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TASK MANAGEMENT

Standard Operating Procedures (SOPs)

AMMENDMENTS

This amendment record is to be completed for each formal amendment to these SOPs. Formal amendments can only be authorised and implemented by the Operations Manager (with advice from the Capability Group as required)

Version	Amendment	Date	Amended By
v.3	Version produced following external review by Artois ltd. Various changes, for detail see report (available from Capability Group)	3 Aug 18	NT
v.3	Changes on safety distances Annex C	Jan 19	JV
v.31	Update following review in Iraq	Apr 19	NT
v.311	Additions to glossary following IMAS review & minor clarifications to safety distances	Jun 19	NT

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SECTION ONE - Introduction

1.1 Overview

Whilst Improvised Explosive Devices (IEDs) and booby-traps have been used throughout history to deny ground or slow an advance, the active participation in fighting in contemporary conflicts by non-state and state groups who lack access to large quantities of conventional munitions and equipment has led to the development and evolution of non-conventional, improvised explosive devices and munitions; designed not only to target incumbent forces but to defeat their clearance capabilities. These non-state armed groups have also made extensive use of IEDs in congested urban environments, deliberately targeting civilians and the critical infrastructure that facilitates a stable society. To that end, the need to monitor emerging techniques and device characteristics that are affiliated to different actors and adapt procedures in the areas HALO operates is of vital importance.

IED threat mitigation has many considerations which are different from normal ERW clearance procedures. The aim of this SOP is to offer pragmatic guidance and structure to conducting Humanitarian IED Disposal (HIEDD). HIEDD is distinct from the disposal of conventional munitions as IEDs will:

- Often incorporate electrical firing circuits as a means of functioning.
- The clearance operator is unlikely to know the full nature of the device until an RSP (Render Safe Procedure) is complete.
- IEDs are unlikely to incorporate reliable safety features.

As such it is unlikely that one can apply template/pre-planned RSPs to all devices. However, through the application of an interlinked set of philosophies, principles, mandatory actions, conventions, referrals and procedures HIEDD operations can be conducted in a safe and reliable manner that can be internally and externally quality controlled, monitored and assured

1.2 Aim of Humanitarian IED Disposal

The aim of HIEDD is to provide Mine Action (MA) organisations with the capability to dispose of IEDs whilst conducting clearance operations under the Convention on Certain Conventional Weapons (CCW) Amended Protocol II (AP II).

1.3 HIEDD philosophies

The following philosophies, in priority order, provide the foundations from which all HIEDD operations must be planned and executed:

- Protection of life
- Protection of property
- Returning the situation to normal as soon as possible
- The gathering and sharing of information where safe to do so

1.4 Operating Environment

The operating environment in which HALO may work will have technical implications as well matters of general humanitarian principle. One of the key concerns of IEDD when conducted by security forces (police and military) is ensuring that any action by an EOD operator cannot be subsequently used by perpetrators to target them. For example, regularly moving IED components by hand is likely to result in anti-handling features being built into future devices to kill/maim the EOD operator attempting to render them safe. While HIEDD operations should be free of this concern (as they should always be taking place in a neutral environment), HALO will always be aware of historical patterns set by police/military forces and draft its procedures accordingly.

Defining the specific limitations of what constitutes 'humanitarian space' is challenging, and HALO will review this on a regular basis. However, in general HALO should seek to ensure that the environment is permissive (both in terms of being free from active belligerents and having consent of the relevant local authorities, further detail on this distinction is at Annex A) and the nature of the devices fall within the technical capacity of HALO personnel (further detail at Part 5 of these SOPs).

If at any stage it becomes apparent that HALO teams are being deliberately targeted then operations should cease immediately, until it can be confirmed that HALO teams are no longer under the direct threat of hostile activity or targeting.

1.5 SOP Structure

HALO's IED SOPs are designed to be read as a single document, but only specific parts may be needed for each individual task. Changes may only be made by the Operations manager or Programme manager and must be submitted to the Regional Director for approval. The structure is as follows:

- HALO Global IED SOP Part 1 - Overview and Task Management (this SOP)
- HALO Global IED SOP Part 2 - Non-Technical Survey
- HALO Global IED SOP Part 3 - Manual Clearance and Technical Survey
- HALO Global IED SOP Part 4 - Mechanical Clearance
- HALO Global IED SOP Part 5 - IED Disposal (IEDD)

SECTION TWO - Definitions, Categorisation and Principals

2.1 IED Definition¹

A device placed or fabricated in an improvised manner incorporating explosive material, destructive, lethal, noxious, incendiary, pyrotechnic materials or chemicals designed to destroy, disfigure, distract or harass. They may incorporate military stores, but are normally devised from non-military components.

Note: An IED may meet the definition of a mine, booby trap, and/or other type of explosive ordnance depending on its construction. These devices may also be referred to as improvised, artisanal, or locally manufactured mines, booby traps, or other types of explosive ordnance (IMAS 2018).

