

CHAPTER 22**SAFEGUARDING OF EXPLOSIVES FACILITIES****CONTENTS**

Para

- 1 SAFEGUARDING PROCEDURES
 - 1.1 Introduction
 - 1.2 How the Safeguarding System Works
 - 1.3 Strategic Safeguarding of MOD Sites
- 2 COMPILATION OF EXPLOSIVE SAFEGUARDING MAPS (ESM) AND SAFEGUARDING DIRECTION ORDERS (SDO)
 - 2.1 Purpose
 - 2.2 Safeguarding Inhabited Building Distance
 - 2.3 Map Requirement and Procurement
 - 2.4 Electronic Data and Mapping
 - 2.5 Defence Explosives Licencing Systems (DELS)
 - 2.6 Map Compilation
 - 2.7 Action on Completion
 - 2.8 Action by Defence Estates (Safeguarding Plans)
 - 2.9 Review
 - 2.10 Consultation by Defence Estates
- 3 DIRECTIONAL WEAPON MAPS
 - 3.1 Introduction
 - 3.2 Review
 - 3.3 Aircraft in Hardened Aircraft Shelters (HAS)
 - 3.4 Compilation of Directional Weapons Maps
- 4 POLICING OF SAFEGUARDED AREAS
 - 4.1 Importance of Safeguarding
 - 4.2 Day-to-Day Activities
 - 4.3 Changes of Use
 - 4.4 Read Across to Contractors Work
 - 4.5 Local Media
 - 4.6 Survey Reports
 - 4.7 Public Traffic Routes
 - 4.8 Policing of Aircraft Directional Weapons Safety Zones
- 5 INVESTIGATING LIKELY ENCROACHMENTS
 - 5.1 Introduction
 - 5.2 Action
- 6 OVERSEAS SITES
 - 6.1 Procedure

7 FURTHER DEVELOPMENT OF EXPLOSIVES FACILITIES

7.1 Procedure

1 SAFEGUARDING PROCEDURES

1.1 Introduction

1.1.1 Explosives facilities are a potential hazard to persons and to property. Accordingly, in order to minimise these hazards should an explosion occur, it is necessary to site such facilities at prescribed Quantity Distances ((QDs) - see Chapter 10) from buildings, roads, railways or places frequented by persons both within and without an enclosed explosives facility. These QDs frequently extend beyond the site boundary. To ensure that MOD explosives, and other essential defence installations, are not compromised by civil encroachment of private or public development within the prescribed quantity distances, maps limiting such development are lodged by Defence Estates (DE), via the Office of the Deputy Prime Minister (ODPM) and Department of Transport, Local Government and the Regions(DTLR), in England, the Scottish Executive in Scotland, and the Welsh Assembly in Wales, with the Local Planning Authority (LPA). This process is known as Explosives Safeguarding.

1.1.2 Under the arrangements described below, the IE's are responsible for the production of the Explosive Safeguarding Maps (ESMs).

1.1.3 There are two types of ESM:

- (1) REGISTERED – Where part of the SG area falls outside the MOD boundary and the ESM is registered by DE with the LPA.

Or

- (2) UNREGISTERED - Where the SG area lies entirely within the MOD boundary, thereby only blighting MOD property, so does not require registering with DE or the LPA.

1.1.4 From these ESMs DE (safeguarding) produce the Safeguarding Direction Orders (SDOs) which are issued, complete with the statutory direction to consult, to the LPAs which are responsible for development on land which adjoins those MOD sites. This is necessary to safeguard certain essential installations, of which explosives facilities form just a part (indeed, SDOs for military airfields are in fact mostly concerned with the Safeguarding of the operational flying criteria). The initiation of changes to those elements of the map which deal with the prevention of civil encroachment to licensed explosives facilities are, in the MOD, the responsibility of the appropriate IE. The factors determining Outside Quantity Distances (OQD) to be used for Safeguarding are given in Chapter 10. DE issues the final editions of the Safeguarding Direction Order Maps and is directly and centrally responsible for the administration of Safeguarding on behalf of the MOD.

