DECLASSIFIED

RESTRICTED

ENCLOSURE 18 NUMBER

DPA

Defence Procurement Agency

Defence Procurement Agency
Yew 3a #1340
MOD Abbey Wood
BRISTOL, BS34 8JH

Direct line:
BRINTON:
Facsimile:
e-mail:

MAJ DH POTTS
CSVL RMI

CSVL/10/1/1

05 September 2003

See Distribution

PROTECTED PERSONNEL VEHICLE (PPV) WORKING GROUP
FRIDAY 05 SEPTEMBER 2003 - MINUTES

Present:

1. Welcome, Opening Remarks and Introductions. The Chairman welcomed all to the meeting and everyone present introduced themselves.

2. Aim of the Meeting. The Chairman stated that the aim of the meeting was to develop a list of issues and associated options to meet the perceived requirement for the future deployment of PPV in support of Op TELIC. He stressed the need to develop a single focus for future staffing of the requirement and subsequent lines of communication for the project(s) once instigated and recommended that DEC(SP) become that focus. This was

DECLASSIFIED

DECLASSIFIED

agreed and **SO2f DEC (SP)** undertook to co-ordinate this action between DEC (SP) and DMO and to develop a Customer 2 single point of contact for the requirement.

3. Background. The Chairman covered the previous work conducted at the PPV Workshop earlier in 2003 and outlined the basic funding issues associated with Project DUCKBOARD. The recent purchase outside the normal procurement chain of armoured Range Rovers for use in Iraq was used as an example to stress that any future PPV project work should involve detailed ILS and procurement strategies from the outset. It was noted that any medium to long term solutions to a possible PPV UOR should also take account of project work already undertaken on DUCKBOARD and FCLV and be considered alongside and incorporated with these as appropriate. The Chairman stressed that the very short time frame to meet the possible PPV UOR would be the key driver in discussing the options to meet the perceived requirement.

3. Requirements Update. SO2f DEC (SP) stated that there was currently no draft SUR, however he outlined a number of possible requirements based upon information from HQ MND(SW), Op TELIC. These requirements were closely aligned to those for the TAVERN/SNATCH vehicles currently in use in NI:

a. Protection. Capable of defeating the threat posed by RPGs[1]. The requirement additionally stressed the need for a rear compartment cupola and grills to protect windows.

b. Mobility. Medium mobility required.

c. Capacity. Driver and commander with a crew of 4 in the rear compartment.

d. Timelines. The initial verbal request was for 228 vehicles to be delivered within 2 weeks. Whilst all present agreed that this was unrealistic, it served to highlight the need for a timely solution to the problem. SO2f DEC (SP) then outlined what he perceived to be a realistic priority for a phased solution to the requirement with Priority 1 being achieved within a few weeks.

(1) Priority 1: 130 vehicles.

(2) Priority 2: 228 vehicles.

(3) Priority 3: 420 vehicles (bde strength).

(4) Priority 4: Bde strength plus 2 bns.

(5) Priority 5: 2 x bdes.

4. Review of Project Drivers to inform the URD drafting process.. The Chairman stressed his desire to inform the user during the URD drafting process so that KURs were

[1] It should be noted that

Due to the limited TAVERN fleet and the expected high cost of procuring similar vehicles, the PPV protection requirement must be realistic in order to permit a timely and cost effective solution to the UOR.

DECLASSIFIED

DECLASSIFIED

achievable and realistic within the timeframe set. To facilitate this 4 key drivers were developed, with particular reference to SNATCH and TAVERN vehicle types:

a. Protection. The levels of ballistic protection afforded by SNATCH and TAVERN were discussed. Although the user will be expected to tailor the requirement to the threat level, he must be made aware of the specified protection afforded by SNATCH and TAVERN so as to determine its usage on operations and also to inform the requirements process. To date approximately 400 SNATCH vehicles have been fitted with new windscreens to combat known problems with damage from ultra violet light. This mixed fleet issue and other ongoing modification programmes including the fitting of uprated ECM equipment must be considered if a decision is taken to deploy SNATCH vehicles to meet the requirement. **SO2f DEC (SP)** agreed relay the current level of protection afforded by SNATCH and TAVERN to the user and to confirm the expected requirement for ECM fits and levels of protection with particular consideration given to the need for

