UK ADC LTD

ADC Supervisors Scheme

2023 CPD Session

Fatalities April 2021 – March 2022

HSE
Health & Safety Executive

One fatality reported:
Recreational fatality at Wraysbury, 12th February 2022

- LA enforced site (Health and Safety (enforcing authority) Regulations 1998)
- HSE providing specialist support

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Over 7 Day injuries April 2021 – March 2022

HSE
Health & Safety Executive

Recreational
- DCI x 2

Inland/Inshore
- DCI x 2
- Deck crew finger injury deploying downline

Scientific diving
- Suspected fracture following fall on rocks carrying diving equipment

Offshore
- Back injury
- Aural barotrauma
- Hand injury

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Dangerous Occurrences April 2021 - March 2022

HSE Health & Safety Executive

Police

- Snagged umbilical – standby diver disconnected umbilical and remained with diver during ascent

Recreational

- 2 x uncontrolled ascents during diver training courses

Shellfish

- OmniSwivel switch block seized up – product safety bulletin issued – risk of asphyxiation

Inland/Inshore

- Tightness of air supply and water ingress from neck seal of KM37

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Dangerous Occurrences April 2021 - March 2022

HSE Health & Safety Executive

Offshore

Closed bell issues x 4

- Bell clamp interlock leak
- Bell door mechanism failed
- Bell clamp interlock pin failed to engage
- Storage depth increased from 105m to 125m during trunk equalization

Trapped Umbilical during dredging operations – structure moved and trapped umbilical. Vessel crane used to lift and free umbilical.

Failure of breathing apparatus x 4

- Cobra Unit – HP hose – contents gauge fell off during preparation.
- Water ingress to hat – cable tie found lodged in 2nd stage regulator
- Gas escaping from port on bailout 1st stage
- Manifold on bailout twin-set failed – content emptied into bell.

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Complaints April 2021 - March 2022

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Health & Safety Executive

Recreational x 2

- Diving without medical. 'AMED shopping' concealing medication
- Manual Handling

Inland/Inshore x 6

- Inappropriate use of Scuba x 3
- Breath hold work
- Unqualified diver, no medical, team size
- Poor quality of breathing gas, location of compressor

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Complaints April 2021 - March 2022 – continued

HSE
Health & Safety Executive

Media x 1
- Insufficient gas supply, no standby gas supply

Shellfish x 2
- No qualifications or medical, solo diving
- Two person dive team

Offshore x 3
- 2 x relating to saturation excursions/tables
- Equipment

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All Diving Industry Sectors

Year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
Fatal	0	3	1 (1 Inland)	1	3	5	1	0	1 (LA)
Major	0	1	1	0	3 (2 Inland)	0	2	0	0
O/7 Day	5 (2 Inland)	6	5 (2 Inland)	5	6 (2 Inland)	8 (2 Inland)	6 (2 Inland)	3 (1 Inland)	9 (2 Inland)
Ill Health	7* (3 Inland)	-	-	-	-	-	-	7** (7 Inland)	0
D.O.	24 (4 Inland)	27	10 (2 Inland)	11 (4 Inland)	12 (3 Inland)	14 (3 Inland)	16 (3 Inland)	7 (1 Inland)	14 (1 Inland)
Complaint	32 (24 Inland)	23 (16 Inland)	15 (13 Inland)	8 (Inland 6)	13 (7 Inland)	17 (9 Inland)	19 (9 Inland)	8 (4 Inland)	14 (6 Inland)

- Numbers in brackets relate to Inland / Inshore
- Diving related Ill Health no longer reportable from 1st October 2013

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HSE Health & Safety Executive

Improvement Notices April 2021 - March 2022

HSE Health & Safety Executive

Scientific x 2

- Training & equipment (x2 notices)

