

Security classification	Not Protectively Marked
Disclosable under FOIA 2000	Yes
Author	CC David Shaw
Force/organisation	West Mercia Police
National Policing Business Area	Uniformed Operations
Date created	8 January 2014

National Water Cannon Asset

Background

ACPO has been working with the Home Office to ensure that the police service has the tools it needs to protect the public and its officers. The Strategic Policing Requirement sets out the Home Secretary's view of the national threats that the police must address and the appropriate national policing capabilities that are required to counter those threats. These threats are terrorism, organised crime, public disorder, civil emergencies and cyber threats and stretch from the local to the national (often quickly and dynamically) requiring a response that is rooted in local policing, with local forces playing their part on the local, the regional and the national stage.

In addition, high-profile public disorder in recent years has led to a revision of the national public order framework. As part of this review, the need for water cannon to be available to support public order and public safety operations in England and Wales has been revisited. It was agreed by the Home Office Less Lethal Technology and Systems Strategic Board with the support of ACPO Chief Constables' Council that a formal project would be implemented to consider this issue. Chief Constable David Shaw is the Senior Responsible Officer for this national project.

Water cannon have been used in Northern Ireland since the late 1990s. Originally water cannon were borrowed from the Belgium Police. However, in 2002 the decision was taken to purchase 6 Somati RCV9000 water cannon. These cannon remain in service to date. Water cannon have never been deployed in England, Scotland or Wales. The reasons why the Police Service considers that water cannon should be available as a public order tactical option in England and Wales are well documented and have previously been shared with Chief Constables and Police and Crime Commissioners. They are attached at Appendix A. This briefing document is designed not to justify why the Police Service believes that water cannon should be available in England and Wales but to explain some of the considerations around operating models and likely deployment scenarios.

When will water cannon be deployed and what assurances can be given to ensure that deployment will always be proportionate?

Water cannon provide the ability to exert control from a distance and critically to provide a graduated and flexible application of force ranging from spray (or diffused mode) to forceful water jets. The mere presence of water cannon can have a deterrent effect and experience from Northern Ireland demonstrates that water cannon are often deployed without being employed. Faced with the need to either protect vulnerable premises or disperse a crowd in a situation of serious public disorder, in the absence of the availability of water cannon tactics it is likely that police commanders would have to authorise alternative tactics (involving significant force) which may include Attenuated Energising Projectiles (AEP or more commonly known as baton rounds), batons, mounted officers, vehicle tactics, police dogs or even firearms.

Water cannon deployment requires the authority of an officer of at least Assistant Chief Constable rank and consideration will always be given to the impact of deploying and using water cannon. National guidance states that water cannon can be used:

- When conventional methods of policing have been tried and failed or, because of the circumstances, are unlikely to succeed if tried.
- In situations of *serious public disorder* where there is the potential for loss of life, serious injury or widespread destruction and where such action is likely to reduce that risk.

Water cannon will therefore only be used to respond to incidents of serious disorder or planned events where the intelligence picture suggests that serious disorder is likely. Whilst water cannon can have a deterrent effect, it must also equally be understood that its presence alone can be inflammatory and public order commanders are specifically trained on the impact on crowd dynamics of using force.

Water cannon have limited use in relation to 'agile' disorder such as the dynamic looting that was witnessed in August 2011. However, it is extremely effective at supporting police lines and creating distance between rival factions (for example between police and protestors or supporting police cordons designed to keep rival factions apart). In such circumstances, water cannon is known to reduce both subject and officer injuries.

Water cannon will be a tactical option only for experienced and specifically-trained public order commanders to use. Once authorised for deployment, the relevant Silver Commander would be authorised to deploy water cannon as they saw appropriate. In relation to planned events where the threat of serious disorder is assessed as high, it is likely that water cannon would be deployed to a suitable forward holding area from which it could be quickly deployed should the need arise.

Attenuated Energy Projectiles (AEP) are authorised for use in the UK but have never been discharged in a public order environment outside of Northern Ireland. The deployment criteria for AEP are the same as those for water cannon however water cannon represents a lower level of force. The decision to deploy water cannon will apply the same level of scrutiny as AEP and it is anticipated that deployments will be unusual.

