

CM(BM) 5/3/1/6/2

28 Jun 06

APS/Min(DP)

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PROTECTED PATROL VEHICLES (PPV)**ISSUE**

1. The capability that might be achieved with the investment of about £50m for the protection of soldiers in PPVs.

RECOMMENDATION

2. That the Minister approves:
 - That £2m be committed now for an urgent study on options for an enhanced PPV.
 - That the MOD proceeds with the full purchase of 166 VECTOR for Southern Afghanistan using existing funds.
 - That additional armoured kits for FV 430 be purchased to provide additional protection options in Iraq on a rolling uplift basis.
3. That the Minister notes:
 - That EP funding would be required to deliver 4 Battle Groups worth of an improved PPV capability as part of Phase 2 of EP07 with a target fielding date in the second half of 2007¹.
 - LAND and PJHQ still see the need for a PPV.
 - LAND remain committed to the full buy of 166 VECTOR, with the first vehicle available in Mar 07, to meet the requirement in Afghanistan. The full buy will be complete by Jul 07, with first vehicles available in Mar 07.
 - The current UOR for uparmoured FV 430 Mk 3 will improve the survivability for troops in Southern Iraq; fielding will be complete in Jan 07 with first systems available during Oct 06. Options are being examined to accelerate the delivery rate of FV 430 Mk 3.

¹ An improved PPV with Bowman and ECM will be in service by the end of 2007.

- The recent development of the RG31 tracked vehicles for the PPV role; an initial assessment for the longer term PPV solution will be provided by 18 Jul 06.
- That PJHQ and LAND continue to regard a broad systems approach to force protection as essential.

TIMING

4. Urgent: to inform Min DP's discussions with Secretary of State.

BACKGROUND

5. The Snatch Land Rover has been criticised in the media in the wake of recent casualties, in particular the criticism that the UK have not adopted the RG31, variants of which are in service with US and Canadian forces and have been used by UK forces in the past. RG31 has previously been discounted due to

and its lack of payload. DEC GM departs for South Africa on 29 Jun 06 to be briefed on the current development of RG31 series and its growth potential.

6. The MOD has done a significant amount to enhance existing equipment: 62 VECTOR² for Afghanistan; enhanced ISTAR³; KESTREL and OSPREY body armour⁴; Electronic Counter Measures⁵; enhanced survivability of our principal tracked vehicles⁶ and of the unarmoured wheeled vehicle fleet⁷.

7. The current joint view of LAND and PJHQ is that the priority is:

- a. A full buy of 166 VECTOR for southern Afghanistan.
- b. A buy of additional FV 430 Mark 3 armour kits (to improve protection in southern Iraq)
- c. An urgent study of the longer term options for sustaining the PPV capability.

PJHQ and LAND regard a broad systems approach to force protection as essential, linking ISTAR, situational awareness, tactics techniques and procedures, ECM and platform survivability. This systems approach seeks to defeat the system; if this fails defeat the device, and finally defeat the attack.

8. A PPV is a protected wheeled vehicle for patrolling, as distinct from protected transport for transit. It requires the ability to support vehicle, foot and combined patrol activities, providing a less aggressive profile than Warrior, thereby enabling the patrol to be more closely involved with local populations. While being designed principally for Peace Support, it is now being regularly used on Peace Enforcement Operations. The PPV function is met through a combination of good situational awareness; a capacity to carry a 4 man fire team and specialist (such as a interpreter) in addition to the commander and driver; survivability commensurate with maintaining freedom of manoeuvre; and mobility/traffic-ability to enable it to patrol in both urban and semi-rural environments.

² £18.4m.

³ £9.4m.

⁴ £21.2m.

⁵ £40.2m

⁶ £30m.

⁷ £24.4m.

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Consideration also needs to be given to its impact on the operating environment (such as its ability to operate at rush-hour in Basra without further impeding the local traffic). Snatch has been developed in response to recent threats in Iraq to a point when no further improvement in protection is possible (except for continuous development of our ECM capability) without reducing significantly its capacity.

9. As an expedient, we are procuring 62 VECTOR as a PPV under UOR procedures; it will provide better mobility and ballistic protection than Snatch. The 6x6 Pinzgauer was chosen because it was available quickly and its chassis is already in service with the UK thus reducing the training and maintenance bill. Additional funding for the balance of 104 Vector to meet the full requirement for Afghanistan has been found by a combination of EP money and the STP. VECTOR's protection, while an improvement on Snatch, will not protect against the most challenging threats such as However, it will significantly thereby enhancing the protection afforded to the crew. Its enhanced mobility and capacity also contribute to a greater overall level of survivability than Snatch.

10. **Further Development:**

a. The threat continues to develop and there is a requirement to assess urgently how to sustain the PPV capability. The US is conducting a similar assessment. New developments designed to meet this threat are currently at the demonstrator stage and it would be prudent to examine these urgently to understand what capabilities they might offer. In general, if we are to combat the developing threat we will require a heavier vehicle capable of carrying a higher payload in order to mount additional armour. The ability of such a vehicle to operate effectively in the urban environment will be part of the assessment.

b. The fielding of a new class of vehicle, such as MUV-R, requires additional work. The priority to enhance the survivability of PPV from existing levels to one that can cope with mines, EFPs and RPG 7, must be balanced against the need for an agile platform able to patrol in the urban and rural environment. In particular, further work (in conjunction with the US) is required to examine the commercial maturity of the potential solutions and gain greater fidelity on earliest fielding timelines⁸.

11. **Summary And Way Ahead:**

a. Extant UORs are enhancing the survivability of the current equipment of the deployed force as quickly as industry can deliver. Therefore, It is recommended that additional funding is provided to develop concurrently an enhanced PPV capability to match the emerging threat, with an anticipated fielding in the latter half of 2007. An initial read out from this study will be available on 18 Jul 06. Priority will need to be given in EP 07 Phase 2 to deliver the capability in 07.

b. In the interim, and to provide the commander with sufficient flexibility to mitigate the weakness of Snatch, additional armour packs should be procured for FV 430. This will provide the increased protection in Iraq⁹, and will cost in the region of £50m. We are also exploring the possibility of accelerating the modification of 430 and manufacture of VECTOR.

⁸ Currently assessed as 8 to 12 months for MUV-R.

⁹ UOR action is currently underway to procure 54 armour packs for FV 430 to be fielded as soon as possible for Op TELIC 9/10.

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DII Signed

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RAD APPLEGATE

Maj Gen

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