

Army Safety

58 | Winter 2018-19 & Environment Matters



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CHIEF ENVIRONMENT &
SAFETY OFFICER (ARMY)

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British Army Safety



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Editorial



Welcome to the Winter 2018-19, 58th edition of Army Safety & Environment Matters. Wow! This magazine has certainly come a long way since its first edition back in 2001. I suppose to be fair it did start off as a one-page quarterly newsletter,

before becoming the publication you are reading today. This is without a doubt down to everyone who has submitted so many interesting and informative articles throughout the years.

The department has seen many CESO(A)s in post since the beginning of this publication (7 up to our current post holder, Col Mike Jeavons). This edition foresees potentially the biggest changes to-date within CESO(A), as we head towards becoming the new Army Safety Centre. See page 4 for an overview of the proposed changes in an article by Col Mike.

So what else do we have in this edition? Well, An Ice Maiden's Reflections (page 12) is an exciting article covering the all-female team trek across Antarctica via the South Pole, enduring extreme weather conditions and many challenging risks – many thanks to Maj Natalie Taylor for her contributions.

Page 11 discusses concerns in relation to a lack of respect for the Glock 17 pistol, providing important reading for those issued with this key weapon.

Page 14 sees an article from the Army's Head of Environmental Health, Lt Col Gareth Moore about the role of the Army's Environmental Health personnel; and there is much, much more in this issue – see the contents, right.

Finally, a quick plea for your personal help – do please ensure that this magazine doesn't just sit on a shelf. Put it to good use by circulating copies amongst your teams, and let's help improve the Army's safety culture together through good communication.

Sharon Foster – Editor

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“Worth a second thought?
Prepare and prevent, don't repair and repent.”

Army Safety & Environment Matters is the twice yearly publication of the Chief Environment & Safety Officer (Army), CESO(A) – <https://www.armynet.mod.uk/armysafety>. Its primary aim is to promote good practice in safety and environmental issues throughout the British Army. If you wish to comment upon any article, make a contribution, or have a query regarding distribution of this publication, please contact: SO2 Comms, CESO(A), Army HQ, IDL 2, Ground Floor, Zone 1, Blenheim Building, Marlborough Lines, Monxton Road, Andover SP11 8HJ. Mil: 9 4393 7037 or Civ: 01264 88 7037.

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News in Brief

ACSO 3216 – The Organization and Arrangements for the Management of Safety and Environmental Protection in the Army

Sponsored by CESO(A) and published in May 2018, ACSO 3216 sets out the framework for how we do Safety and EP in the Army. This is essential reading for Commanders at all levels and safety and environment practitioners.

The publication incorporates Chapters on:

- Army Culture for Safety.
- The Safe System of Work/ Training.
- Army Duty Holding.
- Risk Referral and Dispensation Process.
- Capability Management – Roles and Responsibilities.
- Army Safety Governance.
- Accidents and Incident Reporting.
- Plan, Do, Check, Act Methodology.

ACSO 3216 will be updated over the coming months as the Army's Safety and Environmental Management System (SEMS) is refined. See CESO(A), Col Mike Jeavons' article on the following pages which outline the Army's direction of travel.

ACSO 3216 is available via this link: https://modgovuk.sharepoint.com/sites/defnet/corp/Army/Publications/ACSO_3216.pdf

Are You Getting It?

The fact that you're reading this right now means that, one way or another, you have managed to get hold of this magazine. But getting the magazine delivered to the right people is harder than you might imagine and depends on our address database being maintained.

Therefore, this is a plea for you to help us by highlighting any distribution issues or addressee updates – please contact the Editor, Sharon Foster (contact details below right) with any updates.

Do Others Get It?

As mentioned in the Editorial section on the previous page, we really need your help to get this publication into the hands of all Army ranks and roles – not just the safety and environment community. It's somewhat disappointing to visit an establishment, talk to soldiers and learn that they've never seen or heard of this publication! As such, if copies of this magazine are sent personally to you, **please don't just pin a copy on a notice board and leave it at that – please be proactive and get copies circulated** and placed in areas where others are more likely to have a flick through, e.g. crew rooms, canteens, medical utilities, etc. Of course, some of the content is more relevant to USEAs, but we always include content of interest to all ranks and roles. **So, please help us to get best value from the effort that goes into this publication by helping ensure that it's available far and wide.** If you need a few more copies to help achieve this, let us know, and do also please feed back any ideas you have on how to get this magazine into appropriate hands.

Retiring Safely

A staunch member of the Army's safety policy cohort retires: Major (Retired) Ian Groom leaves his current Civil Service post as Commander Field Army's SO1 Force Protection and finally proceeds to a life of leisure and full time support for Crystal Palace.

Ian first joined CESO(A) in 2007 and after a brief period as a C2, promoted into the C1 SO1 Safety Management post in CESO(A). Here Ian will be remembered for his outstanding commitment to the promotion of Army safety; he was a driving force behind the setting up of

the FTRS USEA arrangements and was always a source of extremely sound safety advice and guidance. Ian continued in the same vein when he was the first to take up the SO1 Force Protection post in CFA's area; here numerous senior officers relied on his safety knowledge and experience. We all wish Ian and his wife Jan a long and happy retirement.

Former DCESO(A) Returns as Reservist

Whilst Edition 57 mentioned the departure and retirement from Full-time Regular Service of Lt Col Richard Thorpe, he is now back in the CESO(A) fold as a Reservist. Here he has a commitment for 88 days per year and is focusing on projects to enhance safety across the Army. Apart from developing CESO(A) Standing Operating Instructions, his first safety project involves the production of a video to compliment the Managing a Safe System of Training Commander's Pocket Guide.

Introducing the Defence Ranges Safety Committee

Overview

The Defence Ranges Safety Committee (DRSC) acts as the MOD focus for the safety of ranges, gives direction on the management and maintenance of the safety of ranges and monitors annual and independent range inspections.

The DRSC sponsors and oversees the production of JSP 403 Handbook of the Defence Ranges Safety and associated forms and other documents. These provide the necessary instructions and guidance for all concerned with the safety of MOD ranges and of other ranges at home and abroad used by MOD personnel.

The Committee's Role

To ensure the safe operation, maintenance and use of our ranges, a Standing Committee, the DRSC, has been established to introduce and oversee range safety standards across MOD. It is responsible through the Defence Safety Authority (DSA) to the Permanent Under Secretary for all aspects of safety on Defence ranges. A Range Safety Management System conforming to policy laid down by the Committee has been in operation for some time and is reviewed on a regular basis.

Safety management takes into account all aspects of the provisions, use, maintenance and inspection of MOD ranges for which there is no appropriate statute or equivalent civil practice with which to compare.

Further Information

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CESO(A) Update and Look Forward

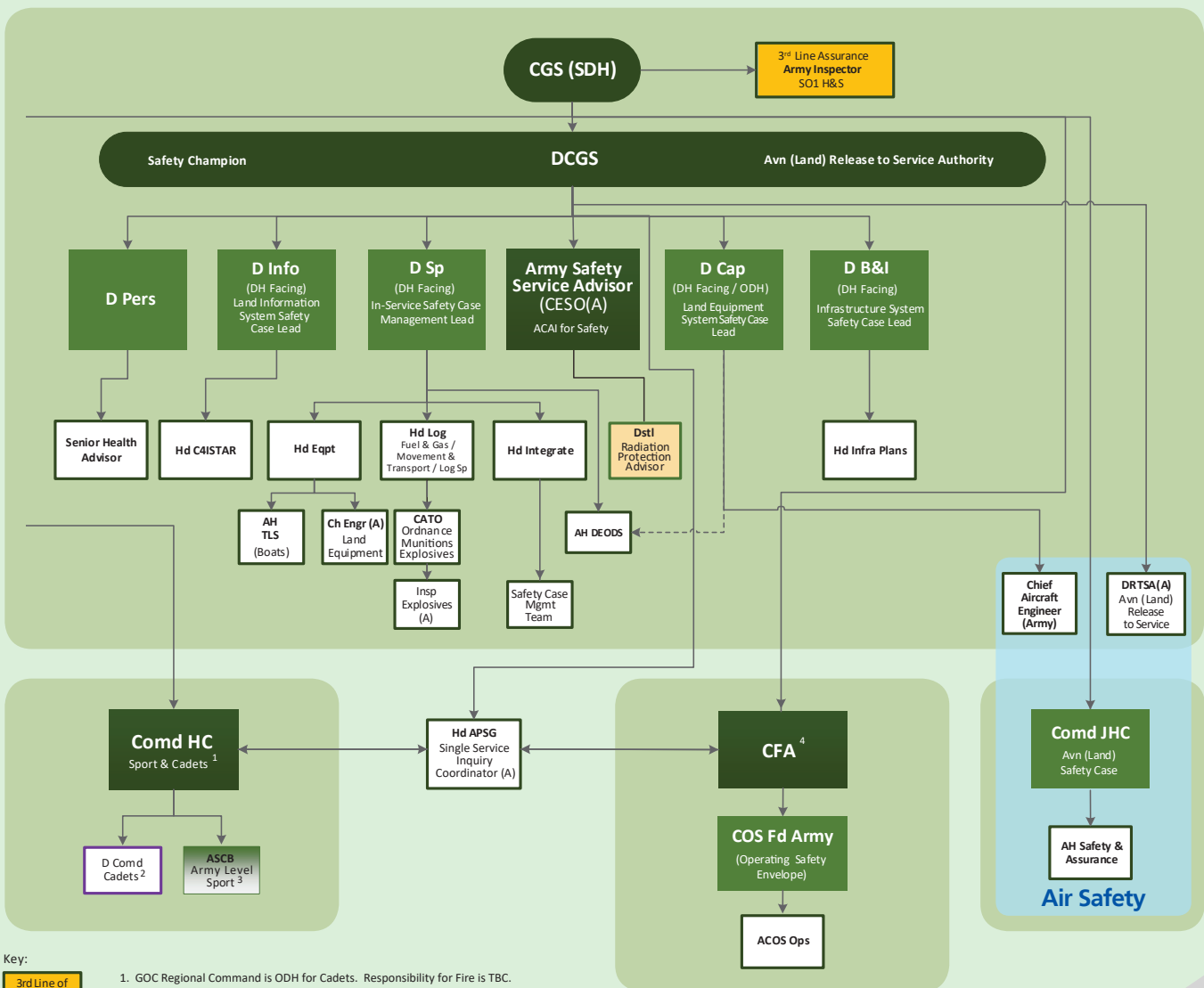
CESO(A) – Col Mike Jeavons

Since my arrival in January 2018, there has been much work ongoing both within CESO(A) and in the wider Army HQ focused on safety.