How will Police & Crime Commissioners be involved in decisions relating to the use of water cannon?

The decision to deploy water cannon is an operational matter. However it is anticipated that Chief Constables would always seek to engage with the PCC prior to using water cannon.

Will the project board be creating strict guidelines for police forces on when and how water cannon should be used?

National guidance (Authorised Professional Practice) already exists on the deployment of water cannon and tactics are well documented in the National Public Order Training Curriculum. Water cannon deployment in Northern Ireland is based on this guidance. While the decision to deploy will be a matter for individual forces, deployment will always be based on this national guidance and training. The existing tactics have recently been reviewed and remain fit for purpose.

However, processes will be put in place to ensure that guidance remains current and that deployments in England and Wales are monitored and that learning from them prompts changes to guidance or the training curriculum as necessary.

If water cannon is a national asset, how will it be deployed?

It is anticipated that water cannon will be a national asset. It will only be deployed according to the prevailing threat assessment and it is anticipated that not all forces will require it. The deployment of water cannon in any given policing area would be an operational decision made by a Chief Officer in the relevant force. Each force should therefore consider how they will communicate and engage with internal and external stakeholders and local communities.

Discussions are still ongoing in relation to possible operating models and where water cannon will be based. Water cannon are capable of travelling at speeds comparable to an HGV and can be mobilised to support any spontaneous or planned policing activity. Deployment timescales would vary depending on the geographic location of any seats of disorder but it is envisaged that water cannon would be deployed in relation to any prolonged extension of spontaneous disorder.

What about deployment in Scotland?

Police Scotland is represented on the National Water Cannon Project Board however it is acknowledged that approval from the Home Secretary would not cover Scotland. However, from an operational perspective, there would be no reason why water cannon could not be deployed in Scotland should the need arise.

Why does England and Wales need its own water cannon? Could we not just borrow water cannon from PSNI as and when the need arises?

The Police Service of Northern Ireland currently has 6 water cannon. In recent years, all six cannon have been deployed simultaneously in response to disorder. PSNI subject matter experts have made a significant contribution to the ongoing project and continue to support it. However, the Chief Constable of PSNI has stated that loaning water cannon to England and Wales could put his communities and staff at risk.

The Strategic Policing Requirement is based on planning assumptions around three spontaneous seats of disorder. How will the deployment of water cannon be prioritised?

In the eventuality that water cannon is required in multiple sites, an assessment will be made of where the greatest threat lies.

Does the National Strategic Threat and Risk Assessment identify that serious disorder is likely.

History would suggest that the most serious outbreaks of public disorder have occurred spontaneously. However, the presence of certain critical factors can increase the likelihood of such episodes. A range of social, economic and cultural issues when combined with a significant and often spontaneous “trigger” event have the potential to lead to the outbreak of significant disturbances.

How safe is water cannon and what are the medical implications of its use?

The authorisation of any less lethal system by the Home Secretary takes into account the medical implications of its use. The Scientific Advisory Committee on the Medical Implications of Less Lethal Weapons (SACMILL) is an independent expert committee that has assessed the risk of injury associated with the use of water cannon and made recommendations regarding its use. It is anticipated that the Home Secretary will be approached in early 2014 in respect of water cannon authorisation. The authorisation itself is overarching and the Home Secretary is not subsequently required to authorise individual deployments. Responsibility for this would fall to individual Chief Constables.

The term 'less lethal' (as opposed to non-lethal) accepts that water cannon are capable of causing serious injury or even death. There is a range of water cannon footage available online showing injuries caused by water cannon however it should be acknowledged that water cannon tactics, deployment criteria as well as the tolerance for disorder or protest vary significantly across the world. As stated above, deployment in England and Wales would be based on tactics employed over the past decade in Northern Ireland. There have been no recorded injuries in PSNI associated with water cannon use and PSNI staff recognise that water cannon presents a lower injury risk than AEP. It is accurate to say that water cannon fills an operational gap between AEP and more frequently used public order tactics (dog deployments, baton strikes, proactive shield tactics) but has the potential to be less injurious than all of these options. Experience from PSNI shows that the deployment of water cannon creates distance between individuals involved in disorder and police and drastically reduces the number of officer injuries.

