diver lost buoyancy control as gas migrated to the legs of her drysuit, and she ascended direct to the surface unseen by the lead diver. The lead diver checked immediately after and could not see the diver so checked through 360 degrees and looked up but could not see the missing diver. Another group of divers swam past and the lead diver checked to see if the missing diver was with them but she was not. Then one of the other divers in the group pointed out that the missing diver was on the surface. The dive was aborted and the lead diver deployed a DSMB and the remaining group ascended and completed a safety stop at 6m for 3 min. After surfacing, the missing diver could be seen ashore removing her equipment. On exiting the water, the lead diver was informed by the assistant dive manager that the diver had complained of tingling in her feet and suspected DCI. The diver was taken to the on-site medical room where she was placed on oxygen at 15 l/min. During examination, it was found that the diver's drysuit had leaked and her legs were soaked in cold water. A recompression chamber was contacted for advice and, based on dive profile and the water temperature (11 deg C), it was suspected that the diver had suffered from mild hypothermia and not DCI.

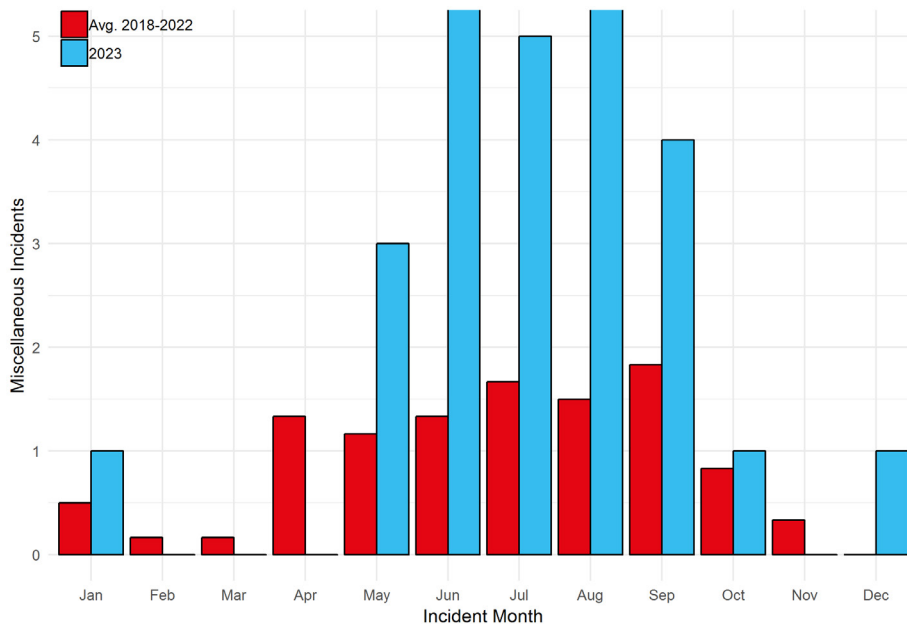
**December 2023**

**23/168**

A diver was on a dive to a maximum depth of 8m when, approximately 25 min into the dive, he

attempted to clear his mask but dislodged his regulator whilst doing so. The diver breathed in some water but coughed it back out and then cleared his mask. From that point on, the diver had difficulty breathing and so ascended to the surface, omitting any safety stop, and swam to a nearby bank. He was coughing up bloody sputum and was assisted from the water by others and his equipment removed. He sat on a nearby seat and was described as ashen with blue lips and was provided nitrox 36 to breathe. After a short while breathing nitrox 36, the diver was able to walk to a nearby car park, where he continued to breathe nitrox. A colleague phoned a diver emergency helpline and the doctor considered that he had suffered from IPO and advised that the diver should attend A&E. In hospital, the diver was found to have an oxygen saturation level of 92%. After further tests including a chest X-ray, he had recovered sufficiently to be discharged with advice to return if his breathing deteriorated. The diver has subsequently had a consultation with a medical referee who confirmed the diver's condition had most likely been due to IPO.

## Miscellaneous



**Figure 19. The month of occurrence of incidents for which there is not enough information to be able to attribute to another category.**

### January 2023

23/289

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

went to collect the securing straps. When the driver returned, she was told that the trailer had come off the ball hitch and had nearly fallen off the end of the slipway.

### May 2023

23/300

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

### June 2023

23/308

The Coastguard tasked a helicopter to assist divers. (Coastguard report).

### May 2023

23/301

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

### June 2023

23/308

The Coastguard tasked a helicopter to assist divers. (Coastguard report).

### May 2023

23/063

Having returned to harbour after diving from a club RHIB, one of the divers assisted in pushing the boat trailer close to the tow vehicle. They positioned the trailer hitch over the tow ball but did not hitch it up, leaving responsibility for that to the driver. The diver went to the back of the trailer and held it in place, whilst the driver wound up the jockey wheel. The tow vehicle driver then reversed down the slip to recover the boat and as there were sufficient people to assist, the driver

### June 2023

23/050

A lifeboat was tasked to respond to a report of divers in distress. The lifeboat made best speed and on arrival on scene, together with other vessels in the area who had responded to the call, they discovered the group had just been signalling and shouting to each other. After ensuring no one was injured, the crew returned to station and reported a FAWGI. (media report).

### June 2023

23/051

A lifeboat was tasked to respond to a report that a diver may be in difficulty. The lifeboat made

best speed and on arrival on scene, commenced a search of the area and established that floating debris had been mistaken for a diver and the crew removed it to make the area safe for shipping. The crew returned to station and reported a FAWGI. (media report).

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**June 2023** **23/061**

Two qualified instructors were attending a more advanced instructor course being taught by an instructor trainer and observed by another instructor trainer. The instructor trainer was teaching one student on a wreck, observed by the second student and the observer instructor trainer. The observing instructor trainer took the opportunity to indicated to the second student some aspects of wreck orientation by signalling the direction and a signal for 'propeller' to indicate the direction to the stern and a similar signal to indicate the direction to the bow. The student misunderstood the signals and thought the instructor was asking him to return to the shotline, which was nearby, and to ascend as he was a little low on gas. The student returned to the shotline and ascended on his own. The rest of the group were unaware of this departure until a few min later, when the observing instructor indicated to the other pair that the second student was no longer with the group. The observing instructor then ascended the shotline to try to locate the second student, and on surfacing, found that he had been recovered by the boat and was safe and well.

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**June 2023** **23/314**

The Coastguard responded to a request to support medical transfer of a diver in need of medical assistance. (Coastguard report).