b. Mobility. It was agreed that a medium mobility vehicle similar to SNATCH and TAVERN would meet the requirement. However the known problems[2] associated with the part time 4WD system employed on TAVERN would seriously degrade its reliability if continually operated in this mode. Additionally TAVERN would require replacement tyres if off-road use was deemed essential. SNATCH should meet the requirement with little adverse effect on reliability however its run flat tyres would need replacement for off-road use.

c. Capacity. SNATCH and TAVERN already meet the desired capacity requirements. There is a wide range of new buy options that will also meet this requirement. It was stated that the use of appliqué armour on current in-service vehicles to meet the requirement would reduce useable payload and that this will require consideration if such a route was taken.

d. Sustainability. Concern was raised over the expected duration of deployment if SNATCH or TAVERN vehicles were utilised to meet the requirement. Neither vehicle types were designed for the terrain or climatic conditions found on Op TELIC. Although SNATCH is generally reliable, current TAVERN availability rates suggest that a large repair pool of vehicles would be required to sustain the deployed operational fleet. It was estimated that if 100 TAVERN vehicles were deployed with an expected 75% availability rate, then a further 30 vehicles would be required in-theatre as a spares pool to overcome known shortages of key components in the supply chain. It was agreed that sustainability would be vastly improved if a single fleet of SNATCH or TAVERN were used to meet the initial urgent requirement. It was considered that a single fleet of SNATCH would best meet any availability requirements due to its increased reliability and in-service spares support.

[2] Weak second drive shaft to enable 4WD.

DECLASSIFIED

DECLASSIFIED

5. Additional Vehicle Considerations.

a. Air-conditioning Requirement. The extremes of temperatures experienced during Op TELIC suggests that air-conditioning would be a requirement for these vehicles. **SO2f DEC (SP)** agreed to confirm this requirement. It was noted that although TAVERN is currently fitted with air-conditioning, it is unlikely that it will be able to cope with the climatic conditions found on Op TELIC. SNATCH is not fitted with air-conditioning though felt there would be a low risk solution to its incorporation.

b. Communication Suites. Currently both TAVERN and SNATCH are fitted for the COUGARNET radio system employed in NI. This will require removal and replacement with systems employed on Op TELIC. **SO2f DEC (SP)** agreed to confirm the communication suite (expected to be CLANSMAN) to be mounted in the vehicles to meet the requirement. CLANSMAN manpack radios could be used in both vehicle types, however only SNATCH would permit the use of the manpack antenna within the hull of the vehicle. TAVERN would require any antenna to be mounted external to the armour to prevent the accidental operation of internal fire suppression system. Both vehicle types are currently limited to 2 fixed external antenna mountings, limiting the communication suite employed without modification to the base vehicle. Any such modification to TAVERN to facilitate additional antennas would require major modification work to its armour system. Neither vehicle is currently configured to operate in the vehicle FFR role predominately due to alternator and wiring loom limitations. A solution to this problem would be more complex if the required engine bay space was taken up by modifications to support air-conditioning units.

6. Vehicle Options to meet the Requirement. It was considered that there were 3 main options to meet the requirement, these together with their advantages/disadvantages are listed below:

a. Option 1: Available in-service equipment modified as required.

(1) SNATCH and/or TAVERN with minor modifications to meet the climatic and communications requirements.

(a) Advantages.

(i) A very quick solution to the requirement.
(ii) Utilises vehicles with known protection, mobility, capacity and sustainability characteristics.
(iii) High degree of protection afforded by TAVERN.
(iv) Modification work can be researched and conducted when the vehicles are in transit or by local contractors on arrival in-theatre.
(v) Low risk solution if SNATCH employed. Higher risk if TAVERN utilised due to reliability and sustainability issues.

(b) Disadvantages.

