

Curriculum Vitæ

Andrew Vian Smith, (AVS), Andy Smith

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Specialist in Humanitarian Mine Action (HMA) covering:

- ERW hazards in HMA, including IEDs;
- project design and management;
- manual and mechanical demining procedures;
- detection technologies, tools and procedures;
- accidents and injury avoidance (risk management);
- training in HMA activities;
- International Mine Action Standards (IMAS);
- the integration of HMA activities with post-conflict peace-building efforts;
- protective equipment for HMA;
- survey and Land Release.

Citizen of the UK, resident in Wales

Licensed to retain inert mines in the UK

Age 64. Married.

Full, clean, UK driving licence.

Broad computer skills.

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www.nolandmines.com

www.ddasonline.com

Whether establishing a programme, running a programme, empowering nationals, identifying problems and solutions or wanting a cogent report written – I am open to offers of challenging work, either under contract or acting as an independent consultant. At the time of writing, family care requirements oblige me to only accept work that can be home-based.

Formal and informal qualifications

- BA 2.1 in Philosophy and Literature (Warwick University, UK) 1982;
- PGCE - (Post Graduate teaching qualification), UK, 1984;
- Member of the British Standards Institute PH/3/12 Protective Clothing and Equipment committee;
- Originator and keeper of the independent [Database of Demining Accidents \(DDAS\)](#);
- Originator and author of the popular Mine Action website – www.nolandmines.com;
- Co-author and editor of EU publication – [Metal-detector handbook for Humanitarian Demining](#);
- Originator of blast visor manufacturing method for technology transfer that now provides the [most used blast visors](#) in Humanitarian Mine Action (manufactured in a mine-affected country and sold on by major European suppliers);
- Originator of the [frontal blast-apron body-armour](#) concept for Humanitarian Demining, variations on which are now the norm in Humanitarian Mine Action;
- Originator of the [design rules for](#), and simple manufacturing methods of, genuinely [blast-resistant tools](#) for Humanitarian Mine action.
- Author of significant parts of the 2017 GICHD *Field Risk Management* training course.
- Holder of the IGEO silver dinosaur (with a beard to match).

Work experience as:

- Chief Technical Advisor (CTA) for UNDP country programmes (Tajikistan, Libya, Lebanon);
- CTA for commercial demining groups;
- Country programme manager and Technical Advisor/trainer for several HMA INGOs;
- Senior consultant (roster) for OSCE and UNDP CRU;
- "Subject Matter Specialist", researcher and advisor for US government agency;

- Longest ever member of the [IMAS](#) Review Board, 2001 – 2011, during which I drafted and co-ordinated the group drafting of many IMAS;
- Trainer and developer of HMA SOPs and training materials for GICHD and varied HMA organisations, including producing generic C-IED and SUA (small drone) SOPs;
- Researcher for GICHD and Universities (devising, then implementing HMA projects to conclusion and also in support of projects devised by others);
- Demining equipment and process field testing;
- Design and technology transfer of appropriate equipment for HMA;
- Process advisor to commercial and NGO demining groups;
- Advisor to EU funded research projects and various universities in Europe and USA;
- Independent assessor of commercial equipment including tools, detectors and PPE;
- Providing programme assessment consultancy for OSCE;
- Registered consultant/assessor to OSCE and UNDP;
- HMA Industry accident specialist;
- Deminer and mined area surveyor.

Originally a development worker, I have been involved in Humanitarian Mine Action (HMA) since late 1995. This has involved working on HMA tasks in Afghanistan, Angola, Bosnia Herzegovina, Cambodia, Croatia, Iraq, Jordan, Kosovo, Lebanon, Libya, Mozambique, Myanmar, Namibia, Sri Lanka, Tajikistan, and Zimbabwe. Related work has been conducted in non-mine-affected countries including Canada, Italy, France, Germany, Kazakhstan, Kyrgyzstan, Montenegro, Namibia, Norway, Sweden, Republic of South Africa, Switzerland, and the USA.