IEDs may be mechanical, electrical, igniferous or (in rare cases) chemically initiated and are likely to incorporate the following features:

- **Main Charge.** Bulk low or high explosives intended to create the perpetrators desired effect. The explosives may be homemade, military or commercial and/or enhanced by fragmentation generating material.
- **Initiator.** The component designed to initiate the main charge following the activation of the switch, often a homemade or manufactured detonator.
- **Firing Switch.** The component which responds to the functioning action (see para 2.2 below) and results in energy being delivered to the initiator (e.g. a pressure plate).
- **Power Source.** Often an electrical battery which supplies power to the initiator, in the case of mechanical IEDs this may simply be a spring powered cocked striker.
- **Container.** The means by which all other components are encased. This may be designed to camouflage the device (such as a suitcase) and/or generate fragmentation.
- **Safe-to-Arm Feature.** Sophisticated IEDs may incorporate a means of ensuring that the perpetrator can emplace the device safely. It should be noted that it is the firing switch not the safe-to-arm feature that categorises an IED. (e.g. a pressure plate device may incorporate a mechanical safe-to-arm timer, but this would still be considered a Victim Operated IED).

2.2 IED Categorisation

HALO should be guided by the national authorities, but a straightforward means of categorisation based on an IED's intended means of functioning is as follows:

- **Time.** An IED designed to function after a set period of time; this may be extremely short (e.g. improvised grenades) or very long (e.g. devices pre-placed to target political events).
- **Command.** An IED that functions following action by the perpetrator, allowing initiation at an exact moment of their choosing. This may be by a physical link (e.g. a main charge at the

¹ IMAS 2018. A general consensus has been developed regarding the clearance of IEDs MA organisations, and has been ratified through amendments to IMAS.

end of a length of command wire) or non-physical link e.g. a radio controlled (RC) device. Note suicide IEDs are incorporated into this category.

- **Victim Operated.** An IED that functions following an action by the victim (e.g. a pressure plate or trip wire). Requires minimal oversight by the perpetrator but may not strike the intended target. This category of device is the most likely to present in post-conflict humanitarian operations.
- **Combination.** A device that incorporates more than one type of firing switch (e.g. a time device intended to target a political event that also incorporates an anti-handling feature targeting EOD Operators attempting an RSP).
- **Hoax.** A device designed to look like an IED (to cause disruption, fear, or observe operating procedures), but one without a means of functioning and presenting no physical hazard. (e.g. an alarm clock wired into candles)
- **False.** Something that was initially reported as an IED, but following EOD action turns out to be innocuous (e.g. a forgotten backpack left in a railway station)

The majority of IEDs cleared by HMA operators are likely to be victim operated, although devices in other categories may be encountered in smaller numbers.

2.3 HIEDD Principles

Whenever designing clearance plans, drafting SOPs, planning RSPs or conducting other activity related to HIEDD, operations should be guided by the following principles:

- **Remote or semi-remote actions to be used wherever possible².** As full device construction is unlikely to have confirmed prior to positive action and the lack of standardised safety features, all positive action (such as severing electrical links, firing disruptors or removing main charges using hook and line) must be conducted with all personnel clear of the explosive danger area.
- **One person, one risk.** Whether conducting clearance procedures or undertaking an RSP the risk must be carried by a single individual. Safety distances, lane positioning and planning and preparation at the control point should remove the requirement for multiple personnel to be in the target area.
- **Minimum time at target.** The HIEDD operator must ensure that they spend the minimum amount of time possible in the target area whilst conducting an RSP. This is best achieved through prior planning and preparation to ensure that the number of approaches and the working time in the target area are both kept to a minimum.

² Remote means refer to methods that do not require an EOD Operator to approach a device- usually robots. It is unlikely that humanitarian operators will have access to such equipment but it is mentioned here to highlight best practice. Semi-remote actions refer to methods that require physical delivery to the device by the operator but are initiated from a safe distance. Such means are regularly employed in mine-action and include hook & line, disruptors, and explosive donor charges.

- **Soak periods where appropriate.** Soak times following EOD action shall be stipulated at the programme level. As a minimum a 10 minute **soak** period must be applied after positive action is conducted. This protects the HIEDD operator in the event that an electrical misfire³.
- **Methodological approach to search and clearance.** The search methods developed over the past 25+ years of mine action transfer to IED clearance, often with the search and clearance inside buildings posing the biggest challenge. Clearance operations should be structured around the proven method of defining and controlling the search areas, with visual, equipment and physical searches conducted in that order.
- **PPE must be worn for all clearance action.** PPE must be worn during searching and all approaches by the HIEDD operator to the device.
- **Manual actions must not be conducted.** Procedures requiring physical interaction with an IED's firing circuit or explosive chain must not be conducted. This includes manually cutting electrical wires, detonating cord, removing power sources or physically lifting components even if separation has occurred. Explosive destruction in-situ should be considered before any manual action⁴.
- **IED Safety Distances.** Unlike conventional munition disposal, ascertaining the exact explosive hazard presented by an IED prior to conducting positive action is generally not possible. Below are recommended **minimum** cordon and evacuation distances that must be in place prior to conducting positive action on a confirmed IED:
 - HME blast-cased up-to 20kg 200m
 - HME blast-cased over 20kg 300m
 - Metal-cased charge under 20kg 400m
 - Metal-cased charge over 20kg 600m
 - If a large HME or conventional ordnance main charge is confirmed during a task, the HIEDD operator is to reassess the appropriate cordon and safety distance. This may require referral to HALO's Global EOD SOP and/or the Operations Manager. Any intended change in minimum distances due to threat assessment, partial evacuation or location of the task, etc., will require the approval of the Operations Manager.

