

MAINTENANCE & SAFETY CHECKS
GENERALY

ANNEX L.....
to TDS No.29 Issue 2
Range Works Inspection Guide

Ser	Element	Remarks		
1.	Snail traps - fabrication failure stress cracking.	<p>In the process of bending the steel if the rate of bend exceeds the design rate stress cracks may form on the outside of the curved steel elements.</p> 		
2.	Sand specification	<p>JSP 403 Vol.2 calls for a particular banding for stability of slope. The BS refers also to mechanical properties that many suppliers seem to ignore. The specified grading with correct mechanical properties provides a stable slope in all weathers.</p>		

				
3.	Sand slopes	Stop butts constructed entirely of sand are ballistically safe but stability during extreme wet weather must be considered. Timber frames or geogrids are suitable clear of the bullet impact areas.		
3.	Drainage	Drainage is an important safety feature where grenades or rockets are used. A flooded pit or depression may hide blinds making it dangerous for the RCO to clear.		

4.	Bullet damage	<p>The RAO annual inspector will determine why shot occurs in unexpected areas. He may not however look at the stability of damaged structural members or services.</p>  <p>Roof beams</p>	 <p>Steel columns</p>
5.	Structures on ranges	<p>Cable pit or service markers made of a hard material on ranges must not be exposed to direct fire.</p>	

6.	Weakened defence structures.	Where walls provide ballistic protection, leaving dry joints or using hollow blocks or brick is dangerous.	
7.	Hidden attrition – also looked at by annual and independent inspectors.	Bullets pass through timber leaving a small hole that is not noticeable. The bullet loses all of its energy when it strikes a hard surface. Here is the effect well illustrated exposed when the works organisation eventually decided to replace the timber.	
8.	Demolition range bunkers.	Many demolition ranges have firing bunkers close by. Each has been constructed to site specific requirements. The works inspection can only determine if the bunker remains in reasonable condition with no visible signs of blast damage.	

9	Overhead Fire Towers.	Each of these are developed locally. There is no standard design. The works inspection should check access and stability. Any barrel support provided should have positive fixing such that weapon vibration will not loosen the fixings.	
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