1.2 How the Safeguarding System Works

1.2.1 The Town and Country Planning Act allows the MOD to safeguard areas by means of individual Directions which require planning authorities to notify DE of planning applications for development within certain defined areas as shown on the Explosives Safeguarding Direction Order Maps(SDO). Statutory Safeguarding does not in itself impose restrictions on development. It does not go beyond placing on a LPA a statutory obligation to consult and to take into account any representations made by the MOD. The main features of the Safeguarding legislation are:

- (1) Consultation with MOD by the LPA before planning consent is given.
- (2) Consultation requirements are illustrated on the SDO.

- (3) Legislation, as follows:
- (a) England and Wales.
 - (i) Town and Country Act 1990.
 - (ii) The Town and Country Planning (General Development Procedure) Order 1995, in specific Circular 2/92 Safeguarding Aerodromes, Technical Sites and Explosive Storage Areas: Town and Country Planning (Safeguarding Aerodromes, Technical Sites and Military Explosives Storage Areas) Direction 2002.
 - (b) Scotland.
 - (i) Town and Country Planning (Scotland) Act 1972
 - (ii) The Town and Country Planning (General Development Procedure) Order 1995, in specific Circular 16/82 Safeguarding of Aerodromes, Technical Sites and Explosive Storage Areas: Town and Country Planning (Aerodromes and Technical Sites) Direction 1982.

1.2.2 When the MOD requires a site to be safeguarded, DE (Safeguarding) are given details of the restrictions which are then issued in map form as a Direction Order to those concerned. For sites in England, the map is first signed by an officer from the DE (Safeguarding) section under authority from the Secretary of State for Defence. For sites in Scotland and Wales, the Direction Order is signed by the relevant Principal of the Scottish Executive/Welsh Assembly.

1.2.3 The Direction becomes valid when it is issued by the ODPM/DTLR or by the Scottish Executive/Welsh Assembly to the relevant Local Planning Authorities. The relevant Inspector of Explosives (IE), the site operator/HoE and the local Defence Estates office are sent a copy of the map by the DE (Safeguarding) section. Once a Direction Order has been issued to a LPA, they are required to consult the DE (Safeguarding) section before granting permission for any development within the restricted areas denoted on the map.

1.2.4 The LPA forwards all necessary details to DE (Safeguarding) for comment, usually giving at least 10 working days to make a response. Some applications can be dealt with immediately by the DE (Safeguarding) section, but frequently advice has to be sought from the relevant IEs. For some sites, there will be more than one advisor due to Safeguarding considerations other than those related to explosives.

1.2.5 When all technical advisors have replied, it is the role of DE (Safeguarding) to judge the appropriate response. It is important to consider factors other than the technical assessment, such as any environmental considerations and governmental policies and targets. In terms of objecting to development, it is essential that the MOD is sure that it is able to justify the objection in the event of a Public Inquiry. Any previous responses to similar development in the same area are also taken into consideration to ensure a consistent approach. The nature of the development is a factor and local politics cannot be ignored.

1.2.6 It is not always necessary to issue a blanket objection; an approval with conditions may be more appropriate. This demonstrates that the MOD is a considerate organisation and promotes positive public relations in areas where the relationship between MOD and the public is delicate. On occasions, an objection will be sent as a holding response to avoid complications arising from missing the deadline.

1.2.7 Whilst the MOD is reviewing the application, the LPA will consider other aspects which may lead to a refusal of permission. If permission is refused by the LPA, or conditions imposed at the request of the MOD, it must be noted that the applicant has precisely the same rights of appeal under planning law as he would have had if permission had been refused on any other grounds.

1.2.8 If an appeal is lodged, then, subject to security considerations, the MOD is required to make available to the parties a statement of why they oppose the particular development, and also to send to any enquiry a representative(s) to read the statement and answer questions within its framework. In such circumstances, the MOD would use either one, or a combination of, a MOD Legal Adviser, the Treasury Solicitor or a specialist Property Lawyer. The applicant's rights to any compensation that might be legally due, or his right to serve a purchase notice on the LPA in the event of his appeal not succeeding are exactly the same as for refusal by any other body.

1.3 Strategic Safeguarding of MOD Sites

1.3.1 Strategic safeguarding is required where a site is a strategic MOD asset operated by a Contractor under HSE explosives licensing where MOD capability would be affected if encroachment were allowed.

1.3.2 Where a department wishes to place an Explosives Safeguarding map with a Local Authority (LA) for a site which is not subject to MOD Explosives licensing the provisions of this Chapter may be used.