The Army Inspector (Brigadier Ben Wrench) was tasked by CGS to undertake a review of the Army's Safety, Lessons, Organisational Learning and Assurance Mechanisms. The report from this review was published in April. The report covered a lot of ground and made a total of 45 recommendations to improve the way the Army manages safety.

Those actions have now all been allocated owners and are being progressed. As you can imagine, several of the actions fell to CESO(A) – more on that later!

One extremely useful output of the report was a map of the various safety stakeholders within the Army – a pictorial representation of the Army's Safety and Environmental Management System (SEMS) if you like. I have reproduced the Level 0 picture below, but it is worth noting that there are similar maps for all levels down to unit level.



- Key:
- 1. GOC Regional Command is ODH for Cadets. Responsibility for Fire is TBC.
 - 2. D Comd Cadets commands the Army Cadet Force and the Combined Cadet Force.
 - 3. Unit level sport safety is delivered via the Chain of Command under Duty of Care.
 - 4. COS Fd Army is ODH for 16 AA Bde.

- 3rd Line of Defence Assurance
- Contractor
- Defence and Army Lead

Total Safety

We will be including the diagrams in future versions of ACSO 3216 (Organisation and Arrangements for S&EP in the Army) as we develop that publication to more fully articulate the Army's SEMS. The roles and responsibilities of all the key posts identified in the diagram will also be captured and, where appropriate, formal letters of delegation will be issued.

So What Else?

Following his arrival, our new CGS, General Carleton-Smith has now signed letters of Duty Holding delegation to all of the Army's Operating Duty Holders (ODHs). The letter outlines their role and responsibilities and all ODHs have replied to CGS confirming that they are content to hold the responsibility. The Army Inspector's report also identified that the most appropriate 2* lead for equipment safety was Director Capability (DCap). This was endorsed at the Army Safety Committee (ASC) in May and Chapter 6 of ACSO 3216 is currently being re-written with DCap's team to reflect the management of equipment safety in the Army. This includes the move of the Safety Case Management Team from Director Support's area to DCap and the establishment of a new B2 post (Land Equipment Safety Officer) to head up the team. This B2 post has now been recruited and by the time you read this, the new incumbent should be in post.

The other major recommendation in the Army Inspector's report was that the Army should establish an Army Safety (and Environment) Centre. The reason for moving from the current "virtual" Safety Centre to a more formally established version is to provide a more visible and empowered organisation. The establishment of the Centre would also enhance the role of the 4* HQ's leadership in supporting and directing the Army's approach to safety and would reinforce the importance of S&EP which in turn would enhance the Army's behavioural and cultural change. The Army Safety Centre should be based around the following core functions, all of which can be mapped to existing CESO(A) functions:

- Policy and Governance.
- Assurance and Advice.
- Lessons / Analysis.
- Communication, Education and Training.

To fulfil all of these functions would require additional resources and the Army Inspector also recommended the establishment of a B2 civilian CESO(A) which would enable me as the current CESO(A) to become the head of the Safety Centre.

So What Next?

Whilst ECAB broadly accepted the recommendations, I have subsequently been tasked with developing a proposal for the Army Executive Committee to consider endorsing. That paper is currently being drafted and will be considered by the Committee this autumn. If accepted by the Committee, the Army Safety Centre could be established at IOC as early as the end of November with an FOC expected in May 2019. I will keep you posted via these pages and hope to be able to provide an introduction to the 4 key functions and how we are going to tackle them in the next edition.

I have also directed a number of other workstrands within CESO(A) that are currently being worked on by the team. In particular we are considering how best to continue the development of the Army's Safety Culture. Whilst great strides have been made in recent years, the need to keep driving positive change is vital and I intend developing a strategy that will pull together existing work and that will identify some new projects that will seek to refine and enhance our safety culture in line with DSA policy (DSA 01.2 Chapter 5). Work has also started on a review of safety assurance to ensure that I am able to provide CGS with a consolidated and complete picture of how well the Army is managing safety. The existing RPOC-led unit audits and self-assessment are a key foundation to this, but it is important that the assurance "wrap" is comprehensive.

The Army's incident reporting, management, investigation and lessons process is also undergoing review. The reintroduction of CESO(A) safety MJPs last year has continued with the most recent one considering the lessons from the Castlemartin CR2 Service Inquiry report and other CR2 incidents and recommendations. I see the incident management and associated lessons process as being a cornerstone of the Army's SEMS and the Chapter in ACSO 3216 will be updated and reissued next year. To assist in delivering the changes that I anticipate, we have also recruited and filled the OC AINC post as this will be vital in "feeding" the process. And finally we have identified the need to undertake an end-to-end review of Army safety training to ensure that it is consistent and coherent as soldiers and officers progress through their careers, equipping them to discharge their safety responsibilities effectively.

Those of you who have managed to join us at one of the CESO(A) Roadshows will have heard much of this already, but I am keen that the wider safety community understands where we are going and why. So my apologies if you are getting it again! It is an exciting and stimulating time to be working in Army Safety and I look forward to continuing to meet and engage with you all through our programme of Roadshows and the Army Safety and Environment Conference in March 2019. But in the meantime, if you have any questions or concerns about our direction of travel, please feel free to get in touch with me at:

Michael.Jeavons828@mod.gov.uk

ACSO 1118 – Learning Lessons

“Insanity is doing the same thing over and over again and expecting different results.” (Attributed to Albert Einstein)

The best Armies are, by their very nature, learning organisations needing to adapt and overcome their opponents. This has been a benchmark of the British Army since Duke of Marlborough and Duke of Wellington and more recently during the campaigns in Afghanistan and Iraq. This dynamic learning approach has now been adopted for non-operational lessons – safety, training, personnel etc., in the revised Army Lessons Process – ACSO 1118.

This seeks to encourage lesson identification and, more importantly, learning at all levels as well as the broader exploitation through sharing best practice and making a difference.

Why is it important?

We all know the importance of adapting (learning lessons?) on the battlefield; but is this too late? Far better to learn today, rather than regret a missed opportunity tomorrow. By energising the Army’s Lessons Process, we will be able to enhance and deliver our operational capability by training more effectively, protecting our people and utilising scarce resources more efficiently. The key element is that by sharing what is learnt we can reduce risk, improve performance and deliver continuous improvement. Sharing is fundamental to the Army culture of learning.

Who is involved?

Everyone – yes, you too! While **Commanders** are responsible for the implementation throughout the chain of command, it is important to stress that it applies throughout, from sub-unit, formation and staff branch – **every soldier** to most senior leaders. The Army needs to be an environment whereby activity can be reported, shared and learning exploited. This begins at section level right up to Army HQ.

A consistent approach

There are four stages, organised around the NATO framework, highlights of which can be found below:

C Capture	Capturing and recording observations to produce good practice, lessons, recommendations and continuous improvement. This should be done using the Observation, Discussion, Conclusion and Recommendations (ODCR) format which provides consistency and ensures sufficient detail is included.
A Analyse	The analysis looks at root cause(s) and considers both good practice as well as wider examination leading to lessons analysis. Where remedial actions and lessons are identified these must be captured using Defence Lessons Identified Management System (DLIMS) .
R Resolve	Where good practice or lessons are identified, these will be resolved at the lowest practical level within the chain of command.
E Exploit	Action officers work to ensure the full value is extracted from the process and communicated to the chain of command.

Learning loops

The learning loop approach set out in ACSO 1118 provides a way of reinforcing learning at an appropriate level, from single loop learning (Unit), double loop learning (Formation) through to Triple loop learning (Army HQ).

Learning loops are determined by scale and are used to improve and adapt at all levels of the chain of command. The approach focuses on reinforcing lessons learning at each level. It comprises:

- **Single loop learning (reacting and improving efficiency).** Often relative to routine repetitive day to day tasks and frequently related to things which could be done better.
- **Double loop learning (understanding and improving effectiveness).** Considers root cause(s) and underlying assumptions and a more questioning approach – are we doing the right things; could we be doing things differently and/or different things.
- **Triple loop learning (transforming).** A higher-level approach, which could cover thinking, philosophy, principles, environment as well as learning processes and training to ask – “how do we decide what is right?”

What does this mean for Safety and EP?

For Safety and Environmental Protection, the 1st Loop is enacted through an incident investigation by ‘a competent person nominated by the CO/HoE’, usually the USEA (or USA) and the 2nd Loop is the remit of Bdes and Divs through the SO1/SO2 FPs/SHEs. The 3rd Loop is taken forward within Army HQ, initially through CESO(A) MJPs, which then feeds up and into the Army Lessons Steering Group (ALSG), ultimately reporting to the Army Organisational Learning Committee (AOLC), chaired by DCGS.

Article contributed by Jenny Godfrey (SO2 Lessons) and Martyn Cox (SO1 Safety Management)

The Army's Safety Lessons Process

How the Army learns safety lessons is detailed in the recently updated Army Command Standing Order (ACSO) 1118 (see previous page). In the ACSO, CESO(A) is the lead proponent for safety lessons, but clearly the stakeholders are much wider than that. So how do we do it?