The HIEDD team⁵ may operate inside these distances due to constraints posed by equipment and the environment- these personnel must be afforded appropriate protection from blast and fragmentation impact. Once an IED has been rendered safe and the main charge(s) prepared for final disposal normal explosive danger areas, in line with HALO Global EOD SOP and IMAS, should be adopted.

³ If mechanical timers have been used as safe-to-arm switches or if secondary timers have been employed by belligerents to deliberately target security force clearance procedures, additional soak period(s) should be applied if these timers could have been started / re-started through positive EOD action. These will be defined by the Operations Manager.

⁴ If, in truly exceptional circumstances, it is believed that manual action is required then authorisation should be sought from HQ Scotland (via both the relevant Regional Director and appropriately qualified member of the Capability Group).

⁵ This is for the minimum number of essential team personnel only. All other HALO staff, civilians and local security forces are to remain outside the minimum cordon and evacuation distance.

SECTION THREE – Task Management Systems

3.1 Management Systems

With the improvised and ever evolving nature of the global IED threat, it is necessary to implement certain systems to maintain an accurate knowledge of the evolving explosive hazard threat that is faced by MA organisations. This will then ensure that HALO can react to new patterns and emerging threats. Information for these systems should be obtained from a wide range of sources, with agreements put into place for information sharing with all relevant organisations. This will ensure a wide and varied information and data capture, minimising the risk of a new threat being missed.

3.2 Improvised Explosive Device Database

As device designs will often change from region to region, or even inside a single task, an IED Database will be kept. This will enable HALO to create procedures for known devices and develop baseline SOPs. As many technical details of the devices will be recorded as possible including make-up, operation, method of attack (i.e. emplacement tactics) and RSPs that have been successfully applied. It should also include common indicators, hazards and any other information which is deemed useful.

- Date of find
- Location of IED
- Type of device
- Depth of find
- Firing Switch
- Main charge
- Method of concealment
- Casualty data (if applicable)
- RSP applied
- Method of discovery (reported, clearance technique etc.)

This information will aid in threat analysis for any areas where operations are to take place. It must be maintained and regularly reviewed for determining threat levels.

As explained in the introduction, the collection of information about IEDs is always a lower priority than the protection of life, limb and property.

3.4 Communications

An effective and robust communication systems needs to be in place as it is vital that teams are able to be in contact with the Operations Room at all times. It is recommended that two forms of communication are available to field teams (e.g. mobile phone and HF). This will allow ease of passage of information, but its most important function is to enable effective emergency procedures to be in place. It is also imperative that clearance teams have access to the experience

and knowledge of the specialists who will be in the Operations Room and the ability to request assistance.

3.5 Sequence of Operations

The aim of HALO operations is to use the most effective and efficient methods to return hazardous areas to productive use. Hazardous areas are identified during non-technical survey and recorded using a Survey Report. These areas are then prioritised for clearance in accordance with humanitarian priorities and organisational capability and capacity. HALO may then conduct further non-technical survey, technical survey and/or clearance to produce end-state land.

Field management staff should be aware that the original non-technical survey report does not produce a definitive account of contamination in an area and operations should regularly review all information and evidence gathered during technical survey and clearance. The Sequence of Operations is as follows:

1. Desktop assessment/impact analysis
2. Non-Technical Survey
3. Task selection and planning
4. Pre-clearance assessment
5. Technical Survey and Clearance
6. Completion and handover

3.6 Non-Technical Survey (NTS)

NTS is the process of gathering evidence about the presence of IEDs to generate Suspect or Confirmed Hazardous Areas (SHA and CHA) using non-invasive means, such as interviews with local communities, reviewing military maps or analysing accident sites. Detail on NTS methods are contained in Part 2 of these HALO Global IED SOPs.

3.7 Task Selection and Planning

Programme work plans are developed in conjunction with local authorities based on local requirements, HALO's projected capacity for the coming year and technical factors.

3.8 Pre-clearance Assessment

Prior to the start of clearance or technical survey operations a Pre-Clearance Assessment is to be conducted. The level of detail and exact time-period/threshold should be determined by the programme based on the threat and currency of survey information, completing the assessment within two weeks of clearance starting is a good rule of thumb. It should aim to verify:

- The information in the NTS report is still valid
- Safe access routes for clearance teams
- Confirmation of safe areas for Baselines, Control Points etc.
- Confirmation that there is still consent amongst all parties for the area to be cleared
- Required clearance methodology, including breach lanes, technical survey plan etc.

- Identify any new information about the target area, recent accidents, clearance by other agencies etc.
- Other information as required

In some areas this may need to be a full resurvey following the procedures outlined in part 2 of these HALO Global IED SOPs. As a minimum in should be a documented process with a dedicated form (digital or hard copy) which is signed/checked by senior operations management staff. The pre-clearance assessment process may also collect socio-economic data to provide a baseline for post-clearance monitoring. The assessment should be conducted by a clearance supervisor and documented with a short report/form to be included in the clearance task book.

3.9 Clearance

The clearance phase is where hazardous areas identified during the survey are cleared of IEDs. All clearance operations are to be pre-planned using the method in Part 3 and Part 4 of these SOPs. It may incorporate manual and/or mechanical means, and elements of technical survey.