1.3.3 The licences granted are to be considered "Strategic" Licences and are solely for the purpose of establishing a MOD explosives safeguarded area and do not attract any other requirements of JSP 482 unless otherwise stated.

1.3.4 Before this provision is used any proposed licence and resultant explosives safeguarding map is to be discussed with CIE, relevant Service IE and DE Safeguarding policy and agreement sought that there is a need for a MOD explosives safeguarding to be put in place.

1.3.5 Licences are to be produced and authorised as specified in Chapter 9.

1.3.6 For sites where the HSE licence the facility a "HSE safeguarding map" is required to be lodged with the LA. Consideration should be given to the area covered by this map and where possible the MOD safeguarding map should be made to fit this area.

1.3.7 For sites where it is considered that the MOD safeguarding map needs to be larger than that prepared for HSE safeguarding, DE Safeguarding policy must be informed as this may attract LA criticism at a later date.

2 COMPILATION OF EXPLOSIVES SAFEGUARDING MAPS (ESM) AND SAFEGUARDING DIRECTION ORDERS (SDO)

2.1 Purpose

2.1.1 The purpose of each site's Safeguarding submission is to define the areas within which inhabited buildings should not be allowed to encroach (the 'Yellow Line distance') and the areas within which certain types of more vulnerable development should not be allowed to take place (the 'Purple Line distance').

2.1.2 All PESs require the production of Safeguarding Maps, with the exception of those under an Authorised Quantity Licence, or any HD 1.4.

2.2 Safeguarding Inhabited Building Distance

2.2.1 The Inhabited Building Distance (IBD), is the OQD that could be achieved if the IBD restrictions within the Site boundary and over which the MOD have control were registered or removed without degrading the Sites operations (e.g. Portakabin accommodation, car parks, golf clubs and other recreational facilities, etc). The 'Yellow Line' is generated from:

- (1) The IBD established from the Site Potential Explosives Licence limit (see Chapter 9) for each PES.
- (2) The IBD that would become available by removing the exposed site (ES) restrictions within the boundary of the site over which the MOD has control.
- (3) Applying Safeguarding IBD to PES in remote sites (including armed aircraft slots) appropriate to the maximum realistic NEQ of the HD concerned that could occupy the site.

2.3 Map Requirement and Procurement

2.3.1 The production of ESMs may vary according to the site administration arrangements. Where sites have their own Explosives Licensing Officer, they may follow the procedure listed below or, through the normal chain of command, use the services of their appropriate IE or CIE (MOD).

2.3.2 Sites are to demand a Site Overview Compilation Map to an appropriate scale (normally 1:2500). This map, which will show the MOD boundary, is available through the site estates management organisation, DE (Safeguarding Plans), or the DE local office. Where acceptable mapping is not available accurate aerial photographs may be used.

2.4 Electronic Data and Mapping

2.4.1 Many military sites now have site plans and maps produced, normally in a Geographic Information System (GIS) format, to aid the management of the estate. In producing Safeguarding Maps, the unit Explosives Safety Officer should use the most accurate facilities available.

2.4.2 The incorporation of all explosives safety information as separate layers that can be applied to the background site plan should be seen as an integral and essential part of the estate management strategy. Not only will this crucial safety information be critical to Safeguarding and the management of safe explosives operations, but will be invaluable to the EWC's advisory role. He will be fully aware of hazard areas in which the construction of new buildings will not gain Siting Board (Chapter 5) approval, and in which contractors will require to be controlled (Chapter 18). It makes sense that the draughtsman be provided with the explosives safety information for him to maintain the digital copy of the ESMs and other necessary maps. Once the initial construction of these layers has been carried out, updating the necessary layers can be carried out swiftly as can the printing of large clear maps for the use of all interested parties. Should this facility not already be available within any contractual arrangements, serious consideration should be given to including them for best estate management at the next contract review.

2.5 Defence Explosives Licencing System (DELS)

2.5.1 Should automatic licencing/safeguarding systems be used to produce, either locally or centrally, the ESM, then, whenever appropriate, live data from the EWC should be utilised to provide the best information. The EWC should freely provide this information for this purpose as the licencing process is carried out on behalf of the site to enable it to carry out its task.

