

INFORMATION NOTE

DUTY HOLDERS GUIDE – GUIDANCE ON THE ASSESSMENT & MANAGEMENT OF LAND CONTAMINATION

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Who Should Read this: Heads of Establishments, DD Estate Management, Project Managers, DCRS, Service Providers and all CESOs	
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Document Aim: This Information Note introduces a Duty Holders Guide containing guidance on the assessment and management of land contamination.

1. This document is aimed principally at providing duty holders with guidance on the assessment and management of contaminated land on MOD sites and establishments and signposts relevant documents and sources of specialist advice.
2. It is recommended that the Guide is printed as an A5 booklet for ease of reference



DE Property **D**irectorate

**DUTY HOLDERS GUIDE ON
THE ASSESSMENT AND
MANAGEMENT OF LAND
CONTAMINATION**

DE
DEFENCE ESTATES
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1. Scope

1.1 This document is aimed principally at providing duty holders with guidance on the assessment and management of land contamination on MOD sites and establishments and to signpost relevant documents and sources of specialist advice.

2. What is contaminated land?

2.1 Land is contaminated when it contains substances that can cause harm, directly or indirectly, to humans or the environment. Land which is contaminated is only deemed to be 'contaminated land' under current legislation where the substances present pose an unacceptable risk to humans or the wider environment.

2.2 The degree of risk depends upon the nature of the contaminant and the presence or absence of a viable link with a 'receptor' such as site residents, workers or visitors, surface water or groundwater. This link is known as a pathway.

2.3 For land to be designated as 'contaminated land' there needs to be a hazardous substance present in sufficient quantities or concentrations to cause significant harm, and a viable pathway through which a receptor can come into contact with the hazardous substance. Statutory guidance defines what 'harm' is to be regarded as 'significant' and how the risks are to be assessed (see Statutory Requirements).

3. Why worry about land contamination?

3.1 Many defence activities, past and present, have or have had the potential to contaminate land, some examples include:- storage and use of fuels and other hazardous materials, demolition of buildings, the historical incineration and burial of waste materials, aircraft/vehicle maintenance and salvage, bombing and firing of ordnance on ranges and fire training.

3.2 Failure to adequately assess and manage land contamination on the defence estate has the potential to impact on defence activities through reducing the availability of training areas, limiting development of the estate, reducing disposal receipts and diversion of funding to meet statutory clean-up obligations.

3.3 MOD has a duty of care to protect the health of its personnel, contractors and visitors on the defence estate and a legal liability for contaminated land caused by defence activities.

3.4 Land contamination may present a risk to users of the land, ecological systems and surface and ground water. Exposure to contamination can be through inhalation of dust or gases, contact with soil, or through food grown on the land. Leachates (dissolved/liquid contaminants) can pollute groundwater and surface waters.

3.5 These risks have been recognised by the Department. It is MOD policy¹ to carry out inspections to assess the land quality across the whole of the defence estate in order to provide a proper knowledge of the condition of the estate and to ensure that it is suitable for use and not causing harm to human health or the environment.

4. What are the effects of land contamination?

4.1 The effects on human health and on the environment will depend on the type and amount of contaminant or contaminants involved and the method of exposure (e.g. skin contact, ingestion, inhalation etc). Impacts on humans range from skin and respiratory irritation, increased incidences of

¹ JSP 418 MOD Sustainable Development and Environment Manual Volume 2, Leaflet 2 – Contaminated Land Policy

cancer and birth defects, to disease, serious injury or death. Impacts on the environment include pollution of water resources and damage to eco-systems.

5. Statutory Requirements

5.1 The two principal legislative regimes for regulating land contamination in the UK are:

- a. Environmental Protection Act (EPA) 1990 Part 2A for current land use.
- b. Town & Country Planning Acts for a change in land use/redevelopment

5.2 Both regimes are designed to deal with existing land contamination that meets the legal definition of contaminated land and so pose an unacceptable risk to human health or the environment. Both regimes also require an overall risk-based approach to dealing with contaminated sites.

5.3 Under both regimes the Local Authorities are the primary regulator for ensuring land contamination is not, or will not cause unacceptable risks through the current or planned use.