Areas physically cleared during technical survey are to be reported in daily statistics in the same way as clearance. Where technical survey, in conjunction with non-technical survey information, provides reasonable certainty that an area is free of IEDs, the area will be recorded as “Area Reduced”.

3.10 Completion and Handover

After clearance is complete any final QA checks must be conducted in a manner appropriate to the clearance method used and all tasks shall be inspected by a Supervisor to ensure that clearance has been satisfactorily completed and final marking is correct. If the task contains any land to be declared as reduced (by technical survey) or and land cancelled (by NTS), approval must be given by the senior programme management before completion.

The Supervisor shall complete a Completion Report and produce a sketch map clearly identifying cleared and reduced areas and the locations of any devices/ERW found. The Completion Report and sketch, together with the original Team Leader’s sketch map and clearance book shall be returned to the Operations Room. This should be subject to quality checks by the Operations Manager before being signed off and conducting handover formalities with the relevant local authority.

3.11 Consent

When conducting IED clearance, particularly after recent conflicts, maintaining community consent is crucial in order to avoid neutrality breaches or worse HALO personnel being deliberately targeted. While common to all mine action programmes this is likely to be particularly challenging in an IED environment, as identifying the parties to the conflict and who maintains an active interest in the devices, is likely to be more challenging than in an environment where conventional forces are operating. In order to mitigate this risk and/or identify occasions where there may not be consent from all parties, the HALO programme should consider:

- Regular community liaison by survey teams and/or senior operations management taking note of any changes.
- Daily inspection of work sites by teams for signs of tampering, ground changes etc.
- Teams to maintain an awareness of anyone making attempts to observe their work for extended periods and/or taking particular interest in technical aspects of operations.
- Maintain a beneficiary/community database of key informants (local mayor etc.) and community groups; recording, where possible, contact details, addresses, land/task ownership etc.

Annex A – Security Force/Counter-IED Procedures

Overview

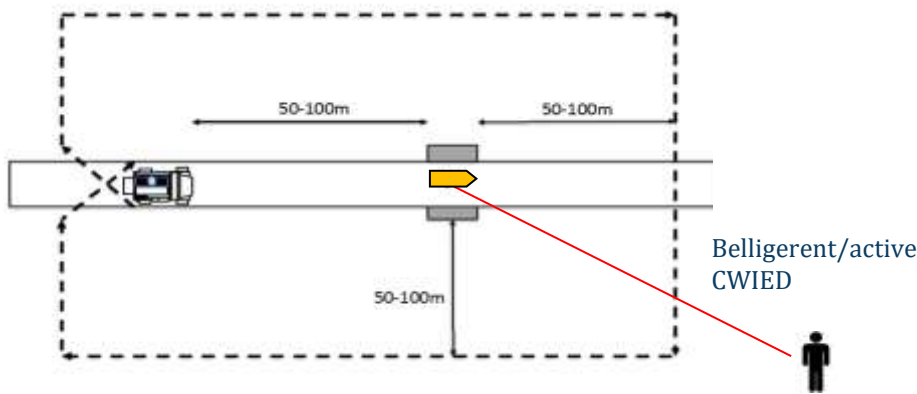
It has only been over the last three years that MA organisations have become significantly involved in the clearance of IEDs. This has largely been the result of conflicts involving non-state armed groups such as Da'esh in areas of the Middle East and North Africa, including Iraq, Syria and Libya. The procedural language that has been adopted is therefore a combination of military and relevant IMAS. There is an ongoing process (2018) to create new, and amend the current IMAS, to better reflect these current operational environments. A key factor to be aware of are that military counter IED procedures balance dealing with an active belligerent, alongside a greater threshold for residual risk and requirement for mobility/speed. These factors should not influence humanitarian MA operations and are therefore sometimes inappropriate to be applied directly by HIEDD teams and clearance activities.

In contrast to security force IEDD teams, humanitarian operators (and HALO specifically) should not be operating in environments where active belligerents are conducting sustained armed campaigns. A residual threat, particularly using asymmetric tactics such as suicide attacks, may be present but the intent and ability of a belligerent to actively target HALO staff while conducting clearance will be minimal to zero. The presence of active belligerents maintaining an interest in emplaced devices would indicate that the environment is one of ongoing conflict between parties; this is broadly comparable to minefields that are still relevant to the military or an armed group. Both indicate a lack of consent from all parts of the local community and clearance should be suspended until this is gained. Similarly, the tolerance for risk while conducting humanitarian IED clearance is extremely low, and HALO should not give way to pressure from stakeholders to 'speed things up' any more than when conducting conventional mine clearance. Any potential gains in clearance rates must be carefully balanced against the increased risks both to personnel and any future land users.

The aim of this annex is to inform operations management personnel of particular procedures and policies that may be appropriate for security forces conducting IEDD but are not likely to be relevant to the type of humanitarian mine action conducted by HALO.

Isolations

In this context an 'Isolation' has a very different meaning from a metal detector 'isolation' in demining. They vary in exact form, but in essence are 360° searches around the perimeter of a target area, often using specialist wire detectors, to mitigate the threat of a command wire or other physically link command devices. These isolations mitigate the risk of belligerents targeting security force personnel. As a belligerent could easily relay a command wire this procedure is regularly repeated every time a team returns to an area.