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**June 2023** **23/315**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

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**June 2023** **23/317**

The Coastguard responded to a call which turned

out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

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**July 2023** **23/320**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

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**July 2023** **23/119**

Three divers had planned to dive to a maximum depth of 35m and visit two underwater features at that depth following their previous aborted dive earlier in the day (see 23/118). The group entered the water and swam on the surface to a shotline marking the first feature and started their descent. The group completed their visit to both features and reached a maximum depth of 35m and then completed the rest of their dive at shallower depths. After ascending to 6m, the three started to conduct a required decompression stop and on completion, one of the divers indicated to the lead diver that they should complete an additional safety stop. The lead diver was confused, and after repeated signals, he ascended to the surface, whilst the other two divers completed their safety stops. During a debrief, the lead diver indicated that he did not understand the signals but that he did not want to hang around as he only had 20 bar gas remaining and wanted to avoid an out of gas situation.

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**July 2023** **23/323**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

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**July 2023** **23/325**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

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**July 2023** **23/326**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

**August 2023****23/327**

The Coastguard gave accident prevention advice to divers. (Coastguard report).

**August 2023****23/328**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

**August 2023****23/330**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

**August 2023****23/334**

The Coastguard gave accident prevention advice to divers. (Coastguard report).

**August 2023****23/336**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

**August 2023****23/337**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

**August 2023****23/097**

A member of the public raised the alarm at 0345 to a diver in difficulty after noticing a diver's surface marker buoy was stationary with no one in sight. The Coastguard tasked Coastguard teams to investigate, and it was established that the diver's marker buoy had been used to mark an underwater object. The Coastguard issued safety advice: "Scuba divers and snorkellers use surface marker buoys (SMBs) to indicate their position and movements to passing boats and personal watercraft users. They are not intended to be used to mark other underwater objects."

**September 2023****23/110**

A diver carried his dive bag between his car and another owned by a member of a sailing club. The

owner of the other car subsequently claimed that the diver was responsible for a scratch on the two-day old car. Agreement was reached between the two for the diver to pay the cost of repair supplied in an estimate by a bodywork company. The vehicle owner returned a week later, claiming that in order to maintain his manufacturer's warranty, it was necessary for the repair to be conducted by a manufacturer-approved workshop, and the cost was threefold higher.

**September 2023****23/341**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

**September 2023****23/345**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

**September 2023****23/348**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

**October 2023****23/358**

The Coastguard gave accident prevention advice to divers. (Coastguard report).

**December 2023****23/362**

The Coastguard gave accident prevention advice to divers. (Coastguard report).

## Overseas incidents

### Fatality

**September 2023** 23/100

A diver and her buddy went for two dives on their day off from a dive centre. The dives were uneventful and successfully completed, but shortly after surfacing from the second dive, the diver lost consciousness, was removed from the water, and given oxygen. She was taken to hospital but lapsed into a coma and placed on a ventilator overnight but passed away early the next morning.

### DCI

**June 2023** 23/275

A diver suffered a DCI following a dive to a maximum depth of 28m and received recompression treatment. (Eire).

**August 2023** 23/286

A diver suffered entanglement in a DSMB line and made an abnormal ascent. The diver subsequently displayed symptoms of DCI following a dive to a maximum depth of 19m and received recompression treatment. (Eire).

**September 2023** 23/288

A diver suffered a skin DCI following a dive to a maximum depth of 67m but did not seek medical attention. (Eire).

**September 2023** 23/285

A diver suffered a DCI following a dive to a maximum depth of 17m and received recompression treatment. (Eire).

**September 2023** 23/240

Following a dive to a maximum depth of 23m for a total of 43 min, a diver complained of shoulder pain and feeling unwell 90 min after surfacing. The dive manager contacted a diving doctor for advice, and the diver was taken to a recompression chamber and treated for suspected DCI. On

discharge, the diver stayed in the country for an extra 72 hours before flying back to UK.

**September 2023** 23/244

Following a dive to a maximum depth of 30m for a total duration of 30 min, a diver complained of stiffness in their neck and shoulder, and later a rash. The diver received a casualty assessment and a call was made to a doctor for advice. Following medical assessment, the diver was taken to a recompression chamber and underwent treatment for suspected DCI. Following a single recompression treatment, the diver remained in the country for 120 hours before flying back to UK.

**September 2023** 23/245

A diver experienced knee pain and itchy skin following a dive to 35m. He did not report this occurrence and continued to complete a second dive to 14m. Later that evening, he informed a colleague of the issues, who told him to call a doctor and the dive manager. The diver was subsequently taken to the recompression chamber and treated for suspected DCI.

**November 2023** 23/155

A diver and his buddy completed two dives in the day during a dive holiday on a liveaboard vessel, following 2 previous days diving where he had completed seven dives, all dives on the trip using nitrox 30. The first dive on day three was a no stop dive to a maximum depth of 30m for a total duration of 50 min. After a surface interval of 3 hours 50 min, a second no stop dive to a maximum depth of 25m for a total duration of 57 min. After surfacing and whilst de-kitting, the diver felt more tired than usual and decided not to undertake the planned night dive. They returned to their cabin and felt aches and very tired and had mild skin tenderness on their abdomen. Subsequently, they felt numbness in their lower arm and sought advice from the senior diver aboard. As symptoms progressed to numbness and 'pins and needles' starting in his right hand and working up to his right shoulder, the senior diver informed the dive guide and requested oxygen, which was then provided to the diver with the guide



recommending 20 min on oxygen. A blotchy rash initially appeared on the right hand side of the chest and believed to be a skin DCI. After 21 min on oxygen, some improvement was shown so the diver was taken off oxygen and given water and rehydration salts, but 7 min later the symptoms started again and so he was placed back on oxygen. After a further 20 min, improvement was again shown and so oxygen was stopped again before symptoms reoccurred 33 min later. and the cycle was repeated until the vessel returned to harbour, and the diver was evacuated ashore by RHIB and transported to a recompression chamber for a Table 5 treatment, which alleviated all symptoms. The next morning, a slight numbness was present so the diver returned to the chamber for further recompression treatment with resolution of all symptoms. Although symptoms did not return, he was given a further treatment the following day and then discharged and given the all clear to fly home two days later.

#### November 2023

23/258

A diver completed 2 dives in a day. The following morning, he reported to the dive manager that he had a pain in his left shoulder. On investigation, he reported that the pain had occurred 30 min after the second dive but did not think anything of it and attributed it to skeletal pain due to wearing unfamiliar kit. The diver was assessed on-site whilst the dive manager sought advice from a diving doctor. The diver was transferred to the local recompression chamber where they received recompression treatment. They were restricted from flying for 72 hours post-recompression treatment.