It all starts with the incident reporting mechanism. By capturing the safety related incidents that are occurring across the Army, CESO(A) is able to build a picture of the most prevalent types of incidents and/or equipment involved. This is turned into a 'watch list' which details the incident types that we are interested in at any point in time. We will monitor this at desk level and decide when the next stage of the process should be initiated: the Military Judgement Panel (MJP).

The Army's Organisation learning mechanism is a three-loop process: the 1st loop being unit learning, 2nd loop formation level and the third loop Army HQ level. The third loop, which is defined in ACSO 3216 as 'learning from learning', is not looking at specific recommendations but considers the recommendations in the round, to identify the wider organisational lessons. The individual Service Inquiry recommendations are tracked and closed by the Defence Safety Authority (DSA).

An MJP will be convened either to consider a single significant event (e.g. the release of a Service Inquiry report) or due to a significant trend being identified. The MJP will normally be convened by CESO(A), but could be led by Army Personnel and Support Group (who cover much more than just safety issues through their MJPs), the Capability Directorate, or another lessons lead within Army HQ.

Attendance at the MJP will be determined by the subject being considered and will be tailored accordingly. Subject matter experts will be used to provide the necessary detail and to ensure that the lessons identified are both sensible and achievable. There is no point identifying a lesson that will simply never be realised. The preparation for the MJP will draft potential lessons that the panel will then consider, adjust and either agree or reject. Most importantly, the panel will also identify an owner for each lesson and a target for implementation.

A useful example is the recent MJP to consider the Challenger 2 (CR2) breach explosion at Castlemartin Ranges in 2017. The MJP used the Service Inquiry report plus a number of other, related AFV incidents drawn from the Army Incident Notification Cell (AINC) database.

From the CR2 MJP eight lessons and three observations were identified and have now been assigned Senior Point of Authorities (SPAs) for action and completion to enable the lessons to be learned by embedding them in business as usual (BAU).

The identified lessons included:

- Confirm effectiveness of revised Mounted Close Combat (MCC) policy assurance mechanism.
- Review of Land Equipment Safety Cases for all equipment prior to 2002.
- Feasibility study to consider cost benefit of articulating minimum competency and currency requirements underpinning the assumptions in the safety case.
- Review of mechanism for identifying and raising user input via a Capability User Board (CUB) to safety panel.
- Review of PXR/POR process.
- Review and identify if the PXR/POR format actively seeks to identify safety lessons.
- Review of submitting a form (AF510) for incident reports.
- Prior to any future range period, crews are to be given a presentation as part of initial range safety brief including a video production of the effects of a bag charge being ignited inside a turret.

Work is now underway for the next CESO(A) MJP, which is expected in Jan 19 on Glock pistol issues (see page 11).

Another key element of the process is the Safety, Personnel and Health Integration Group (SPHIG). This brings together the 'lessons leads' for each of the safety (CESO(A)), personnel (APSG) and health (SHA(A)) areas within Army HQ. The SPHIG allows the sharing of common lessons between these similar groups to prevent things 'falling between the cracks'. It also enables common themes and issues to be identified and raised using the Army's lessons mechanism, ACSO1118 – Army Lessons Process. That means that items will be raised to the Army Lessons Steering Group chaired by Brigadier Army Staff. This allows cross-cutting issues to be captured and addressed in a pan-Army approach which is much more coherent and more likely to lead to a positive outcome.

So what?

This whole process is 'bottom fed'. In other words, it relies on you to report incidents and to conduct unit level investigations to enable the trends and themes to be identified. You may not be the only unit with a particular issue and when we pull that together at Army level, the results can be very powerful. So keep reporting and feeding the lessons process – it works!

Army Safety and Environmental Working Group (ASEWG)

Within the Army Safety and Environmental Management System (SEMS), more regularly referred to as AC SO 3216, there is an embedded governance structure. At the lowest level this relies on individuals, such as private soldiers, taking responsibility for their own actions in accordance with the Health and Safety at Work Act 1974 (HASAW), Section 7: Duties of Employees to *'take reasonable care for the health and safety of themselves and others who may be affected by their acts or omissions'* and to *'co-operate with their employer or any other person to enable legal obligations to be met'*, which means complying with a Safe System of Work/Training. This responsibility then passes upwards and onwards through the Chain of Command from JNCOs, COs to CGS who has the ability to act on, report or refer issues ultimately to the Secretary of State for Defence.

Within units this process is formalised through the unit safety committees, normally chaired, at least once a year, by the CO, again under the HASAW Sections 2(6) & (7) and Section 3. Then through Brigade and Divisional Command Boards; where Safety and Environmental Protection (S&EP) should be a standing agenda item. Then into Army HQ where the Army Safety Champion, Deputy Chief of the General Staff (DCGS), sits.

Within Army HQ the governance structure is as shown, right:

The ASEWG is the desk-level Safety and Environmental Protection (S&EP) forum that supports the Army Safety Committee (ASC) and the Army Safety Sub Committee (ASSC) chaired by CGS and DCGS respectively. It maintains and reviews the CESO(A) Safety and Environment Risk Register and tracks the "actions" that fall out of the ASC and ASSC. The ASEWG reviews S&EP performance and considers S&EP issues and risks for potential elevation to the Committee level. The ASEWG draws its membership from across the Army and has a key role in ensuring that SEMS (based on Plan, Do, Check, Act)¹ along with the organisational arrangements for the SEMS remains fit for purpose.

The Army Safety and Environment Working Group Terms of Reference (ToRs) are:

- a. Review the CESO(A) Safety and Environment Risk Register.
- b. Convey the key messages from the ASC and ASSC and track the Actions arising from both meetings, directing and informing further work as required.
- c. Review S&EP management information.
- d. Review Safety and Environmental lessons.

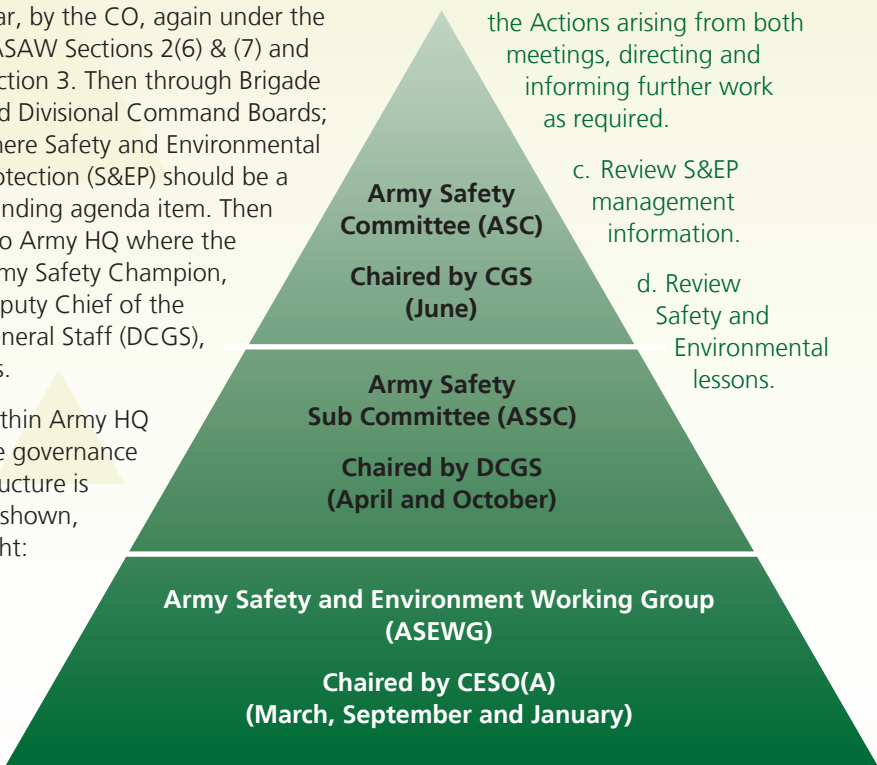
- e. Consider papers from ASEWG members on S&EP issues that potentially require elevating to the ASSC level.
- f. Review other S&EP issues as directed by CESO(A), such as:
 - (1) S&EP lesson learning.
 - (2) Equipment safety.
 - (3) Road safety.
 - (4) Fire risk.
 - (5) Radiation protection.
 - (6) Infrastructure safety.
 - (7) Safety training.
 - (8) Provision of SQEP in safety critical posts.
 - (9) Communications and messaging.
- h. Discuss any other business raised by ASEWG members.

All outputs from the ASEWG will be published in the form of Record of Decisions (with ASEWG slide pack attached) and an Army Safety Centre Activity Tracker.

The attendance is primarily SO1 Force Protections (FP) and Safety, Health and Environment (SHE) with other subject matter experts (SMEs) or interested parties to ensure as broad a church as possible. The ASEWGs meet three times per year, usually in the Tidworth Garrison Theatre.



More information can be found on the Defence Intranet: <http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/Army/Organisations/Orgs/clf/Organisations/Orgs/coslf/Organisations/Orgs/CESOA/Pages/CESO%20A.aspx>, within AC SO 3216, or by contacting the CESO(A) Groupmailbox: armylf-ceso-mailbox@mod.gov.uk



¹ACSO 3216

CESO(A) Roadshows 2018

At the Army Safety and Environmental Conference 18 (ASEC 18) held at Army HQ in March, Col Mike Jeavons, CESO(A), announced that he would be undertaking a series of Roadshows across the UK to allow for a more personal engagement with the Army's Unit Safety and Environmental Advisers (USEAs). Whilst USEAs are crucial to delivering the Army's Safety and Environmental Protection to units (the sharp end of S&EP delivery), they are supported by the rest of the Army Safety matrix including SO1 and SO2 Force Protections (Field Army) and SO1, SO2 and SO3 Safety,

Health and Environment (SHEs) within Home Command. Therefore, as the Roadshows were targeted at the 'Safety Family' all were invited.