Humanitarian operators should never be concerned about being targeted in this way, if this is a credible threat it would indicate involvement in an area of active hostilities where belligerents maintain an interest in emplaced devices. Furthermore, the 360° search increases exposure to victim operated devices. Security forces will mitigate this with a point searcher equipped with a hand held metal detector, but the assurance of search is not akin to that for humanitarian demining. It may be useful to identify the locations of legacy command wires during a clearance task (to identify hazards/requirements for CHA extension etc.) but this should be achieved through planning of Technical Survey and targeting clearance lanes in areas where command wires are suspected.

Electronic Counter Measures (ECM)

In security force IEDD operations ECM is a form electronic intervention to prevent a firing signal reaching the receiver of Radio Control IED (RCIED). Types and technical details vary, with more powerful versions having greater range/reliability and they may be hand carried or vehicle mounted. Typically, a number of ECM units will be required to counter the different frequencies that an RCIED may operate on (e.g. one for mobile phone based devices, another for hand held radio based devices), together this is often referred to as an 'ECM suite'.



(L) EOD hand carried ECM suite (C) Patrol ECM (R) Vehicle mounted ECM

As with the threat from CWIEDs humanitarian mine action operators should never be in a situation where they are being actively targeted by RCIEDs during clearance operations and so ECM should not be a requirement. Also, in areas where active targeting is a threat it is insufficient for only the

EOD operator to be protected; deminers, management personnel and visitors would, in principle, all need to be under the protection of the 'ECM bubble' until the area had been fully cleared.

Soaks

Soak times are familiar to humanitarian EOD operators and are also applicable to in HIEDD as well. Humanitarian operators may well deal with devices that have been booby trapped with anti-lift devices/delay timers, and for these reasons an appropriate soak time should be applied after EOD action. Such soaks are often referred to by security force IEDD personnel as secondary soaks. Additionally, security forces also routinely apply:

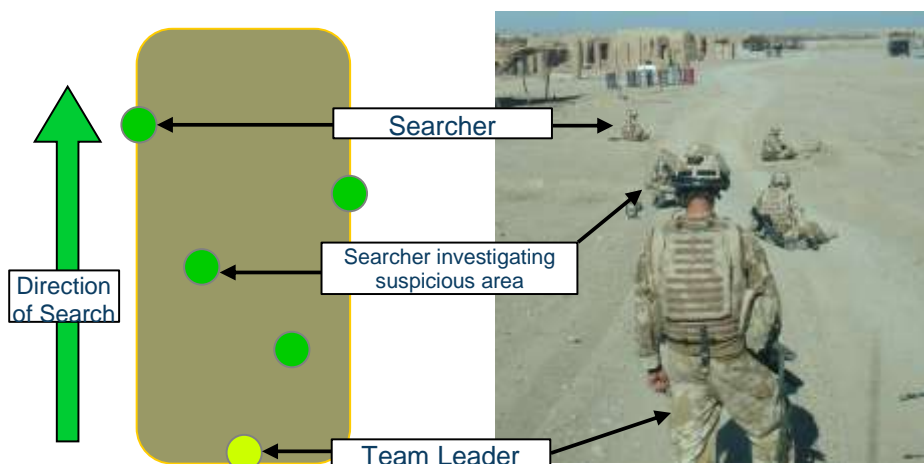
Primary Soak. A primary soak is a safe waiting period that is applied to protect a security force IEDD operator from an up and running mechanical timer. This was a concept developed in Northern Ireland where devices were often fitted with mechanical timers, both as the firing switch for a time IED and also as a safe-to-arm switch in a victim operated and command devices. This latter factor became a pertinent issue as faults with the command or victim operated IED's firing circuits could result in the functioning of the device when the mechanical safe-to-arm ran down and not through the belligerents intended action. A primary soak was applied either from the last time that the device could have been interacted with (i.e the cordon was secured) or after EOD action was conducted on a device (Time, Command or Victim Operated) and could not be discounted that a mechanical timer had not been started / re-started. This mitigates the risk to the IEDD operator being inside the explosive danger area when the mechanical timer runs downs. For humanitarian clearance operations this is not be a concern as any mechanical timers (either firing or safe-to-arm) should have long since expired⁶. In some circumstances there may be a risk of HIEDD action re-starting a mechanical safe-to-arm timer that had become jammed. If HALO faces this threat the Operations Manager will provide direction when additional soak periods are to be applied post HIEDD Action.

Assessed Soak. An assessed soak period protects a security force IEDD operator from an electronic timer. Unlike mechanical timers the variance in time delay can be significant. Electronic timers can be used to target specific activities, such as high-profile events that are due to occur several months after the device is emplaced or to target the forensic chain exploiting IED components that have not been properly made safe. Neither of these scenarios should be of concern to an HIEDD operator. HIEDD should however be aware that electronic timers can be used to target security force operators through pattern setting. This involves a belligerent using a IEDD positive action to start an electronic timer that functions the device while the operator is making a subsequent approach. If this threat is pertinent to HALO the Operations Manager will provide further guidance in these HALO Global IED SOPs.

High Risk/Advanced Search

⁶ For similar reasons humanitarian mine action operations should never be at risk of an IED initiated by time delay, as this would suggest they are responding to a recently emplaced device.