2.6 Map Compilation

2.6.1 The draft ESM will be compiled by the officer responsible for licencing the site, either manually or using digital mapping using DE compatible GIS software. Where the Yellow and Purple Lines fall within MOD controlled property, the site is to use this information along with any other local safeguarding management aids to ensure that exposed sites are not incorrectly authorised and constructed within these marked areas. This is known as Internal Safeguarding. ESMs should:

- (1) Show, but not identify, all PESs on the site.
- (2) Identify the boundary of MOD owned land in red.
- (3) Show the Yellow Line - an envelope of the individual lines normally drawn at the IBD, generated by the Site Potential, from each PES.
- (4) Show the Purple Line - normally drawn at twice the Yellow Line distance for HD 1.1. However, there are some exceptions, such as when only HD1.2 and HD1.3 are considered, the purple line coincides with the yellow line.

2.7 Action on Completion

2.7.1 This will vary according to the method of map creation. DE require only the co-ordinates and radii that constitutes the Yellow and Purple Line. This data can be transferred by either listing it on a spread-sheet or by digital overlay (e.g. .shp file). Where maps are still prepared by hand, local arrangements will apply.

2.7.2 Only the authorised safeguarding map may be used or displayed on the Site.

2.8 Action by Defence Estates (Safeguarding Plans)

2.8.1 Using the data supplied by the IE, DE (Safeguarding Plans) will produce the SDO to the most appropriate scale. This SDO should be copied back to the appropriate IE.

2.9 Review

2.9.1 The site ESM is to be reviewed quarterly as part of the periodic policing of the site boundary (see para 4).

2.10 Consultation by Defence Estates

2.10.1 From time to time, DE will wish to consult on proposed developments, usually between the Yellow and Purple Lines, and this consultation will normally take place directly with the appropriate HQ or IE. For this reason, sites are to inform the relevant IE without delay of potential encroachments that are known, or expected, to be controversial.

3 DIRECTIONAL WEAPON MAPS

3.1 Introduction

3.1.1 Directional Weapons Safety Zones (see Chapter 10, Section 5) are not protected by the statutory Safeguarding provisions described above. Nevertheless, sites are to produce, in duplicate, maps showing arrangements for Directional Weapons Safeguarding. These maps, in scale 1:10 000, are to show the areas hazarded by directional weapons. Directional Weapons safety Zones which rely on natural terrain barriers are to have the necessary topographical information detailed on the maps depicting the limit of the hazardous areas. Instructions on map compilation are at para 3.4, and on completion of the compilation, these maps are to be submitted firstly to the HoE for approval, and then to the relevant IE for endorsement. Once approved, the IE is to return one copy of the map to the site and retain one copy for his own records. On receipt of their copy, the site Explosives Licensing Officer is to make further controlled copies as necessary and distribute them to Senior Air Traffic Controller (SATCO) and affected flying formations. These maps are to be made available to IE Inspectors.

3.2 Review

3.2.1 The map is to be validated by the site Explosives Licensing Officer either annually, or when there is a requirement to change Directional Weapon safe

headings. Such amendments are to be notified to the appropriate IE. Where infringements of the criteria in Chapter 10, Section 5 are evident on these maps, the site is to provide explanatory notes to satisfy the IE as to why they consider the situation to be safe and to demonstrate adherence to the principle of driving risks to the ALARP level. Site Directional Weapons maps are to be re-submitted to the IE at 5 yearly intervals for re-authorisation.

3.3 Aircraft in Hardened Aircraft Shelters(HAS)

3.3.1 When an aircraft with directional weapons fitted is parked in a HAS with the main doors closed, these doors are considered to be an adequate barrier for the directional weapons fitted.

