



SAFETY SERVICES ORGANISATION



Session 3.4

Explosive Limit Licences

**IATG Foundation Course:
Ammunition Storage Infrastructure Module**



Lesson Objectives

At the end of this lesson you should be able to:

- Know and understand the national system for explosives licensing
- Know the definitions of the key components of the ELL process and be able to apply them in the workplace
- Understand how an ELL is produced and be able to interpret its meaning
- Explain the main responsibilities for management of ELL

Introduction

- Explosive Limit Licences (ELL) are management tools to reduce risk in ammunition and explosives storage facilities by ensuring that these facilities are correctly sited, fit for purpose and have appropriate limits on NEQ by HD
- The national technical authority is responsible for the development and operation of a suitable ELL system
- Management of the system should be independent of the units/organisations that operate the storage and processing facilities

ELL as a Risk Management Tool

- **The principles of Risk Management, are based around two principles of risk:**
 - Tolerable Risk
 - As Low as Reasonably Practicable (ALARP)
- **Note that what is permissible and that which is ALARP, may well differ**
- **Further measures to achieve ALARP should be analysed**
- **Specific factors that may be considered to reduce risk include:**
 - NEQ limits
 - Personnel Limits
 - Operational considerations for processing buildings



Types of ELL

- **There are four main types of ELL in use**

- Standard ELL
- Non-Standard ELL
- Authorized Quantity ELL
- Ammunition Demolition Site ELL

- **Note:**

- **Site Potential Limit.** The potential NEQ, by HD, achievable at a PES after calculating the QDs to the various ES
- **Authorised Limit.** The actual limit, authorised by the technical authority, and is the maximum quantity of explosives, by HD, that is actually permitted at that PES

Standard Licence

- **Used for ‘normal’ requirements for ammunition storage**
 - Unless circumstances demand a different type of licence
 - When the QD between the PES and ES can be achieved in line with the guidance provided in the QD matrices and tables (in IATG 02.20 - Quantity and separation distances)



Non-Standard Licence

- **Used if specific constraints or regular monitoring**
 - If QDs can't be met, so ECA has been used
 - If regular monitoring is required



Authorised Quantity Licence

- **For ‘ready use’ ammunition**
- **In buildings not specifically designed for ammunition storage**
 - eg police stations, guardrooms
- **States what type of ammunition, and quantity**



Ammunition Demolition Site Licence

- **Used where open burning and/or open detonation occurs**
 - eg a demolition ground



Management of Licenses

- **Distribution and Display:**
 - 1 copy to the national technical authority
 - 3 copies to the ammunition storage unit
 - **1 copy for prominent display at the relevant PES**
 - 1 copy to the ammunition inspectorate



Management of Licences

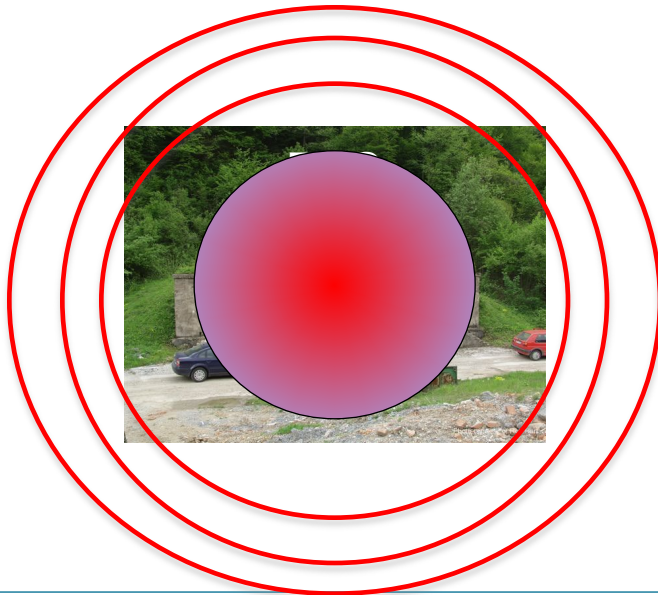
- **Validity:**
 - Change of Circumstances
 - Time validity
- **If a licence cannot be issued**
- **Completing and authorising an ELL**
- **Suspension of an ELL**