All were very well attended with the common key points being:

- **The relationship between the Army and S&EP training delivery, such as RAF Halton.**
- **The responsibilities of USEAs – administered by one unit whilst supporting a portfolio of units.**
- **The role of USEAs beyond G4 into G3 – planning and conduct of training and the delivery of Risk Assessment and other S&EP courses to units.**
- **The potential renaming of USEAs to Army Force Protection Advisors (AFPAs) to better reflect their R2.**
- **The Army's Training Compendium against actual training requirements and availability.**
- **The involvement of SO1 FP/SHE in USEA reporting.**
- **The Army's system of incident reporting, incident investigation and the closing of incidents.**
- **Access to S&EP information and statistics.**

Two of the Roadshows also received an excellent presentation from Nigel 'Wicked' Williams, Station SEA, 29 Regt RLC on South Cerney station's environmental management activity. Nigel received the 2017 Army Safety and Environmental Award (ASEA) as the individual who had contributed the most to environmental matters, with 29 Regt RLC receiving the unit award. His activity demonstrating what can be achieved by a committed individual in a unit showing positive S&EP leadership making best use of resources, saving the MOD money and preventing a potential environmental disaster.

The calendar for next year's Roadshows is:

- **Thu 18 Jul 19 – Army Safety Roadshow (North); The Centenary Hub, Plave Lines, Catterick.**
- **Fri 20 Sep 19 – Army Safety Roadshow (South); Tidworth Garrison Theatre.**
- **Thu 21 Nov 19 – Army Safety Roadshow (LONDIST); MOD Main Building.**



Three Roadshows took place in the King Henry VIII Wine Cellar in MOD Main Building (sadly without any wine!) for London District and the South East; the Tidworth Garrison Lecture Theatre for the South West; and at The Centenary Hub, Plave Lines, Catterick for Scotland and the North. Attendees were encouraged to attend whichever event best suited their location and diaries.

The aim of the events was to:

- **Gain a better understanding of the issues/challenges facing the Army Safety Matrix.**
- **Identify how Army HQ/CESO(A) can better support the Safety Matrix going forward.**
- **Meet as many individuals from the Army Safety Matrix as possible.**

Article contributed by Sgt Colin Jenkins, Wing SNCO, Snr Instructor, AFFI TI CSI

Parachute Adventurous Training Safety

"To develop individual courage and leadership skills through controlled risk in a challenging outdoor environment in order to enhance operational capabilities."

How do we conduct Risk to Life (RtL) Parachute Adventurous Training safely whilst challenging individuals enough to achieve the aims of AT?

Safe training is something that we as an organisation take extremely seriously, but there has to be an element of risk to achieve the aims of Adventurous Training (AT). That said, we continually try to mitigate the risk to as low as reasonably practicable (ALARP) by operating within the rules and regulations of a number of organisations.

Firstly, we are governed by the Civilian Aviation Authority (CAA) and the British Parachute Association (BPA), and as such comply with their Operations Manuals. As an additional layer of governance that is specific in its regulation we have our own capstone document, the Joint Service Adventurous Training Operations Manual (JSAT Ops Manual) which complements and improves upon the already proven safe working of the BPA Ops Manual. These form our Governance documents from which our local SOPs are derived.



Secondly, assurance is achieved through four levels of Defence Assurance (LoDA) interwoven with an annual inspection by the BPA Safety Training Officer (COO) and CAA, covering all aspects of parachute delivery, training and documentation. HQ ATFC and HQ ATG (A) provide the first and second LoDA respectively assisted by internal SMEs. The third and fourth levels are covered by a mix of Defence Safety Authority (DSA), Defence Land Safety Regulator (DLSR), the BPA and 22 Gp (RAF) Total Safety Assurance and Regulation (TSAR) (who are lead for all aspects of Air Activity). They also hold bi-annual JSAT Policy Group meetings with our two sister Wing Chief Instructors to cover best practice and any fallout from any policy changes within the BPA.



Mitigating risk to achieve the aim cannot be underestimated, we reduce this with staff training taking place at the start of the season making sure each instructor and staff member is SQEP, current and competent for the season ahead. This is a minimum requirement to be able to deliver any Joint Services Adventurous Training courses. Some may see the early season trip to the US as a privilege but in terms of achieving the aim, there is nowhere more suited (we have tried and failed in both UK and Europe!).

Running concurrently to the practical skills training is our Wing induction in which all staff, both instructors and Temporarily Employed Elsewhere (TEE), are taken through all critical and essential training delivery items, be it aircraft refuelling and starts, packing, first aid, H&S, SOPs and MATTs to name a few. This is always documented in our Safety Management System, which is held by one of our senior instructors, who is an Instructor Examiner, Advanced Instructor and holds all ratings for current disciplines. That said, anyone from the bottom up has access to this document and can reference it at any given time. We also brief all staff that our Safe Management System is not solely the responsibility of one person, it is the responsibility of all those within the Wing. The key to the whole process is that the Wing openly operates a 'no blame' culture to enable us to identify any current trends or near misses before they become accident/incidents. Crucially, any events are staffed through the working groups to ensure that lessons are learnt and mitigating action taken across all of the delivery wings.

We also firmly believe that the training we deliver here at the Wing is the platinum standard in terms of instruction, operating with more BPA Instructor Examiners than any civilian or military counterpart.

So have we done enough?

Currently the statistics would show that across the Army, AT currently does not sit within the Risk to Capability (RtC) area, whereby 20% of current categories make up 80% of the incidents reported*. When you also look at the statistics of injury rates for Sports and Physical training, they both have higher reported incidents: 41.96% and 33.13% against those of AT (24.9%). We, as an organisation, believe wholeheartedly that there is always room for improvement and risks can never outweigh the aim of the output-improved capability on operations.

We do it well, but we are always trying to improve!

* CESO(A) SO1 Safety Management (Martyn Cox)

Article contributed by Lt Col C MacGregor KRH, Sqn Ldr R Perry RAF and WO2 N Manning REME, Taji Service Inquiry, Defence Safety Authority.

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Glock 17

Prevent pistol accidents through increased professionalism

Brought into service in 2013 as the L131A1 General Service Pistol (GSP), the Glock 17 replaced 3 different pistols: the L9A1 Browning, the L105A2 SIG 226A2 and L47A1 Walther. The pistol used to be carried predominantly by officers and vehicle commanders, however, changes in the contemporary operating environment have increased the requirement for the GSP to be carried as personal protection weapons by all ranks. Over 31,000 Glock GSPs are available to UK forces and they are widely deployed with personnel on global operations now.

Since 2013, numerous 9mm unintentional discharges have occurred with the GSP – these have resulted in 5 minor injuries, 3 of which were to the firer, 1 serious incident that resulted in life-changing injuries, and 1 fatality.

Whilst all these occurrences involved varying degrees of error and negligence, in all these incidents personnel demonstrated poor standards of weapon handling and unsafe practice. **Respect the pistol – it is supposed to be deadly!**

Hand-held, with a short barrel and no externally applied safety catch, the Glock 17 is designed to operate quickly. This provides an advantage in engaging and suppressing an enemy in Close Quarters Battle. The weapon is perfectly safe if used as taught and handled appropriately. GSP safety relies on 4 elements: There are 3 internal mechanisms that disengage in sequence as the trigger is operated, and are reactivated when the trigger is released. These do not prevent operation of the trigger, but prevent inadvertent operation of the weapon through jarring or dropping.

The fourth safety element is the holster, which is a critical and integral part of the safety system. It is mandatory to carry the GSP in an issued holster. The critical nature of the holster in the system of safety must be understood by all users.



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Unlike the SA80 Rifle, the Glock GSP is not taught to soldiers during basic training, but instead, training is delivered by units as required. This is commonly undertaken as part of Mission Specific Training. As a consequence, soldiers can deploy with relatively little experience with the GSP compared with their experience of other Infantry weapon systems. Pistols are perceived as weapons with a high social status – they are described by our soldiers as 'sexy bits of kit' and 'cool'. While it is noteworthy that 9mm accidents occur across Defence, however, and are not restricted to less experienced personnel, familiarity and **a lack of respect for the deadly nature of the weapon is a recurring theme.** No weapons-related activity is low risk. By following the rules for safe handling, accidents can be prevented.

As errors and mistakes are inevitable, how can we reduce the likelihood of further Glock GSP injuries and deaths?

- Use the mandated Glock GSP holsters – it is a crucial part of the Safety System.
- Only clean weapons in designated areas.
- Load and unload only when ordered, and with supervision.
- Never assume the state of a weapon; treat each as if it were loaded until it is made safe.
- Do not point weapons in an unsafe directions.
- Have the self-discipline to observe known weapon handling drills.
- Avoid the temptation to skip procedures through over-confidence of your own skills.
- Strive to improve your standards at every opportunity.
- Do not ignore poor standards and actions, even if they appear minor.
- All ranks must challenge unsafe behaviour.

An Ice Maiden's Reflections

Major Natalie Taylor



In January 2018, the Army's own 'Ice Maidens' became the first all-female team to trek across Antarctica, via the South Pole on foot, covering 1,056 miles in 61 days and enduring temperatures as low as -52°C . Major Natalie Taylor (1 Mercian's Regimental Medical Officer) talks to us about her experiences of being one of the six women to complete this landmark expedition.

How it Came About

It all started when Major 'Nics' Wetherill had a dream to go the South Pole. We met around five years ago and she thought I could help her make it happen, so the two of us together organised the expedition. We wanted it to be more than just going to the South Pole, we wanted to get as many women involved as possible, so we opened this up to both Regulars and Reserves.