This is a term used by security force personnel to refer to clearance. Generally involving a team of 4-8 searchers, team members will be spaced at 10-15 metres and will clear through an area using hand held metal detectors and investigation tools. Unlike mine clearance techniques not every signal will be investigated (searchers may use discretion if they believe a signal is not an IED component), marking is kept to a minimum and team members work in close proximity even when excavating. This is a far more rapid process than manual demining, which is required for military operations.



Example of search team deployment and signal investigation

High risk search is in essence a risk management approach to clearance and involves a much lower degree of assurance and QC than normally applied for humanitarian clearance. While a degree of risk management is often required during task identification and prioritisation, it should not extend to clearance operations where the highest degree of assurance that can be reasonably attained should always be applied.

C-IED Pillars/Principles

Military/security forces C-IED operations are usually guided by “pillars” that span the full spectrum of activity. Not dissimilar to the way Mine Action pillars seek to engage beyond just clearance of mines/ERW, so too do C-IED pillars seek defeat an opponent’s use of IEDs (network) across the full range of operations. They should have no place in guiding humanitarian efforts, but are included here for reference:

- **Attack the network.** Intelligence-led operations concerned with preventing the proliferation of IEDs, often using information gathered from devices recovered during clearance. These may be combative or non-combative in nature and usually target logistical or command elements of belligerent “IED networks”
- **Defeat the device.** Operations focused on preventing IEDs from directly impacting military operations. Often focused on search and clearance, or other forms of prevention (route making to bypass devices, armouring etc.)
- **Prepare the force.** Ensuring all aspects of a unit are appropriately trained and equipped to prevent/reduce the impact of IEDs on their mission/task. This can include search/clearance training, dissemination of ECM, training in C-IED patrol patterns etc.

Annex B – Glossary of Terms

ANAL

HME made from Ammonium Nitrate and Aluminium

ANFO

HME made from Ammonium Nitrate and Fuel Oil

ANNIE

HME made from Ammonium Nitrate and Nitro-Benzene

ANS

HME made from Ammonium Nitrate and Sucrose (icing sugar)

Anti-Handling Device

A device intended to protect an item and which is part of, linked to, attached to or placed under the item and which actuates the item when an attempt is made to tamper with or otherwise intentionally disturb the item.

Blind

Explosive ordnance which has been primed, fuzed, armed, initiated or otherwise prepared for action, and which has been dropped, fired, launched, projected or placed in such a manner as to constitute a hazard to operations, installations, personnel or material and remains unexploded either by malfunction or design, or for any other cause.

Booby Trap

A device designed, constructed or adapted to kill or injure, which functions when a person disturbs or approaches an apparently harmless object or performs an apparently safe act.

CMD

Conventional Munitions Disposal

Controlled Explosion

Any occasion when an EOD Operator uses a deliberate explosive technique to neutralize an Improvised Explosive Device (IED) during Render Safe Procedures. The term may cover the use of a demolition charge to destroy the IED in IEDD this term is also used whenever an IEDD disrupter is fired.

Conventional Munitions Disposal

The location, detection, identification, on-site evaluation, rendering safe, recovery and final disposal of unexploded EO, which includes booby traps but not IEDs. It may also include EO which has become hazardous by damage or deterioration, when the disposal of such explosive is beyond the capabilities of personnel normally assigned

Counter IED

C-IED is a government process specifically designed to reduce or eliminate the threat posed by improvised explosive devices. It is generally framed around three pillars of activity: attacking the network; defeating the device; preparing the force. Whilst prepare the force and defeat the device may relate to humanitarian mine action, attack the network does not as this would compromise the neutrality of the Humanitarian Mine Action community. As such, C-IED cannot be considered Mine Action.

CO-OP

HME made from Sodium Chlorate and Nitro-Benzene.

CP

Contact Point

Command

A type of switch that is initiated by the user in order to control the moment of initiation

Command Wire Improvised Explosive Device

A CWIED has a physical link of wire between the firing point and the contact point.

Contact Point

In a command initiated IED, the point where the main charge is, which the target come into contact

Daisy chaining

Ordnance may be used in daisy chains linked with other explosive hazards. The emplacer may link main charges together with wire or detonating cord. When the initial mine is detonated, the other mines may detonate. This may also create large, lethal engagement areas.

Destruction In Situ

The destruction of any item of ordnance by explosives without moving the item from where it was found, normally by placing an explosive charge alongside. Also called blowing in situ.

Detonation

An exothermic reaction at molecular level induced by the action of a disruptive wave through an explosive material causing a sudden violent increase in volume due to the evolution of gaseous products. Examples include:

- High Order: Detonation at a velocity approaching the maximum stable velocity of detonation for a system.
- Low Order: Detonation at a velocity well below the maximum stable velocity of detonation for a system.
- Partial: The incomplete detonation of a high explosive caused by a physical break or lack of chemical homogeneity within the explosive material.

Disrupter

An EOD weapon or explosive that is used to remotely break up the components of an IED.

Disruption

The effect of violently separating the components of an IED so that it cannot function.

Electronic Counter Measures (ECM)

A form of electronic intervention involving actions taken to prevent or reduce effective use of the electromagnetic spectrum through the use of electromagnetic energy. There are three subdivisions of electronic countermeasures: electronic jamming, electronic deception and electronic neutralization.