### Boat/Surface

#### April 2023

23/073

On the fourth day of a week's technical exploration dive trip searching for new shipwrecks in the area, the dive boat started to take on significant water from the stern whilst divers were preparing to dive. Crew took immediate action to bail, de-kit divers who were preparing to dive and commenced transit to shore. During transit, the water level kept increasing so a 'Mayday'

call was issued. When no response as received, a secondary emergency response plan was initiated by phoning an onshore dive manager. The team then identified a bilge pump failure and that the bilge was full of water and fuel. Members of the team entered the water to remove the bung then, after recovery from the water, motored to allow the bilge to gradually drain. The 'Mayday' was downgraded to 'Pan Pan' but still no response received via radio. The vessel returned safely to mooring where the bung was refitted. An examination conducted post-incident identified that the breather tube for the fuel tank on the new vessel was incorrectly installed (tubed to the bottom of fuel tank like a fuel offtake hose rather than breathing from the top of the tank). This led to fuel getting pushed into the bilge which caused the bilge pump to fail. Water level in the bilge then gradually built up over a period of months until the drain ports went underwater.

#### April 2023

23/272

A dive boat suffered engine failure and a lifeboat was tasked to assist. (Eire).

#### May 2023

23/040

A group of divers were aboard a charter vessel which left harbour early in the morning to travel to a wreck. The weather was calm but there were fog banks out at sea. At about 0630, one of the group was on deck looking at the boat's wake when he noted the skipper had turned through ninety degrees to starboard. Shortly after, the boat came to a sudden stop. There was shouting from the crew and full astern was engaged, but the boat was stuck fast on a reef and would not move. Lifejackets were issued but there were insufficient for the passengers and none for the crew. After about 90 min, another vessel arrived and attempted to pull the boat off the reef but after a number of failed attempts with a risk of the tow ropes parting, the vessel left. The tide was falling and it was felt the boat was rocking, and then it suddenly shifted to starboard with a 10 degree list. Two further boats arrived, and the passengers swam across to them. They arrived back in port late in the morning.

## June 2023

23/279

A dive boat suffered engine failure and a lifeboat was tasked to assist. (Eire).

## August 2023

23/283

A dive boat suffered engine failure. (Eire).

## October 2023

23/169

Two divers were part of a group on a liveboard dive boat. The group were briefed for a morning dive drifting along a reef wall back towards the moored boat after being dropped off by RHIBs. The briefing included advice on navigation and to deploy DSMBs if surfacing early and wait to be picked up by RHIB. The two divers formed a buddy pair but shortly after reaching an area of bleached coral, they were both low on gas. One deployed a DSMB and they ascended, completing a safety stop for 3 min. The surfaced away from the reef edge, and the current was drifting them away from the location of the moored boat. They had not been spotted despite their DSMB having been on the surface prior to their ascent. Meanwhile the other divers had been returning to the moored boat, and once all had been recovered, it was noticed that the two divers were missing and had not been seen on the surface. One of the two RHIBs was used to search for the divers, initially close to the boat and the reef before the search progressively widened. The search was hampered due to the glare from the low morning sun across the water. Shortly after, the second RHIB took two of the dive guides who had not been in the water and deployed them to search underwater in the area where the dive had taken place. The divers were eventually located and recovered by one of the RHIBs and returned to the liveboard safe and well, if not a little concerned by the experience.

## Ascents

### January 2023

23/003

A diver and his two buddies commenced a dive down a steep kelpy rock face, which dropped between 25-30m on an exposed and tidal site. The diver had recently had his equipment serviced, although one of his regulators could not be fully

serviced due to no service kit being available. The diver was using a twin-set of 2 twin 12ltr cylinders and a new wetsuit and had not conducted a weight check prior to the dive. The combination of the twin-set and the lighter wetsuit meant that the diver was significantly overweighted. As a result, the diver was very uncomfortable during the dive, constantly having to adjust his buoyancy with his BCD. Towards the end of the dive, when conducting a safety stop, the diver was too buoyant and did not dump air quickly enough and surfaced. The diver took the decision to descend to complete his safety stop but had become separated from his buddies and so deployed a DSMB. When he subsequently surfaced, he found he had drifted around the island in the current and so could not see the RHIB, which was anchored. One of the other divers in the group who had de-kitted but was still in the water had swum around the island looking for him and assisted him back to the boat as he was becoming tired and feeling a bit distressed. On recovery aboard the boat, the diver was placed on oxygen and monitored. It was subsequently established that the diver was around 12 kg overweighted. (linked to incident 23/085 and 23/091).

### May 2023

23/032

A diver was part of a group of divers being escorted by two divemasters on a dive to 40m with no planned decompression stops. Having descended to a maximum depth, the diver was making his way back up and his two computers both indicated he was within his no stop times, when one of the divemasters grabbed him from behind and pulled him upwards. This resulted in the diver rising too quickly over 4m, causing one of his computers to alarm and triggering a decompression penalty on this computer. The diver had to struggle to get the divemaster to release him and he sank slightly, further increasing the decompression penalty. The diver ascended and completed deep stops at 22m and 12m, whilst the rest of the group were conducting safety stops around 6m. The other divemaster, who had not witnessed their colleague's actions, signalled the diver to ascend but he refused, signalling he had stops to complete, which the divemaster acknowledged and continued to

monitor the diver. The diver completed 4 min of decompression stops at 6m and a further safety stop at 3m for 1 min before surfacing safely.

## May 2023

23/047

Two divers had completed a dive the previous day to a maximum depth of 18m, with a total duration of 40 min. The following day after a surface interval of 23.5 hrs, the pair formed part of a group of two pairs led by a guide to dive a submarine, which was a protected site. No touching of the wreck was allowed and divers must stay 2m away in order to ensure not to stir up the silt. The group descended a shotline to 27m where a line was attached leading to the wreck and a strobe light was attached at this point. The pair followed the guide along the line and then forward to the bow of the wreck, keeping the wreck on their right, and then completed a full circuit of the wreck, reaching a maximum depth of 30m. On the return to the line the pair checked their computers and found they had 4 min of no decompression time remaining. One diver had 100 bar and his buddy 110 bar remaining and so they agreed to ascend. They were at the conning tower which was close to the line and the guide continued the dive with the other 2 divers. The divers started to follow the line to the shot and met a second group with another guide who were following the line to the wreck. One of these divers got to the wreck and finned away hard, which stirred up the silt and reduced visibility to zero and the divers became separated. The buddy ascended about 2m to rise above the silt cloud but could not see his buddy and spotting the strobe, swam towards the shotline. He waited there for his buddy, waving his torch. He was joined by the guide and signalled he had lost his buddy and both waited, looking for torch lights. After a short time, the guide indicated to ascend and that she would search the wreck. The buddy then ascended the shotline, completing stops at 12m and 6m. On surfacing, the buddy noticed the other pair were on the surface, having lost the wreck and ascended on a DSMB. The diver was also on the surface and on recovery aboard the boat, explained that he made a rapid ascent to the surface having run out of gas. The diver was put on oxygen for the

two hour journey back to port but displayed no signs or symptoms. Subsequent download of the diver's computer showed a dive profile showing an initial ascent from 27m to 5m, followed by an immediate redescent to 12m and then a direct ascent to the surface. The diver realised he had missed his safety stop and so descended again to 13m and then saw-toothed between 13m and 5m over 3 min. He then descended rapidly to 24m and a further rapid ascent to 6m, and then a slower descent back down to 24m. At that point, the diver found it difficult to breathe and knew at that point his cylinder was empty and he made a rapid ascent direct to the surface.