(i) Neither tested to climatic conditions on Op TELEIC.

DECLASSIFIED

DECLASSIFIED

(ii) Known reliability and ILS problems with TAVERN.
(iii) Modification work required for fitment of communication suite and air-conditioning.
(iv) Protection levels afforded by SNATCH may not meet the requirement to counter the local threat.
(v). Inability to operate wide communications suite on TAVERN , without major modification to armoured hull for additional antennas.
(vi) Mixed fuel issues associated with deploying petrol engined SNATCH vehicles.
(vii) Mixed fleet of SNATCH and TAVERN would present major logistical and equipment support challenges.
(viii) Requires removal of vehicle assets from NI.

(2) Wolf and/or Pinzgauer TUM/FFR fitted with appliqué armour.

(a) Advantages.

(i) Use of vehicles already in theatre.
(ii) Amour kits already available.
(iii) Relatively cost effective.
(iv) Bolt-on/off by user in-theatre as threat dictates.
(v) Removes need to utilise NI vehicle fleet.
(vi) Low risk engineering solution.
(vii) Possibly less requirement for air-conditioning and radio fit modification work.

(b) Disadvantages.

(i) Vehicles will require modification work to accept appliqué armour (could be conducted in-theatre).
(ii) Low availability of Wolf 110 and Pinzgauer FFRs for conversion.
(iii) Current appliqué kits provide no top hatch.
(iv) Further design and research work necessary to meet any armoured top cover requirement.
(v) Once vehicles modified to accept appliqué kits, may have associated problems when vehicles are rouelmonted out of theatre with parent units.

b. Option 2: The refurbishment of APV 1.5 awaiting disposal or in-service SNATCH vehicles.

(1) Penman Engineering Ltd (PEL) to conduct refurbishment on the APV 1.5 stock held by them awaiting disposal.

(a) Advantages.

(i) Relatively quick solution for first 10 vehicles.

DECLASSIFIED

DECLASSIFIED

(ii) Vehicles already owned by MOD, hence relatively inexp
to produce.

(b) Disadvantages.

(i) Poor mechanical condition of the majority of the fleet held by PEL (approximately 50). Fleet was earmarked for disposal since deemed life-expired.
(ii) Adverse political implications[3] of using vehicles that have already been offered for disposal by the MOD.
(iii) Total number available insufficient.

(2) Hobsons Ltd to conduct refurbishment of in-service SNATCH by removing the armoured hull and re-fitting to reconditioned chassis with new diesel engines.

(a) Advantages.

(i) Cost effective solution (compared to new buy).
(ii) Low risk solution to protection requirement.
(iii) NI gain refurbished SNATCH fleet once released from Op TELIC duties.

(b) Disadvantages.

(i) Lack of detailed engineering prototyping to confirm validity of solution.
(ii) High risk solution to mechanical and chassis refurbishment.
(iii) Lack of substantiated costing for engineering work required.
(iv) Solution limited to basic protection levels of current SNATCH fleet.
(v) Unable to meet Priority 1 deployment time for requirement.

c. Option 3: New vehicle buy tailored to meet the requirement. Due to the timing of the meeting, there was insufficient time to gather the requisite information regarding performance, cost and availability of the various options available. However, based upon the information gathered, all were agreed that there were various low risk options which could meet the requirement in the medium to long term. A new buy solution could not meet the Priority 1 timeframe requirement outlined in Para 3d[4].

7. Realistic Options available to meet the Requirement. It was decided that a number of the options could be rejected or modified as a result of the meeting:

a. Option 1: Available in-service equipment modified as required. It was considered that the deployment of SNATCH and/or TAVERN was the primary method of meeting the Priority 1 timeframe. However due to the ILS issues and the reliability levels of TAVERN already noted, it was recommended that a single fleet of SNATCH

[3] In the light of recent national press reports.
[4] gave the guideline of approximately 4 months to deliver Land Rover Defender 110s with armour protection (similar or better to that of SNATCH) in the quantities required once contract placed.