Explosive Ordnance (EO)

All munitions containing explosives, nuclear fission or fusion materials and biological and chemical agents. This includes:

- Mines
- Cluster Munitions
- Unexploded Ordnance
- Abandoned Ordnance
- Booby traps
- Other devices (as defined by CCW APII)
- Improvised Explosive Devices*

Note: Improvised Explosive Devices (IEDs) meeting the definition of mines, booby-traps or other devices fall under the scope of mine action, when their clearance is undertaken for humanitarian purposes and in areas where active hostilities have ceased.

Explosive Ordnance Disposal (EOD)

The detection, identification, evaluation, render safe, recovery and disposal of EO.

Explosive Ordnance Disposal Procedures

Those particular courses or modes of action taken by explosive ordnance disposal personnel for access to, diagnosis, rendering safe, recovery and final disposal of explosive ordnance or any hazardous material associated with an explosive ordnance disposal incident.

- Access procedures - Those actions taken to locate exactly and to gain access to unexploded explosive ordnance.
- Diagnostic procedures - Those actions taken to identify and evaluate unexploded explosive ordnance.
- Render-safe procedures - The portion of the explosive ordnance disposal procedures involving the application of special explosive ordnance disposal methods and tools to provide for the interruption of functions or separation of essential components of unexploded explosive ordnance to prevent an unacceptable detonation.

- Recovery procedures - Those actions taken to recover unexploded explosive ordnance.
- Final disposal procedures - The final disposal of explosive ordnance which may include demolition or burning in place, removal to a disposal area or other appropriate means.

False

An object, reported in good faith to be a suspect IED, that is subsequently proved to be totally innocuous.

Find

The report of explosive or inert bomb making components, weapons, ammunition and tools found by the Police or the Security Forces (SF).

Flight Path

The path along which a projected munition will travel along.

Firing Point (FP)

That point in the firing circuit where the device employed to initiate the detonation of the charges is located

High Explosive (HE)

Substance or mixture of substances which is designed to detonate.

High Risk Search

A military term referring to a form of risk-mitigation search, undertaken by specialist search trained teams where there is a high likelihood of there being an IED present. Sometimes known as Advanced Search.

HME

Home Made Explosive

Hoax

An object in a situation which has been conceived to deliberately deceive and or cause disruption, sometimes used in a come-on situation, which may or may not contain components normally associated with an IED, but does not contain explosive.

Hook & Line

Techniques and equipment used to semi-remotely move objects, using string, ropes or fishing line and various attachments.

High Threat (HT) IEDD

A legacy British Military term referring to IEDD conducted in environments which may include IEDD operators being specifically targeted by the IED emplacements, when there is a high incidence in the use of active RCIEDs, high instances of complex devices and/or the use of 'come-on' tactics.

ICP

Incident Control Point

IMAS

International Mine Action Standards.

Impact Site

The area that a projected munition may land.

Improvised Explosive Device (IED)

A device placed or fabricated in an improvised manner incorporating explosive material, destructive, lethal, noxious, incendiary, pyrotechnic materials or chemicals designed to destroy, disfigure, distract or harass. They may incorporate military stores, but are normally devised from non-military components

Note: An IED may meet the definition of a mine, booby trap, and/or other type of explosive ordnance depending on its construction. These devices may also be referred to as improvised, artisanal, or locally manufactured mines, booby traps, or other types of explosive ordnance.

Improvised Explosive Device Disposal (IEDD)

The location, identification, rendering safe and final disposal of IEDs.

Improvised Landmine

An improvised device that is designed to replicate a landmine.

Improvised Munition

An improvised device that is designed to replicate an existing munition.

Incendiary

An IED which contains low explosive and is primarily designed to cause burning

Incident Control Point

A safe area, within a Police or SF cordon, from which an IEDD, CMD or BCMD operation is controlled.

Launch Site

The area which a projected munition is in.

Launch Tube

A platform from which a spacecraft, rocket, etc., is launched.

LDT

Long Delay Timer

Legacy Device

Devices which originated from a conflict, but the conflict is now over.

Low Explosive (LE)

Explosives which burn rapidly rather than detonate.

Light Sensitive IED

The firing switch is a light sensitive cell that closes the circuit following a change in light levels.

Manual Action

Any positive action carried out by an EOD operator while they are still present in the immediate vicinity/hazardous area of an IED.

Manual Approach

When an EOD operator departs the control point and walks up to the immediate vicinity of an IED.

Mitigation

The reduction of risk by means of an applied action. In IEDD this may include such actions as sandbagging an item, surrounding it with water bags or immersing it in aqueous foam.

Misfire

Failure to fire or launch as intended resulting in the unintentional retention of the munition or weapon.

Neutralisation

EO is said to be “neutralised” when it has been rendered, by external means, incapable of firing on passage of a target, although it may remain dangerous to handle

Non-Permissive Environment

In the context of humanitarian mine action: an operational area during a specified time period where there is a humanitarian need, where access is not possible, or where consent is not provided by relevant stakeholders, preventing mine action activities to take place according to the humanitarian principles and within the framework of international humanitarian law. (opp. Permissive environment)

Partial Detonation or Burn

Only part of a charge is detonated or burnt. This can arise as a result of poorly produced, prepared or broken charges or ammunition.