Starting as a novice surveyor and deminer, I have gained experience in Humanitarian Mine Action at all levels up to UNDP CTA. I have become a technical specialist in mine clearance, programme management, effective demining procedures, AP mines (and their effects), accidents in demining (their investigation and their prevention as part of formal risk management) and the training needs of national deminers. My close knowledge of the IMAS has led to my providing practical assistance in drafting national HMA standards for several countries. I excel at identifying problems and at writing clear, forensic reports. When contractual discretion is required, it is guaranteed.

As the originator and keeper of the [Database of Demining Accidents](#), I gathered enough evidence and experience to become an evidence-based safety and risk management specialist. Alongside field work, I have instigated and carried through projects to develop, prove and establish in local production safety equipment and training materials for use in HMA (never for personal profit but always aiming to be commercially viable, so sustainable). Examples are the most commonly used blast visor, the frontal apron protection used in HMA (which has been widely developed by others), blast resistant hand-tools, simple explosive disrupters, innovative pictorial training materials, and AP blast mine resistant wheels.

With a background in development work, I have a genuine respect for and empathy with the nationals wherever I find myself and have worked closely with members of the armed forces in many countries. We have not always achieved what we set out to do, but by starting from where we were, not where someone else thought we *should* be, we have always managed to move forward.

My work over recent years is detailed (and earlier years summarised) in what follows. A list of relevant publications is appended.

2018 activities

Jan-Feb: Working with the Lebanon Mine Action Centre (LMAC) for UNDP on the revision on the National Mine Action Standards (NMAS), including the provision of an original IED Search & Clearance NMAS.

Sept-Nov: OSCE consultant in Kazakhstan and Tajikistan, including presenting on IEDs and on accident investigation in HMA.

Various home-based minor consultancies.

2017 activities

Provision of consultancy services to commercial, INGO and individuals working in HMA, including advising on risk management, national strategy and the drafting of national standards;

Jan-Sept: Conducting original research for University of Genoa, Italy, into improved low-order disruption techniques, including EFPs, thermite and flares;
Jan-June: coordinating with Palau national authorities to draft the shortest and clearest national mine action standards ever;
May: speaker on R&D and ICBL at 14th International Symposium on HMA, CTRO, Croatia (papers published);
June-July: stand-in Programme Manager for HMA project in the Pacific (covering holiday leave);
August: contracted to write a public access SOP covering the use of Small Unmanned Aircraft in HMA: this is intended to serve as a national standard where none exists;
Nov-Ongoing: Chief Technical Advisor to the Lebanon MAC conducting a comprehensive review of the National Mine Action Standards and assisting with the draft of the 2nd Edition NMAS; and
Continuing to gather accident data for the DDAS whenever possible.

2016 activities

Provision of consultancy services to commercial, INGO and individuals working in HMA, including advising on national strategy documentation, risk management and donor access;
Authoring and publishing public access SOP for dealing with IEDs in HMA;
Researcher working with University of Genoa, Italy, on HMA related technologies;
Oct-Dec: Contracted to GICHD to produce lessons and materials making up an extensive Operational Risk Management in HMA Training course;
Contracted by INGO to draft National Mine Action Standards; and
Continuing to gather accident data for the DDAS whenever possible.

2015 activities:

Jan-Dec: Royal Military Academy, advisor to EU R&D for HMA project. Also advising on EU CWA test protocol for demining machines that are not designed to detonate/disrupt mines;
April-ongoing: Consultancy to machine manufacturer and University of Genoa conducted in Italy and Croatia. Advising on a demining machine designed to be sustainable by being versatile enough to be used after demining is finished;
Feb-May: Editor of original academic study on the authorship of the Shakespeare canon;
April – speaker on R&D in demining at 12th International Symposium on HMA, CTRO, Croatia;
Aug-Nov: Consultant Mine Action Specialist for OSCE Office in Tajikistan, developing strategy with Government of Tajikistan, monitoring field efforts and advising on future activities;
Sept: Main speaker and moderator at one week Regional HMA workshop in Bishkek, Kyrgyzstan, seeking regional co-operation over HMA issues; and
Continuing to gather accident data for the DDAS whenever possible.