## June 2023

23/274

A diver had been on a dive to a maximum depth of 25m when they suffered a rapid ascent but experienced no ill effects. (Eire).

## July 2023

23/071

Two divers were diving a wreck and had been to a maximum depth of 22m. About 16 min into the dive at a depth of 15m, one of the divers deployed her DSMB. As it deployed, the reel snagged and the diver let it go and the reel dropped a little. The diver thought she could reach it, and she put her hand up to reach it but had ascended sufficiently to throw off her buoyancy, so she could not dump excess air quickly enough. The diver made a rapid ascent direct to the surface from 15m in about 35 sec. Her buddy had seen his buddy going to the surface quickly and thought it was related to the DSMB she had just deployed. He thought she would come back down so waited but she did not return. He spun around looking for her and ascended quickly to 12m to see if he could see her, but he could not and decided to ascend. The buddy ascended to 6m and started to conduct a safety stop but had difficulty maintaining his depth due to the current. His buoyancy at one point dropped below 6m and so restarted his safety stop of 3 min once back at 6m. He got control of his buoyancy, completed his stop and surfaced to find his buddy back on the boat and on oxygen. The diver had been spotted surfacing by the dive manager, who instructed the cox'n to come alongside her. The diver was recovered aboard, and after checking she was OK

and establishing the sequence of events, she was placed her on oxygen as a precaution.

### September 2023

23/239

A diver lost buoyancy control whilst completing an AS horizontal swim and made an uncontrolled ascent to the surface.

### September 2023

23/241

A diver was at 16m on a dive when they lost an integrated weight pouch, which caused a rapid increase in buoyancy, resulting in the start of an uncontrolled ascent. The instructor was able to intervene and arrest the ascent. The weight pouch was found to have been overloaded and was adjusted for subsequent dives.

## Technique

### January 2023

23/085

A diver and her two buddies commenced a dive down a steep kelpy rock face which dropped between 25-30m on an exposed and tidal site. The third diver was new to the club and appeared to have a lot of equipment but it was assumed he was suitably experienced. The group descended, initially experiencing quite a current but they quickly swam around the edge of the rock face into quieter water and the group explored the area in good visibility. The diver saw a moray eel that had a hook, large lure and a large weight anchoring it to the bottom and the diver cut the line at the weight and the fish swam away a short distance but the lure was attracting other large fish. The diver checked the other divers to see if they had scissors to cut the line free but none had any, so she ended up cutting and pulling the lure off. The diver had become a little stressed by this and had used more air than usual and so signalled to turn around and start heading back to the boat, which was anchored. As they ascended, the third diver appeared to be uncomfortable and was crawling up the rocks. The diver deployed a DSMB; she had 80 bar remaining and 3 min of required decompression stops and the water was a little surgy. Part way through the stops, the third diver lost control of his buoyancy and surfaced and then sank back down to the bottom

at 15m on his back. He was assisted by the others to regain himself, and he then deployed his own DSMB and, at that point, started to drift away. The diver and her remaining buddy surfaced with the diver finding she had only 20 bar remaining in her cylinder, and she was concerned about the missing third diver. The diver shouted to the boat, alerting them to the missing diver, and then shouted to her buddy to check she was OK, but the buddy did not respond and continued swimming towards the boat. The boat sent another diver around the corner to look for the missing diver. The diver got aboard the boat and was about to pull the anchor when she heard a commotion around her other buddy, who was finding it very hard to breathe. Another member of the group entered the water to help her de-kit and she was recovered aboard and reassured and she eventually calmed down and climbed aboard. The third diver was located and assisted back to the boat. (linked to incident 23/003 and 23/091).

### August 2023

23/124

A recently qualified diver was on a diving holiday with her club. On the third dive of the trip, she was buddied with a dive leader for a shore dive to a wreck. The diver was not qualified to conduct 'no clear surface' dives and had no training in wreck penetration. During the dive on the wreck, the dive leader entered the wreck and, although there had been no briefing that the wreck would be penetrated, the diver felt obliged to stay with her buddy even though she was uncomfortable going inside the wreck. As the dive leader led the diver down to a lower deck, the diver became entangled in a ladder. She remained calm and was trying to work out how to untangle herself. The dive leader, realising the diver was no longer behind him, retraced his route and, on finding the diver entangled, helped release her. The pair then made their way back out of the wreck. The diver did not dive with the dive leader again during the trip.

### October 2023

23/247

Two divers entered the water via a backward roll from a dive boat. The first almost lost their weightbelt on entering the water but managed to retain it, adjust and tighten the fit. The second

diver lost their weightbelt on entering the water. The lost weightbelt was subsequently recovered by other divers.

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**October 2023** **23/248**

During entry from a RHIB, one diver landed on top of their buddy as they both did not deploy as briefed by the cox'n. The second diver had paused before rolling back, resulting in him landing on top of their buddy. Fortunately, no injury was sustained, and the cox'n repeated the briefing to avoid further occurrences.

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**October 2023** **23/137**

A diver on the third day of a diving holiday was on his 9th dive of the trip at a depth of 30m when he noticed his cylinder had 70 bar remaining. He signalled this to his buddy and started to ascend. When the diver reached 30 bar remaining, his buddy provided their AS, and the diver's computer indicated he required 30 min of decompression stops. The dive guide surfaced to inform the skipper and request an additional cylinder of air for the diver to complete his decompression stops. It was then noticed that the diver's computer had stopped counting down with 17 min still to go so the guide and the skipper agreed that they would wait until the original 30 min had elapsed and then terminate the dive regardless. The diver and his buddy completed the 30 min deco and surfaced without requiring the spare air cylinder, and no adverse effects were experienced. Subsequent inspection of the computer seemed to indicate that the diver had missed previous ascent warnings and had likely required a previous stop for 9 min.

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**October 2023** **23/253**

Two divers conducted a wreck dive to a maximum depth of 42m and exceeded the maximum authorised depth of 40m whilst on the expedition. The dive manager reminded all expedition members of depth limit and the risks of narcosis.

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**November 2023** **23/259**

A diver experienced difficulty breathing from his regulator at 35m on his descent and indicated

to his buddy 'out of gas'. The buddy responded, and they commenced an AS ascent up to 16m, where he switched from what he believed to be his primary regulator to his pony, aborted the dive and ascended. On the surface, the diver's pony cylinder read 0 bar and his main cylinder read 190 bar. Neither diver suffered any ill effects.

