

## **BAFFLE RANGE SYSTEM**

### **SMART SOLUTION FOR SMALL ARMS PRACTICE FIRING**

Conventional Classification Ranges used for firing practice with small arms are provided with a danger area extended up to 1830m behind the stop butt. The danger area provides a safe zone for the misdirected bullets resulting from possible errors made during practice firing. The area required for the classification range with full danger area is around 500 acres which is quite huge. These ranges were not very safe and several accidents have been reported because the free flight bullet can travel up to 3 to 4 km. Moreover, there is an overall shortage of classification ranges primarily due to non-availability of adequate and suitable land for constructing safe and efficient ranges.

TBRL, Chandigarh has indigenously developed the concept of a range with reduced danger area requirement, termed as Baffle Range, as an alternative, effective and safe facility for small arms practice firing without comprising training objectives. Baffle range used improvised concepts of a system of ground barriers, side walls, baffle walls and stop- butt to arrest the misdirected bullets. The land required for a Baffle Range can be reduced to 5-20 acres by providing suitable designed ballistic protective structures (i.e. baffle walls, side walls, ground barriers, stop butt etc.) at specified locations, properly conditioned impact surfaces, regular upkeep of impact area and strict enforcement of safety rules/ precautions in the range. Such a great saving of land creates a possibility of having practice firing ranges at cantonments with short availability of land.

#### **Advantages of Baffle Range**

- Land requirement reduced to 5 acres for 100m firing Range.
- Promote safe and efficient firing practice.
- Designed to prevent injury to personnel and to prevent damage outside the range from misdirected firing and ricochets, if firing is executed within permissible firing errors.
- Includes provision for ease of maintenance and safety.

#### **Salient Features of Baffle Range**

- Existing Baffle Range Sizes: 100,200,300,400 and 500m
- Providing with sacrificial bullet resistant FICS (Fibers Impregnated in Concrete Slurry) panels & CRS (Composite Rubber Steel) Panels developed based on extensive trials.
- Design caters for eight firers in lying, kneeling and standing position
- The design provides a safety of 15 in the horizontal plane and 15 in vertical plane.
- Weapons authorized on the Baffle Range include 9mm Carbine & Pistol; 5.56 mm INSAS Rifle & LMG; 7.62mm SLR; AK-47 etc
- Site area for Baffle range is 125m wide and (L+50) m long where L is maximum firing to be accommodated.
- Enclosed type stop butt for maximum safety
- Baffle Range facilitates three types of ground barriers based on topographic and climatic condition of area.
- Baffle Range has the provision of portable acoustic canopy above firing position to reduce the outdoor noise levels.

Interested Industries are requested to forward their Expression of Interest (EoI) to Director TBRL, Chandigarh with a copy of Director DIITM, DRDO HQ on following address:-

**To,**

**Director**

**Terminal Ballistic Research Laboratory (TBRL)**

Sector-30, Chandigarh-160030

Phone: 0172-2307100, 2657674

Fax: 0172-2657506

Email ID: **director[dot]tblrl[at]gov[dot]in**

**Copy to**

**Director**

**Directorate of Industry Interface & technology Management (DIITM)**

Room No. 447, DRDO Bhawan, DRDO HQrs, Rajaji Marg, New Delhi-110011

Phone: 011-23013209/23015291

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Email: **diitm[dot]hqr[at]gov[dot]in**

Industries are requested to enclose supporting document in EoI as per Appendix 'D' of DRDO Policy and Procedure for ToT available at **<https://www.drdo.gov.in/sites/default/files/inline-files/drdo%20Policy%20%26%20Procedure%20%20for%20ToT.pdf>**