2014 activities:

October: independent assessment of new mine/ERW detection technology on behalf of potential investors;
Jan-Dec: Invited member of the Project Advisory Board for an EU funded HMA research group (TIRAMISU);
Jan-Dec: Advisor to HMA R&D programme based in Italy;
Jan-Dec: Associate member of innovative INGO establishing the first Humanitarian Mine Clearance in Myanmar, including demining and training in Myanmar and Thailand;
Jan-Feb: Independent assessment of innovative metal detector for its UK developer; and
Minor activities throughout on the maintenance of the DDAS.

2013 activities:

Jan-March: Independent HMA consultant to a PPE manufacturer in Zimbabwe;
Jan - December: ad-hoc advisor to LMAC in Libya (CTA/TA) from UK;
March-May: Consultancy to commercial company in Iraq, drafting SOPs etc.;
June-Aug: Design and development of innovative ballistic armour;
November: independent assessment of HMA PPE for Korean commercial manufacturer;
Oct-Dec: various advisory and consultancy tasks including task assessment in Kuwait on behalf of Indian INGO, Metal detector tests for industry leading manufacturer and drafting support

documents for machines in demining; and
Nov-Dec: Invited member of the Project Advisory Board for an EU funded R&D research group.

2012 activities:

Jan-Dec: Advisor to LMAC in Libya (CTA/TA), in UK and funded by INGO: based in Tripoli for three months, then from UK;
March-August: Drafting new SOPs for two international commercial demining organisations; and
Jan-Dec: minor activities on the maintenance of the DDAS.

2011 activities:

Jan-July: updating the Database of Demining Accidents;
Feb/March: Consultancy to international training group on metal-detector use and related accidents;
March: Completing IMAS revision draft for mechanical demining;
March: drafting a business plan for testing of PPE in HMA;
April/June: conducting a field study and preparing an in-depth report on an innovative demining effort in Sri Lanka;
June-Oct: managing research project on Libya for INGO preparing for intervention;
June-Dec: advising LMAC in Libya (as an independent) including trips to Libya during the conflict; and
Continued active membership of the IMAS Review Board until being obliged by UNMAS to leave when the IMAS became effectively UNMAS/GICHD standards in October 2011 (I did not have confidence in the leadership).

2010 activities:

Jan: Provision of SOPs and advice to commercial demining consortium; and
Part sabbatical during early months;
Jan-June: Collaborative design and blast testing of innovative AP blast-resistant wheel designs with University of Genoa, Italy;
June: TNT blast testing of first production HMA Mask-visor in Italy;
Aug-Dec: Design and development of innovative ballistic armour in collaboration with EDaS, UK;
Nov-Oct: Consultancy on PPE and safety provided to government body in the Republic of South Africa;
Oct: presentation to a government group about the accident record in HMA;
Nov: Consultancy to commercial demining company operating in Angola;
Varied: Consultancy to PPE manufacturer in Zimbabwe;
Continued active membership of the IMAS Review Board, including submitting revisions; and
Gathering accident records for DDAS update.

2009 activities:

Jan-June: varied work on IMAS Land Release and Field Risk Assessment documents;
Feb-June: CTA UNDP Mine Action, Libya (drafting national standards and appraising needs);
Oct-Nov: technology transfer of new designs of visor and PPE to manufacturer in Africa, and establishing same in manufacture; and
Continued active membership of the IMAS Review Board: various design work: various short consultancy tasks.

2008 activities:

Jan-Feb: updating [database of demining accidents](#);
Jan-March: consultant/trainer contracted to an international NGO in Jordan. Field trials of high-pressure excavation lance and blast boots, detector selection trials, etc.;
July-Sept: consultant UNDP Angola writing SOPs and training materials. Prepared international SOPs with Asian NGO seeking UN accreditation (successfully);
Sept - Dec: Writing generic SOPs for Humanitarian Demining; and
Continued active membership of the IMAS Review Board: various design work: various short consultancy tasks.