## **Equipment**

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**February 2023** **23/174**

During equipment assembly and checks, a BCD was found to have frayed stitching and separation on the seam of the jacket outer covering and was removed from use.

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**February 2023** **23/175**

A dive computer showed an error code during buddy check and the computer was replaced and returned to stores for repair.

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**March 2023** **23/177**

Multiple minor kit failures were identified during pre-dive checks and equipment assembly, including fin straps, mask straps, compass and mouthpieces. All were identified as unfit for purpose and replaced.

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**March 2023** **23/178**

During a buddy check, a computer low battery warning noticed. The computer isolated and not used for remaining dive operations.

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**March 2023** **23/179**

During buddy checks, the shoulder dump valve toggle was pulled off its cord and was repaired on-site.

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**March 2023** **23/011**

Two students and an instructor were undertaking a training dive at an inland dive site where the water temperature was 7 deg C. At a depth of 11m, a student was practising regulator retrieval when his regulator started to free flow. Unable to stop the free flow, the diver switched to his own AS and made a controlled ascent direct to the

surface accompanied by the other student and the instructor, omitting any safety stops.

**April 2023**

**23/141**

Three divers were on a dive to a maximum depth of 31m. On a wall at a depth of 18m, one diver approached her buddy with her finger in the end of the hose for her BCD mouthpiece hose, with the mouthpiece completely detached and missing. The buddy was shown air escaping, so placed her own finger in the hose to stop it. The diver was in a wetsuit and had no other means of buoyancy. The pair made a slow ascent to a ledge at about 7m so that they could carry out the decompression stops they had already accumulated. The third diver was on a rebreather and had a camera and had been engrossed in taking a photograph in a crack in the wall. The buddy ensured she had her fins overhanging the ledge so that he could spot them, and he subsequently rejoined them. Whilst on the ledge, attempts were made to get air into the jacket, but it immediately escaped again. Once the group had cleared their decompression stops, they made their way along the reef to their exit point underwater which was a long fin and required working hard against a slight current. The buddy used her buoyancy to support the diver with the faulty BCD. On surfacing, the two open circuit divers had to pause to get their breath back before explaining to others what had happened and de-kit. Examination of the BCD subsequently found it was full of water, preventing it from being properly inflated.

**April 2023**

**23/024**

A diver was preparing his equipment prior to loading onto a vehicle to travel out for a day's diving. He noticed that the cord operating the shoulder dump valve for his BCD was significantly frayed. The cord had worn against the steel grommet and had almost worn through. The equipment was from a loan pool and had been serviced six months earlier.

**April 2023**

**23/181**

During operation, a compressor charging whip connection failed, but the retaining lanyards

prevented the complete detachment of the hose. The compressor panel was isolated and it was found that the hose threads were worn.

**May 2023**

**23/182**

During pre-dive equipment function checks, a BCD self-inflated due to the nut connecting the hose to the BCD being cross-threaded. The BCD was isolated and returned to stores for rectification.

**May 2023**

**23/183**

During the post-dive washdown following a dive, a diver submerged the entire regulator unit in freshwater without it being attached to a cylinder under pressure. To compound the problem, the regulator's dust cap was not fitted, and subsequent flooding of the regulator first stage took place. The regulator was taken out of service for the rest of the expedition, and the diver re-educated on the equipment care process to follow.

**May 2023**

**23/184**

A dive computer was found to have low battery warning during buddy checks. Computer was replaced and removed from use.

**May 2023**

**23/185**

During a safety stop at 6m following a dive to a maximum depth of 20m, the front valve cover on a diver's AS regulator demand valve fell off, although it was not in use at the time. The dive was concluded safely. Subsequent detailed checks on all loan pool equipment identified an additional four regulators with problems, which were all either rectified by a service technician or removed from service.

**May 2023**

**23/186**

A BCD self-inflated during equipment build and function check. On inspection, the BCD hose connection nut was found to be loose and was repaired on-site.

**May 2023**

**23/057**

A diver and his buddy were diving a wreck, both

using nitrox 32, and the diver was using twin cylinders. The pair had completed the first dive to a maximum depth of 25m and a total duration of 45 min, including a safety stop of 3 min at 6m. After a surface interval of 188 min, the pair entered the water and descended to the wreck and reached a maximum depth of 30m. During the dive, at a depth of 25m, the regulator from his left-hand cylinder felt 'tight' on one breath and then on the next breath, failed to supply any gas. The diver switched to his right-hand cylinder regulator and then performed a shut down and start up procedure with his left-hand cylinder. He verified that the cylinder had remaining contents and was working correctly by inflating and immediately deflating his BCD, which was connected to the left-hand cylinder but the second stage regulator would not supply gas. The diver and his buddy decided to navigate back to the shotline as surface traffic of multiple liveboards made it inadvisable to ascend directly. The pair surfaced with a total dive time of 52 min, including a safety stop of 3 min at 6m. Back aboard the boat, a visual examination of the regulator did not identify any reason for the failure. The regulator was approximately 21 years old but had been regularly serviced, most recently two months previous. The diver used a spare regulator for the remainder of the trip.

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**May 2023** **23/190**

Following a dive, a diver was found to have bitten through their regulator mouthpiece bite blocks. The mouthpiece was replaced and the diver educated on the correct use of a regulator.

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**May 2023** **23/191**

A free flowing AS was identified during a buddy check. The item was exchanged by Centre staff and serviced before being brought back into use.

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**May 2023** **23/192**

A BCD self-inflated during equipment build and function check. On inspection, the BCD hose connection nut was found to be loose and was repaired on-site.

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**July 2023** **23/198**

The frayed outer covering of a BCD's shoulder area was identified in a post-dive cleaning, which was not noted during the buddy check. The BCD was isolated and removed from service.

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**July 2023** **23/200**

During kit up, a diver's fin strap snapped and was replaced on-site.

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**July 2023** **23/201**

During kit up, a diver's fin strap snapped and was replaced on-site.

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**July 2023** **23/202**

A BCD self-inflated during equipment build and function check. On inspection, the BCD hose connection nut was found to be loose and was repaired on-site.

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**July 2023** **23/204**

During kit up, a diver's fin strap snapped and was replaced on-site.

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**July 2023** **23/205**

During kit up, a diver's fin strap snapped and was replaced on-site.

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**July 2023** **23/206**

During kit up, a diver's fin strap snapped and was replaced on-site.

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**July 2023** **23/208**

A BCD shoulder dump valve string snapped during a buddy check and was repaired on-site.

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**July 2023** **23/209**

A BCD shoulder dump valve string snapped during a buddy check and was repaired on-site.

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**July 2023** **23/210**

During kit up, a diver's fin strap snapped and was replaced on-site.

