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DJtCap J5/PPV

21 Feb 05

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PROTECTED PATROL VEHICLE (PPV) OPERATIONAL REQUIREMENT

References:

- A. DJtCap_Mvre_J3_FP dated 27 Oct 04.
B. DEC SP/38/7/6/ dated 18 Feb 05.

CM(BM)

148

14 FEB 2006

MINISTRY OF DEFENCE

ISSUE

1. The funding that the DEC SP EP05 option sought for expanding the PPV fleet, to meet the operational requirement DJtCap produced in Oct 04 (Reference A), has been cut by 45%. At the inaugural meeting of the PPV Capability Integration Working Group (CIWG) on 1 Feb 05, 3 options for the way ahead were outlined by DEC SP (based on indicative costs of PPV VECTOR):

- a. Option 1. Convert the remainder of the PPV SNATCH fleet to SNATCH 2 standard. This would equate to a PPV fleet of approximately 936 PPV SNATCH 2.
- b. Option 2. Convert approximately 312 PPV SNATCH 1/1.5 to SNATCH 2 standard and procure approximately 100 PPV VECTOR. This would equate to a PPV fleet of approximately 624 PPV SNATCH 2 and 100 PPV VECTOR.
- c. Option 3. Convert no more PPV SNATCH 1/1.5 but procure approximately 200 PPV VECTOR instead. This would equate to a PPV fleet of approximately 312 PPV SNATCH 2 and 200 PPV VECTOR.

2. **Option 2 for the PPV fleet is selected**, giving a fleet of approximately 624 PPV SNATCH 2 and 100 PPV VECTOR. This new vehicle would be procured under a Cat D process in order to meet the ISD of 1 Jun 06.

TIMESCALE

3. Priority – PPV VECTOR is to be delivered by 1 Jun 06.

RECOMMENDATIONS

4. PPV VECTOR conforms to the characteristics given in the URD (Reference B), the Key Requirements for which are as follows:

KR	Requirement
(a)	(b)
K1	The vehicle shall provide the User with protection from
K2	The vehicle shall provide the User with protection from
K3	The vehicle shall provide the User with protection from devices comparable to

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KR	Requirement
(a)	(b)
K4	The vehicle shall provide the User with protection from shaped charge weapons up to 1
K5	The vehicle should provide similar mobility to that of vehicles currently being operated by the Military Observation Teams in Afghanistan.
K6	The vehicle must be able to accommodate/seat 6 x 5 th -95 th percentile males comfortably.
K7	The vehicle must be capable of being fitted with all current and future communications systems.
K8	The vehicle must be capable of being fitted with all current and future Patrol ECM equipment.
K9	The User shall be able to operate PPV Type B in all theatres, less in areas colder than -20 degrees Celsius and hotter than 50 degrees Celsius.
K10	The vehicle should have a minimum reliability of 95% probability of completing a 24 hour duty cycle.

5. Further examination of the provision of funding through EP/STP05 and in EP/STP07 needs to be undertaken, in order to allow a sensible transition of the PPV fleet from its current to its future configuration after 1 Jun 06 (i.e. on the delivery of VECTOR). This is particularly relevant with regards to the NI requirement in 2006 and thereafter; an element of the 300 PPV SNATCH 1/1.5, which are not to be converted as a result of the selected option, may have to be sustained for the period of Marching Season 2006.

6. Respective Force Level Reviews for all theatres must re-examine the current PPV requirements for all theatres once the actual fleet size is known. The exact number of PPV that can be converted to SNATCH 2 standard and/or procured (i.e. VECTOR) is not, as yet, known.

7. It is highly desirable that the solution for PPV VECTOR can be replicated in future to meet subsequent demands for it, in order to minimise the number of variants.

DETAIL

8. Factors considered in the selection of Option 2 are given below, and these have been worked into the URD (Reference B).

9. Protection. The increasing levels of violence during Phase IV of Op TELIC, which necessitated the widespread use of protected mobility, have been highlighted in recent reports.¹ Additionally, OA is consistently reporting on the increased effectiveness of small arms weapons and ammunition.² Therefore the PPV CIWG has deemed that the combination of ECM and an enhanced level of protection (i.e. BR6) are to be the minimum standard for Type B VECTOR variant. For Type A, a BR4 protection level, in conjunction with ECM, is deemed sufficient given the nature of the threat it is likely to be exposed to. However, the development of a modular protection system should be considered, where PPVs can vary their protection level to meet the prevailing threat, thus giving greater flexibility in the management of the PPV fleet in future.

¹ In particular, DOC Op TELIC lessons Study Vol 2, Draft 3 (1-star Circulation) dated 20 Jan 05.

² "The proliferation of tungsten carbide penetrators will increase small arms penetration by approximately 50% in all calibres, while better propellants and sabot light armour penetrators (SLAP) may provide another 50% improvement." FRES Threat Statement 2004-2030 dated 30 Jul 04. See also VECTOR OA Report Dstl/LSD/109/3/3/1/CP2 v1.0 dated 31 Mar 04.