The risk of injury from water cannon can be categorised as follows:

- primary - injuries caused by the water jet impacting the body
- secondary - injuries produced by impact on the body of street furniture or other debris
- tertiary - injuries caused by impact of the body with other objects.

What level of force is used on people and how is this controlled and recorded?

Water cannon are capable of being used in different modes based on the level of threat present. This ranges from 'diffused mode' (where water is sprayed in a mist) to full jets. Water cannon commanders are able to regulate the output pressure of the monitors (the technical name for the parts of the cannon that discharge the water) and the individual cannoneers have further control over water pressure and the amount of time that the monitor is deployed for. A system using cameras and CCTV monitors in the water cannon cab assists with aiming.

Water cannon use will be recorded by a series of cameras and associated digital data recording equipment. This information will be preserved in accordance with evidential best practice and will be available to support judicial and complaint cases.

Are there human rights issues relating to water cannon?

Human rights legislation is well documented in public order training and guidance and all public order commanders must consider the implications of their actions in relation to ECHR. Public order commanders when deploying water cannon would remain fully cognisant of their

obligations and duties under Article 2 (Right to Life) and Article 3 (Prohibition of Torture) of the Human Rights Act 1988. The mere presence of water cannon would constitute a use of force and therefore commanders at all levels would be accountable and must show that the force used was proportionate, lawful and necessary.

Is the introduction of water cannon consistent with British policing model and the minimum use of force?

Water cannon fills the operational gap between AEP and other more frequently used public order tactics. Article 2 of the UN Basic Principles of the Use of Force and Firearms states that; "Governments and law enforcement agencies should develop a range of means as broad as possible and equip law enforcement officials with various types of weapons and ammunition that will allow for a differentiated use of force and firearms". The national approach to public order is one of 'no surprises' and it is imperative that the introduction of water cannon is supported by a comprehensive engagement programme.

What engagement is taking place or proposed?

The project board recognises the need for engagement regarding the introduction of water cannon and is cognisant of the findings of the London Assembly Police and Crime Committee report 'Arming the Met'. The project board equally recognises that the Mayor of London and Police and Crime Commissioners will want to carry out their own engagement regarding water cannon and will support this process in any way that it can. Chief Constables have been asked to discuss water cannon with their respective Police and Crime Commissioners and both the APCC and MOPAC are represented on the project board. Papers have been previously submitted to the APCC General Meeting.

The College of Policing has agreed to assist with the facilitation of a series of public engagement events and these will focus on the revised national public order framework rather than water cannon as an isolated issue. It is anticipated that these events will take the format of a number of scenario-based exercises involving key partners and local community members where the anticipated police response to an escalating public order scenario will be explored. In anticipation of wider community and media interest, a comprehensive communications strategy has been written which clarifies roles and responsibilities.

What are the anticipated costs of the national asset and how will it be funded?

Costs depend on the size of the cannon purchased and its technical specification and typically water cannon cost from £600k to £1 million. It is anticipated that cannon would last between 25 and 30 years. Work is ongoing to explore all procurement options and establish revenue costs to ensure that any operating model represents value for money. A number of financial models will be presented to Chief Constables and Police and Crime Commissioners for consideration however it is hoped that forces would want to contribute proportionately to this national capability. The support of PCC's will be critical to any decisions taken in relation to funding arrangements for the national asset.

What are the training implications for staff?

The College of Policing and National Policing Lead for Public Order are advising on training-related matters. All public order trained staff will need to have at least awareness training regarding operating alongside water cannon. It is hoped that this can be incorporated into existing accreditation training with minimal impact and delivered through the existing regional training centres. Officers will be specifically trained in roles such as water cannon commander, driver and cannoneer. This bespoke training will be limited to a small pool of nationally trained operators and subject to continuous professional developments requirements.

Technical considerations.