Some 250 women applied by e-mail. After an initial paper sift we took 50 to Capel Curig in Wales for a selection weekend. From this we then took 22 to Norway for two weeks of training with the Royal Marines and Norwegian Army.

The team, on reaching the South Pole (not even half way into their epic 1,056 mile journey)



We then down-selected again to 12 for a further two weeks in Norway, then down again to seven of us for a final 'mini Antarctica' intensive training session in Norway. From the original 250, six of us ultimately did the expedition in Antarctica: myself, Nics, Captain Rosanna Baker, Lieutenant Jenni Stephenson and reservists Major Sandy Hennis and Lance Sergeant Sophie Montagne.

Managing Risks

It's all about controlling the situation and with the support of the Army you can achieve things in dangerous environments with appropriate mitigation. One of the biggest risks to life in Antarctica are crevasses, so much of the training we did in the Alps focused on how to manage these and perform rescues.

Other key risks to life are hypothermia and frostbite. Due to the nature of Antarctica and its sheer scale, you might not be extracted as a casualty for several days. Chile was the closest place where we could have received proper medical care, so when we were undertaking our risk assessment, one of the biggest issues was that we would be outside of normal medical timelines and we had to learn to be self-sufficient.

Responding to JSP539

There's two types of cold injury: non-freezing cold injury (NFCI) and freezing cold injuries like frostbite, where limbs become frozen. Both fall under JSP539 and so when we were doing all the risk analysis for Antarctica one of the things we had to do was write a letter of mitigation to explain why we would be working outside of JSP539 and how we had mitigated those risks. For example, JSP539 states that if it's below a certain temperature, we should not work.

However, in Antarctica it's very often below -20°C and we had to explain that if we tried to stick to every aspect of JSP539 that we'd actually be putting ourselves in more danger. If we were static for too long we might risk running out of food and fuel before we got to our next supply point (there were only three of these in total!)

Mitigation

Before you go to Antarctica you have to gain weight for an expedition like this (we each gained a stone), as the most efficient way of carrying fuel is by carrying it in your fat cells rather than carrying as food on your sledge.



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Our training in Norway helped us work out what equipment was best for the expedition. We wore special base layers with natural wool fibres as these were really good at keeping heat in. Our outer trousers were bespoke and made by Mountain Equipment. They designed-in bigger pockets for equipment, adjusted sizing for best fit and put extra insulation around our thighs because of the risk of 'polar thigh' which is a cold / abrasion injury like a big chilblain. Women are more susceptible to this as we naturally carry more fat on our thighs than men do. We also wore special 'skirts' to further help prevent thigh injury and operated a 'buddy, buddy' system to check daily for skin lesions.

Culture

One of the things that made Exercise Ice Maiden successful was the meticulous planning that we put in place beforehand for the training exercises and our open and honest culture. Where we found in training that things didn't work well, we said let's try and do this another way instead.

For example, when it came to clothing, we didn't all dress the same for the expedition – it's ultimately what is best for you and keeps you safe that matters. With regard to medical skin tapes, we found through training that zinc oxide tape worked best; and we worked out the best ways to repair tents in extreme polar conditions (your tent is your safety lifeline).



Training in Norway

The training exercises were invaluable for the lessons that we learned and carried forward into the expedition itself.

The Hardest Part

We each had different things that were hardest. I have a background in ultra-sports and endurance activities like skiing. I love being outdoors and love camping, so I was in my element every day. For me the hardest part was actually getting to that start line! I was partly responsible for organising the funding in the two years leading up to the expedition, and it wasn't until quite late in the day that we got the money secured.

The other hard thing for me was that once we got to Antarctica we had terrible weather and couldn't start the expedition for 14 days. Each day lost waiting was one day less we then had for the expedition itself. So, although, yes, we did it in 61 days (11 days quicker than we had planned) we didn't know that at the time and it was frustrating.

For other team members, the hardest thing was the monotony of the 61-day trek and dealing with boredom, although some used personal music players to help with this.

Looking Back

With the benefit of hindsight, I really don't think there are any risks that we would deal with differently when it comes to mitigation. However, if I was to do another expedition I would probably have the final team determined earlier with a shorter selection process so that we had more time to train together beforehand.

We left for the expedition in October 2017, but earlier that year from March to July I was a full-time GP

in Afghanistan. When I got back, another member of the team was then on exercise for a while. The military were fantastic in giving us time off to do the exercises in Norway, but all other training was done at weekends, so there wasn't as much time for us to bond as we would have liked, ahead of the expedition weather window.

Inspiring Others

We were all really surprised when we got back to the UK at the level of media interest and support we had from people. We were expecting our families and friends and a few military people to perhaps follow us, but to find out that many people across Europe and further afield were inspired by our journey was really humbling and nice to hear.

Subsequently, we've all been around many schools and youth groups delivering talks about the expedition. I'm quite active in the Girl Guides movement and at a big camping event one of the leaders came up to me and told me that after attending my talk her daughter was inspired to run two personal bests in her 10k racing. I've also received other great feedback about how people have taken on new challenges as a result of hearing about our all-women expedition. It's great that we've created a legacy.

Key Facts

- **The Journey:** From Leverett Glacier, via the South Pole to Hercules Inlet, Antarctica.
- **Distance Covered:** 1,056 miles in 61 days.
- **The Climate:** Sub zero temperatures down to -52°C , snow, ice and wind speeds of over 60mph.
- **Weight Carried:** 176 lbs per sledge.
- **Resupply Points:** 3
- **More Info:** <http://exicemaiden.com/>



Lessons learned in Norway helped preparations for Exercise Ice Maiden

Article contributed by Lt Col Gareth Moore, the Army's Head of Environmental Health

Military Environmental Health

The World Health Organisation's definition of environmental health (EH) is: "The control of all those factors in man's physical environment, which exercise, or may exercise a deleterious effect on his physical development, health or survival". Put into military terms this is interpreted as control of those factors which increase the risk of Disease and Non-Battle Injury (DNBI) and reduce operational effectiveness.

Army Environmental Health personnel are responsible for identifying, assessing and advising, on the control of the plethora of health threats faced by all MOD personnel, both in the Firm Base and overseas. This task is conducted both proactively by carrying out Med Recces and Force Health Protection Audits (FHPA) of units and establishments, and reactively in response to concerns raised such as infectious disease cases or concerns regarding food or water quality.

The primary role of the EH Cadre is the identification of health threats and how to reduce their risk. They are trained in disease control and investigation, housing fitness, health and safety and accident investigation, occupational/industrial hygiene, vector and pest management, food and water safety, operational sanitation and bio-security.

Across Defence there are 91 established Army EH posts. All personnel are either graduate EHOs or undergraduates conducting their BSc. In 2014 the EH Cadre professionalised and all personnel joining the Cadre now enrol on a partnered BSc EH (in partnership with Leeds Beckett University) delivered primarily at Lichfield. Existing EH personnel were enrolled onto a BSc upgrade course over a four year period. The last of these courses began in Sep 17.

One of the major challenges facing military EH is supporting the volume and pace of overseas operations and deployments. Some of the recent key issues EH are involved with are highlighted below.

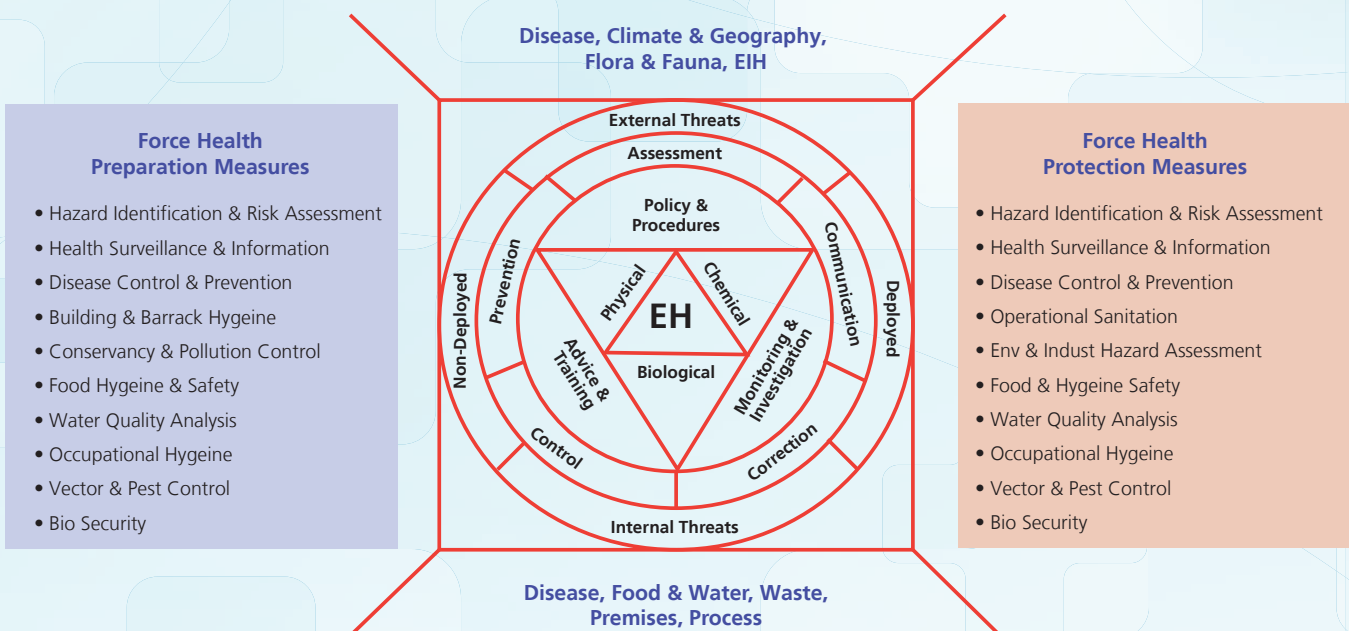
Water Quality

Recent routine drinking water sampling identified raised levels of lead (in one case up to 8.5 times the legal standard) in the piped supply of drinking water at three MOD establishments (RAF Linton-On-Ouse, Hullavington and Winterbourne Gunner).

