



Defence  
Infrastructure  
Organisation

## DIO POLICY INSTRUCTION

### Subject: GUIDANCE FOR UNEXPLODED ORDNANCE IN INFRASTRUCTURE ACTIVITIES

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**Who should read this:** DIO Staff (inc LMS/Disposals/Footprint Strategy Teams) and Contractors; Public, Private Partnerships, Private Finance Initiatives Project Managers/Commercial Officers, Commanding Officers/Heads of Establishment (CO/HoEs) and representatives; and Chief Environmental and Safety Officers (CESOs), or equivalent.

**When it takes effect:** Immediately

**When it is due to expire:** Upon publication of JSP850 Volume 2

Health and Safety



DIO-EOC Geophysical Survey to Identify Potential Ordnance



Ordnance Recoveries from Joint Clearance Operation

## Equality And Diversity Impact Assessment

This guidance has been Equality and Diversity Impact Assessed in accordance with the Department's Equality and Diversity Impact Assessment Tool against:

### **Part 1 Assessment Only (no diversity impact found)**

#### **DOCUMENT AIM**

1. To identify when Unexploded Ordnance (UXO) should be considered for infrastructure tasks.
2. The assessment of UXO is required when considering health and safety aspects of infrastructure work and/or utilisation of the estate, including:
  - SD Training Estate;
  - Acquisition and disposal of land;
  - Redevelopment projects or construction activities that require excavation of the ground;
  - Alienated estate (Former MOD land no longer in MOD ownership) where UXO is suspected or known.
3. For each of the areas identified, the guidance sets out the responsibilities of DIO and the Front Line Commands (FLCs) in assessing, clearing and managing the risk from UXO present on the defence estate. Guidance is also given on situations where third parties request access to MOD land for infrastructure works. The guidance identifies how to engage the DIO ordnance Subject Matter Expert (SME) to advise on the level of risk posed by UXO.

#### **POLICY AND STATUTORY REQUIREMENTS**

4. The explosive threat from UXO is primarily a health and safety at work and a public safety issue. Where the risks associated with UXO are within MOD control, the MOD Duty Holder must ensure the risk is 'As Low As Reasonably Practicable' (ALARP). The Duty Holder must ensure that processes are in place to ensure UXO risks are assessed and managed using the following:
  - Known UXO hazards must be included on the Establishment Hazard Register and 4C Area Hazard Registers (see JSP 375, Part 2, Volume 1, Chapter 34 – 4C System – Visiting Workers and Contractors);
  - Duty Holders must ensure that activities within their control take account of potential risks posed by the presence of UXO and land is used within agreed parameters;
  - Duty Holders must ensure that effective processes are in place to inform site users, facility and project managers, contractors and visitors of any known UXO hazards before they commence their activities
5. For sites where DIO provides infrastructure services, DIO is responsible for providing fit-for-purpose infrastructure which is legally compliant and safe when used for its intended purpose including the following. DIO-EOC are DIO's ordnance SME and can provide or assist Duty Holders with these responsibilities, i.e.:
  - Assessing and managing the risks associated with UXO;
  - Prioritising Explosives Ordnance Disposal and Search (EOC&S) tasks;

- Informing the CO/HoE and their TLB of any significant risks associated with UXO;
- Maintaining establishment level records on known and suspected UXO.

6. If a suspected item of ordnance is discovered on a site during everyday use it shall be reported in accordance with local procedures or to MOD police; where this is not possible, the finder shall call 999 and request police assistance. The police may make the decision to call in a military EOD team under the terms of MACP.

7. Full detail of explosive ordnance clearance, disposal and search policy is given in JSP 364.

8. For policy on dealing with residual contamination associated with ordnance (e.g. explosive or propellant residues or other chemicals) see JSP 418, Volume 2, Leaflet 2.

9. Explosive Ordnance Disposal and Search (EOD&S) operations are conducted by trained personnel using specialist equipment in accordance with the accepted operating procedures at the time. No clearance operation can provide a 100% guarantee that all items have been recovered. This applies to Explosive Ordnance (EO) and other military-related contaminants, such as chemical weapons agent. Hence, ordnance clearance certificates should be treated with caution and advice sought from DIO-EOC on the applicability of a certificate to a specific task.

### **Requirements for Assessment of UXO – SD Training Estate**

10. The Range and Training Area User (the unit conducting training on the range) is responsible for removing all their military debris and litter upon completion. This is termed 'Range Clearance'. JSP 403, Volume 5, provides further detail. The Ranger Officer is responsible for confirming that the Training Area User has carried out this task and the Training Area is safe for the next user, range personnel and/or public access where applicable.