2007 activities:

Jan-Feb: Programme Manager for HMA INGO in Sri Lanka;
Feb - Sept: UNDP Chief Technical Advisor for humanitarian mine action in Tajikistan;
Oct-Dec: consultant/trainer contracted to an international demining organisation in Jordan;
and
Continued active membership of the IMAS Review Board.

2006 activities:

Aug - December: Programme Manager for HMA INGO based in Sri Lanka;
Jan: CTA for Commercial demining group, preparing IMAS compliant generic SOPs and preparing bids; and
Continued active membership of the IMAS Review Board.

2005 activities:

Jan-May: contracted to INGO in Sri Lanka as a Technical Advisor and Trainer for Asian demining INGO partners. The work included the development of tools and machines to assist manual demining with Asian demining NGOs, training and carrying out equipment tests and trials alongside normal TA duties. I also prepared various SOPs and related documents for the national accreditation of the partner NGOs;
May: invited specialist at KODE Design AS Humanitarian Demining PPE workshop in Oslo, working on an improved demining visor which became the ROFI mask);
Oct-Nov: Consultant drafting documents for INGO in Sri Lanka. Designing the on-line version of the Database of Demining Accidents (DDAS);
Dec: speaker at BAM's "Reliability tests for Demining" in Berlin; and
Continued contract to update the Database of Demining Accidents for UNMAS/GICHD.

2004 activities:

Jan: I was part of the management and presentation board of the EU's Joint Research Centre (JRC), ISPRA's workshop on the use of metal-detectors in Humanitarian Demining (following joint authorship of the handbook on the use of metal detectors in humanitarian demining).
Jan-Dec: contracted to the UN Mine Action Service (UNMAS) through the Geneva International Centre for Humanitarian Demining (GICHD) to update and analyse the database of accidents that have occurred during mine-clearance (I began that database in 1998);
July-Dec: contracted to GICHD to devise, carry out and report 2004 field studies of manual demining in Iraq, Sri Lanka, Afghanistan and Cambodia (followed by field trials in Mozambique) as part of an ongoing study of Manual Demining; and
Elected member of the Review Board for the UN's International Mine Action Standards, and an invited member of various groups concerned with the development of standards and best practice within humanitarian demining. Member of CEN/BT/WG 126 and drafted the business plan with a view to achieving consensus on developing appropriate tests for protective equipment within the HD industry.

2003 activities:

Jan-Nov: writing (joint authorship and editor) the *Metal Detector Handbook for Humanitarian Demining*, published by the EU and distributed by the UNMAS and the EU;
Feb: training SWEDEC deminers on the risks in Humanitarian Demining in Kosovo. Training industry technicians in HD generally;
March: Instructing engineering students at MIT, Boston, USA and University of Warwick, UK, on varied demining issues;
March-April: Various research throughout Southern Africa, including contracts to write NGO SOPs to meet the new International Standards, writing a risk-assessment for the live-area testing of a new detection technology, and a formal assessment of an NGO's problems with its insurer;
June: contracted to South African government agency to attend, address and document mined-area marking workshop with a view to improving marking systems;
July-Oct: contracted as adviser, trial-planner and independent observer of innovative demining technology trials in Angola. (Trials took place in October/November 2003);
Nov: Invited adviser and speaker at the ITEP - Workshop, (International Test and Evaluation

Program for Humanitarian Demining) on Reliability Tests for Demining, Berlin;
Occasional advisor/consultant to demining NGOs, and to academic and research institutions;
Elected member of the UN International Mine Action Standards (IMAS) review board; and
Continued gathering of data for the Database of Demining Accidents.

