EXPLOSIVES SITE SAFEGUARDING AND ENCROACHMENT

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INTRODUCTION TO EXPLOSIVES SITE SAFEGUARDING

- **Objective:** Protect Defence EO facilities by mitigating risks from incompatible developments.
- **Scope:** Based on eDEOP101 and AASTP-1 safeguarding principles, including boundary lines, maps, and quantity distances (QD).
- **Key Focus Areas:**
- Defining safeguarding lines (Green, Yellow, Purple).
- Using maps to coordinate zone planning with Local Planning Authorities (LPAs).
- Importance of managing public encroachment to maintain safe operational boundaries

SAFEGUARDING PRINCIPLES

- **Purpose**: Ensure safety and operational viability of Defence EO facilities by mitigating risks from public and internal encroachment.

- **Key Elements**: Safeguarding lines (Green, Yellow, Purple), safeguarding maps, consultative processes with Local Planning Authorities (LPA), and land control measures to avoid incompatible developments.

- **Standards for Safeguarding**:
- Based on Public Traffic Routes (PTR), Inhabited Building Distances (IBD), and Hazard Divisions for EO.
- Safeguarding lines are key in protecting EO facilities and ensuring long-term operational capabilities

SAFEGUARDING LINES AND ZONES

- **Green Line**: Based on Public Traffic Route Distance (PTRD) to limit risks associated with public roads near facilities.
- **Yellow Line**: Based on Inhabited Building Distance (IBD) to minimize proximity of residential and commercial developments.
- **Purple Line**: Twice the IBD for Hazard Division 1.1 EO materials, representing the highest safeguarding distance.

NATO AASTP-1 Insight:
AASTP-1 also uses PTRD and IBD as boundaries but allows adjustments based on traffic type and density, which can reduce PTRD from a full IBD to 2/3 IBD for low-traffic areas.

SAFEGUARDING MAPS

- **Purpose**:

•Safeguarding maps outline safeguarding zones, marking Green, Yellow, and Purple Lines.

•Used to communicate Defence safeguarding requirements to LPAs and property owners.

Distribution:

•Internal Maps: Show detailed EO storage data for Defence use.

•Public Maps: Provide unclassified safeguarding lines to aid local zoning without disclosing EO specifics

Process:
Safeguarding maps are prepared by Defence authorities and updated regularly to manage both internal and external developments around EO facilities.

QUANTITY DISTANCES (QD)

- **Definition of QD**: Required safe distances between a Potential Explosion Site (PES) and Exposed Sites (ES), which include buildings, roads, and public areas.
- **Application**:
  - eDEOP101 and AASTP-1 prescribes QDs based on fixed distance multipliers, including a 2x distance for Purple Line zones.
  - For example, a HD 1.1 site might require a D13 (400m) distance, and in some cases, the Purple Line may be calculated at 2D13 (800m) depending on EO licensing requirements
  - Adjustments may apply for internal developments within Defence property, coordinated with estate planning.

NATO AASTP-1 Note:
AASTP-1 allows QD flexibility; high-density public routes require full IBD, while lower-traffic routes may allow QD to reduce to 2/3 IBD.

ENCROACHMENT AND DEVELOPMENT CONTROL

- **Challenges with Public Encroachment**: Urban development near Defence sites increases the risk of adverse effects on EO facilities. Public encroachment can limit EO operations if QDs are not maintained.
- **Control Measures**:
  - Use safeguarding lines to delineate allowable development around EO sites.
  - Consult with LPAs to align public developments with Defence safeguarding needs.

NATO AASTP-1 Additional Context:
AASTP-1 has similar measures for managing development impacts around EO sites, with added flexibility for member nations to control public access in shared regions.

CONSULTATIVE PROCESSES AND COMPLIANCE

- **Role of Defence Licensing Authority**:
  - Regular engagement with LPAs to ensure safeguarding lines and maps are well-integrated into local planning.
  - Compliance ensured through updated safeguarding maps and brochures distributed to local authorities.
- **Collaboration Framework**:
  - Defence authorities work closely with LPAs to manage land use and mitigate risks of incompatible developments around EO sites.

PRACTICAL APPLICATIONS AND CASE STUDIES

- **Case Study 1:** Managing high-traffic routes near Purple Line boundaries—using safeguarding maps and LPA consultations to manage zoning.

- **Case Study 2:** Adjustments in planning when new internal development requires revised QD calculations to maintain safety compliance.

- **Case Study 3**: Mitigating Risks from New Housing Development Near the Yellow Line Boundary

- **Application Insights:**

- These examples demonstrate how safeguarding maps and distance controls mitigate encroachment risks, preserving facility functionality.

EXAMPLE 1: *MANAGING SAFEGUARDING LINES ALONG A HIGH-TRAFFIC ROUTE NEAR A PES*

- **Scenario:** Planned highway close to an EO facility requires safe Public Traffic Route Distance (PTRD).
- **Actions:** Calculated Green Line for full IBD; consulted with Local Planning Authority (LPA) and provided public safeguarding map.
- **Outcome:** Highway rerouted to comply with PTRD, maintaining safety without impacting Defence operations.

EXAMPLE 2: *ADJUSTING SAFEGUARDING BOUNDARIES FOR INTERNAL DEVELOPMENT*

- **Scenario:** EO facility expands storage, increasing Net Explosive Quantity (NEQ).
- **Actions**: Recalculated Yellow and Purple Lines based on new NEQ; updated internal safeguarding map and informed LPA.
- **Outcome:** Boundaries extended to meet QD compliance, ensuring safe operations and informing local authorities of changes.

EXAMPLE 3: *MITIGATING RISKS FROM NEW HOUSING DEVELOPMENT NEAR THE YELLOW LINE BOUNDARY*

- **Scenario:** Proposed residential development near Yellow Line boundary.
- **Actions:** Risk assessment conducted; consulted with LPA and developer, provided Defence Reference Book for guidelines.
- **Outcome:** Development moved beyond Yellow Line, ensuring a safe buffer and proactive Defence engagement with the LPA.

KEY TAKEAWAYS

- **Safety and Operational Viability**: Safeguarding lines and maps are essential for maintaining operational security of EO facilities amid public developments.

- **Risk Mitigation through Collaboration**: Effective safeguarding relies on consistent coordination with LPAs and adherence to established QD principles.

Q & A

- Thank You!
- Questions?
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