Permissive Environment

In the context of humanitarian mine action: an operational area during a specified time period where there is a humanitarian need, where access remains possible, and where consent is provided by relevant stakeholders, allowing mine action activities to take place according to the humanitarian principles and within the framework of international humanitarian law. (opp. Non-permissive environment)

Pigstick

A disrupter that fires water at extremely high velocity.

Positive action

Refers to any action taken by the operator that will disturb, move, render safe, destroy or introduce any outside influence on EO.

Note: This includes actions such as X-ray or any other activity that may change the state of the EO

Projectile Command Improvised Explosive Device (PCIED)

A PCIED incorporates an open switch of two conductive plates held a short distance apart (usually metal). At the desired time of initiation, the perpetrator launches a projectile at the contact plates causing the switch to close and the device to initiate.

PPE

Personal Protective Equipment.

Pressure Plate Improvised Explosive Device (PPIED)

An improvised device that is initiated by an improvised pressure plate.

Radio Controlled Improvised Explosive Device (RCIED)

In an RCIED the link between the firing point and contact point incorporates equipment which utilises the electromagnetic spectrum.

Render Safe Procedure

The application of EOD methods and tools on EO to interrupt functions or separate components to prevent an unacceptable detonation.

Note: The term permanent neutralisation is sometimes used interchangeably here.

Rendered Safe

The condition of an EO or IED when the hazardous components have been separated or neutralized to a sufficient degree that they no longer pose an explosive hazard.

ROV

Remotely Operated Vehicle

Remote Action

Positive actions that can be carried out without the need for an EOD operator to leave the EOD Control Point (CP) and approach suspected EO (usually robots or other unmanned systems)

Suicide Borne Improvised Explosive Device (SBIED)

A command activated device that is delivered to target by a willing suicide bomber.

Semi-Remote Action

Positive actions that require the EOD operator to leave the EOD Control Point (CP) and approach the immediate vicinity of the EO in order to place an EOD tool which is then operated/activated remotely once the EOD operator has returned to the CP.

Secondary Hazard

A hazard which will increase or add to the effects of an explosion.

SOP

Standard Operating Procedures.

Soak Time or Safe Waiting Period

Waiting times which an operator must allow to elapse prior to making a manual approach, including approaches after conducting a remote or semi-remote positive actions.

Spider Device

A RCIED that is detonated by an ICOM radio or similar transmitter. Also has been used with long range cordless telephones. Long range cordless telephones have been used in conjunction with a base station. These are similar to cellular telephones, but have a more limited range (several hundred meters)

Suicide Improvised Explosive Device (SIED)

A command device used by the perpetrator while carrying out a bomb attack, knowing that he or she will be killed in the explosion.

Suicide Vehicle Borne Improvised Explosive Device (SVBIED)

A VBIED that is driven and triggered by a suicide bomber.

Time

A type of switch that functions after a period of time.

Trojan device

An IED concealed within an innocuous object or IED component part. Designed to function during movement, collection, transport etc.

Unexploded Explosive Ordnance

Explosive ordnance that has been primed, fuzed, armed or otherwise prepared for use or used. It may have been fired, dropped, launched or projected yet remains unexploded either through malfunction or design or for any other reason.

Victim Operated

A type of switch designed to be initiated by a victim's presence, proximity, contact or activity causing a device to function that may injure or kill one or more persons..

VBIED

Vehicle Bourne Improvised Explosive Device.

Vehicle Bourne Improvised Explosive Device (VBIED)

An IED delivered by any small ground-based vehicle (e.g., passenger vehicle, motorcycle, moped, bicycle, etc.) and/or serves as the concealment means for explosives, with an initiating device.

Victim Operated

Designed to function on contact with the victim.

Annex C - SAFETY DISTANCES

Item	Minimum Distance	Comments
Mechanical Clearance		
Distance between two working armoured machines during the excavation phase	25m	
Distance between machines and civilians or searchers NOT in PPE	200m	If a civilian enters the working area work must stop until they have left
Distance between machines and personnel behind armoured shield or bunker	50m	Only the authorised HALO armoured shield is to be used
Distance between working machines and searchers in PPE	100	PPE = visors and aprons.
Distance between two <u>pairs</u> of searchers working in an inspection pit	25m	
Distance between excavator cab and uncleared area during the sweep	5m	
Manual Clearance		
Distance between two manual clearance lanes	25m/50m	Depending on threat defined by Ops Manager on each task
Distance between control point and working searchers	200m	
Distance between first aid point and active lane	50m	Medics should be able to reach any active lane in less than 5 minutes
Building clearance	N/A	One searcher per building; team leader as close as practical as per clearance plan
During EOD/IEDD operations		
Small blast only charge (under 20kg)	200	e.g. 5 litre plastic jerry can
Large blast only charge (over 20kg)	300	e.g. 20 litre plastic jerry can
Metal-cased charge (under 20kg)	400	e.g. "speedbump" main charge
Metal-cased charge (over 20kg)	600	e.g. gas canister main charge
<p>If an unusually large HME or conventional ordnance main charge is confirmed during a task, the HIEDD Operator and Operations Manager are to reassess the appropriate cordon and safety distance.</p> <p>If during operations a minimum safety distance is not practical, the alternative evacuation and cordon plan should be referred and approved by the operations manager prior to implementation.</p>		