2002 activities:

Jan: Completion of Version 3 of the DDAS (formerly DDI, Database of Demining Incidents) for UNMAS;

Feb-March: Devising, arranging and completing a series of six Mine Action workshops with demining groups throughout Mozambique and Zimbabwe. The workshops introduced the "Mined Area Indicators - Mozambique" training resource to deminer and surveyor trainers. The National MAC (IND) requested several hundred copies for National distribution;

March: Various activities throughout Southern Africa, including the provision of inert AP landmines for US DoD via consultants in Namibia; advising the Namibian Explosives Police; and the collection of injury data and explosive ordnance records. Researching and authoring ordnance fact sheets for field use;

April: the ITEP/JRC, invited "expert advisor... to contribute a user's perspective to the work on specifying metal detector test and evaluation in CW07". ISPRA, Italy;

April: SWEDEC Scientist/Technician course, EOD school, Sweden and in the field in Croatia. Attending as instructor and trainee! Certificate gained;

June: Judge (for the fourth year) in Mine Action Canada's annual academic competition to find engineering technology appropriate for exploitation in HD;

Aug 2002 - 2003: editor and joint authorship of hand-book on metal-detectors and their use in humanitarian demining (finished in 2003);

Dec: the ITEP/JRC, invited "expert advisor... to contribute a user's perspective to the work on specifying metal detector test and evaluation in CWA 07". ISPRA, Italy;

Elected member of the UN International Mine Action Standards (IMAS) review board; and
Occasional advisor/consultant to demining INGOs.

2001 activities:

Jan-Feb: accident research assisted by the MACC in Kosovo.

Jan-Dec: Update of the Database of Demining Accidents (formerly the AVS Database of Demining Incident Victims) with GICHD/UNMAS;

March and August 2001: design and build multi-sensor detector test area in Angola for demining NGO and manage/report its first usage by EU research programme DEMINE;

March-June: Authoring and production of [Mine Action training resource for Angola](#) - a resource pack featuring 55 x A3 (US B) sized colour photographs of mined areas, mined area indicators and detailed mines. This work was carried out with the GWHF (a US Foundation) and funded by US DoS;

June: Judge (for the third year) in Mine Action Canada's annual academic competition to find engineering technology appropriate for exploitation in HD;

Aug: advise/organise/implement/document blast testing of PPE with Namibia Explosive Police for SADEC;

Aug: Advisor to UNMAS as active member of User focus group involved in the production of the new Internal Mine Action Standards;

Elected member of the UN International Mine Action Standards (IMAS) review board; and
Occasional advisor/consultant to demining NGOs

1999-2000 activities:

Active invited member of GICHD/UNMAS User Focus Group engaged in advising on the revision of UNMAS International Mine Action Standards. Occasional advisor/consultant to demining NGOs;

Jan-Sept: programme with US government agency to develop and demonstrate protective equipment items for use in humanitarian demining. This included the development of a range of safer demining hand-tools that are now widely used, and completion of earlier work on visor and armour production suitable for exploitation in mine-affected countries (no proprietary rights on any designs are retained and details are given freely on request);

June-Dec: Production of Mine Action training resource for Mozambique - a resource pack

featuring 55 x A3 (US B) sized colour photographs of mined areas, mined area indicators and detailed mines. This work was carried out a US Foundation and funded by US DoS;
June: Production of "pilot" training materials to assess the potential of the later programme;
August: Invited independent observer at HD equipment trials in Namibia;
Aug-Dec: general and demining accident research in Mozambique, Zimbabwe, Angola, Namibia; and
Sept-Dec: design and production of prototype micro-vegetation cutter for use in humanitarian demining HD (in collaboration with radio control and robotics specialists in Florida, USA).

1998 -1999 activities:

Occasional advisor/consultant to demining NGOs, MIT Boston and to Cranfield University's Mine Action Centre, UK; and

Jan-Dec: Subcontracted to US Army CECOM NVESD as a subject matter specialist. This involved making extensive field visits and producing reports, video and photographs. I spent much of my time travelling in mined countries (Afghanistan, Cambodia, Bosnia Herzegovina, Angola, Mozambique and Zimbabwe) researching the demining methods, equipment, management regimes and the various incidents/accidents that had occurred. I took advantage of being in mined areas to continue the explosive testing of equipment that I had started previously, gathered information on UXO for the US ORDATA database. I also arranged, conducted and documented field trials of a variety of new equipment. Blast testing and field trials of equipment took place at various sites in Afghanistan, Angola, Mozambique and Zimbabwe.

