



REQUEST for PROPOSAL (RFP)

for

Overt Body Armour for Authorised Firearms Officers

Ref: 3609

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1. INTRODUCTION

1.1 Purpose & Scope

The Police, Fire & Crime Commissioner for Staffordshire (the Commissioner) is seeking the purchase of replacement overt ballistic body armour for its Authorised Firearms Officers (AFOs).

This procurement is being carried out via direct award under Lot 7.6 of the ESPO Framework reference 144_19 for Personal Protective Equipment (PPE) & Clothing.

This specification relates to the performance, evaluation and production aspects of overt body armour to be issued to Authorised Firearms Officers (AFO's), working in scenarios where a high velocity handgun and/or rifle, and/or shotgun threat has been assessed. The fundamental design criteria are for an armour system to provide protection against the above threats, and cover the vital organs. This system must be able to incorporate body worn equipment and be compatible with duties undertaken by officers.

A contract will be awarded for an initial period of 12 months in which the Commissioner may extend for a further two periods of up to 12 months each, by giving written notice to the Supplier not less than one month prior to the last day of the Initial Contract Period.

Upon contract award, an initial order shall be placed by the Commissioner for approximately 125 units

1.2 Special Terms

1.4.1 No Exclusivity

The Supplier is not being appointed as the Commissioner's exclusive provider of all services which are the same as or similar to the Services and the Commissioner shall be free at any time to purchase any such services from one or more other Commissioners.

1.4.2 No Guaranteed Purchases

The Supplier does not give, and shall not be deemed to have given, any guarantee, warranty or other assurance as to the quantity or value of Services that may be required under the Contract, nor as to the revenue that the Commissioner will generate as a result of entering into the Contract.

1.3 Abbreviations

APA	Armour Panels (Front & Back)
AFO	Authorised Firearms Officer
ARV	Armed Response Vehicle
BABT	Behind Armour Blunt Trauma
FMJ	Full Metal Jacket
HOSDB	Home Office Scientific Development Branch
MOLLE	MO dular L ightweight L oad-carrying E quipment
OSE	Officer Safety Equipment
PALS	Pouch Attachment Ladder System
SFO	Specialist Firearms Officer

1.4 Definition of Terms

Body Armour	Complete armour assembly with Armour Panels (including groin protector, neck / shoulder / additional armour inserts) Upgrade Plates and Armour Covers.
Armour Panel	Front or back armour material pack in protective cover.
Armour Material Pack	Layers of armour material fixed together as in build standard before fitting in protective cover to form Armour Panel.
Upgrade Plate	Supplementary plate for front and rear wear to provide additional protection to Armour Panel.
Armour Cover	Black overt cover to be worn over garments which should carry Armour Panels and Upgrade Plates and incorporate a MOLLE carriage system.

2. DESIGN REQUIREMENTS

2.1 General

- 2.1.1 The requirement is for an overt body armour system to provide ballistic protection to the vulnerable areas of the torso (see 2.2 for coverage) whilst allowing the officer to undertake their operational duties.
- 2.1.2 Provision of AFO body armour is required for both male and female figure shapes (i.e. gender specific fit) and sizes. The body armour must be easily donned and doffed (without assistance).
- 2.1.3 The cover needs to incorporate a sweat management system, and provide a consistent image between the genders.
- 2.1.4 The ergonomic performance of the armour is of high importance, including flexibility, weight and balance of the armour.
- 2.1.5 The armour should be accompanied with a suitable bag for the purposes of storage and to maximise longevity of the armour.

2.2 Coverage

- 2.2.1 The protected area should include the torso, ensuring coverage of the central abdominal organs, in particular the heart, liver, lungs, kidneys and spleen.
- 2.2.2 In addition to the two main areas of protective panels, one front and one back, the solution will also include continuous protection at the sides of the armour where the protective panels meet and shoulder panels.
- 2.2.3 Where protective panels and/or elements meet, a small overlap is desirable and edges should not be harsh.