- Larger varieties of water cannon hold up to 9000 litres of water but are also available with smaller or larger capacity. The larger the vehicle, the greater the capacity however this subsequently impacts upon the manoeuvrability of the vehicle.
- Water cannon weigh up to 30 tonnes when laden and are typically 'all wheel drive'. Whilst this enables them to operate in a range of environments, the weight of the vehicles make them susceptible to being marooned on soft ground. For comparison purposes they are likely to have similar access restrictions to a large refuse lorry.
- A 9000 litre cannon running at full pressure would discharge its capacity in around five minutes however the need to operate at this pressure for this length of time is unlikely and would be difficult to justify in terms of use of force.
- Water cannon can refill from each other or from hydrants. Whilst it is possible to fill from open water sources, experience suggests that this feature is rarely used. Refilling from a hydrant typically takes from 10-20 minutes depending on hydrant pressure and, when deployed, water cannon need to be supported by a dedicated filling crew.
- Water cannon can also offer limited fire-fighting capabilities and some models are designed to be able to mix fire-fighting foam additives.
- Water contained within water cannon is heated to approximately 5 degrees Celsius to prevent the onset of medical conditions associated with the shock of being exposed to cold water.

Appendix A – Water Cannon Operational Requirement (Part 1)

Title: Water Cannon Use of water cannon by police in relation to disorder incidents and planned public order operations	Operational Requirement (Part 1)	
	Date	24.06.13
	Owner	Chief Constable David Shaw
	Lead Dept.	National Conflict Management Policing Portfolio
	Version	1.0
	Review date	N/A
	Contact	chief@westmercia.pnn.police.uk

1. Background

- 1.1 The consideration of the water cannon issue has been taking place within the context of a much broader programme of work under the leadership of Chief Constable Ian Learmonth, National Policing Lead for Public Order and Public Safety. The catalyst for this work was the disorder of August 2011 and the programme incorporates a comprehensive review of capability, capacity, responsiveness, training, tactics and equipment of which the water cannon option is just one element.
- 1.2 Article 2 of the UN Basic Principles of the Use of Force and Firearms states that; “Governments and law enforcement agencies should develop a range of means as broad as possible and equip law enforcement officials with various types of weapons and ammunition that will allow for a differentiated use of force and firearms”.
- 1.3 The use of water cannon as a safe and proportionate tactic in the continuum of force for dealing with public order situations was explored in detail in the two-part *Patten Report*.¹ Its validity as a tactical option has also been recognised by Sir Dennis O’Connor in the HMIC report *Rules of Engagement* and the Metropolitan Police report *Four Days in August*.²
- 1.4 Water cannon were first used in Northern Ireland in 1969 and at that time were described by Her Majesty’s Inspectorate of Constabulary (HMIC) as ‘*mechanised creators of distance between police and protestors*’. Development of water cannon took place during the 1980’s and water cannon was officially authorised for use in Northern Ireland in 1999. The Somati RCV9000 Water Cannon has been authorised for use in Northern Ireland since 2004 and is deployed and used on a frequent basis. This employment is based on guidance within the College of Policing Authorised Professional Practice (APP) and the National Police Public Order Training Curriculum. England, Wales and Scotland remain among the few European countries that do not have this tactical option available to commanders facing serious public disorder.

¹ Recommendations 69 & 70 relating to public order equipment – “A Research Programme Into Alternative Policing Approaches towards the Management Of Conflict”

² Para 7.6 recognised that, had water cannon been available, it would have been considered as a tactical option during the August disorder. It may also have been considered for protests such as Countryside Alliance in 2004, the Gaza demonstrations against the Israeli Embassy in 2008/9 and the student protests of 2010.

