



CONTENTS

1.	PURPOSE	2
2.	BACKGROUND TO THE CONTRACTING AUTHORITY.....	2
3.	BACKGROUND TO REQUIREMENT/OVERVIEW OF REQUIREMENT	2
4.	DEFINITIONS	2
5.	SCOPE OF REQUIREMENT.....	3
6.	THE REQUIREMENT	3
7.	KEY MILESTONES	5
8.	AUTHORITY'S RESPONSIBILITIES.....	5
9.	REPORTING	5
10.	VOLUMES	5
11.	CONTINUOUS IMPROVEMENT.....	5
12.	SUSTAINABILITY.....	6
13.	QUALITY	6
14.	PRICE.....	6
15.	STAFF AND CUSTOMER SERVICE	6
16.	SERVICE LEVELS AND PERFORMANCE.....	6
17.	SECURITY REQUIREMENTS.....	6
18.	INTELLECTUAL PROPERTY RIGHTS (IPR).....	6
19.	PAYMENT	6
20.	ADDITIONAL INFORMATION.....	6
21.	LOCATION	6
	ANNEX 1	7
	ANNEX 2	8



1. PURPOSE

- 1.1 CAST have a requirement to reduce the noise within our in-door Firing Range in order to reduce reliance on high Single Number Rating (SNR) hearing protection. The noise reduction solution could be soundproofing, an intrinsically safe remote firing Switch or a combination of the two.
- 1.2 The purpose of this procurement is to identify suitable external suppliers of noise reduction solutions who can offer a complete solution to CAST including product(s), installation and verification (witnessed demonstration).

2. BACKGROUND TO THE CONTRACTING AUTHORITY

- 2.1 CAST (the “Authority”) is a unique team of scientists and engineers at the heart of the Home Office providing expert advice, innovation and frontline support. The Authority is the primary science and technology interface between Home Office ministers and policy makers, frontline delivery partners, and the Providers of science and technology. Understanding the policy and operational context of Home Office business allows the Authority to operate where others cannot for reasons of impartiality, national security or market failure.
- 2.2 The Authority’s expertise and activities are focused into capability areas that serve the range of Home Office interests in contraband detection; crime prevention and community safety; cyber; forensics; identity assurance; protective security; public order and surveillance.

3. BACKGROUND TO REQUIREMENT/OVERVIEW OF REQUIREMENT

- 3.1 A recent Noise Survey with Assessment of Exposure reported that results for short term measurements are above the exposure limit value of 87dB(A) (measured noise level table in ANNEX 1). The Firing Range is a narrow room containing some sound proofing material to absorb some of the noise (further ‘scene-setting’ information is available in ANNEX 2).
- 3.2 Mandatory hearing protection is required when firing.
- 3.3 The distance between the operative and the firing point is limited when firing due to the length of the wire attached to the firing controls. A cable approximately 30 meters in length would reach the Loading Room for remote firing however, the cabling and remote firing controls would need to be intrinsically safe as the Loading Room is a DSEAR Zone 22 area (further scene-setting information is available in ANNEX 2).
- 3.4 The aim of this exercise is to procure a noise-reduction solution that will reduce reliance on high SNR hearing protection (PPE)

4. DEFINITIONS

Expression or Acronym	Definition
SNR	means Single Number Rating (ISO 4869). SNRs are expressed in dB and are used as a guide for comparing the potential noise reduction capability of different hearing protection devices, such



	as ear plugs worn as PPE
DSEAR	means the Dangerous Substances and Explosive Atmosphere Regulations 2002
PPE	means Personal Protective Equipment, in this instance, hearing protection.
VfM	means value for money, a combination of both cost and quality

5. SCOPE OF REQUIREMENT

5.1 In-scope:

- 5.1.1 Noise reduction solutions within the in-doors Firing Range and/or Loading Room that are comprised of:
- 5.1.1.1 Soundproofing within the Firing Range and/or Loading Room;
 - 5.1.1.2 Intrinsically Safe Remote Firing Control Switch located within Loading Room;
 - 5.1.1.3 Or a Value for Money combination of 5.1.1.1 and 5.1.1.2, above.

5.2 Out of scope:

- 5.2.1 Supply of hearing protection (PPE)

6. THE REQUIREMENT

6.1 Soundproofing

- 6.1.1 All soundproofing materials must be fire-retardant.
- 6.1.2 All soundproofing materials must be non-toxic with non-respirable particles/fibres
- 6.1.3 All soundproofing materials affixed to walls and ceilings must reflect ambient light OR be suitable for painting with water-based emulsion.
- 6.1.4 All soundproofing materials affixed to walls and ceilings must be non-porous and cleanable by any licensed deep-clean company (to remove lead dust).
- 6.1.5 All soundproofing floor coverings must be non-slip and wipe-cleanable (to remove lead dust).
- 6.1.6 All soundproofing materials affixed to furniture, such as storage units/filing cabinets, must be non-porous and wipe-cleanable (to remove lead dust).