Although appropriate action was taken at the sites above, and immediate drinking water bans were implemented until the water quality was improved, it is unknown what the duration of exposure may have been. EH investigation into these incidents has highlighted areas of concern regarding water quality assurance (particularly with regards to lead exposure) across the MOD estate which are currently being raised through the appropriate Chain of Command. DIO has the responsibility for assuring water quality in MOD buildings and should be approached in the first instance for information regarding the risks of lead in MOD buildings.

Lead can be particularly harmful to children under 6 years of age and may impact mental development. It originally posed a serious risk to children until lead paints were banned in the UK in 1992 and now is occasionally found in lead water service pipes. The use of lead water pipes was banned in the UK in 1970, so most modern buildings will be lead free.

EH Force Protection Model



Under sixes are particularly vulnerable to lead in water



The Drinking Water Inspectorate advises that where there is a suspicion of lead water pipes, the taps should be run daily (for the time it takes to fill a wash-hand basin) before consumption.

Asbestos

In Apr 16 a potential exposure to asbestos was reported affecting personnel deployed as part of the Short Term Training Team (STTT) in Maidaguri, Nigeria.

EH deployed to the location to conduct an FHPA and identified that the asbestos contaminated material was present throughout the location as a result of damaged building materials.

In extreme cases, inhalation of asbestos fibres may lead to a type of cancer of the lung called mesothelioma. There is little preventive action that can be taken post-exposure to reduce the pathological impact, except to inform personnel of the significant increased risk that smoking contributes to development of fatal asbestos related conditions. This will allow individuals to potentially mitigate some of the future risk. Personnel and medical records were annotated in accordance with policy contained within JSP375.

Asbestos contaminated material – Maidaguri



A detailed Force Health Protection Audit of all UK Army locations in Nigeria occurred in Nov 18. The resulting report should identify any current asbestos health risks.

Vector Borne Disease

Army EH has also been working closely with the Govt's Crisis Contingency Secretariat and Department of Health (DH) and DEFRA in contingency planning for the eventuality of finding *Aedes albopictus* mosquito species in the UK.

This mosquito is capable of transmitting chikungunya and dengue viruses and has already established itself across Europe as far North as Paris. This is of particular concern for the UK as the eggs can remain viable throughout the winter (diapause) and hatch once conditions become favourable. The favoured breeding sites for this mosquito are opportunistic, urban environments such as plant pots and vehicle tyres. Indeed, Public Health England has identified the importation of remoulded car tyres from Europe as a significant risk. To date *A. albopictus* eggs have been identified and treated on three separate occasions in the Folkstone area.

Military EH personnel currently provide the only rapidly deployable, trained and equipped capability for providing mosquito control in the UK. This is now a standing MACA task until such time as DH/DEFRA can provide an internal capability.

Female *Aedes albopictus* mosquito



What can EH do for you?

Currently, routine EH work in supporting units and formations consists of:

- Production of Force Health Protection Instructions for overseas deployments.
- Medical recces.
- Investigation of infectious disease outbreaks (often in conjunction with Defence Public Health Unit and Public Health England).
- Food safety audits.
- Occupational hygiene assessments, (e.g. noise, vibration, airborne contaminants).
- Accommodation fitness assessments (MSQs and SLA).
- Water safety and quality assurance.

- Integrated pest management and vector control (including investigations into the efficacy of pre-impregnated uniforms, pesticide resistance and vector surveillance).
- Pollution and air quality monitoring.
- Environmental protection issues.

Army Environmental Health plays a major role in supporting the Defence Public Health Network (DPHN) with regard to issues such as infectious disease outbreaks and air quality standards. During the previous 12 months military EH has deployed in role to over 35 countries.

More details of the function and tasking of EH personnel are contained in the Senior Health Advisor Policy Letter (SHAPL) 001/17, including access to the Army Environmental Monitoring Team.

https://modgovuk.sharepoint.com/sites/defnet/Corp/Army/Publications/SHAPL_001_17.pdf#search=SHAPL

Don't Let Winter Ruin Your Regime

As the days get shorter, it's tempting to just cosy down with a box set and a monster take-out, but a winter running or cycling regime doesn't have to be just for the hard core if you have the right kit and know-how.

Do it Warmly, in Layers

- Warm-up before you head out:
 - Your body stays warm by burning calories, meaning extra calories are important in avoiding hypothermia, so ensure you're properly fuelled before leaving.
 - Having a hot drink before you set out can help you stay warmer for longer.
- Do stretching exercises inside before you hit the cold outside, then you will still be warm when you start. Think warm head, hands, feet and torso:
 - Head – wear a skull cap or beanie hat to keep the heat in. Cyclists should wear underneath the helmet.
 - Hands – wear windproof, well insulated gloves. Consider two layers.
 - Feet – cushioned, thermal socks for running. There are effective overshoes / booties, e.g. neoprene that can be worn over normal cycling shoes to help keep feet warm and dry... NFCl isn't just a military training concern!
 - Cyclists should also consider wearing winter tights with a high front to help keep both your legs and torso warm.
- Use the layering system to help maintain core body temperature:
 - A base layer with long sleeves to help keep draughts out, made of breathable material that wicks sweat away from your body.
 - A mid layer such as a fleece to keep the warmth in and absorb moisture from the base layer.
 - An outer layer that is preferably well insulated, windproof, breathable, waterproof and with pockets to allow easy access to the sustenance you will need to keep you well-fuelled in the cold.
 - Use the air vents and zips to help regulate your body temperature.



Do it Dynamically

- Check the weather forecast so that you're fully prepared.
- Think about your route and how exposed to climatic conditions you will be.
- Consider wind direction and think about setting off with a head wind whilst you're fresh, so that you can return with a tail wind when you're more tired.
- Ensure that other people know about your intentions before you set off.
- Consider doing shorter circuits so that you're never too far away from home, in case the weather takes a turn for the worse or you run out of energy.
- Carry your mobile and ensure you have an ICE (in case of emergency) contact stored.
- Take full account of changing conditions and be prepared to throw in the towel.
- Remember that broken bones are more likely if it's icy or slippery. Black ice on hard surfaces, in particular, is a real hazard for both runners and cyclists. Know when not to go out.

Do it with a Mate!

- Running or cycling in a group can be better for motivation and take your mind off the cold.
- There's safety in numbers – you're much more likely to be seen by other road users.
- You can take turns shielding each other from a biting wind.
- If you're cycling and experience a mechanical problem, having someone to help can make all the difference.
- If you are unfortunate enough to suffer an injury, it's much better that this happens when there's someone there to potentially help you.

Do it with Good Equipment

- Good traction becomes an issue in winter months, so if you're running, wear shoes with good grips. If you're cycling, swap your track slicks for grippier tyres.
- If you have a choice of bike, why not save your best bike for the better weather.
- Keep on top of bike maintenance:
 - Set the tyre pressures right (too high = risk of blowout, too low = risk of a 'pinch' puncture). The correct pressure depends on the weight of rider, size of tyres, etc.
 - Remember to take a mini pump and repair kit out with you.
 - Ensure that the brakes are working properly (vital for when it's wet).
 - Check that lights are bright and correctly angled to attract the attention of other road users.
 - Then when you get back, wash any road salt away, dry and ensure that the chain / key components are lubricated... do this before you chill-out and then it's less likely to get neglected and will be ready for next time.
 - Do have your bike properly serviced.

Do it with High Vis

- Many road users do not expect to see runners or cyclists in winter, and are likely to be suffering reduced visibility themselves, so make sure you stand out:
 - Wear fluorescent clothing and reflective materials.
 - Whether you're running or cycling, flashing LED lights help you to stand out – even if it's not dark.
 - But don't just rely on flashing lights if it is dark – use bright fixed lighting to help you see the path ahead.
- Ride with the traffic, run against it, i.e. if you're a cyclist then ride on the same side of the road as other users (preferably on a cycle path). If you're running, then face oncoming traffic so that you're more likely to be spotted.
- Stick to well-lit areas and avoid going anywhere that you don't feel completely safe.

Do it Again

Take some of this onboard and you'll be in a good position to do it again and again... You can do it – winter doesn't have to be the season to grow your own winter coat (i.e. bang weight on).

Prepare and get out there!

Article contributed by Kirsty Williams, Defence Infrastructure Organisation (DIO)

Managing Fires on the Training Estate

Fires on the training estate are not uncommon all year-round, however the good weather that we all enjoyed last summer increased the risk of fire. Most notable were the unintentional fires at Middlewick (Essex), Otterburn (Northumberland) and Salisbury Plain (Wiltshire), which were in part influenced by the nature of the essential military training being conducted there at the time.

The Defence Infrastructure Organisation's Role in Managing the Estate

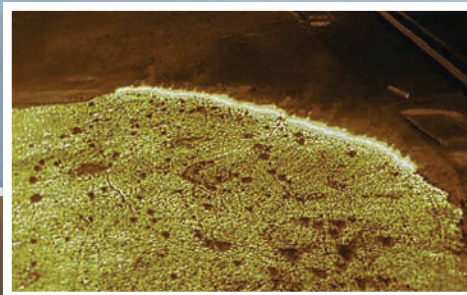
The Defence Infrastructure Organisation's (DIO) Overseas Region and Defence Training Estate (OR&DTE) team is responsible for the provision of military training facilities in the UK, and around the world, to enable our Armed Forces to be ready for operations and deployments. Most important is the provision of a Safe Place to Train 365 days of the year. It manages around two thirds of the 223,800 hectares that the MOD owns, and a further 207,400 hectares that it has rights over. They make sure that Service Personnel have sufficient training areas, with a variety of terrain and climates to represent those places where they are likely to serve.

