



UNIFORMED OPERATIONS BUSINESS AREA

Prof. Rod Flower FRS,

<redacted>

Dear Professor Flower,

Further to my letter dated 21st May 2014, I have commissioned further work from the Home Office Centre for Applied Science and Technology (CAST) , together with colleagues from the College of Policing and the Metropolitan Police Service. Further submissions are now available for your attention to assist in producing of a revised SACMILL statement.

To assist, I have set out the issues highlighted in the initial SACMILL statement, together with accompanying commentary which I hope will be of use to the panel when considering the new submissions.

Recommendation paragraph 18

The peak forces and pressures developed by the WaWe 9 primary water cannon jets should be measured over a range of target engagement distances and at various pump pressure settings. These should be compared with equivalent measurements made on the in-service Somati RCV 9000 water cannon jets. The force and pressure measurements should be obtained using a range of appropriate force plate sizes. SACMILL has reviewed a draft outline proposal for the force and pressure testing of the WaWe 9 water cannon jets and looks forward to reviewing the final detailed technical plan when this becomes available.

Members of CAST travelled to Germany on the 21st – 23rd May 2014 and were afforded the opportunity to examine this issue relating to water pressures in more detail. Their attached report entitled **Project DISPERSE Trial Results for German Water Cannon May 2014 & CAST Response to SACMILL Recommendations** outlines their findings in relation to this particular recommendation (Page 7, point 3.11).

Recommendation paragraph 19

Any substantive differences in performance between the Somati and WaWe 9 water cannon systems should be addressed by a combination of modifications to the

WaWe 9 vehicles and implementation of appropriate training, tactics, techniques and procedures.

During the visit to Germany 21st – 23rd May 2014, CAST members were afforded the opportunity to examine the WaWe 9 cannon in more detail. Their attached report outlines their findings in relation to this particular recommendation (Page 8, point 3.21).

The response identifies what CAST believe are the substantive differences between the two water cannon models and highlights the modifications that are recommended to the WaWe 9 model by the service in order to ensure that any differences in performance between the Somati RCV 9000 and the WaWe 9 water cannon can be addressed.

I am able to confirm that the training, tactics, techniques and procedures relating to the operational use of both the Somati RCV 9000 and the WaWe 9 water cannon have been harmonised utilising the best practice already in existence within PSNI following use of water cannon in Northern Ireland over many years. Relevant documents are attached.

Recommendation paragraph 20

The water jets produced by the WaWe 9 are capable of engaging people at considerably closer distances (and potentially with greater force) than those produced by the Somati RCV 9000. Since close proximity to the jets is likely to increase the risk and severity of injury, it is recommended that the implications of this design difference are thoroughly characterised and understood.

This issue has already been identified as a difference between the two water cannon. During their most recent visit to Germany, CAST have been able to confirm that an adjustment modification to the WaWe 9 model is achievable to ensure that the angle of the water cannon (and therefore the water cannon to target distance) can be reduced to mirror that of the Somati RCV 9000 model. <redacted>

Recommendation paragraph 21

Some general characteristics of the WaWe 9 vehicle itself should be established and compared to the Somati model. These include: determining the areas of restricted visibility from the cab, the turning circle, stopping distance of the vehicles in dry and wet conditions, and the effectiveness of any physical countermeasures designed to impede the ability of protesters to climb onto the vehicles.

During the visit, CAST, working with colleagues from the MPS were able to undertake further work in relation to the visibility from the cab of the WaWe 9 model. Observations in relation to this particular recommendation are outlined in their report (page 13, paragraph 2.4.1).

Recommendation paragraph 22

The public address system of the WaWe 9 should be of comparable efficiency to, or better than, that of the Somati RCV 9000. This system is used to warn of the imminent use of water cannon and hence provides an opportunity for people to disperse voluntarily.

The CAST report makes comment on the PA system (page 14, point 3.5.1) and the MPS' fleet management team have been able to confirm that the PA system to be installed in the WaWe 9 water cannon will be of the standard and quality currently installed in MPS vehicles, and will meet or indeed exceed the recommendations, as set out in the CAST report. <redacted>

Recommendation paragraph 23

The peak forces and pressures developed by the WaWe 9 rear-mounted water cannon jet should be measured to provide an indication of the effects of this facility (which is absent from the Somati RCV 9000) and its operational role should be clarified.

No current tactics include the use of the rear mounted cannon on the WaWe 9 cannon and therefore the water cannon project board has directed that the rear water cannon will be removed. CAST have been able to confirm that it is feasible to remove the rear facing cannon and blank off the outlet pump, therefore preventing its operational use (page 14, point 3.6.1)

Recommendation paragraph 24

A routine maintenance schedule for the WaWe 9 should be designed and implemented and should include both the main vehicle and the water delivery system.

The MPS' fleet management team have confirmed that once the vehicles are in their possession they will undertake a maintenance assessment. Following this, bespoke maintenance schedules will be produced and adopted for the WaWe 9 vehicles and their water delivery systems. This document will be produced following receipt of the machines by the MPS and will be forwarded to SACMILL once produced.