DECLASSIFIED

DECLASSIFIED

be used to meet the requirement. The option of applying appliqué armour to the service Wolf 110 and Pinzgauer vehicles was discounted due to the scarcity of Pinzgauers in general and Pinzgauers/Wolf 110 FFR variants in particular. It was accepted however, that this could be a low risk solution in the medium term if the threat levels are commensurate with the protection provided by such kits and if authority is granted to release these vehicles for this particular role.

b. Option 2: The refurbishment of APV 1.5 awaiting disposal or in-service SNATCH vehicles. Both the PEL and Hobsons refurbishment programmes were discounted as an option for this requirement. The PEL option to refurbish APV 1.5 vehicles awaiting disposal was discounted due to the poor mechanical condition of the fleet as a whole and the political implications of utilising such equipment. The Hobsons Ltd option of refurbishing in-service SNATCH vehicles would not meet the Priority 1 and 2 timeframes for the requirement and involved a high degree of technical risk. It was considered to be a long-term solution to Project DUCKBOARD but not for this requirement.

c. Option 3: New vehicle buy tailored to meet the requirement. Although the procurement of new vehicles would not meet the Priority 1 timeframe requirement, they were considered to be a valid solution to the requirement in the medium to long term.

8. Recommended Solution to the Requirement. In the light of the discussions outlined in Paras 6-7, it was agreed that 2 options (A and B: outlined in Table 1) be recommended as a method of meeting the requirement. When considering the options, the Chairman highlighted the following actions to simplify the staffing process:

a. The DLO (CSV Sp IPT) would be the supporting organisation if SNATCH (and possibly TAVERN) were selected to fulfil the initial requirement. **CSV (Sp) 2** agreed this action and to investigate methods to meet the requirement (Option A).

b. The DPA (CSVL IPT) would be the supporting organisation for any new buy of vehicle to support the requirement. **CSVL RM1** and **PM1** agreed this action and to investigate new-buy options to meet the requirement (Option B).

c. If the final solution to the requirement involved options similar to that outlined in Table 1, then a separate Business Case for each option would be required to accurately reflect the differing requirements and production timeframes. **SO2f DEC (SP)** agreed to ensure that this staffing process would be adhered to.

DECLASSIFIED

DECLASSIFIED

Option A – To meet Priority 1 and 2 Timeframes				
Vehicle Type (a)	**Availability (b)**	**Modification Required (c)**	**Responsible Support Organisation (d)**	**Remarks (e)**
SNATCH	Up to 4 wks[5]	Aircon, radio fits, ECM fits, tyres (for off-road use)	DLO **(CSV Sp IPT)**	
Option B – To meet Priority 3 to 5 Timeframes				
Vehicle Type (a)	**Availability (b)**	**Modification Required (c)**	**Responsible Support Organisation (d)**	**Remarks (e)**
New buy (COTS)	4-6 months once contract let[6]	Roof cupola (tbc), aircon and FFR loom for radio fits	DPA **(CSVL IPT)**	All modifications conducted on production line

Table 1. Recommended Options to meet the perceived PPV requirement.

9. Closing Statement and AOB. CSV (Sp) 2 reminded all that HQ Land must be kept informed of developments regarding the modification and use of in-service vehicles to meet this requirement to ensure any associated increase in training and STTE requirements are budgeted for. The Chairman then concluded the meeting by stressing the need to focus all requirements activity through DEC (SP), his desire that the initial requirement be met by a single fleet of SNATCH vehicles and that the process to modify SNATCH for a possible deployment on Op TELIC should be investigated immediately. There being no other business, the Chairman thanked everyone for their input and closed the meeting at 1230hrs.

Original Signed

for CSVL TL

Distribution:

All attendees

Internal:

CSVL TL

[5] Estimated figure, including transit time once authority granted to release from current ops.
[6] Based upon estimated figures from Land Rover.

DECLASSIFIED

DECLASSIFIED

CSVL PM 1 (for promulgation to project officers as necessary.)
CSVL ILSM
CSVL BM
CSVL C
CSVL PPC
CSVL RM 1

DECLASSIFIED