3.4 Compilation of Directional Weapons Maps

3.4.1 The Directional Weapon Map will be compiled as follows:

- (1) Aircraft Safe Heading PES. Those PES with a required aircraft safe heading are to be given a unique serial number or letter and are to have the Safe Heading marked as a 60 mm red line from the centre of a red circle with an arrow indicating the heading in degrees True. A line, 5 mm on each side of the safe heading, is to be marked out to the appropriate scaled distance detailed in Chapter 10, Section 5. The resulting triangular template is known as the safe heading sector for that PES. The boundary lines of each safe heading sector are to be over-marked in red.
- (2) Flight Line. Where safe heading sectors are in multiples, as in the case of a flight line, the sectors may be merged to give a single wedge shaped boundary line. However, at least one of the merged PES is still to be marked with a red arrow and the heading details at sub-para (1), above.
- (3) Legend. A legend listing the Safe Headings in degrees Grid ($^{\circ}G$) and degrees True ($^{\circ}T$) for each safe heading serial number/letter is to be affixed to the map. Each Safe Heading is to detail the aircraft types and weapons that are permitted to be parked on each Safe Heading having due regard to the requirements in Chapter 10, Section 5.
- (4) Other PES. All other PES within the safe heading sector are to be marked with a red continuous circle of >5 mm diameter. The boundary of any multiple explosives facilities outside the safe heading sectors is also to be outlined in red.
- (5) IR Flare Safety Zones. Where practicable, IR flare safety zones are to conform to the template given in the relevant aircraft Safety and Maintenance Notes and are to be shown, to scale, in red on the map. In the absence of authoritative template information, an all-round safety zone of 200 m from each dispenser is to be shown.
- (6) Barriers. Where approved barriers (see Chapter 7) are used, the barrier line is to be marked, to scale, in red on the map. Each barrier is to be given a unique serial number, and a legend affixed to the map giving the details of the serial number, construction and dimensions of each barrier. Each PES using a barriered safe heading is to be marked with a red arrow of 60 mm length, the heading details in degrees True, and the boundary line of the safe heading sector up to the barrier.

4 POLICING OF SAFEGUARDED AREAS

4.1 Importance of Safeguarding

4.1.1 The Safeguarding of explosive facilities is crucial to the continued operational effectiveness of a site and although the statutory system of consultation ensures that the majority of intended developments come to the notice of the MOD, the mechanism is not foolproof. The reasons for this are essentially threefold:

- (1) Local authorities may occasionally, through error, omit to acquaint the MOD about local planning applications.
- (2) The LPA overview maps cannot be amended quickly in order to reflect any changes made to the Safeguarded areas brought about by major changes in Explosives Licences through extensions to explosives facilities.
- (3) Landowners may execute development without first seeking planning permission from the LPA.

4.1.2 Therefore, HoEs are to ensure that the procedures described below, which are intended to maintain the integrity of explosives facilities and to prevent encroachments of the Safeguarded Areas, are complied with in full. In particular, the monitoring process detailed in para 4.2.2 is to include a regular physical inspection of the Safeguarded zones to check, in so far as is reasonably practical, that no encroachments have occurred.

4.2 Day-to-Day Activities

4.2.1 In addition, as part of the periodic inspections of PES required by Chapter 20, and during the normal day to day operations at PES, personnel are to be briefed to report any unusual activity through their normal chain of command for investigation and immediate action where necessary. This requirement also includes any activity on MOD property where a change of use of a building or facility infringes the existing Safeguarded area to a PES (Internal Safeguarding).

4.2.2 The site Explosives Licensing Officer or nominated Explosives Safety Officer is to inspect up to the boundary of the Purple Line at 3 monthly intervals and, by reference to both the authorised ESO and, if appropriate, the Directional Weapons Map, is to observe whether there are any encroachments of the OQDs or the Safe Headings. The following encroachments are to be noted:

- (1) Any building/structure or caravan within the Yellow Line.
- (2) Any building of Vulnerable Construction (see Chapter 10, Section 2) within the Purple Line.
- (3) Any sensitive site such as a School, Hospital, Rest Home or Place of Religious Worship within the Purple Line.
- (4) Any structure in any aircraft Directional Weapon Safe Heading arc.
- (5) Any possible construction sites in the general area.
- (6) Any signs of activity that may bring significant numbers of people on to adjacent land within the Purple Line or Directional Safety Zones (e.g. field sports, fetes and other leisure activities).

4.3 Changes of Use

4.3.1 Changes and additions may occur without any obvious signs of construction, particular attention is to be given to any possible change of use of existing agricultural or other buildings.

4.4 Read Across to Contractors Work

4.4.1 Within MOD property, the guidance offered at Chapter 18 for contractors staff working within the IBD may be read across to gauge the likely impact of an infringement to an Explosives Licence.