Inland/Inshore x 8

- Risk assessment, plan manage & conduct. Equipment maintenance (x3) notices. Fish farm diving
- Equipment maintenance (x1 notice)
- Equipment cleaning (COVID) and suitable plant and equipment (x2 notices)
- Team size (no standby at immediate readiness) and suitable & sufficient equipment (x2 notices)

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Enforcement Notices by Sector; Improvement Notices + Prohibition Notices

HSE Health & Safety Executive

YEAR	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
TOTAL	2 + 3	9 + 4	5 + 3	0 + 1	14 + 3	6 + 2	14 + 1	4 + 2	3+3	10+0
Offshore	0 + 0	0 + 0	1 + 0	0 + 0	0 + 0	0 + 0	0 + 0	1 + 0	0 + 0	0 + 0
Inland/ Inshore	0 + 0	4 + 0	2 + 1	0 + 1	5 + 0	3 + 0	8 + 1	3 + 2	2 + 1	8 + 0
Shellfish	1 + 3	0 + 0	1 + 0	0 + 0	9 + 2	3 + 2	0 + 0	0 + 0	0 + 2	0 + 0
Recreational	1 + 0	2 + 1	1 + 2	0 + 0	0 + 1	0 + 0	2 + 0	0 + 0	1 + 1	0 + 0
Scientific & Archaeological		3 + 3	0 + 0	0 + 0	0 + 0	0 + 0	0 + 0	0 + 0	0 + 0	2 + 0
MoD	0 + 0	0 + 0	0 + 0	0 + 0	0 + 0	0 + 0	4 + 0	0 + 0	0 + 0	0 + 0

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Fatalities current year to date (April - October 2022)

HSE
Health & Safety Executive

Recreational Diver Training, Scotland April 2022

Shellfish Diving, Scotland, August 2022

Inland/Inshore, Scotland, August 2022

Email address for notification;
Diving@hse.gov.uk

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RISK BASED ASSESSMENT OF CYLINDER INTERNAL EXAMINATION PERIODICITY
5th October 2022

Annex - **Commercial inshore**
Sponsor: Association of Diving Contractors (ADC)
The commercial inshore diving industry have been using the following intervals for inspection and testing of diving cylinders:

- Periodic inspection and test every 5 years
- Internal examination every 2.5 years

Cylinders used for bail-out and suit/buoyancy control device (BCD) inflation that are at an increased risk of water ingress, are internally examined every 6 months. Cylinders either individually or supplied in bundles and used only on the surface to provide gas to a diver via an umbilical have been inspected and tested every 10 years. These inspection periods have not resulted in a catastrophic failure in the past decade and are part of the broadly acceptable risk presented in the generic risk assessment.

Annex - **Commercial offshore**
Sponsor: International Marine Contractors Association (IMCA)
The commercial offshore diving industry have been using the following intervals for inspection and testing of diving cylinders (IMCA guidance D018):

- Periodic inspection and test every 5 years
- Internal examination every 2.5 years

Cylinders used for bail-out and suit/buoyancy control device (BCD) inflation that are at an increased risk of water ingress, are internally examined every 6 months. Cylinders either individually or supplied in bundles and used only on the surface to provide gas to a diver via an umbilical have been inspected and tested every 10 years. These inspection periods have not resulted in a catastrophic failure in the past decade and are part of the broadly acceptable risk presented in the generic risk assessment.

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Scuba or Surface Supply?

A decision that should be based on the appropriateness of the equipment not its convenience i.e use it because it is the right equipment for the job in terms of diver safety – not because it will be easier or less expensive to use.

Under the Inland/Inshore ACoP L104, SCUBA may be acceptable for use in simple tasks (such as inspection) in clear water where there is no risk of entanglement or 'benign' conditions. It still requires the use of a full face mask with communications, an independent reserve air supply and a life line attached. Its use also requires the management of an emergency to be considered as well as being justified with a full risk assessment.

Scuba is generally disapproved of by the industry in most commercial applications. Industry exceptions are: Media, Police, Military, Scientific and archaeological diving

However, they will also use surface supply wherever possible.