2.3 Carriage of Armour Panels / Upgrade Plates

- 2.3.1 The front and rear Armour Panels will fit securely into an Armour Cover. The cover must securely carry and maintain the position of the Armour Panels in the correct position on the body.
- 2.3.2 The Upgrade Plate must be securely attached to or integrated into/onto the Armour Cover design.

- 2.3.3 The armour material pack must be enclosed in a protective cover using a dark coloured water-proof material, with an information panel attached (see section 2.5).

2.4 Carriage of officer safety equipment and firearms

- 2.4.1 The Armour Cover shall be black and will incorporate a laser cut MOLLE facility with to carry OSE and firearms equipment with securely attached, transferrable pouches. It is recognised that individual officers have their own preference with regard to carriage of equipment, hence a modular / interchangeable system in which equipment can be carried in a variety of places upon the body armour is required. (Please note: it is of fundamental importance that the carriage of equipment is secure).
- 2.4.2 The cover design shall provide a minimum in service life of 2 years for the Armour Covers.
- 2.4.3 The cover must be removable from Armour Panels, and able to be laundered when necessary.
- 2.4.4 The Armour Cover for the body armour will be capable of displaying the officer's number on each shoulder and carriage of radio communication systems and body worn video.
- 2.4.5 The cover must be provided with a discreet handle on the rear which must withstand an officer being dragged along the ground whilst wearing the armour.
- 2.4.6 Core equipment items that are to be carried by AFOs on the overt armour cover MOLLE facility are:
- Friction lock baton
 - PAVA spray
 - Rigid handcuffs
 - Spare magazines
 - X2 Taser
 - Radio (click fast)
 - Bodyworn Video
 - Torch
 - Additional pouches for 2 x stun grenades
- 2.4.7 The MOLLE carriage facility shall have the capability to cater for the use of a;
- centre point sling attached to shoulders
 - carbine retention sling
- 2.4.8 The MOLLE carriage facility shall also allow for the augmentation of additional protection to the neck, groin (and sleeves if required in the future).

2.5 Cover Construction

2.5.1 Technical construction of the fabric of the Armour Cover must be;

Colour:	Black		
Laundering:	Machine washable to 40°C		
Dimensional stability @ 40°C	Woven – warp:	< 2%	ISO 5077
	Woven – weft:	< 2%	
	Knitted – courses:	< 5%	
	Knitted – wales:	< 5%	
Abrasion resistant:	> 50,000 rubs		BS EN ISO 12947-2: 1998
Pilling	Grade 4 after 30,000 rubs		BS EN ISO 12947-1: 2001
Snag resistance	Grade 4		BS 8479:2008
Tensile strength / Bursting strength (as appropriate)	Warp: >600N Weft: >600N	>250 KPa	BS EN ISO 13934-1:1999 / BS EN ISO 13938-2:1999
Tear strength	>40N		BS EN ISO 13937-3: 2000
Colour fastness to laundering	Stain 4 Change 4		BS EN ISO 105-C06:1997
Water	4		BS EN ISO 105-E01:1996
Light fastness	Xenon arc tester (min 5)		BS EN ISO 105-B02:1999
Rub fastness	Dry rub: 4 Wet rub: 4		BS EN ISO 105-X12:2002
Perspiration	Acid 4 Alkali 4		BS EN ISO 105-E04:2009

2.5.2 Where fastenings and fittings are used, they must match the colour of the cover, and be of compatible weight and durability.

2.5.3 All materials and trimmings must be durable to daily wear and abrasion from the interaction with equipment and equipment carriage systems, e.g. belts or MP5.

2.5.4 Lining materials to provide good wicking properties.

2.5.5 All seams to be over-locked and well finished. Seams must not have any slippage / grin. All fastenings and fixings attached using appropriate stitching. Stitch length to be no less than 10 stitches per 2.5 cm. Sewing thread to match the fabric and be a synthetic or blend of appropriate dTex.

- 2.5.6 Where length or girth adjustment is utilised it must not be bulky or stiff, have sharp/chaffing edges or hinder passage of airflow.
- 2.5.7 Any additional protection elements e.g. neck or groin must be attached externally to the Armour Cover to prevent internal discomfort to the wearer.
- 2.5.8 The armour will generally be worn with wicking undershirts, attention must be paid to ensuring the internal surfaces of the armour prevent wear and tear, in particular snagging to these undershirts.