The team is also responsible for the maintenance, preservation and conservation of the land, allowing it to offer much needed habitats for a variety of flora and fauna to thrive, and for the enjoyment of the public now and for future generations.

The importance of the Range Danger Area

Military fires on the training estate aren't caused deliberately and usually start, and are contained, in the Range Danger Area (or impact zone) – this is an area in the heart of the training area that is out of bounds to the public. These areas are largely constructed with the potential for fires in mind, and include stone tracks to prevent the transfer of a fire onto the wider estate.

Live munitions, fast moving vehicles, low flying aircraft and unmanned aerial vehicles are all used during live military manoeuvres and in the Range Danger Areas you will find unexploded military debris. Due to the dangerous nature of the Range Danger Area fires that start there cannot be extinguished by the Fire Service, or the MOD, but need to be left to burn out on their own.





Salisbury Plain Fires

An important international training exercise took place on Salisbury Plain in July, and despite temporary restrictions on ammunition likely to initiate a fire, a fire still broke out and continued to burn for several days. The smoke plume, largely the effect of burning gorse, affected large parts of Wiltshire and was created by a combination of the hot, dry weather conditions, the wind direction and the already dry ground conditions.

There was no threat to life or property, and although the MOD was unable to put the fire out, as it was in the impact area, we worked closely with Wiltshire Council, Dorset & Wiltshire Fire and Rescue Service and Public Health England to update the public on the situation and to advise on the best precautions to take.

We take the safety of our military personnel and the public seriously and we did all that we could to reassure local-residents and to reduce the risks.

The Impact on the Environment

Although fires can have a negative effect, there are also some benefits, hard as that may be to believe.

Fires can often remove alien trees and plants that compete with native species for nutrients and space, and the removal of thick undergrowth means that sunlight can reach the lower levels, enabling regrowth and regeneration. Fires also return nutrients to the soil by burning dead or decaying matter. They can also act as a natural disinfectant, removing disease-ridden plants and harmful insects from the ecosystem.

In many places across the world fires are set intentionally for the purposes of forest management, farming, restoration and greenhouse gas reduction. Only several weeks after the fire on Salisbury Plain the re-growth was already extraordinary, with a healthy green sward in direct contrast to the sun-dried unaffected areas.

DIO's Role in Fire Management

The DIO's OR&DTE team takes its role in trying to prevent and control fires very seriously. It monitors the risk of fires across the training estate throughout the year, working hard to maintain a balance between the needs of our military training audience and the local communities in which it sits. A range of measures are put in place to prevent and control range fires, including grazing programmes – agreed with local farmers to keep the grass short during the summer months; ammunition bans during extremely dry conditions; and fire watch schemes to ensure fires are constantly monitored.

Wildfire alerts are also in place based on a traffic light system (Yellow, Amber and Red) and at each alert state DIO OR&DTE employ different control measures to safeguard the Defence Training Estate:

- **YELLOW wildfire alert state:** the Regional Commander, with the assistance of his establishment staff assess the value of training against the risk of fire. This assessment incorporates all climatic data available to DIO OR&DTE and the expert knowledge of the Training Safety Officers.
- **AMBER wildfire alert state:** the ability to assess the activity is no longer held at regional level. Due to the exceptional risk of fire at AMBER the decision of what military activities can proceed are made on an individual basis by Head DIO OR&DTE. The Brigadier not only considers the assessment provided by the Regional Commander, but also looks at how our military activity is affecting the local population, any media interest there may be, and any involvement from local MPs and wider Government.
- **RED wildfire alert:** the risk of fire is so great that only activities directly relating to deployment of troops overseas will be considered.

Do's and Don'ts for Military Personnel

- Pay attention to clearing the ground when cooking.
- Properly extinguish all cigarettes.
- The setting of fires inside buildings is strictly forbidden.
- Open fires may only be set on the training area when they are contained in a properly manufactured burn tray.
- Personnel are not to attempt to suppress or extinguish fires while wearing Cam-Cream.
- If a fire breaks out contact Range Operations, or call the Fire Service (999).

Article contributed by David Challes, Deputy Head, Defence AIB

DAIB Lessons Learned

Safety lessons from recent Service and Non-Statutory Inquiries

Sniper training accident at Tain Air Weapons Range, Scotland – 1 Nov 16



On 1 Nov 16, a student on a sniper training course being run at the Tain Air Weapons Range in Scotland was killed by a single round from his own L115A3 Sniper Rifle. The SI Panel concluded that the soldier had left the firing point without having completed his unload drill and that this was not checked by the safety supervisor.

The key safety lessons from this accident are:

- Do not fire the Sniper Rifle unless you have received formal skill at arms training.
- Do not hold the Sniper Rifle upright by the suppressor – it is not a crutch.
- The Sniper Rifle trigger is very sensitive and, there is a risk that it may snag on personal equipment or foliage, which could cause an un-demanded discharge.

- Safety staff must supervise all drills and practices.
- All safety staff and firers must rehearse the immediate action drill for an accident, which should be detailed in the RASP. This will ensure that when something goes wrong all personnel will know how to react.
- Don't take shortcuts on a range – procedures are there for good reasons.
- Regardless of rank, challenge any unsafe behaviour or practices when handling weapons and live firing. If you see something wrong, say something – it may save a life.

The full Service Inquiry report can be found here: <https://www.gov.uk/government/publications/service-inquiry-report-into-the-death-of-a-soldier-participating-in-a-night-live-firing-sniper-cadre-at-raf-tain-range-field-firing-area-on-1-november>

A short (2 sided) bulletin giving the outline of the incident and key lessons, along with a short video with the same message, is available via the Army Knowledge Exchange (AKX) here:

<https://akx.sps.ahe.r.mil.uk/sites/akx/training/training-lessons/training-lessons-from-service-inquiries>

Both the bulletin and video are also available via the following QR code (you will need a smartphone with a QR code reader and a Defence Gateway account).



Challenger 2 accident at Castlemartin Ranges, Wales – 14 Jun 17

On 14 Jun 17, during a live firing range package at Castlemartin Ranges in Wales, a CR2 suffered a catastrophic breech explosion and a subsequent fire during a demonstration shoot. The Commander and Loader were killed, the (guest) Gunner suffered life changing injuries and the Driver sustained minor injuries. The SI Panel concluded that a critical part of the breech assembly, which provides rear obturation in the gun, had been removed for cleaning after an earlier live firing practice and had not been replaced. In addition, some of the charge bags had not been stowed in the charge bins, resulting in a catastrophic fire.



Continued...

The key safety lessons from this accident are:

- Always stow bag charges in the charge bins – they cannot be extinguished when lit.
- Carry out gun drills conscientiously. Do not take shortcuts – drills and procedures are there for good reasons.
- When a crew mounts a vehicle that has been used before, a Hand Over / Take Over must be conducted between the on-coming and off-going crews.
- Wear the correct Personal Protective Equipment and clothing.
- Be aware of the ammunition safety rule: Do not take mobile phones or other electronic devices within 5m of electrically initiated weapon systems.
- Make sure you know what to do in the event of an accident – pay attention when conducting casualty extraction training and emergency hatch opening drills.
- Regardless of rank, challenge any unsafe behaviour or practices when live firing. If you see something wrong, say something – it may save a life.

The full Service Inquiry report can be found here: <https://www.gov.uk/government/publications/service-inquiry-report-into-the-challenger-2-incident-at-castlemartin-ranges-pembrokeshire-on-14-june-2017>

A short (2 sided) bulletin giving the outline of the incident and key lessons, along with a short video with the same message, is available via the Army Knowledge Exchange (AKX) here: <https://akx.sps.ahe.r.mil.uk/sites/akx/training/training-lessons/training-lessons-from-service-inquiries>

Both the bulletin and video are also available via the following QR code (you will need a smartphone with a QR code reader and a Defence Gateway account).



Luge Accident at Igls, Austria – 29 Jan 18

On 29 Jan 18, an accident occurred on the Luge track at the Innsbruck Olympia Eiskanal at Igls in Austria during the Royal Air Force Bobsleigh, Luge and Skeleton Association Novice Ice Championships. The accident resulted in a Service Person receiving a serious head injury.

The NSI concluded that the cause of the accident was a combination of loss of sled control and an inability to successfully execute corrective steering actions.

The key safety lessons from this accident, aimed primarily at those organising such activities, are:

- Allow time to develop trainee competence and assess competence before progressing the training.
- Ensure your Coaches are qualified, experienced and trained to carry out the required activity.
- Formally nominate Safety Officials in administrative instructions and ensure they know their roles.
- Ensure Risk Assessments are carried out to a high standard, and review any Generic Risk Assessments prior to each activity.
- Ensure an equipment maintenance policy is established. If it is not in the equipment manual, seek guidance from the manufacturer; and do not modify equipment without authority.
- Ensure a robust accident reporting process is in place and use it.

The full Non-Statutory Inquiry report can be found here: https://modgovuk.sharepoint.com/%3ab%3a/r/sites/defnet/dsa/Documents/DAIB/20180802-Luge_Defence_AIB_Investigation_Report_NSI_Final-OS.pdf?csf=1&e=RJDx5M

A short (2 sided) bulletin giving the outline of the incident and key lessons, is available on the DAIB DefNet site here: <https://modgovuk.sharepoint.com/sites/defnet/dsa/Pages/DAIB-Reports.aspx#Heading2>

Article contributed by Major Tania Reay, SO2 UAS, Joint Helicopter Command

UK Drone Operation Update

Drone technology is extremely useful, great fun to use and unquestionably, here to stay within both the military and the civilian sector. As drone operators are legally responsible for every flight they undertake, it is essential they keep up to date with the law, comply with it and ensure they minimise the risk of mid-air collision with a manned aircraft and injury to the general public.