5.4 Under EPA Part 2A the Local Authorities have a statutory duty to inspect their area to identify any 'contaminated land' and to ensure the remediation of such land. For 'Defence Sites' local authorities are likely to ask Commanding Officers/Heads of Establishment for information on past activities and details of any known contamination in order to make an initial assessment. If further investigation is deemed to be required the local authorities can seek the assistance of the Environment Agency (England & Wales), SEPA (Scotland) or EHS (NI) to assist them with investigations and making the assessment.

5.5 Only when part or all of a defence site is formally designated as 'contaminated land' by the local authority does it become a 'special site' and the regulatory responsibility formally transfers to the EA, SEPA or EHS (NI).

5.6 Under the planning system, controls or conditions based on the proposed use, are put on land or remedial work specified as part of the development permission. Where contamination is suspected, the developer is responsible both for investigating the land to determine what remedial measures are necessary to ensure its safety for the purpose proposed, and for actual remediation.

6. Common Law Liability

6.1 In addition to the statutory obligation there may also be a common law liability (harm or loss to another person or their property) with respect to contaminants migrating off site towards adjacent sites. The remedy would be to restore the land back to the original condition and recover the cost of any damages (remediation, reduction in land value, loss of earning, health effects etc) from the polluter.

7. Guidance

7.1 MOD policy and approach to assessment and management of contaminated land is detailed in:

- a. JSP 418 Sustainable Development and Environment Manual, Volume 2, Leaflet 2 Contaminated Land
- b. Defence Estates Contaminated Land Management - Land Quality Assessment (LQA) Management Guide (Practitioners Guide PG01/07)

7.2 In addition, guidance on the Department's and individuals general duty of care under Health and Safety legislation is provided by:-

- a. JSP 375 MOD Health and Safety Handbook

8. Risk Assessment

8.1 The MOD strategy for managing land contamination is:

- One-off assessment of the estate to identify high risk areas
- Further investigation to quantify levels of contamination at high risk areas
- On-going management of identified risks through site controls
- Review of risk assessment on change of use/re-development

8.2 The assessment and quantification of risks (health, environmental, legal and financial) caused by land contamination and the identification of the most appropriate and cost effective management response is achieved through phased Land Quality Assessments.

8.3 The phases of a LQA are:

Phase 0	Preliminary risk based strategic assessment and prioritisation
Phase I	Desk Study/Site walkover
Phase II	Intrusive Site Investigation
Phase III	Option Appraisal
Phase IV	Management Response

8.4 An appropriate level of LQA is required for current use, when there is a change of use and for all property transfers. If it can be shown at an early stage that risk is low, then it may be unnecessary to proceed to the next phase. Within each phase of LQA a Land Quality Statement (LQS) is to be provided. The LQS provides a non-technical statement on the land quality of the site that can be made readily available to third parties.

8.5 A LQA provides a snap shot in time and as a result the risk assessment within the LQA has a limited shelf life. The risk assessment should be reviewed whenever there is a significant change to site activity, change in relevant legislation, change of statutory guidance or a pollution incident occurs. Where an investment decision is to be made based on a pre-existing LQA, the parameters and assumptions within the LQA should be checked to ensure they are still valid.

8.6 Explosive Ordnance risks must be considered as an integral part of the LQA process. The initial assessment should be carried out by the Explosive Ordnance Disposal (EOD) Team appropriate to the lead occupying Top Level Budget Holder (TLB). On completion of the clearance task the EOD Team should complete an Explosive Ordnance Clearance Certificate in accordance with JSP 364 Explosive Ordnance Disposal Manual. The information provided by the EOD Team should inform the LQA risk assessment.

9. Advice

9.1 Specific advice and support on contaminated land issues can be obtained from Defence Estates Environmental Management Group, St George's House, Sutton Coldfield B75 7RL (Tel: 0121 311 2441).

10. Duties

10.1 The primary management responsibility for land contamination on the defence estate lies with the lead occupying TLB through their Commanding Officer/Head of Establishment.

Top Level Budget Holders

10.2 Each TLB has a duty to the Secretary of State to ensure that there are processes in place to protect the health, safety and welfare of personnel, contractors and visitors on their establishments and to protect the environment.