6.2 Intrinsically Safe Remote Firing Control Switch located in Loading Room

OFFICIAL



-
- 6.2.1 Intrinsically Safe Remote Firing Control Switch located/used within the Loading Room must meet the requirements of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 1996.
 - 6.2.2 Intrinsically Safe Remote Firing Control Switch must be suitable for use in a DSEAR Zone 22 area and comply with BS EN 60079-31. The Switch must be a 2-stage turn-key operated safety and push button momentary Switch and have suitable connections to interface with current firing system.
 - 6.2.2.1 Inspect and certificate current Remote Firing Control Switch OR upgrade/replace current Remote Firing Control Switch, in-line with 6.2.1 and 6.2.2, above.
 - 6.2.3 Persons providing, maintaining or verifying electrical installations and equipment in, or associated with, the hazardous areas must be competent to undertake the task (e.g. CompEx trained)
 - 6.2.4 The Intrinsically Safe Remote Firing Switch system must be wipe-cleanable (to remove dusts and particulates).
 - 6.3 Requirements common to 6.1 and 6.2 above
 - 6.3.1 All solutions supplied must comply with the relevant statutory, regulatory and legislative requirements.
 - 6.3.2 All solutions supplied must comply with the applicable standards.
 - 6.4 Constraints
 - 6.4.1 The solution must NOT alter the supporting structure/building that houses the in-door Firing Range and Loading Room.
 - 6.4.2 The 'furniture' including mounting platforms and over-head gantry must remain operational and housed within the Firing Range.
 - 6.4.3 Wall mounted power and cable points must remain accessible.
 - 6.4.4 The solution must NOT introduce new risks or increase existing risks to Health & Safety
 - 6.5 Outcome
 - 6.5.1 The measured noise exposure to staff (during test firing) must be as low as is reasonably practical (ALARP) resulting in reduced risk of damage to hearing (both severity and likelihood) within the Firing Range/Loading Room, which in turn will reduce the reliance on high-SNR hearing protection. While ALARP means just that, the following noise levels are ideal: **Daily personal noise exposure between 70dB**



and 80dB(A-weighted) and Peak Sound Pressure below 135dB(C-weighted)

- 6.5.2 The reduced noise within the in-doors Firing Range/Loading Room will be measured during solution verification (CAST-witnessed verification by demonstration) by the solution provider thus:
- 6.5.2.1 Noise levels within the Firing Range and Loading Room during test firing (source and reflected noise)
 - 6.5.2.2 Exposure to noise to staff within the Firing Range and Loading Room during test firing (received noise)

7. KEY MILESTONES

- 7.1 The Potential Provider should note the following project milestones that the Authority will measure the quality of delivery against:

Milestone	Description	Timeframe
1	Arrange date(s) for work to commence on-site	Within 2 weeks of Contract Award
2	Complete installation and verification/certification of solution.	Within 8 weeks of Contract Award

8. AUTHORITY'S RESPONSIBILITIES

- 8.1 The Authority will provide contact details of key project personnel upon the award to the successful Provider.
- 8.2 The Authority will provide site access and access to basic welfare provisions during the works.

9. REPORTING

- 9.1 The Authority requires a report to be issued following the completion of the project.
- 9.2 The report shall contain details of the works undertaken, including (but not limited to): project planning documentation, scope of works, method statement, schedule of works, material safety data sheets for products used, H&S documentation, warranty information, certificates.

10. VOLUMES

- 10.1 Not Applicable

11. CONTINUOUS IMPROVEMENT

- 11.1 Not Applicable



12. SUSTAINABILITY

12.1 Not Applicable

13. QUALITY

13.1 The quality is shown within section 6 requirements section of this document.

14. PRICE

14.1 The Contract price shall be a fixed project cost paid upon successful completion of the works.

14.2 Prices are to be submitted via the Appendix E excluding VAT.

15. STAFF AND CUSTOMER SERVICE

15.1 Potential Provider's staff assigned to the Contract shall have the relevant qualifications and experience to deliver the Contract.

15.2 The Potential Provider shall ensure that staff understand the Authority's vision and objectives and will provide excellent customer service to the Authority throughout the duration of the Contract

16. SERVICE LEVELS AND PERFORMANCE

16.1 The project milestones will act as the KPI for this contract.

17. SECURITY REQUIREMENTS

17.1 The successful organisation(s) is/are required to inform CAST at least 24 hours in advance of the individuals who will be visiting site to ensure they have appropriate access and escort.

18. INTELLECTUAL PROPERTY RIGHTS (IPR)

18.1 Not Applicable

19. PAYMENT

19.1 Payment can only be made following satisfactory delivery of pre-agreed certified products and deliverables.

19.2 Before payment can be considered, each invoice must include a detailed elemental breakdown of work completed and the associated costs.

20. ADDITIONAL INFORMATION

20.1 Both ANNEX 1 and ANNEX 2 (at the end of this document) contain 'scene setting' information

21. LOCATION

21.1 The location of the Services will be carried out at CAST, Sandridge, Woodcock Hill, St Albans, HERTS AL4 9HQ