**July 2023** **23/211**  
A wetsuit boot zip failed during donning and was replaced.

**July 2023** **23/216**  
BCD stitching of outer covering failed during the dive. Isolated and removed from service.

**July 2023** **23/217**  
A BCD shoulder dump valve string snapped in buddy check and was repaired on-site.

**July 2023** **23/218**  
During kit up, a diver's fin strap snapped and was replaced on-site.

**July 2023** **23/219**  
During kit up, a diver's fin strap snapped and was replaced on-site.

**July 2023** **23/220**  
During kit up, a diver's fin strap snapped and was replaced on-site.

**July 2023** **23/221**  
A regulator mouthpiece detached during cleaning post-diving. The cable tie was found to have failed and the cable tie was replaced and regulator function checked.

**July 2023** **23/222**  
During a dive, a diver found that the regulator mouthpiece bite blocks had failed. After surfacing and reporting the problem to the dive manager, the mouthpiece was replaced.

**July 2023** **23/223**  
A BCD outer cover was found to be torn in numerous locations due to age. The BCD was isolated and removed from service.

**July 2023** **23/224**  
A diver's mask strap failed whilst they were donning the mask. The mask was removed from

service and replaced with another from pool supply.

**July 2023** **23/225**  
A diver's mask strap failed whilst they were donning the mask. The mask was removed from service and replaced with another from pool supply.

**July 2023** **23/226**  
A BCD outer covering failed during the dive and was noticed when changing cylinders for the second dive. The BCD was isolated and removed from service.

**July 2023** **23/227**  
A BCD outer covering failed during the dive and was noticed when changing cylinders for the second dive. BCD was isolated and removed from service.

**July 2023** **23/228**  
A BCD outer covering failed during the dive and was noticed when changing cylinders for the second dive. BCD was isolated and removed from service.

**July 2023** **23/229**  
Two dive computers went into error prior to diving. They were taken out of service and returned to a loan pool for investigation and repair or replacement.

**July 2023** **23/230**  
During function checks prior to diving, two BCDs were found to be self-inflating. The BCD hose connection nuts were found to be loose and so BCDs were changed and the faulty BCDs returned for maintenance.

**August 2023** **23/282**  
A diver experienced a regulator failure on a dive to a maximum depth of 31m and conducted an AS ascent. The diver was placed on oxygen as a precaution. (Eire).



## September 2023

23/242

A BCD convoluted inflation hose came detached from its shoulder mounting. The cable tie may have failed, either due to age or the hose being pulled too hard. The BCD was repaired and returned to service.

## October 2023

23/129

Three divers completed the first dive of the day to a maximum depth of 18m with a total dive duration of 52 min, including a safety stop of 3 min at 5m. After a surface interval of 248 min, the group started a second dive from a boat to a maximum depth of 18m. Sometime into the dive, the group were exiting a short tunnel formation when a diver's regulator hose became disconnected following a loud bang and fell to the seabed. The diver had their back towards the other two divers and was waving his hands on his side. The other two divers were within 5m of the diver and the more experienced one swam to the diver within a few seconds, closed the cylinder valve and offered the diver their AS. The diver described having bought the hose and regulator as new, and having been surprised after the purchase that the metal part of the hose that connects to the cylinder had appeared used. The hose had been making a hissing sound for about 5 min before the diver entered the water during pre-dive check. Having provided an AS, the dive continued for some min after the incident as the group swam back towards the boat, including a safety stop at 5m for 3 min during ascent, and the group surfaced after a total of 45 min.

## October 2023

23/250

A diver noticed that their BCD outer cover had a small amount of wear and tear during kit up. A replacement was not available at the location and the damage was not deemed critical and so was used until the end of the expedition, whilst monitoring for any further deterioration. The BCD was returned to an equipment pool and tagged for replacement/repair prior to the next expedition.

## Injury

### January 2023

23/091

A diver and her two buddies commenced a dive down a steep kelpy rock face which dropped between 25-30m on an exposed and tidal site. The group descended, initially experiencing quite a current, but they quickly swam around the edge of the rock face into quieter water and the group explored the area in good visibility. The lead diver encountered a moray eel with a lure and weight snagging it to the bottom and spent some time removing the weight and lure, subsequently contributing to her running low on gas. The third diver had additional problems and became separated from the group during the ascent. On surfacing, the diver swam quickly and determinedly towards the boat and, although the distance was long, the current was with her. The dive manager was surprised at how out of breath she was, and another member of the group had to enter the water to help her de-kit and reassure her until she eventually calmed down and climbed aboard. This was only the second dive the diver had carried out since recovering from long Covid. (linked to incidents 23/003 and 23/085).

### February 2023

23/172

A diver suffered a laceration to their left index finger on discarded rubbish on the seabed. The diver had dived to a maximum depth of 11m for a total duration of 36 min.

### February 2023

23/173

A diver complained of headache, lethargy, and nausea several hours after diving. A neuro examination was undertaken, and the diver placed on oxygen. A doctor was contacted and advised transfer to a recompression chamber for assessment. The diver was detained in hospital overnight and given IV fluids, and discharged the next day.

### February 2023

23/006

A diver suffered a minor transient ischaemic attack (TIA) within 24 hours of his last dive and was attended to by a retired doctor who was

on the same dive trip, who determined that the symptoms were more likely related to a TIA than DCI. The doctor advised the diver to take aspirin and refrain from diving for the rest of the trip. After two days, the diver agreed to attend a hospital for medical attention before flying home. Whilst waiting for transport to the hospital, the diver suffered a further TIA, observed by the retired doctor who was accompanying him to hospital. At hospital, the diver underwent scans (MRI, CT and Doppler) but doctors found nothing to prevent his return to UK the next day. Back in the UK, the diver planned to seek further medical advice with the reports from the investigations in hospital.

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**March 2023** **23/176**

A diver was hit in the face with a heavy DSMB reel that was attached to a D ring on their BCD when conducting a backwards roll off a dive boat.

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**April 2023** **23/180**

Following diving, a diver complained of pain in their left arm. A neuro examination was conducted and no other signs and symptoms were evident. A doctor was called for advice and no further action was required as the pain was attributed to an existing injury. The diver returned to diving the next day.

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**May 2023** **23/187**

A diver suffered eye barotrauma due to failure to equalise mask pressure during descent.

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**May 2023** **23/188**

A diver was unable to clear their ears during a descent at a depth of 5m and aborted the dive. The diver also had a problem with blocked sinuses and was unable to continue diving in the short term.

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**May 2023** **23/189**

A diver under training had difficulty clearing their ears at 3m; they ascended to 1.5m but still could not clear. The diver surfaced and was still unable to clear their ears fully and was withdrawn from the diving course.

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**May 2023** **23/273**

A diver tripped and was taken to hospital by ambulance for treatment and was admitted. (Eire).