Recommendation paragraph 25

A strategy should be developed for the sourcing of spare parts, especially those components whose ageing or failure may have medical implications for the public.

The MPS have a sophisticated vehicle management and fleet service capability that will make all efforts to source any parts that are required via the manufacturers. The main vehicle chassis components are still available from the original equipment manufacturer but the MPS cannot provide a full guarantee that the sourcing of parts will not become more difficult in the future, and that the requirement to have certain parts purpose-made may lead to additional costs and periods where a water cannon is non operational. This document will be produced following receipt of the machines by the MPS and will be forwarded to SACMILL once produced.

Recommendation paragraph 26

The existing User Guidance is currently specific to the Somati RCV 9000 system. Should a decision be made to acquire the WaWe 9 vehicles, these aspects should be developed to be applicable to both water cannon systems and the final documentation provided to SACMILL for review.

Both the College of Policing (CoP) and the MPS have now completed their drafting of the training and standard operating procedures. Both documents are pertinent to the

use of water cannon in both the PSNI and (if authorised) on the mainland and have been updated so that they do not refer to specific makes and models of water cannon. Both documents are included in the bundle.

Recommendation paragraph 27

The User Training documentation is incomplete in its current form. The training should incorporate more content on injury mechanisms and draw on any lessons learnt in operational use of water cannon in serious disorder in Northern Ireland and elsewhere.

The CoP has updated the training documentation and specific reference to injury mechanisms is now included in the learning outcomes, and therefore forms an integral part of any water cannon training. <redacted>

Recommendation paragraph 28

Both the User Guidance¹ and User Training documentation, in their final, fully developed form, should be made available to SACMILL for review and endorsement prior to implementation of the WaWe 9 system as a new water cannon capability in the UK. SACMILL believes that it would be inappropriate to introduce the WaWe 9 as a public order capability given the current level of maturity of the documentation controlling the use of water cannon and the training given to users.

Both the College of Policing (CoP) and the MPS have now completed their drafting of the training and standard operating procedures. Both documents are pertinent to the use of water cannon in both the PSNI and (if authorised) on the mainland and have been updated so that they do not refer to specific makes and models of water cannon. Both documents are included in the bundle.

Recommendation paragraph 29

Consideration should be given to the ergonomics of the operating area, the working conditions of the crew and to the risk of injuring police officers standing close to the device when it is operated.

The CAST report makes a number of comments in relation to this recommendation (page 15, point 3.7.1). The additions to the vehicle will include the installation of CCTV and a new PA system although the extra equipment within the interior of the vehicles will not impact significantly on the ergonomics of the vehicles. Both the CoP training module (E4) and the MPS' SOP include detail in respect of the safe operating of the cannon.

Recommendation paragraph 30

Any injuries occurring during training that are attributable to the WaWe 9 system should be reported to SACMILL so that the medical advice can be revised if necessary.

In the short term, a clear reporting process will be put in place which escalates any injuries through the Chief Public Order Instructor to the project Senior Responsible Owner (SRO). The SRO will then be responsible for ensuring all injuries, be they

¹ PSNI water cannon user training and guidance was later adopted as the ACPO Guidance on the Deployment and Use of Water Cannon. This ACPO Guidance was largely incorporated into the draft National Policing Improvement Agency (NPIA) National Police Public Order Training Curriculum which in itself has now been replaced by the College of Policing's National Police Public Order Training Curriculum - Module E4 Water cannon in public order.

caused during training or whilst the equipment is deployed operationally, are reported to a nominated single point of contact within SACMILL. In the medium term, a use of force reporting project is underway and this will ultimately ensure that all use of force, including the operational use of water cannon is recorded accurately on a National basis.

I know that you are aware of the tight timescales that the project is working to. The German police require the Metropolitan Police Service to have signed contracts by the end of July. In order for this to happen, the Home Secretary would have to make and announce her decision on authorisation before Parliament rises for summer recess (22 July). We want to ensure the Home Secretary has time to consider carefully her decision and to this end, we would welcome a revised SACMILL statement before the end of June. If a revised statement is not possible, I would be grateful if we could discuss how we record your views on progress made to date.

I hope the above summary and the attached documents assist you and your SACMILL colleagues in producing an updated SACMILL statement. If I can be of any further assistance, please do not hesitate to contact me or my staff officer

Yours sincerely

David Shaw
Chief Constable
National Conflict Management Portfolio Lead.

Enclosed.

- *Project DISPERSE Trial Results for German Water Cannon May 2014 & CAST Response to SACMILL Recommendations V3*
- *College of Policing Module E4 summary of medical implications*
- *College of Policing National Police Public Order Training Curriculum - Module E4 Water cannon in public order.*
- *Metropolitan Police Service water cannon Standard Operating Procedure (SOP) - version 0.4 [DRAFT]*