2. Water cannon as a tactical option

- 2.1 Over the past 20 years, a range of less lethal policing options has been developed to enable the use of force at close quarters (batons, Taser, incapacitant sprays etc). The range of less lethal options to exercise control at a distance is limited. Faced with a situation where rioters were throwing petrol bombs or other missiles capable of causing death or serious injury, there would be little alternative other than to withdraw or deploy AEP or conventional firearms alongside conventional public order tactics. Deploying conventional public order tactics without AEP / firearms is likely to increase the risk of both officer and subject injury.
- 2.2 Water cannon provides the ability to exert control from a distance and critically to provide a graduated and flexible application of force ranging from spray or diffused mode to forceful water jets. The mere presence of water cannon can have a deterrent effect and statistics from Northern Ireland demonstrate that water cannon is often deployed without being employed³. Faced with the need to either protect vulnerable premises or disperse a crowd in a situation of serious public disorder, in the absence of the availability of water cannon tactics it is likely that police commanders would have to authorise alternative tactics (involving significant force) which may include AEPs, batons, mounted officers, vehicle tactics, police dogs or even firearms.
- 2.3 The principles of public order command centre on balancing the rights and freedoms detailed within ECHR and ensuring that any policing response is proportionate. The need for proportionality when force is used by police officers is clearly defined in legislation and public bodies and processes exist to hold the police to account for their actions. Police officers are required to resolve situations with the minimum amount of force necessary and there is equally an expectation from the public that the police will respond positively to serious disorder.
- 2.4 It is anticipated that water cannon would be deployed in relation to planned events and serious disorder. Any decision to deploy water cannon would be based on a thorough assessment of a number of critical factors (in particular the threat of disorder and the level of violence used / anticipated) and would need to be both a lawful and proportionate use of force. It is reasonable to expect that water cannon would only be deployed where other tactics have been tried and proven to be unsuccessful or deemed otherwise inappropriate. Examples of where water cannon could be deployed include the following, which are intended to be illustrative, not exhaustive: defending a fixed and vulnerable / iconic location; separation of hostile crowds during demonstrations / disorder; creating distance between police and opposing factions; facilitating the advance of police resources and other emergency services to deal with life at risk incidents during incidents of severe disorder.
- 2.5 It should be understood that water cannon has its limitations. It is acknowledged that it has a limited effect on fast, agile disorder. The Metropolitan Police report *Four Days in August* commented that *'Examples in recent history where the use of this tactic might have been a consideration for commanders had it been available include the Countryside Alliance demonstrations in Parliament Square (2004), the Gaza demonstrations against The Israeli Embassy (2008/9) and potentially the student protests of 2010 where specific locations were targeted. In all these cases police had to face significant levels of violence*

³ Between 1/4/12 and 30/9/12 water cannon were deployed on 53 occasions by the PSNI but only used 4 times

in order to protect key locations and buildings and the staff within them’.

3. Potential to cause injury

- 3.1 Each water cannon used in England or Wales must be approved by the Home Secretary. The Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons (SACMILL) has been tasked by the UK Less-Lethal Technologies and Systems Strategic Board to advise on the medical implications surrounding use of a type of vehicle-mounted water cannon that has not previously been available to support policing of serious public disorder in the UK. In order to inform this advice, a comprehensive review on the medical implications of vehicle-mounted water cannon has been completed in July 2013 by the Defence Science and Technology Laboratory.
- 3.2 There are few recorded injuries associated with the use of water cannon. The DSTL report concludes *‘medically relevant evidence from operational use of water cannon in Northern Ireland and elsewhere has been sought and assessed, as has the medical literature concerning the effects of high pressure water jets on the body. No clinical case reports concerning injuries sustained specifically from use of water cannon in civil disorder were found in the peer-reviewed literature, although there is good evidence from other sources to indicate that serious injuries have been sustained by people subjected to the force of water cannon jets* (DSTL report “The medical implications of vehicle-mounted water cannon with special reference to the Ziegler Wasserwerfer 9000 (WaWe 9) system).
- 3.3 Injuries associated with the use of water cannon can be categorised as follows;
- Primary - injuries caused by the water jet impacting the body.
- Secondary - injuries produced by impact on the body of street furniture or other debris.
- Tertiary - injuries caused by impact of the body with other objects, such as may arise, for example, if the water jet causes people to fall over or to be thrown against rigid structures.
- 3.4 While it is accepted that the use of water cannon could lead to serious injury, it is equally important that this is taken in the context of the manner of its use and the training provided to operators. Deployment of water cannon within England and Wales would be based on tactics described within the National Public Order Authorised Professional Practice (APP) and based on the National Public Order Training Curriculum. These documents form the basis for deployments within Northern Ireland where there have been no reports of injury caused by water cannon. It is anticipated that output pressures of any water cannon procured for use in England and Wales would not exceed those of the PSNI Somati RCV9000 and these pressures will be subject to scientific testing by the Home Office Centre for Applied Science and Technology (CAST).
- 3.5 Colleagues in Northern Ireland will state that the availability of water cannon during incidents of disorder in Northern Ireland typically leads to reduced officer injuries. At present there is no data to support this claim however consultation has taken place with PSNI specialist public order trainers who support this claim. Primarily, experience shows that water cannon creates distance between police and protestors reducing the ability of protestors to throw large injury-causing missiles (for example large masonry) at police.