4.5 Local Media

4.5.1 In addition to physical surveillance of the areas surrounding explosives facilities, information on proposed events or potential developments may be gleaned from local radio or by careful perusal of local newspapers or journals.

4.6 Survey Reports

4.6.1 Registers are to be kept at sites in which a certified record is to be maintained of the periodic surveys. IE Inspectors will, during their visits, examine these registers and the survey procedures to satisfy themselves that Explosives Safeguarding is being correctly administered.

4.7 Public Traffic Routes

4.7.1 Where Public Traffic Routes (this includes rail and water-borne traffic) have an influence on the safeguarding map, information on usage is to be obtained and recorded. Where applicable, observation of Public Traffic Route usage is to form part of one Safeguarding survey per year. Information regarding road traffic flows may be obtained either from the local district authority, or through CIE (MOD) staff, from DETR.

4.8 Policing of Aircraft Directional Weapons Safety Zones

4.8.1 The periodic policing of the safety zones hazarded by directional weapons systems is to be carried out in conjunction with the policing of the site boundary required by para 4.2.2, above. The Directional Weapons Map is also to be used as a guide when carrying out the periodic policing. Directional Weapons Safety Zones are not protected by statutory provisions, therefore, where encroachments are noted, action is to be taken either to realign the weapon system or provide a suitable barrier. In exceptional operational circumstances, for short periods, an application is to be made to the relevant IE for a Non-Standard Licence/Letter of Authority in accordance with Chapter 9.

4.8.2 Within the safety zones hazarded by aircraft directional weapons (see Chapter 10, Section 5), monitors are to look for buildings, construction sites, caravans, portakabins and other signs of activity which may bring any significant numbers of people into the hazarded areas.

5 INVESTIGATING LIKELY ENCROACHMENTS

5.1 Introduction

5.1.1 When a likely encroachment is discovered, it is essential that its full nature is determined quickly, but with the utmost discretion. When trying to fully identify the infringement, the following rules are to be observed:

- (1) DE (Safeguarding) are to be contacted without delay, through the appropriate IE, so that an investigation with the relevant LPA may be instigated.
- (2) No member of the unit staff is to take unilateral action by contacting the LPA.
- (3) No orders to stop work are to be given to personnel working on a building or building site.

5.2 Action

5.2.1 Where an infringement or change of use is detected, HoEs are to ensure that full details of such changes are immediately brought to the attention of relevant HQ Staffs and the appropriate IE. If the infringement is serious, the IE is to inform CIE (MOD) and take the immediate action necessary to ensure that any risk to members of the public is both tolerable and as low as reasonably practicable. Additionally, HQ/IE staff are, in turn, to confirm that DE (Safeguarding), who will investigate the matter and seek further advice and assistance as necessary, are fully aware of the situation.

5.2.2 HoEs are to be aware that Landowners may legally carry out certain changes on their property without seeking planning permission. All such changes, which come to the notice of the site, are to be notified to the appropriate IE who will determine the appropriate course of action.

6 OVERSEAS SITES

6.1 Procedure

6.1.1 To promote greater safety for the local population, sites overseas are to implement these safeguarding procedures as far as is practicable, including areas where the Purple and Yellow Lines cross international borders, through the relevant HQ. Due account is also to be taken of any local planning regulations which require stricter criteria. Where required, advice is always to be obtained from the relevant IE, in the first instance, or CIE (MOD) as appropriate.

7 FURTHER DEVELOPMENT OF EXPLOSIVES FACILITIES

7.1 Procedure

7.1.1 Whenever further development of explosives facilities is required, one of the first actions must be to determine whether an increase in the Safeguarded area is necessary. If this is necessary, then full details of the alterations for the ESM are to be forwarded by IE staff to DE at the earliest possible opportunity in order that DE can be given the necessary tasking. It is unlikely that the amendments to the map will be processed before the appropriate Siting Board has been convened (see Chapter 5). Accordingly, the Siting Board is to ensure that the requirement for a new ESM is recorded, and also for progressing this requirement at regular intervals until the map is produced.

7.1.2 In addition, until the extra Safeguarded area is cleared through DE, sites are to increase the policing of their boundaries to once per month. This is to ensure that any civilian development that appears subsequent to Service plans for expansion does not cause these plans to be compromised.