11. In addition to Range Clearance there may also be a requirement for Explosive Ordnance Clearance (EOC) on the SD Training Estate. JSP 403 specified EOC as a separate activity to Range Clearance, and identifies it as a military responsibility. EOC is predominantly an activity to deal with historic ordnance remaining on ranges and training areas, including closed impact areas. The responsibility for coordinating EOC activity on the military training estate rests with DIO-EOC, working closely with DIO SD Training.

12. The Head of Establishment (HoE) is responsible for ensuring the range or training area is safe for continued use. The risks associated with unexploded ordnance (UXO) remaining on ranges and training areas must be kept under review. Where UXO search and clearance is required, the responsible Service Explosive Ordnance Disposal (EOD) Team should be tasked by either the HoE or the Range Safety Officer via DIO-EOC in accordance with DIO SOI J7 No. 2. DIO-EOC will assess the need for a risk assessment and, if required, complete this risk assessment. DIO-EOC will task the relevant UXO clearance organisation should they determine that a clearance operation is required.

13. For SD Training Estate overseas, EOC shall be completed in accordance with the requirements of treaties and/or agreements made between the UK and the Host Nation (HN). The terms of such agreements will vary between training areas; however as a general principle the MOD shall work to UK standards or those of the HN if they are higher, within the constraints of what is practicable in that environment and the risk signed up to by the UK MOD Lead in the Area Operations (AO). DIO-EOC can provide ordnance risk management and clearance advice to SD Training, if requested.

## **Requirements for Assessment of UXO – Acquisition, Transfer and Disposal of Land**

14. A UXO risk assessment completed by a competent (i.e. suitably qualified and experienced) person is required for land going for disposal (both freehold and leasehold), surrender or termination of leasehold property, or land proposed to be acquired by MOD.

15. For acquisition of land (including leasehold), the Senior Responsible Officer (SRO) is responsible for ensuring that an appropriate UXO risk assessment has been carried out. They shall ensure that the current owner has provided sufficient information on the potential EO risk, ideally in the form of a UXO preliminary or detailed risk assessment (PRA/DRA). This information shall be provided to DIO-EOC to ensure that all EOC information is stored correctly; DIO-EOC can provide advice to the SRO if required. If no risk assessment is available from the current owner, the SRO shall seek advice from DIO-EOC.

16. For disposals (including surrender or termination of leasehold), DIO-EOC will complete the UXO Risk Assessment in accordance with CIRIA C681. DIO-EOC will also task the relevant UXO clearance organisation should they determine that a clearance operation is required, prioritised in consultation with the Disposal Case Officer. For transactions where MOD is permanently giving up the interest in the land, UXO clearance shall be to a standard that takes account of the level of clearance practicable, the proposed future use, land value enhancement and long-term MOD liabilities. The responsibility for the management of any residual UXO risk (including clearance) shall be recorded in the conditions of land transactions.

17. Where a TLB declares land as surplus to their requirements DIO will carry out a UXO risk assessment, identify any UXO search and clearance requirements and request EOD&S from the appropriate Service EOD Team. As a minimum, a UXO PRA shall be carried out before handover of the site for disposal from the departing team to DIO. Hence the likely EOC liability will be quantified by DIO-EOC prior to acceptance by DIO. Further EOC work may then be conducted to ensure that any residual risk is low enough that any normal purchaser would be competent and able to manage the risk without a detrimental effect on value.

18. When an inter-TLB transfer of estate is planned, a UXO risk assessment shall be provided by the transferring TLB to the receiving TLB. Any recommendations for mitigation and/or clearance should be completed by the transferring TLB to ensure that the site is suitable for its stated future use. As part of the transfer preparation the opportunity should also be taken to reduce the UXO legacy liabilities to the new occupier, even if this is not required to support the site's stated future use.

## **Clearance of Buildings in Support of Transfer and Disposal of Land**

19. It is essential that buildings or land that may at any time have been used for the storage, handling and processing of explosives should be rendered free from all explosives contamination (CFFE) and formally certified as such before being used for other purposes.

20. Buildings with no history of ordnance usage should be cleared by the departing unit.

21. Buildings with a history of ordnance usage should be CFFE as the buildings are taken out of ordnance usage (JSP 482 Chapter 27, Annex D refers) by competent personnel from the departing unit; if there are no competent personnel in site or the task is beyond the unit's capability, then please contact the DIO-EOC team who will supply the required capability.

## **Requirements for Assessment of UXO – Redevelopment Projects and/or Construction Activities**

22. For a change of use/development the nominated Project Manager must ensure an appropriate level of UXO risk assessment has been carried out by a competent person and all necessary mitigation measures are put in place.