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**June 2023** **23/060**

A diver was preparing for a shore dive on a wreck when he tripped and fell in full diving equipment, including a twin-set. The diver was taken to hospital where an x-ray revealed he had broken his arm in two places.

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**June 2023** **23/194**

Following a training dive, a diver complained of shoulder pain and reported to the instructor and was referred onwards to medical care. On examination, DCI was discounted and diver returned to normal duties.

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**June 2023** **23/067**

A diver had completed two dives the preceding day, the first to a maximum depth of 24m for a total duration of 20 min and after a surface interval of 60 min, a dive to a maximum depth of 15m for a total duration of 60 min, including a safety stop at 6m for 3 min. The following day, the diver descended as part of a group of six, including a dive guide to a maximum depth of 24m on a wall. Sometime into the dive and at a depth of 22m, the diver's regulator malfunctioned and was giving her water instead of air. The diver started to ascend, trying to cough out the water, but the more she coughed, the more water the regulator gave her. The diver indicated to her buddy that she was out of gas and was ascending and ascended slowly until she reached 9m. She could see the reef above her but knew she was drowning and starting to lose consciousness so kicked for the surface. On arrival inflated her BCD and spat her regulator out, raised her arms and was coughing uncontrollably. The dive boat inflatable located the diver and recovered her aboard after removing her equipment. Once aboard, the diver kept retching to try to bring up as much water as possible whilst she was being returned to the dive boat, where she was placed on oxygen. The diver continued to retch and cough for three hours before a decision

was made to return to harbour and transfer the diver to hospital. On arrival the diver was given a CT scan which showed fluid in her lungs and she was transferred to ICU for treatment of near drowning. The diver received treatment in hospital for 4 days before being released in order to fly home. The day after returning home, the diver began feeling very unwell and was taken by ambulance to A&E and treated for Legionnaires/ bacterial pneumonia. She was released home after 5 days treatment to continue taking medication and to convalesce at home.

**June 2023** **23/196**

A diver banged their head on their cylinder when conducting a backwards roll off a dive boat. No further medical treatment needed.

**June 2023** **23/276**

A diver was treated for hypothermia following a dive to a maximum of 25m. (Eire).

**July 2023** **23/203**

Following diving, a diver was unable to clear his ear. The diver sought advice and medication from the local pharmacy and continued to dive. On return to UK, the ear problem returned and after medical advice was given ear drops.

**July 2023** **23/207**

Post-dive, a diver reported feeling unwell and sought medical advice. After an X-ray and ECG, it was pronounced that the episode was not any illness or injury and was attributed to anxiety.

**July 2023** **23/212**

A diver felt pain in their ear when descending on a dive. They aborted the dive and returned to surface where the ear cleared and so they continued the dive. Post-dive the ear was still sore and so medication and advice was given at the local pharmacy. On return to the UK, the diver reported to A&E with ear pain after the ear began bleeding due to inflammation of the ear; diagnosis of ear damage was not possible. A further ENT appointment undertaken.

**July 2023** **23/213**

A diver had difficulty with equalisation at the 6m safety stop on the ascent phase of the dive to a maximum of 16m. On surfacing, the ears still felt 'muffled' so the diver attended a pharmacy for decongestants as diver had a mucus build up in sinuses.

**July 2023** **23/214**

A diver noticed bloodshot eye post-diving. A doctor was contacted for advice and diagnosed barotrauma due to mask squeeze and, following advice, the diver continued to dive the next day.

**July 2023** **23/231**

A diver suffered acute labyrinthitis post-diving. The diver did not immediately seek medical advice, and whilst consulting a doctor sometime later, it was not possible to directly attribute the symptoms to diving activity or another cause.

**August 2023** **23/106**

A diver had completed two dives on holiday without incident. The first to a maximum depth of 17m for a total duration of 60 min, including a safety stop of 5 min at 5m and after a surface interval of 144 min, a second dive to a maximum depth of 20m for a total duration of 56 min, including a safety stop of 5 min at 5m. Shortly after surfacing and back aboard the dive boat, the diver experienced a short seizure of about 30 sec duration. The diver was placed on oxygen until the 'D' sized cylinder was exhausted. During that time, the diver was given four neurological assessments with no abnormal symptoms present. The diver had no previous medical history of seizures and her breathing gas was analysed for contaminants but none were found. A diver helpline was contacted for advice and the diver was taken to hospital for assessment but was discharged with an emergency plan for any further seizures. The diver did not dive again during the trip and agreed to undergo further neurological examination with her GP on return home.

**August 2023** **23/236**

A diver slipped on rocks whilst kitted up and

entering the water, causing pain and bruising to their right hand. Diver received on-site first aid and had a medical appointment check up on return to UK.

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**September 2023** **23/284**

A diver suffered from hypercapnia on a dive to a maximum depth of 32m and was given oxygen. (Eire).

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**September 2023** **23/237**

A diver sustained a 2cm laceration to their left hand following a stumble aboard a RHIB and their hand contacting the jubilee clip used on the pony clamp on a diving set. The diver was treated on-site and was able to continue diving.

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**September 2023** **23/243**

After a series of 3 dives, a diver complained of tingling in his left chest which started during the third dive, which was to a maximum depth of 10m for a total duration of 58 min. The diver received a casualty assessment and a call was made to a doctor for advice. After reviewing all the information provided, the doctor advised the group to monitor the diver and complete a second casualty assessment the following morning, if no other symptoms present, the diver was cleared to continue diving. No further issues were experienced, and the diver continued diving during the expedition.

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**October 2023** **23/249**

A diver cut their left hand when grabbing hold of a wreck.

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**October 2023** **23/251**

A diver indicated a headache at the 6m stop on the ascent from the dive to 35m for a total duration of 20 min. On surfacing, the diver reported they did not feel well and had a headache. A recompression chamber was called, and the diver was transferred to the chamber for assessment.

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**October 2023** **23/254**

A diver was tying off the boat with the rope around their hand when the vessel was driven off, causing the diver's hand to be pulled into the cleat, causing dislocation of finger.

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**November 2023** **23/147**

A diver on a diving holiday had completed a dive the previous afternoon to a maximum depth of 25m for a total duration of 80 min. The following morning, after a surface interval of 17 hours 33 min, she completed a dive to a maximum depth of 33m for a total dive time of 60 min, including a safety stop at 6m for 3 min. After a surface interval of 140 min, she completed a drift dive to a maximum depth of 23m for a total dive time of 68 min. Four hours after surfacing, the diver developed a skin rash and was placed on oxygen and the rash disappeared after a period on oxygen.

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**November 2023** **23/260**

A diver reported to the dive manager that he had a severe headache at the morning dive briefing. As this followed an incident the previous day, the dive manager sought additional medical advice but the diver did not require recompression treatment.