2.6 Labelling

- 2.6.1 To ensure that the Armour Panels are inserted correctly into the outer cover, an information panel must be **permanently** attached to show the **side of the panel/plate that is worn against the body**. In addition, the following information shall be included:
- Manufacturer's name
 - Size
 - Date of manufacture
 - Lot & serial number
 - Certified protection level of the armour
 - Care instructions and correct assembly
 - A space on the panel must be provided for the officer to write their name and warrant number (8 digits)
 - UK Force / Service specific information (e.g. Product Code).

The printed armour information contained on the information panel shall remain legible throughout the in-service life of the panel.

- 2.6.2 The outer covers will permit the attachment of Velcro POLICE badges centrally on the front and rear of the cover.

2.7 Shaping and sizing

- 2.7.1 Provision of body armour is required for both male and female figure shapes (i.e. gender specific fit) however a consistent image between the genders should be maintained.
- 2.7.2 Upgrade Plates must take into account size variation and gender differences.
- 2.7.3 The armour system must be available in a comprehensive range of sizes to allow for variation in height and build of the wearers, and must be adjustable to allow the wearer maximum comfort.

- 2.7.4 The Supplier shall carry out a measuring service and/or cascade training to an employee of the Commissioner.
- 2.7.5 The Supplier is required to provide a detailed size chart/roll, which they are able to supply, together with the physical measurements of the armour and Upgrade Plates, and the corresponding body sizes each armour is designed to fit. This contract is seeking more than 1 standard size of Upgrade Plate to meet the needs of the range of sizes available.
- 2.7.6 The Supplier shall also ensure they can accommodate how they would address the provision of non-standard/special measure sizes for officers who cannot be accommodated in the standard range of sizes.
- 2.7.7 Each unit of armour must provide for variation in the chest and waist measurements. The design must prevent the armour from "r ding up" on the wearer during normal operational duty activities.

2.8 Wearability

2.8.1 The fundamental areas of importance with regard to wearability are:

- Accurate and comfortable fit
- Flexibility
- Thickness (minimal bulk)
- Minimal overall weight and good weight dispersion of body armour
- Non-chafing edges (especially at the underarm, neck, waist and lower back regions)
- Carriage and good weight distribution of equipment
- Heat and sweat dispersion incorporated within the cover / armour design
- Minimum resistance to movement
- Ease / simplicity of donning and doffing including any necessary adjustments by the individual
(not listed in any order of importance)

2.8.2 The armour must be compatible with:

- operational activities, for protracted periods, potentially **8 to 16 hours** in duration;
- activities include standing, sitting, walking, running, driving (with seatbelt fitted), carriage of an MP5 using a centre point strap, all unarmed use of force activities and all firearms activities including shooting whilst being in the prone position (i.e. lying on the floor), abseiling and any other activities reasonably anticipated to be undertaken by AFO's.
- Other equipment, i.e. use with a ballistic helmet and respirator.

3. PERFORMANCE REQUIREMENTS

3.1 Protection Levels

Each unit of armour must provide ballistic and knife protection that meets the minimum protection level requirements as detailed below.

3.2 Armour Panels

A CAST certified solution of soft Armour Panels and Upgrade Plates compliant to the 2017 Home Office Body Armour Standards (2017);

Armour Panel (front and back)	9 mm handgun Knife Spike	HO2 + KR1 + SP1
Upgrade Plate (front and back)	Rifle Shotgun	HO3 + SG1

If the nominal size of Upgrade Plate of 10" x 12" is not suitable for the design of some sizes of armours, the Supplier shall submit details of their proposals for alternative size(s) and curvature to fit the wearer.