23. A UXO risk assessment is required for construction activities notifiable under the Construction Design and Management (CDM) Regulations 2015. The risk assessment shall be completed in accordance with CIRIA C681. The DIO project manager shall request the UXO risk assessment from DIO-EOC.

24. For DIO projects, DIO-EOC will complete the risk assessment and, if required, will task the relevant UXO clearance organisation should they determine that a clearance operation is required.

25. For construction activities which are not notifiable under CDM Regulations 2015, a UXO risk assessment is not normally required. Risk from UXO shall be managed using existing on-site information and procedures, such as a statement of known hazards or a site hazard register. Where on-site procedures identify a UXO risk that cannot be adequately managed, advice shall be sought from DIO-EOC.

### **Requirements for Assessment of UXO – Alienated Land**

26. Historically alienated land is land that is known to have been used (either bought, leased or acquisitioned) for defence purposes at any time in the past and that is no longer part of the defence estate.

27. The MOD could be responsible for the remediation of military-related contamination where this is subsequently discovered on alienated land.

28. MOD response to ordnance finds on alienated land falls into two types:

- Emergency Response – Military Aid to Civilian Powers (MACP). This is described in detail in JSP 364 and is not considered further in this guidance.
- Planned clearance of alienated estate. This is discussed further below.

29. Planned clearance of alienated estate is carried out where there is a liability held by MOD for ordnance remaining on the land following hand back to the original owner or when sold on to a new owner. Planned clearance will only take place following an assessment of need by DIO-EOC.

30. The requirement for an assessment could be driven by a number of situations, including:

- New information has come to light which has identified a potential risk of which MOD were not previously aware;
- Either a single or multiple MACP incidents which indicate a wider issue related to UXO;
- Landowner concern.

31. Sites that were known to have explosive ordnance risks at sale may have been sold with knowledge and/or had restrictions on their use written into the sales agreement. DIO will confirm whether any liability for managing explosive ordnance risk has been taken on by the current owner.

32. Where the site is transferred to another Government Department prior to sale, DIO will confirm whether that Department took on any liability for managing explosive ordnance risk.

33. DIO-EOC, liaising with other areas of DIO and Directorate of Judicial Engagement and Policy, Common Law Claims and Policy (DJEP-CLCP), will identify whether any claim made against MOD for work on alienated land is valid. If the claim is considered valid, DIO-EOC will identify the scope of the issue, the liabilities held by the various parties involved and the need for a UXO risk assessment. If required, DIO-EOC will complete this risk assessment.

34. If required, DIO-EOC will task the relevant UXO clearance organisation for a clearance operation. This will be tasked via the HQ Standing Joint Commander (SJC) UK Ops room, who are the tasking authority for any planned clearance operations completed by military teams on alienated land. Service EOD Teams are responsible for EOC of land not currently owned or occupied by MOD, in accordance with JSP 364.

### **Requirements for Assessment of UXO – Third Party Requests for Access to MOD Land to Carry Out Infrastructure Works**

35. Where third parties request access to MOD land to carry out infrastructure works that have not been contracted by MOD or their Industry Partner (e.g. a Utilities Company that wants to lay services across MOD for their own commercial benefit), the following guidance should be followed. DIO-EOC can provide support and advice to the Duty Holder (in terms of available information and review of third party proposals for ordnance clearance work) as required:

- The Duty Holder should make the third party aware of any known or potential ordnance hazard within the proposed working area and agreed access and egress points. If access rights (either permanent or temporary) are granted by DIO, it is the responsibility of the third party to manage any risk associated with that access and to indemnify MOD against any claim associated with the identified risk;
- The third party should carry out their own H&S risk assessment in accordance with the information provided to them by the MOD Duty Holder;
- The third party is required to assure the MOD Duty Holder that all works are carried out in a safe manner in line with current legislation and current industry working practice, including CIRIA C681;
- The Duty Holder's approval of the third party's risk assessment and working practice does not attract MOD liability should an incident occur during the works or as a direct result of third party works;
- If the third party is not satisfied with the information provided by the Duty Holder or wants further work (e.g. ordnance clearance) to be carried out before they access the site, it would be for the third party to fund and/or provide this. Any ordnance clearance work conducted on behalf of the third party would need to be approved by the Duty Holder;
- The full commercial value of the proposed works should be realised and MOD costs recovered;
- DIO access agreement (Licence Agreement or Wayleave) will include provision for EOC in line with this policy to be agreed by both parties before access is granted to MOD land.

### **RESPONSIBILITIES**

36. EOD&S is predominantly a Land Forces (LF) centred activity both at home and on deployed operations, bolstered by RN and RAF contributions, including vital maritime and nice air ops capabilities. Responsibility for Defence EOD&S rests with Land Forces as lead service. The overall governance and delivery responsibility for EOC Disposal and Search sits with Assistant Director Defence Explosives Ordnance Disposal and Search (AD DEODS).