4. Strategic risk of disorder

- 4.1 There is no intelligence to suggest that there is an increased likelihood of serious disorder within England and Wales. However, it would be fair to assume that the ongoing and potential future austerity measures are likely to lead to continued protest. Experiences in Millbank in 2010 demonstrate how quickly protest can turn to serious violent disorder. In addition, the social and economic factors that are currently being experienced have the potential, when combined with a significant (and often spontaneous) “trigger” event, to lead to the outbreak of significant disturbances. The disorder in August 2011 saw major damage to property, deaths of members of the public and injuries to police officers.
- 4.2 The Metropolitan Police Service sees no evidence of a change in the context that underpinned the protest related violence and disorder seen in 2010 and 2011. It is also worthy of note that the potential for serious public disorder at specific protests has, on two occasions in the last 18 months, lead to the successful application for authority to prohibit processions under Sec 13 Public Order Act 1986. Prior to this, the last prohibition was in 1981 following the disorder in Brixton. Whilst there is no specific intelligence, the underlying factors outlined above are arguably more relevant for the capital given its significance as a focal point for protest.
- 4.3 Although the disorder within the Metropolitan Police area in 2011 provided the catalyst for the debate around the requirement for water cannon, serious disorder was experienced in many major cities and towns of an intensity and scale where water cannon potentially could have offered an operational advantage to public order commanders.

5. Public Opinion

- 5.1 It is anticipated that public opinion will be mixed in relation to water cannon. Some perceive that the use of water cannon is not consistent with the British style of policing. There is however a public expectation that the police will deal positively with disorder and that the level of force used will be reasonable.
- 5.2 CC Ian Learmonth has consulted with key stakeholders in relation to the wider revised public order framework and water cannon has featured in this. MOPAC and the APCC are represented on the project board and will play a key role in delivering the wider communications strategy should approval to use water cannon in England and Wales be granted.
- 5.3 A 2012 YouGov survey (14/3/12) suggested that 90% of respondents were in favour of water cannon. Unexpected media interest in the ongoing project in May 2013 confirms that public opinion in relation to water cannon is mixed. However, no significant public opposition to water cannon has been identified in response to media releases.
- 5.4 Experience in Northern Ireland has shown that there is far more concern from community groups around the deployment and use of AEP as opposed to the use of water cannon. AEP has never been deployed in England and Wales in response to disorder incidents.

6. Community Impact

- 6.1 The impact of water cannon on individual communities will depend on the nature of the deployment as well as the nature of the incident prompting it. Public order policing is based on a ‘no surprises’ ethos and commanders must, wherever practicable, build communication / engagement plans into their planning considerations and assess the

impact of their response to disorder. Post-incident community impact processes are embedded and well-practiced in all police forces.

- 6.2 The Police Service has new national mechanisms for monitoring and assessing community tension. These were implemented in June 2013 and are based on the National Intelligence Model (NIM) principles. Nationally the National Domestic Extremism and Disorder Intelligence Unit (NDEDIU) assesses the strategic domestic extremism and public disorder threats.
- 6.3 Police and Crime Commissioners provide an alternative mechanism for engaging with communities and this will form part of the community engagement process following any decision to approve water cannon for use in England and Wales.

7. Operating Model / Funding Models

- 7.1 Chief Constables have been consulted regarding potential operating and funding models. While a range of responses has been received, there is general support for a nationally funded model however Chief Constables have requested that all funding options and sources be explored.
- 7.2 The opportunity to buy second hand water cannon from Germany presents a cost-effective solution to the short-term requirement for water cannon. Since early 2013 the project has focussed on obtaining a short-term solution as it was identified that the procurement of a new bespoke product could take 18-24 months. The short-term solution will also enable the Police Service to re-assess the Operational and Technical Requirements (based on training and deployment) for a bespoke model to ensure that they are current and constitute best value. The purchase of used water cannon in the short-term is cheaper than leasing solutions and it is anticipated that partial costs could be recovered through the onward sale of the water cannon.