Prior to 1998:

With a background in developing and installing appropriate equipment for manufacture and use in developing countries (water pumps), I became active in Humanitarian Demining in 1994/5. I worked either independently or with the engineering departments of academic institutions (UK and Australia) developing a range of protective equipment, tools and vegetation cutting machines for use in HD until 1997, when I cut ties with those academic institutions. During that time I was trained by the British Royal Engineers and (more appropriately) by small commercial demining and surveying groups in Africa. I carried out numerous blast tests of equipment in the UK, Africa and Asia, inadvertently becoming both a deminer and a technical specialist in AP mines and their safe removal.

Some publications available online

My well used websites www.nolandmines.com and www.ddasonline.com provide the best examples of my publications.

[*PPE Development and Needs in HMA*](#), Editorial, Journal of Conventional Weapons Destruction, CSIR, JMU, USA, May 2018

[*Black Adder Disrupters*](#), Andy Smith, (co-authored with William Bagley of Johns Hopkins University, USA), Issue 21.3, Journal of Conventional Weapons Destruction, CSIR, JMU, USA, November 2017.

[*Using Small Unmanned Aircraft \(SUA\) in HMA*](#), Andy Smith, Journal of Conventional Weapons Destruction, Issue 21.3, JMU, USA, November 2017.

[*An APT Demining machine*](#), Journal of Conventional Weapons Destruction, CSIR, JMU, USA, July 2017.

[*Why we fail to meet the primary goal of the Ottawa Convention*](#), 14th international Symposium Mine Action 2017, HCR-CTRO, Croatia, 2017.

What is humanitarian Mine Action? Last delivered at Pearson Engineering, March 2016: paper at: <http://www.nolandmines.com/General intro to HMA.pdf>

[*Generic SOPs - Handbook for Humanitarian Demining*](#) (2nd edition 2009). Now in 2019, [Global SOPs](#). Distributed freely and widely downloaded (many well known HMA groups use some of the content).

[*Metal-detector Handbook for Humanitarian Demining*](#): Editor and main contributor, Andy Smith. Pub EU, 2003, ISBN 92-894-6236-1. Distributed by UNMAS, GICHD, ITEP and the EU. Available as a download *.pdf file.

Using the Database of Demining Accidents, by Andy Smith (6.2)
maic.jmu.edu/journal/6.2/notes/andysmith/andysmith.htm

Myths, Mines and Ground Clearance [Article 2], by Andy Smith (7.2)
maic.jmu.edu/journal/7.2/notes/smith/smith.htm

Driving the HD Machine in the African Bush, by Andy Smith (6.2)
<http://maic.jmu.edu/journal/6.2/features/andysmith/andysmith.htm>

Developing Safer Demining Hand-tools in Zimbabwe, by Andy Smith (6.2)
maic.jmu.edu/journal/6.2/focus/andysmith/andysmith.htm

Need To Know? Mine Action Education Resources, by Andy Smith (6.3)
maic.jmu.edu/journal/6.3/features/smith/smith.htm

Myths, Mines, and Ground Clearance [Article 1], by Andy Smith (2.3)
maic.jmu.edu/journal/2.3/features/myths.htm

IMAS and PPE Requirements, by Andy Smith (7.1)
maic.jmu.edu/journal/7.1/focus/smith/smith.htm

The Facts on Protection Needs in Humanitarian Demining, by Andy Smith. (4.2)
maic.jmu.edu/journal/4.2/Focus/PN/protectneeds.htm

Observations and inferences – Reflections on the AVS Database of Demining Incidents...
www.minesactioncanada.org/techdocuments/smithmineinjuryreport.html

MINE INJURY DATABASE Observations and inferences: See [Crunching data](http://www.minesactioncanada.org/techdocuments/deminerinjury.html)
www.minesactioncanada.org/techdocuments/deminerinjury.html

Injuries that Occur in Humanitarian Demining, Landmine Monitor 1999
www.icbl.org/lm/2000/appendices/injuries.html

The future of "Humanitarian" demining: charitable or commercial? by Andy Smith
www.minesactioncanada.org/techdocuments/commercial.html