It is absolutely not acceptable for construction or offshore activities or any activity where there is poor visibility and therefore a risk of entrapment.

Disadvantages of Scuba

- There is a finite supply of breathing gas carried by the diver.
- If there is no line to surface and no voice communications the diver will not be able to alert the surface in the event of an emergency.
- If there is no line to the surface the surface team will not know the depth of a free swimming diver or how to find them.
- Only limited back up gas supplies can be carried should there be a problem with the primary supply.
- If the diver is not tended via a lifeline there is a greater likelihood of buoyancy problems leading to serious incidents (e.g. exposure to unintended depths).
- If there is no line to the surface the diver can easily become separated and lost.
- SCUBA equipment tends to be less robust to harsh conditions and is more likely to become damaged.

Advantages of Surface Supply

- There is an unlimited source of breathing gas available to the diver via his umbilical *(Theoretically unlimited - depends on available supply).*
- There is always a line attached to the diver, so it is always possible either to pull him to the surface or at least to find him in the event of an emergency.
- It is easy to remain in voice communication with the diver via hard-wired comms.
- The surface team can ascertain the depth of the diver accurately at any time.
- It is a simple matter to provide both surface and in-water back up air supplies should there be a problem with the primary supply
- The umbilical helps prevent problems with buoyancy (e.g. inadvertently sinking to unplanned depths).
- The diver cannot become separated and lost.

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The above points would not hold true if the diver's umbilical were to be severed - this a highly unusual occurrence & the surface team should seek to ensure that the diving umbilical is protected from damage at all times.

Diving at Work Regulations – Approved Code of Practice (L104)
What does it Require?

- An Appointed Diving Contractor – *Registered with the HSE*
- A clear brief / Hazard identification from the client.
- A Diving Project Plan (DPP) & Risk Assessment
- Adequate Team size & appropriate competencies - *Minimum '5' for Surface Supplied Diving*
- Suitable Equipment & Maintenance
- Appointed Supervisor(s) – *notified in writing 'Letter of Appointment'*
- Certificated - *Medically 'FIT' in-date Divers – medical certificate issued via an AMED*
- At least **2** First Aid qualified personnel
- An achievable - stand-alone - emergency plan
- The necessary support network for the supervisor.
- Permit or Dive Approval system where appropriate.

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Diving Supervisors *(Regulation 10)*

Supervisors have a duty to ensure the diving operations for which they have been appointed as supervisor are carried out without risk to the Health and Safety of those taking part (and others)

- Must be issued with a copy of the Dive Project Plan / Risk Assessment
- Does not need to have a valid diving medical if not diving
- Must be qualified in the diving techniques being used in the operation. *(Must hold a surface-supplied diving certificate)*
- Must be "competent" – have a combination of training, knowledge & experience to do the job required in a safe and efficient manner
- To complete and sign the Dive log / Divers Log Book (ACoP Annex 3)
- Should ensure to have at least two members of the team with valid First Aid Certificates and arrange for the provision of one to be 'available' during a dive i.e. acting as a tender;
- Should have signed the Approval to Dive *(Assuming this is required)*
- May need to update / revise RA's as work progresses on-site
- Be satisfied that any support personnel are competent, properly briefed and immediately to hand.

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Welfare

It is a legal duty to provide adequate welfare facilities - *in as far as is reasonably practicable, and what is proportionate. (schedule 2 L153, CDM15) / INDG 293 Welfare at Work*

- An adequate number of separate toilets for men & women. Where this isn't possible, toilet doors should be lockable and separate from urinals.
- Toilet paper.
- Sanitary disposal facilities for women.
- Adequate and suitable hand-washing facilities (not the canteen or kitchen sink), to include running hot (or warm) and cold water, soap or hand cleaner and a way of hygienically drying the hands. Not a shared towel.
- Showers, if necessary.
- Changing and drying rooms, with separate facilities for men & women, where necessary.
- Somewhere to take breaks from work, with a supply of clean drinking water and cups or a drinking fountain.
- A means of boiling water for drinks.
- Chairs with back support (not canteen benches).
- A facility to warm-up food (e.g. microwave).
- A means to secure valuables and a change of clothes.