Flying a Privately Obtained Drone

Whenever a privately obtained drone is flown for personal use /commercial gain, its operation is governed by the Air Navigation Order (ANO); specifically by Articles 94, 95, 240 and 241. Operators need to be aware that on 31 May 18, Parliament passed an amendment to the ANO which, from 30 July 18, implemented a legal requirement for:

- A height ceiling of 400ft (120m) for all drone flights.
- A restriction on flying drones within 1km of protected aerodromes within the UK, unless with the permission of the relevant ATC unit.

As a result, any operator who flouts these new height and airport restrictions could be charged with recklessly or negligently acting in a manner likely to endanger an aircraft in flight or a person in it and could face an unlimited fine, up to five years in prison or both. Furthermore, as part of a wider programme of new drone legislation to be published soon, police are to be given more specific powers for 'on the spot' intervention for inappropriate drone use.

The 31 May 2018 amendment to the ANO also introduced further changes which, from 30 November 2019, require:

- Operators of drones above 250g to be registered.
- Operators of drones above 250g to obtain an acknowledgement of competency from the Civil Aviation Authority (CAA) which includes an online safety test.

During the intervening period the CAA will complete its work on producing the systems and educational materials needed to deliver the changes so that operators are able to comply within the deadline.

Before flying a drone for legitimate commercial purposes, operators must first seek permission from the CAA. They must also attend an accredited course which includes flying competence, knowledge of the law, risk assessment, decision making, etc. to ensure they do not expose the general public or manned aviation to unnecessary danger. Further information can be found on the CAA website.

MOD Personnel Operating Military Procured Drones

Both military and civilian MOD personnel who use MOD procured commercial off the shelf drones for non-core Service aviation purposes such as photography, multimedia application, surveys, etc. are subject to regulation by the Military Aviation Authority (MAA). As such they are specifically governed by MAA Regulatory Articles 1600 (Remotely Piloted Air Systems) and, in particular, 2321 (Class 1(b) Remotely Piloted Air Systems – Operator Qualifications and Requirements), each of which is very similar to civilian regulations for commercial use of small drones.

Available Drone Resources

- **CAA Drone Code.** The CAA's Drone Code is designed to help ensure that UK drone users can easily access the information they need to fly drones safely and legally, without endangering others. See: <https://dronesafe.uk/>
- **The Drone Portal.** As the Defence lead for reducing the risk of a Mid-Air Collision with a drone, the RAF Safety Centre has developed a Drone Portal: https://modgovuk.sharepoint.com/teams/5699/SafetyPortal/20180309-RAFSC_Portal_Drones.pdf?csf=1&e=TPmsh4. The portal features links to information on changes to regulation/legislation and relevant new information/further reading. It also provides links to a drone video and game (see below).
- **Ask, Look, Listen Drone Safety Video.** The RAF Safety Centre has produced a safety information video aimed at informing leisure drone pilots on the importance of aviation safety and pilot responsibility. The video is available as a DVD from the RAF Safety Centre and via YouTube: <https://www.youtube.com/watch?v=-OH6wUosG4>
- **The National Air Traffic Service (NATS) Drone Run Game.** NATS hosts the fun and interactive Drone Run game, where players must fly their drone whilst avoiding increasingly busy skies. The game has been designed to provide education on drone law and safety in an enjoyable manner. The game can be played on a phone, tablet and even on MoDNET. See: www.nats.aero/dronerun/

Done Code: Your Responsibilities

- **Be Drone Safe**
 - Always keep your drone in sight.
 - It's against the law to fly your drone over 400ft (120m).
- **Be Drone Aware**
 - Every time you fly your drone you must follow the manufacturer's instructions.
 - Keep the right distance from people and property.
- **Be Drone Legal**
 - You are responsible for each flight.
 - Stay well away from aircraft, airports and airfields. It is against the law to fly your drone within 1km of an airport/airfield.

Nominations for Army Safety & Environment Awards 2018

Nominations are invited from Army Regular, Reserve and Cadet Units for the Army Safety & Environment Awards 2018, to be held as part of the Army Safety and Environment Conference 2019 (ASEC 2019).

The categories for award entries are as follows:

1. **Individual Safety Award** – for the individual who (in the opinion of the nominating SO1FP / SO1SHE) has made the most significant contribution to safety management within their area over the last 12 months.
2. **Individual Environmental Award** – for the individual who (in the opinion of the nominating SO1FP / SO1SHE) has made the most significant contribution to environmental protection within their area over the last 12 months.
3. **Unit Safety or Environmental Award** – for the unit who (in the opinion of the nominating SO1 FP/SO1SHE) has made the most significant contribution to safety or environmental protection within their area over the last 12 months.

All nominations are to be submitted to Sharon Foster, SO2 Comms:
sharon.foster474@mod.gov.uk **no later than 22 February 2019.**
Awards will be presented by DCGS at the ASEC 2019 – see below.



Army Safety & Environment Conference 2019 (ASEC 2019)

Following the success of ASEC 2018, invitations will shortly be sent out for ASEC 2019 to be held in Tidworth Garrison Theatre on 21 March 2019 (08.00 to 16.30).

Our theme for the conference will be 'Safety Culture' and confirmed speakers are as follows:

- **DCGS – Lieutenant General Nicholas Pope.**
- **DG DSA – Lieutenant General Richard Felton.**
- **Simon Ruda – Director of Behavioural Insights Team.**
- **Harriet Hancock – Head of regime services HMPPS Youth Custody Services.**
- **Paul Brooks – Group director, Health Safety & Environment, TATA Steel.**
- **WO1 Glen Haughton – Army Sergeant Major.**

The event is open to all personal, uniform or civilians, engaged in Safety & Environmental Protection within the Army. The closing date for requests to attend the conference is 22 January 2019.

If you haven't received your invitation by 8 February 2019, please get in touch with Sharon Foster, SO2 Comms: sharon.foster474@mod.gov.uk



Key Contacts

To convert the following Mil numbers to Civ, dial 01264 88 and then add the last 4 digits.

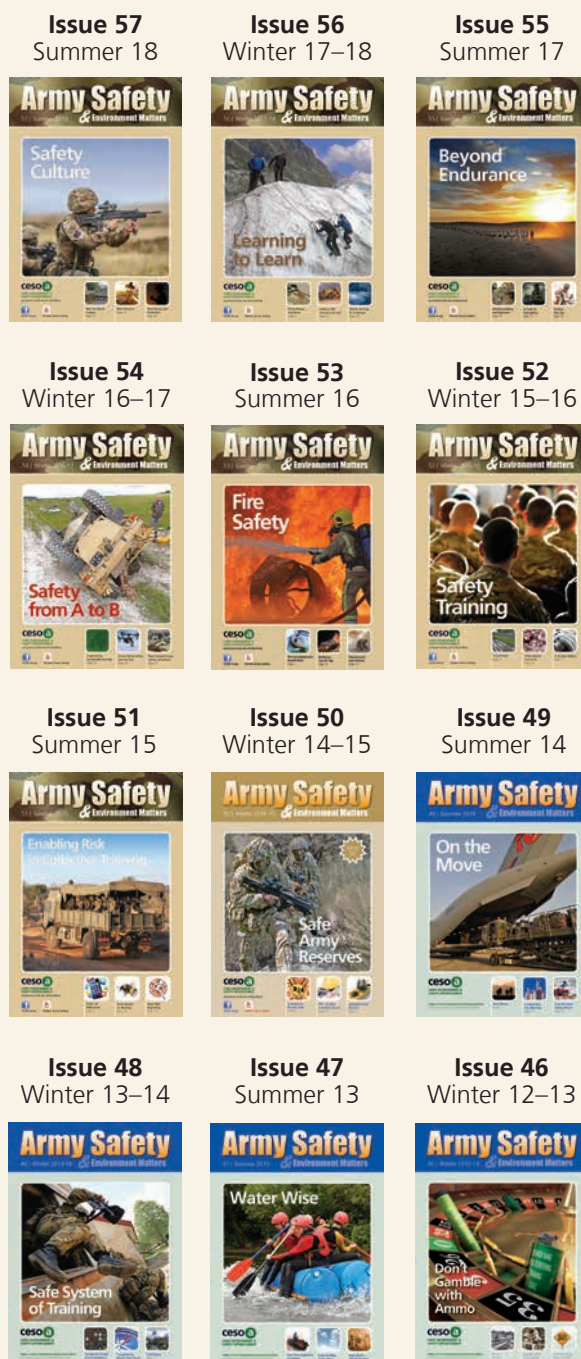
CESO(A)	
CESO(A) – Col Mike Jeavons	9 4393 7051
DCESO(A) – Lt Col Kev Howard Perry	9 4393 6791
SO1 Safety Pol – Adam Neale	9 4393 7052
SO1 Safety Management – Martyn Cox	9 4393 7058
SO2 Lessons – Jenny Godfrey	9 4393 7059
SO1 Audit – Lt Col (Retd) Ian Tennent	9 4393 7627
SO2 EP&SD – Simon Morriss	9 4393 7624
SO2 Comms – Sharon Foster	9 4393 7037
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DAIB LAND Ops1 – Maj (Retd) Billy Evers	07717 424001
DAIB LAND Ops2 – Maj (Retd) Andy Neary	030 679 86589
DAIB LAND Ops3 – Capt Mark Symonds	07717 424005
DAIB LAND Ops4 – Capt Reg Pierce	07717 424004
DAIB LAND Ops5 – WO1 Lee Fairbanks	07717 484018
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DAIB LAND Eng1 – WO1(ASM) Tony Craven	030 679 82533
DAIB FAX (Mil)	9 4391 7551

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This and previous issues are available on the Defence Intranet and can also be downloaded from <http://www.armysafetymag.uk>



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