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10. Mobility and Sustainability. Experience of PPV SNATCH in Afghanistan and Iraq to Gate has shown this vehicle to be unsuitable for operating off maintained road surfaces.³ The expeditionary nature of future operations indicates that UK forces will be deployed to areas where the infrastructure (i.e. the road network) is poorly maintained, and which will be particularly harsh on vehicles such as PPV. Therefore mobility and sustainability are key factors in the selection of PPV VECTOR.

11. Capacity. An important aspect of dismounted operations is the number of troops that can be deployed on to the ground, especially for example in public order situations. TTPs developed in support of current operations (i.e. Op TELIC and NI) demand a vehicle capacity of 2+4 plus mission essential equipment, communications and ECM; it is noted that concerns have been raised over the weight of BOWMAN system.⁴ These issues indicate that PPV SNATCH does not offer sufficient capacity, although it is not known what growth potential PPV SNATCH 2 has.

12. Fleet Size. As experience from the last 18 months⁵ has shown, having insufficient PPV to meet the operational demands for it has resulted not only in sub-optimal solutions through reallocation between theatres (and a commensurate increase in operational risk for all concerned), but also adverse media attention⁶. However, the NI Type A PPV requirement is likely to fall in line with a reduction in NI liability as a result of the ongoing Force Optimisation process and NI Normalisation⁷. In the intervening period though there will be a need for continued detailed management of the fleet with equipment priorities being set and operational theatres re-evaluating their Force Protection/PPV requirements accordingly. This will not, however, diminish the need to seek sufficient resources for Force Protection, and PPV in particular.

PRESENTATION

13. There are public, political and media expectations that military operations can now be conducted without significant casualties.⁸ Indeed, lessons learnt from operations⁹ and policy guidance¹⁰ are demanding sustained investment to provide sufficient protected mobility vehicles for operations in hostile environments, such as Iraq and Afghanistan. It is necessary to accept that "Trends indicate that future operations will continue to face threats of a similar nature [to those in Iraq] and Defence planning should be cognisant of this reality, rather than

³ PPV SNATCH on Op HERRICK is deemed to have "...**NO** off road utility in this theatre, early in the tour there were a few attempts to use on some of the tracks and lanes inside Kabul and its mobility was close to zero. It is now only used on the Tarmac surface roads for the drop off and pick up of foot patrols." PHQ J5/5012 dated 17 Feb 05.

⁴ "The concerns raised by the TELIC OT over the additional weight added with the inclusion of BOWMAN are reinforced by the Afg OT, in that it could further reduce the load capacity and weight of the PPV further reducing the mobility." E-mail PJHQ J3 (LAND 3B) Afghanistan Desk dated 14 Feb 05.

⁵ PPV SNATCH was first called for deployment to Op TELIC in Sep 03.

⁶ The Mail on Sunday ran articles regarding soldiers being put at risk due to a lack of protected mobility both in Aug 03 and again in Oct 04.

⁷ APRC endorsed the current assumptions on NI liability on 3 Nov 04 (APRC/P(04)/38 dated 26 Oct 04), which were predicated on NI Normalisation being announced by 1 Apr 06, and on NI savings being realised by 1 Apr 08.

⁸ DFD/C&C/FCD dated 19 Jan 05, Para 24.

⁹ "Sustained investment is required to provide sufficient protected mobility vehicles for operations in hostile environments such as Iraq." DOC Op TELIC lessons Study Vol 2, Draft 3 (1-star Circulation) dated 20 Jan 05, Lesson 668.

¹⁰ "Specific priorities for protection are: personnel protection (personal equipment and collective protect)...", DFD/C&C/FCD dated 19 Jan 05, Para 24.

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reactive to a situation after a deployment is underway.¹¹ Again, additional resources must be sought to support such findings.

CONCLUSION

14. Despite the significant resource constraint that has been placed on this aspect of the Force Protection capability as a result of EP/STP05, the operational requirement for Op HERRICK, which has been the principal driver behind this PPV work, demands a more capable vehicle than PPV SNATCH 2. Indeed, the need for PPV is unlikely to diminish for the foreseeable future. While clearly this decision will reduce the overall size of the PPV fleet in due course, the introduction of a more capable vehicle (and one that is more suited to the type of operations the UK is/will be engaged in), in conjunction with the conversion of more PPV SNATCH, is deemed to be the most pragmatic approach to this problem, given the resource constraints imposed now and in the light of the potential reduction of the NI requirement for Type A PPV as a result of Force Optimisation and NI Normalisation.

[Signed on DII]

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¹¹ DOC Op TELIC lessons Study Vol 2, Draft 3 (1-star Circulation) dated 20 Jan 05, Para 667.

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