10.3 In order to discharge their duties with regard to land contamination each TLB should:-

- a. Ensure that there is a funded prioritised LQA programme in place to assess the areas of the estate for which they are responsible to identify any potential unacceptable land contamination risks.
- b. Ensure that where it is identified that an unacceptable risk is posed by the presence of contamination, action is taken to reduce and control those risks to an acceptable level.
- c. Have a process in place to monitor and report the management of land contamination risks.
- d. Ensure that staff have the appropriate level of training, knowledge and awareness of land contamination hazards and risks.

Commanding Officer/Head of Establishment

10.4 The Commanding Officer/Head of Establishment has a duty to the Secretary of State, and a personal responsibility, to ensure the health, safety and welfare of personnel, contractors and visitors on their establishments and to protect the environment.

10.5 In order to discharge their duties with regard to land contamination the Commanding Officer/Head of Establishment should:-

- a. Ensure that a LQA Phase 0 strategic assessment has been carried out for their site and, where identified, further LQA Phases have been commissioned.
- b. Ensure that an Explosive Ordnance risk assessment has been carried out for the site.
- c. Ensure known land contamination hazards are on the establishment hazard register.
- d. Ensure land contamination is considered as part of the arrangements for notifying known site hazards to Site users, Facility and Project Managers, contractors and visitors prior to commencement of their activities.
- e. Ensure that where the LQA identifies significant land contamination risks, these are regularly reviewed as part of the site Environmental Management System (EMS).
- f. Act as the 'Host' for LQA works or alternatively nominate an appropriate person (i.e. the Site Estate Representative/4C's² appointed duty holder) to fulfil the role.
- g. Ensure that the nominated 'Host' has the appropriate level of training, knowledge and awareness of land contamination hazards and risks.
- h. Ensure effective processes are in place to ensure site users, facility and project managers, contractors and visitors are aware of any known land contamination hazards before commencing their activities.

² The officer/manager appointed to act for the CO/HofE with regard to implementation and operation of the site's 4C's management system, providing effective cooperation, coordination, communication and control in its dealings with contractors and other visiting workers.

Host

10.6 It is the responsibility of the Host to:

- a. Ensure that Site Users, Facility and Project Managers, contractors and visitors are aware of any known contaminated land hazards before commencing their activities.
- b. Provide all relevant information held at site level for LQAs or other ground investigations on request.

Facility & Project Managers

10.7 It is the responsibility of Facility and Project Managers to:-

- a. Ensure that their staff, contractors and visitors are aware of any known site hazards.
- b. Ensure that where there is to be a new or changed activity on a site, land contamination risks are reviewed and if necessary further investigations instigated.
- c. Report to the Commanding Officer/Head of Establishment, through the Site Estate Representative or 4C's appointed duty holder, any new information on land contamination identified as part of works carried out.
- d. Maintain records and provide all relevant information on land condition in relation to the works carried out to the Head of Establishment or nominated representative on request.

Defence Estates Land Management Services

10.8 For land transaction (disposal, hiring, letting) it is the responsibility of the nominated DE Desk Officer to:-

- a. Ensure that an up to date land contamination risk assessment has been carried out.
- b. Consult with all relevant specialists and advise on the most appropriate risk management strategy to minimise future liability.
- c. Record the conditions of the land transaction including the agreed split of responsibility for current and future contaminated land liabilities.

10.9 For land not currently owned or occupied by the MOD where it is claimed by the Regulatory Authority, a purchaser, or other landowner to have been contaminated by the MOD, it is the responsibility of the nominated DE Desk Officer to:

- a. Verify whether the site has been previously owned or occupied for defence.
- b. Take legal advice on the terms of the historic sale.
- c. Determine whether MOD is liable for decontaminating the land and assess the remediation measures required.
- d. Prepare a business case to secure funding to meet any MOD liability.

LQA Sponsor

10.10 The LQA Sponsor (designated TLB representative) is responsible for:

- a. Ensuring that funding is in place.

- b. Coordinating/facilitating the compilation of the information required for the LQA as specified in the LQA Management Guide, including EOC.
- c. Notifying all parties when the LQA is due to commence; Commanding Officer/Head of Establishment, Site Estate Representative/4C's duty holder, Facility Manager etc. as appropriate.
- d. Ensuring a copy of the completed report is forwarded to the Commanding Officer/Head of Establishment and DE Construction Support Team at Sutton Coldfield

Employees

10.11 It is the responsibility of all employees to ensure that they are familiar with the content of local orders, including those relating to land contamination and comply with them. Employees must also bring to the attention of the appropriate supervisor or manager any shortcomings they identify in the arrangements for the management of hazardous substances and land contamination, including the arrangements for the accumulation and disposal of hazardous materials.