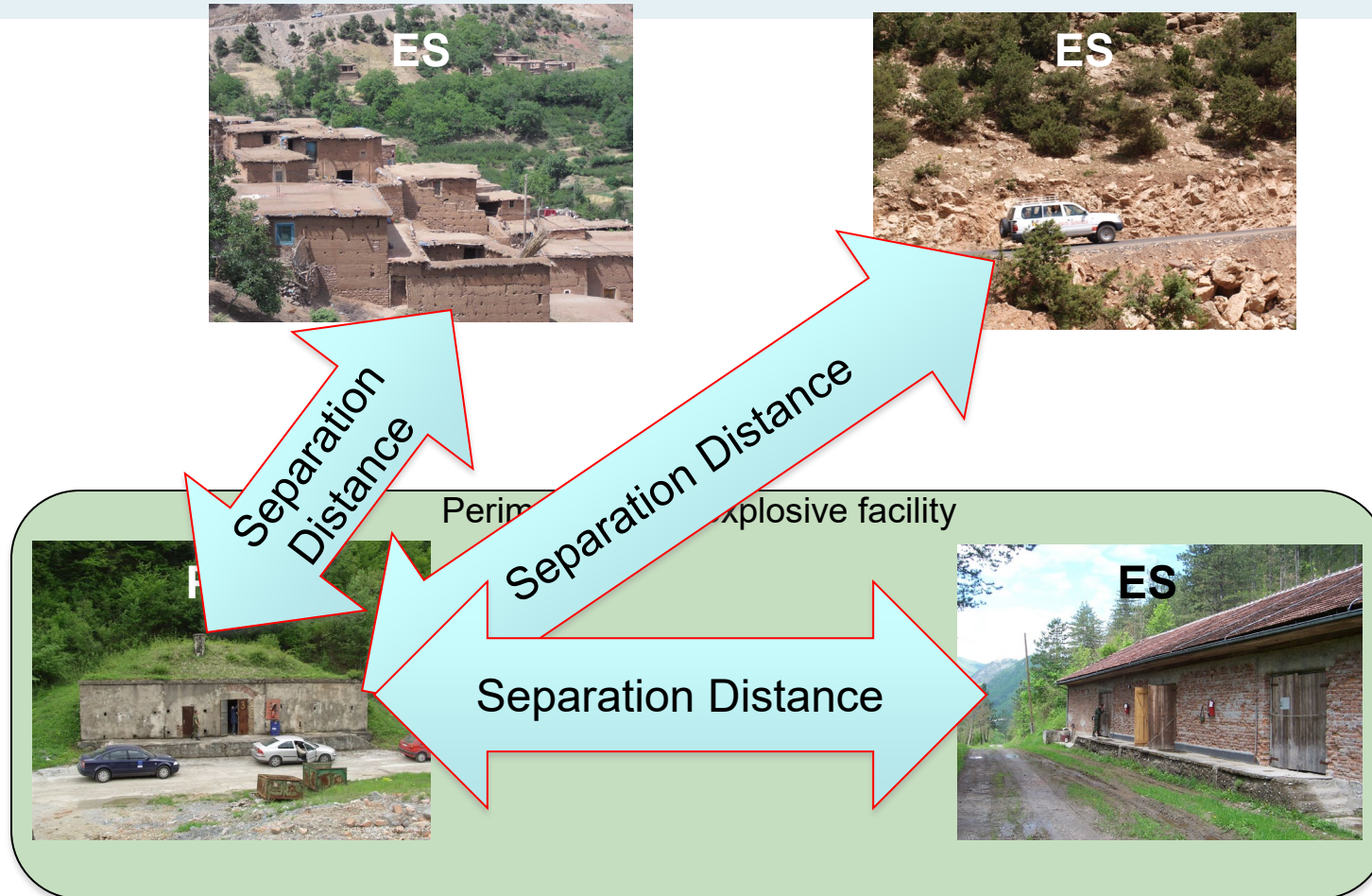
The Licensing Process

- This is when QDs are of practical use

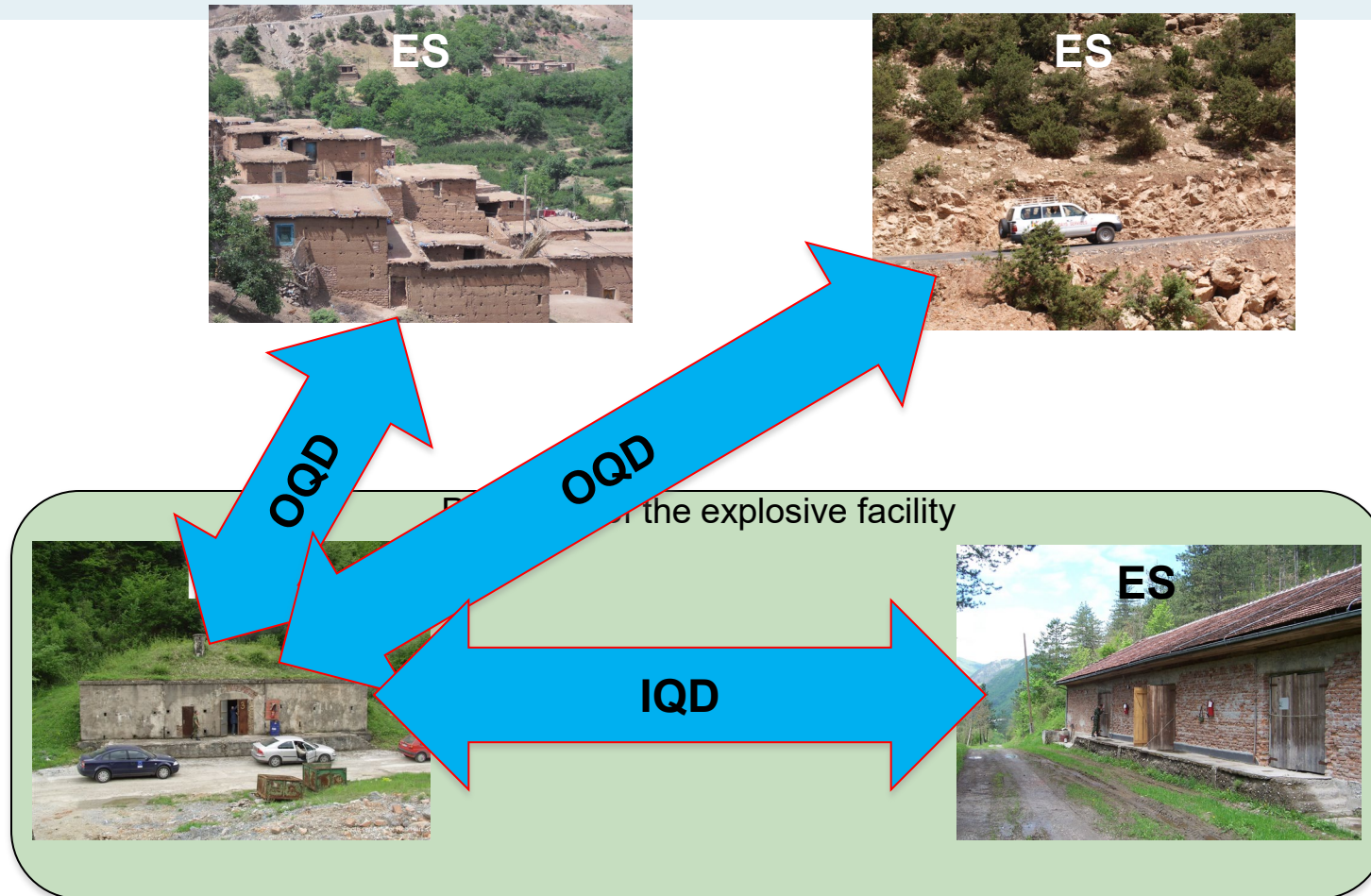
Definitions



Definitions



Definitions



The ELL Matrix

1. UNIT												2. LOCATION																																																																																																																																																									
3. DESCRIPTION						4. PERIOD						5. AIRCRAFT/SHIP/VEHICLE						YES/NO																																																																																																																																																			
6. MATERIAL/STOCK						7. DETERMINATION						8. ANALYSIS						9. OBSERVATIONS																																																																																																																																																			
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The ELL Matrix

1 UNIT				2 LICENCE			
3 SITE/NAME		4 FOR/USE/AS		5 ADEQUATE FREIGHTING YES / NO			
6 ELECTRICAL STANDARD CAT: A/B/C/D/OTHER		7 LIGHTNING PROTECTION YES/NO		8 AREA PLAN		9 SAFEGUARD MAP	
10 CONSTRUCTION DETAILS							
11 FLOOR & DOOR 7 BAR / 3 BAR / FFR / OTHER		12 TYPE OF FLOOR		13 TYPE OF HEATING		14 IAS YES / NO	
15 SITE DRAWING							
16 TRAVERSE DETAILS							

17 MINIMUM REQUIRED QUANTITY OF UNITS (VOLUME)				18 LICENSING AUTHORITY'S SIGNATURE			
HD 1.1	HD 1.21	HD 1.22	HD 1.33	HD 1.34			
ANY COMBINATION OF HD NOT BEING ONE OF THESE VALUES IS UNDESIRABLE IN ACCORDANCE WITH NATO GUS					HD 1.4 TO CAPACITY		
AVAILABLE UNITS OF SPACE							