Welfare facilities must be kept clean and in good order. Welfare facilities are provided for your benefit.
Please look after them.

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The Dive Project Plan *(regulation 8)*

ACoP 6,9 - para 37

The expected information to be contained within a Diving Project Plan

Risk Assessments – may be provided within a separate, specific project document – Generic & Specific activities

The planning including all information and instruction to protect the health & safety in all those taking part in the diving project.

- Standard operating rules & procedures (para 37)
- General principles of the diving techniques to be used (para38)
- Emergency planning – contingency procedures, including the retrieval of an injured and/or unconscious diver(s) from the water (para38) – including designated A&E & Recompression Facilities – This could be in a separate project specific Plan
- Team size & arrangement sufficient for the intended operations (para74, 77, 78) – **minimum of 5**
- Breathing mixture being used by the divers
- Dive Tables / Schedules (exposure)
- Access & Egress arrangements
- Expected depth of operations
- Tidal planning
- Isolation Plan / Permit control (para 48)
- Limiting environmental factors – water flow, rain, cold, darkness, lightening, surface visibility
- Basic Health & Safety provisions – This could be provided within a separate, project specific Management Plan
- Quantity of available gases (para61) – calculations to demonstrate availability required for the intended operation
- Quality of gases (para62) – **BS EN 12021 tested at least every 3months**

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Suitability of Compression Chambers (para 119)

Two-person, two-compartment compression chambers should be suitable for the purposes intended and comply with the recognised standard.

Availability of Compression Chambers (para 114)

The diving contractor has a responsibility to ensure the provision of facilities so that a diver can be recompressed in an emergency, should this be necessary. Treatment of DCI in a compression chamber should commence as soon as possible (subject to medical advice) – Diving Medical Advisor
The provision of a compression chamber should be in accordance with the decompression procedures selected as part of the diving project plan.

Dives shallower than 10m (*even with planned in-water deco not exceeding 20mins*) – **not more than 6hrs travel from site.**

Dives between 10-50m *(even with planned in-water deco not exceeding 20mins) – the diving contractor should assess the DCI risk due to operational factors depth/ temperature/ work/ number of dives.* – **Should be immediately available on-site**…..
If the assessment demonstrates relatively LOW-risk of DCI, then not more than 6hr travel from site.

For dives with planned in-water decompression stops greater than 20mins, the chamber is to of immediate use on site. The diver should be able to leave the water quickly and easily and be pressurized within the chamber as per the dive schedule.

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Approval to Dive – Should be Mandatory.

(Previously referred to as a Permit)

At least two - competent - persons must be satisfied that all the necessary controls are in place before diving commences.

One signatory must be the Diving Supervisor.

The other could be; the Diving Coordinator, a designated representative, The clients representative, A vessel skipper, a facility Engineer or other person in control of some structure or equipment that could adversely affect the diver or the support team.

But should be competent to act as an authorising signatory.

Where possible use physical locking/isolation arrangements.
(Padlocks etc, keys to be held by the Supervisor on site) This may be covered by Permit to Work system ?

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No Approval - No Diving - No Exceptions

Who Starts - Who Stops?

- **Only the Diving Supervisor can start diving operations.**
- **Other persons in a position of authority, relevant to the site, can tell a supervisor to terminate the diving for operational or safety reasons.**
- **Anyone else can seek to stop the diving, via the supervisor, should they see something that they consider could adversely influence the safety of the diver or support team.**
- **The Diving Contract Administrator may have an interest due to their knowledge of the work site and diving task.**

If in Doubt - ASK - Do Not Assume

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