11. Management/Remediation

11.1 There are numerous methods for managing the risks associated with land contamination. These range from the removal of the contaminant, various physical, chemical and biological treatments or breaking the pollutant linkage by restricting access to the affected area. The choice of management response will be site-specific and depend upon the nature and extent of the contamination, the level of risk and the cost benefit. Site investigations and remedial works are expensive and it is recommended the LQA phased approach is adopted.

11.2 Carrying out a LQA requires a multi-disciplinary approach and the use of appropriately trained and experienced specialists. Technical advice must be sought before undertaking any assessment or investigation of land potentially affected by contamination.

12. Records

12.1 It is recommended that the Head of Establishment maintains a Land Condition File that documents a brief history of the establishment, known areas of concern, historic and current potentially contaminating activities and a summary of the findings of LQAs, ground investigations and other relevant information with regard to land contamination.

12.2 Land contamination hazards identified through LQAs or other site investigations must be recorded on the establishment hazard register.

12.3 Each TLB should report annually to the Sustainable Development and Environment Board (SDEB) on progress against the MOD target to complete a one-off assessment of the entire estate to identify high risk areas, actions taken to quantify levels of contamination at high risk areas and manage identified risks.

12.4 Defence Estates has set up a catalogue and electronic library of LQA reports carried out by or on behalf of MOD. Access to the LQA catalogue and reports (where digitised) is through GEODE Mapping on DE Estate Information Portal (*Note:- not yet enabled for general access*). Electronic copies of all new LQAs commissioned should be forwarded to DE CST Environment Management Group for cataloguing. Heads of Establishment should check the catalogue to ensure they are aware of any LQAs relevant to their areas of responsibility and forward copies of any reports in their possession not in the catalogue to the DE CST Environment Management Group

12.5 For all land transactions Defence Estates should retain on the case file a record of the land condition at the time of the transaction, plus details of the agreed split of responsibility of each party to the transaction with regard to current and future land contamination.

13. Related/further guidance

13.1 Other MOD documents covering specific aspects of policy in relation to land contamination are listed below:

Related MOD Policy Documents

Ref.	Title	Policy area
JSP 362	Defence Lands Handbook	Land transactions (disposal, hiring, letting) and public access (CROW, Byelaws, permissive)
JSP 364	Explosive Ordnance Disposal Manual	Explosive ordnance Disposal(EOD) and Search (EOC) procedures
JSP 375	MOD Health & Safety Handbook	Health & Safety Policy and Guidance
JSP 392	Instructions for Radiation Protection	Occupational Health guidance of radiation protection including radioactively contaminated land
JSP 418	MOD Sustainable Development and Environment Manual	Volume 2, Leaflet 2 – Contaminated Land Policy
DE	Contaminated Land Management	Land Quality Assessment (LQA) Management Guide – Practitioners Guide (PG01/07)
DE DMG 12	Site Closure Guide	Rundown, closure, and marketing of sites prior to disposal

14. Contacts

Organisation	Contact Point	
Directorate of Safety & Claims (DS&C)	Chief Environmental Safety Officer (CESO(MOD))	Environmental Policy
DE Property Directorate	DE Prop Env Pol	Environmental Policy, Contaminated Land Policy
DE Construction Support Team – Environmental Management Group	DE CST-EMG, Head of CST Environmental DE Ops North CST 1	Land Quality Assessment, Environmental Management
DE&S Environmental Science Group (ESG)	Head of Environmental Science Group	DE&S Land Quality Assessment, EOD risk assessment
DE&S Environmental Protection Policy Group	DES SE CESO-OHSE-SDEP1	Environmental Protection
Navy	CESO Navy	RN Environmental and Safety Policy
Army	CESO Army	Army Environmental and Safety Policy
RAF	CESO RAF	RAF Environmental and Safety Policy
RAF PTC AOA OCLQA	Head of LQA Team	RAF Land Quality Assessment
Centre TLB	CESO Centre TLB	Centre Environmental and Safety Policy