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**December 2023** **23/164**

Following the final dive of dive trip, a diver had completed washing his kit and went to hang up his semi-drysuit to dry over a hanger rail. He slipped and fell down three or four steps and grazed his right arm, sprained his right wrist, bruised his right hip and banged his left shin. The bang to his right arm left him in considerable pain for some time. The diver was treated aboard the boat by a paramedic, who was part of his group, applying a dressing to the graze with antiseptic cream, anti-inflammatory cream on his wrist, and the diver took ibuprofen for the pain. At the time of the fall, the crew were washing the deck with detergent and hosing it down, making the deck slippery with running water.

## Miscellaneous

**June 2023**

**23/280**

A diver slipped but did not suffer any significant injury. (Eire).

**June 2023**

**23/195**

A diver lent over the side of a boat to tie off the vessel and overreached, resulting in a fall into the sea. The diver was recovered and their lifejacket repacked and returned to service.

**September 2023**

**23/357**

The Coastguard responded to a call which turned out to be a False Alert with Good Intent - FAGI. (Coastguard Report).

## History of previous UK diving fatalities

Year	Membership	BSAC	Non-BSAC
1965	6,813	3	-
1966	7,979	1	4
1967	8,350	1	6
1968	9,241	2	1
1969	11,299	2	8
1970	13,721	4	4
1971	14,898	0	4
1972	17,041	10	31
1973	19,332	9	20
1974	22,150	3	11
1975	23,204	2	-
1976	25,310	4	-
1977	25,342	3	-
1978	27,510	8	4
1979	30,579	5	8
1980	24,900	6	7
1981	27,834	5	7
1982	29,590	6	3
1983	32,177	7	2
1984	32,950	8	5
1985	34,861	8	6
1986	34,210	6	9
1987	34,500	6	2
1988	32,960	10	6
1989	34,422	4	8
1990	36,434	3	6
1991	43,475	8	9
1992	45,626	9	8
1993	50,722	3	6
1994	50,505	6	6

Year	Membership	BSAC	Non-BSAC
1995	52,364	9	9
1996	48,920	7	9
1997	48,412	4	12
1998	46,712	5	14
1999	46,682	9	8*
2000	41,692	7	10
2001	41,272	10	14
2002	39,960	3	7
2003	38,340	6	9
2004	37,153	4	18
2005	37,185	5	11
2006	35,422	4	11
2007	34,857	8	5
2008	34,325	6	5
2009	32,790	8	9
2010	32,229	7	7
2011	30,909	5	7
2012	29,632	9	7
2013	28,728	5	9
2014	28,375	5	11
2015	27,803	3	5
2016	27,346	5	7
2017	26,774	2	13
2018	26,717	8	9
2019	27,000	10	3
2020	21,594	2	4
2021	22,047	8	8
2022	22,540	0	6
2023	23,447	4	5

*\*1999 figure corrected from 9 to 8 due to a double count discovered in 2010.*

*1998 figures onwards are calendar year figures; 1965 to 1998 are October 1st to September 30th figures.*

## List of abbreviations used in this and previous incident reports

<b>AIS</b> .....	Automatic identification system (location beacon)	<b>HUD</b> .....	Head up display
<b>AS</b> .....	Alternative source (gas or air)	<b>ILB</b> .....	Inshore lifeboat
<b>A&amp;E</b> .....	Accident and emergency department	<b>INM</b> .....	Institute of Naval Medicine
<b>AED</b> .....	Automated external defibrillator	<b>IPO</b> .....	Immersion pulmonary oedema
<b>ARCC(K)</b> .....	Aeronautical rescue coordination centre (Kinloss)	<b>IV</b> .....	Intravenous
<b>ARI</b> .....	Aberdeen Royal Infirmary (Scotland, UK)	<b>kg</b> .....	Kilogramme
<b>AWLB</b> .....	All weather lifeboat	<b>LB</b> .....	Lifeboat
<b>BCD</b> .....	Buoyancy compensation device	<b>MCA</b> .....	Maritime & Coastguard Agency
<b>BOV</b> .....	Bailout valve	<b>m</b> .....	Metre
<b>CAGE</b> .....	Cerebral arterial gas embolism	<b>min</b> .....	Minute(s)
<b>CG</b> .....	Coastguard	<b>MOD</b> .....	Maximum operating depth
<b>CCR</b> .....	Closed circuit rebreather	<b>MOP</b> .....	Member of the public
<b>CNS</b> .....	Central nervous system	<b>MRCC</b> .....	Maritime rescue coordination centre
<b>CPR</b> .....	Cardiopulmonary resuscitation	<b>MRSC</b> .....	Maritime rescue sub centre
<b>CRT</b> .....	Coastguard rescue team	<b>MV</b> .....	Motor vessel
<b>DCI</b> .....	Decompression illness	<b>NCI</b> .....	National Coastwatch Institute
<b>DDMO</b> .....	Duty diving medical officer	<b>PFO</b> .....	Patent foramen ovale
<b>DDRC</b> .....	Diving Diseases Research Centre (Plymouth, UK)	<b>PLB</b> .....	Personal locator beacon
<b>DSC</b> .....	Digital selective calling (emergency radio signal)	<b>POB</b> .....	Persons on board
<b>DSMB</b> .....	Delayed surface marker buoy	<b>QAH</b> .....	Queen Alexandra Hospital (Portsmouth, UK)
<b>DPV</b> .....	Diver propulsion vehicle	<b>QAB</b> .....	Queen Anne Battery (Plymouth, UK)
<b>ECG</b> .....	Electrocardiogram	<b>RAF</b> .....	Royal Air Force
<b>ENT</b> .....	Ear, nose and throat	<b>RHIB</b> .....	Rigid hull inflatable boat
<b>EPIRB</b> .....	Emergency position indicating radio beacon	<b>RMB</b> .....	Royal Marines base
<b>FAWGI</b> .....	False alarm with good intent	<b>RN</b> .....	Royal Navy
<b>FRS</b> .....	Fire and rescue service	<b>RNLI</b> .....	Royal National Lifeboat Institution
<b>GP</b> .....	General Practitioner (doctor)	<b>ROV</b> .....	Remotely operated vehicle
<b>GPS</b> .....	Global positioning system	<b>SAR</b> .....	Search and rescue
<b>Helo</b> .....	Helicopter	<b>SARIS/SARSYS</b> ..	Search and rescue information system
<b>HEMS</b> .....	Helicopter emergency medical service	<b>SMB</b> .....	Surface marker buoy
<b>HLS</b> .....	Helicopter landing site	<b>SRR</b> .....	Search and rescue region
<b>HSE</b> .....	Health and Safety Executive	<b>SRU</b> .....	Search and rescue unit
		<b>UK DMC</b> .....	UK Diving Medical Committee
		<b>UTC</b> .....	Coordinated universal time
		<b>VLB</b> .....	Volunteer life brigade
		<b>999</b> .....	UK emergency phone number



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