3.3 Evidence of Technical Evaluation

The following evidence may be requested as part of your tender response;

- Evidence of HOSDB Body Armour Certification
- Upgrade Plate evaluation
- Behind Armour Blunt Trauma (BABT) test evaluation
- Critical Perforation Analysis (CPA) evaluation
- Knife test evaluation
- Coverage evaluation
- Flexibility evaluation
- Evaluation of Armour Panels designed for the female shape
(*Armour Panels designed for the female shape will be evaluated by inspection of the engineering drawings to determine the location of ballistic testing at any perceived areas of weakness.*)

4. QUALITY MANAGEMENT

- 4.1 The Quality Assurance of all work carried out under the contract shall be in accordance with the requirements of BS/EN/ISO 9001: 2008, to ensure the MPS of consistent quality of the items to be supplied under this contract.
- 4.2 The Supplier shall nominate a representative, with authority to resolve matters pertaining to quality, who will liaise with the MPS both before and during the period of contract.
- 4.3 The Supplier shall state all sub-contractors and suppliers to be employed during the contract, and state which aspect of the product the sub-contractor is involved with. Also, the Supplier shall declare sub-contractors previous experience in similar contracts. The MPS reserves the right to audit at any time, with reasonable notice, the quality management systems of sub-contractors.

5. SAMPLE SUBMISSION REQUIREMENTS

5.1 Samples

Prior to purchase and following the return of this document. The following samples are to be provided at the expense of the Supplier.

Qty	Description of Sample	Size
1	Female solution as described above	TBA
1	Male solution as described above	TBA

Deliver to:
Staffordshire Police
Weston Road
Staffordshire Police ST18 0YY
FAO Insp [REDACTED]

6. TIMESCALES

Request for Quote Sent to Supplier	Wednesday 4 th March 2020
Sample Demonstration at Staffordshire HQ	Tuesday 10 th March 2020
End of Sample Testing	Friday 13 th March 2020
Final Quotation back from Supplier	Tuesday 18 th March 2020
Contract Award / Purchase order Raised	Before 31 st March 2020

7. SUPPLIER RESPONSE SECTION

7.1 Specification Compliance

The Contractor is to confirm that it can meet the specification as set out above and if not, please provide commentary regarding any requirements that cannot be fulfilled.

SUPPLIER COMPLIANCE:

7.2 Pricing

The Commissioner shall utilise the pricing schedule as agreed under Lot 7.6 of ESPO Framework reference 144_19 for Personal Protective Equipment (PPE) & Clothing as follows;

Item Description	Size	Colour	Product Code
(Men's) MOLLE Style tabard Body Armour system with customisable features. Equipped with CAST 2017 certified soft Armour Panels provide HO2/KR1 & SP1 protection against ballistic, knife and spike threats.	Available in: S-3XL	Black	LN0227
(Women's) MOLLE Style tabard Body Armour system with customisable features. Equipped with CAST 2017 certified soft Armour Panels provide HO2/KR1 & SP1 protection against ballistic, knife and spike threats.	Available in: S-3XL	Black	LN0227
Hard Armour Ballistic Plate for use on MOLLE style body armour system. CAST 2017 certified protection level H03 & SG1.	250 x 300mm size plate	Black	HA0143

The Supplier is to provide a separate Quotation that identifies which of the 'customisable features', as mentioned in the above specification, is likely to incur additional costs to the Commissioner.

As a minimum the Supplier is also to provide optional costings for the following;

- Cost of replacement covers
- Measuring service
- Cascade training for the purpose of measuring

7.3 Volumes

Volumes are not guaranteed and it is expected that following the initial purchase, any future purchases shall relate to the movement of staff and/or destroyed kit only.

Estimated Initial Purchase

111	AFOs	Spec as described above (male only)
14	Negotiators	Protection levels as stated at 3.2 though a simple plain black Armour Cover required only (not a MOLLE).
125		

7.4 Additional Clarifications

Please confirm the warranty period / details of the following;

Cover <i>Please include details of instances of wear and tear on the MOLLE such as stitching loosening whilst carrying heavy pouches and what options are available to the Commissioner.</i>	
Panels <i>Please include any types of activity that would void the warranty such as storage, care & maintenance)</i>	
Plates <i>Please include any types of activity that would void the warranty such as storage, care & maintenance)</i>	