The ELL Matrix – The PES

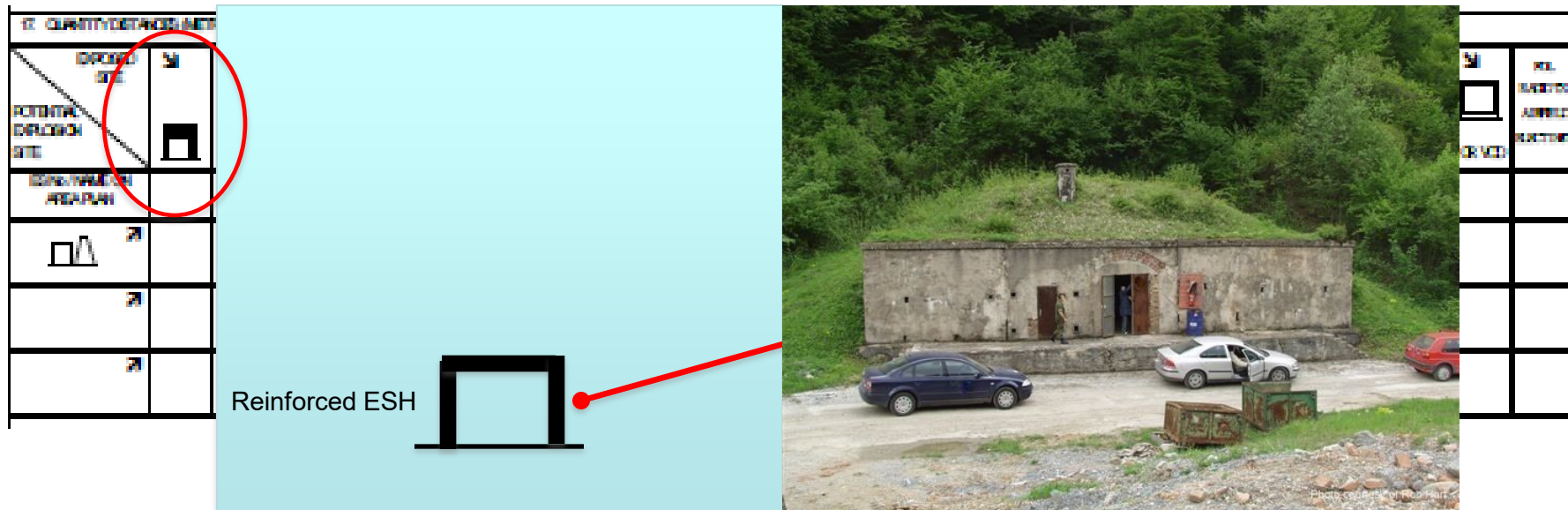
1. TYPE										2. LOCATION														
3. DESCRIPTION					4. FUNCTION					5. STATUS/STORAGE					YES/NO									
6. MATERIALS USED CAT: A/B/C/D/OTHER					7. DANGER/PROTECTION YES/NO					8. ANALYSIS					9. INSPECTION/MAINT									
10. COMMENTS/NOTES																								
11. MATERIALS USED 7BAR/5BAR/FRU/OTHER					12. TRACK/LOCK					13. TRACK/HARDEN					14. YES/NO					15. YES/NO/OTHER				
16. TRACK/PROTECT																								

17. QUANTITY/DETAILS (METRES)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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The ELL Matrix – The ES

12. QUANTITY DETAGGER (METRES)																																																																																																																																																																																																																																																																																																																																					
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The ELL Matrix – The ES



The ELL Matrix - Distances

12. QUANTITY DISTANCES (METRES)																									
POTENTIAL EXPLOSION SITE	EXPLOSION SITE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
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The Licensing Process

- **UN SaferGuard provide an ELL Tool at**
- [Create an Explosives Limit License | International Ammunition Technical Guidelines \(unsafeguard.org\)](https://unsafeguard.org)
- **This is based on the QD tables in IATG, not those in ER2014 or DSA OME 03**
- Can be a useful tool to give you a rough idea of limits between a PES and an ES.

Management of ELL

- **Responsibilities for the management for ELL are invested from the National level down to user units and will include:**
 - The Secretary of State for Defence – Government level
 - A Chief Inspector of Explosives – MoD level
 - Inspectors of Explosives – within Defence level departments
 - Head of Establishment – within ammunition holding establishments
 - Explosive Safety representatives

Note to facilitator: Amend this slide to determine the in-Nation management system and add descriptions of their responsibilities



Validity of ELL

- **Any change of circumstances or alterations in the ammunition holding storage area must be carefully examined to determine if the licence may have been compromised**
- **A standard ELL usually remains valid for 5 years unless:**
 - Alterations are made to the PES
 - A review is required by significant changes to National legislation
 - ALARP can no longer be demonstrated
 - A change in use or need is required
- **HoE is responsible for ensuring the terms of the licence remain valid**

Questions?

Lesson Objectives

You should now be able to:

- Understand the national system for explosives licensing
- Identify and understand the key definitions used in the ELL process
- Interpret an ELL
- Understand the process of ELL production
- Understand the important elements for the management of ELL



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