37. DEODS is a tri-Service organisation that provides the Defence focus for EOD&S governance, high level policy, strategy and international engagement as well as direction, standards and professional advice to Defence. They are the Competent Defence Authority for EOD&S.

38. LF provide the lead for provision of EOD Command and Control (C2) within the UK, the disposal of WW2 German air-delivered weapons, EOD diving in non-tidal waters (for munitions not of naval origin) and EOC to the defined extent of former MOD property returned to public or private ownership (less RN or RAF responsibilities).

39. The RN provides the lead for EOD in tidal waters, on the coastline below the high water mark, on or near naval property, in vessels at sea or in port, on or in offshore installations and for all naval ordnance found above and below the surface. It is responsible for assisting Defence Infrastructure Organisation (DIO) with the EOC, to the defined extent of former RN installations returned to public or private ownership (including maritime firing ranges).

40. The RAF provides EOD on or near RAF operating bases and installations as well as for all crashed aircraft (unless underwater) and has the lead for air-delivered munitions (less German WW2 types). It is responsible for assisting DIO with the EOC, to the defined extent of former RAF operating bases and installations returned to public or private ownership (including Air Weapons Ranges (AWRs)).

41. DIO-EOC complete UXO risk assessments, complete geophysical surveys to support EOD&S operations and perform a risk management role on behalf of MOD. UXO risk assessments may take the form of a preliminary risk assessment (PRA) or a detailed risk assessment (DRA), both completed in accordance with CIRIA guidance. A detailed risk assessments will be prepared where there is a specific construction activity to be carried out. DIO-EOC are the tasking authority for DIO's EOC tasks and liaise with military teams as appropriate to secure EOC/EOD services as required.

42. The responsibility for delivery of EOC by military teams on behalf of DIO rests with the following UXO clearance organisations:

- **Army** – 33 Engr Regt (EOD) EOC Group
- **RN** – Fleet Diving Sqn.
- **RAF** – 5131 (BD) Sqn RAF.

43. If, following consultation, insufficient capability is available from military teams, and there is sufficient business need, DIO will procure EOC/EOD delivery using third party contractors, utilising DIO-EOC as the SME. DIO units shall engage with the DIO-EOC team before entering into any agreements with third party EOC/EOD contractors. If private sector UXO search, clearance and/or disposal services are procured, the MOD Contracting Organisation is responsible for ensuring that all the requirements of Health and Safety legislation and regulations are met.

## Acronyms

AO – Area Operations  
CDM – Construction Design and Management Regulations  
CFFE – Certified Free From Explosives  
CIRIA – Construction Industry Research and Information Association  
DEODS – Defence Explosive Ordnance Disposal and Search  
DJEP-CLCP – Directorate of Judicial Engagement and Policy, Common Law Claims and Policy  
DRA – Detailed Risk Assessment  
EO – Explosive Ordnance  
EOC – Explosive Ordnance Clearance  
EOD – Explosive Ordnance Disposal  
EOD&S – Explosive Ordnance Disposal and Search  
FLC – Front Line Command  
HN – Hosting Nation  
HQ SJC(UK) – Headquarters Standing Joint Commander United Kingdom  
MACP – Military Aid to Civilian Powers  
NGEC – Next Generation Estate Contracts  
NTEP – National Training Estate Prime  
PRA – Preliminary Risk Assessment  
SJC – Standing Joint Commander  
SME – Subject Matter Expert  
SRO – Senior Responsible Officer  
UXO – Unexploded Ordnance

## Terms and Definitions

**EO** – All munitions containing explosives, nuclear fission or fusion materials and biological or chemical agents. This includes: bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small arms ammunition; all mines, torpedoes and depth charges; demolition charges; pyrotechnics; cluster and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature.

**EOC** – A deliberate activity carried out to reduce or eliminate the EO hazard in a defined area. It combines search and EOD skills and may be carried out periodically to provide duty of care, or in response to a specific request or requirement.

**EOD** – The rendering safe, recovery and disposal of UXO.

**UXO** – Explosive ordnance that has been primed, fused, armed or otherwise prepared for use and used in an armed conflict. It may have been fired, dropped, launched or projected and should have exploded but failed to do so. It also refers to explosive ordnance that has not been used during an armed conflict, that has been left behind or dumped by a party to an armed conflict, and that is no longer under the control of the party which left it behind or dumped it. Abandoned explosive ordnance may or may not have been primed, fused, armed or otherwise prepared for use.