

	<p>REGULATION 28 REPORT TO PREVENT FUTURE DEATHS</p> <p>THIS REPORT IS BEING SENT TO:</p> <ol style="list-style-type: none"> 1. The National Police Chiefs' Council, (Deputy Chief Constable Simon Chesterman QPM, National Armed Policing Working Group) 2. The Chief Constable of Bedfordshire Police (Chief Constable Jon Boutcher QPM) as the responsible officer for the joint Armed Policing Unit for Bedfordshire, Cambridgeshire and Hertfordshire police forces.
1	<p>CORONER</p> <p>I am Nicholas Moss, Assistant Coroner for the coroner area of Cambridgeshire and Peterborough.</p>
2	<p>CORONER'S LEGAL POWERS</p> <p>I make this report under paragraph 7, Schedule 5, of the Coroners and Justice Act 2009 and Regulations 28 and 29 of the Coroners (Investigations) Regulations 2013.</p>
3	<p>INVESTIGATION and INQUEST</p> <p>On 22 October 2015, an investigation was commenced into the death of RICHARD THOMAS DAVIES, AGED 41. The investigation concluded at the end of an inquest with a jury on 21 July 2017. The medical cause of death was 1a gunshot wound to the chest. The narrative conclusion of the jury in answering a questionnaire was:</p> <ul style="list-style-type: none"> • Richard Davies died as a result of a single round fired by a police firearms officer; • Lawful killing; • Richard Davies acted in a way that was intended by him to get the police to shoot him; • The jury did not find there to be any errors or omissions in relation to the police communications or negotiation attempts which were possible causes of the death. However, they recorded that they were uncomfortable that telephone negotiations were not considered as although there was only a low possibility it would have affected the outcome, it was worth pursuing.
4	<p>CIRCUMSTANCES OF THE DEATH</p> <p>Following a number of developing personal and health problems, on 21 October 2015 Mr Davies threatened his children with a knife and tied them up in the family home. The police were called. Six Armed Response Vehicle firearms officers from the Bedfordshire, Cambridgeshire and Hertfordshire Police Armed Policing Unit responded. Upon their attendance at the scene, a number of rounds were fired by Mr Davies from a homemade firearm using live .22" ammunition. After four shots by Mr Davies, one of the firearms officers fired a single round from his police-issue Heckler & Koch G36 carbine almost simultaneously with a fifth shot fired by Mr Davies. Mr Davies was killed by the police shot.</p> <p>The bullet which hit and killed Mr Davies fragmented in his body. There was no exit wound. The bullet track went through Mr Davies' left clavicle destroying the medial third of that bone. Fractured bone pieces and/or the fragmented bullet pieces caused significant damage to the subclavian artery which was the most immediately fatal of Mr Davies' multiple injuries.</p> <p>On the evidence heard at the inquest, and given the significant bullet-strike on bone and bone fragmentation, I determined that there was <i>insufficient</i> evidence (and it would be unduly speculative) to conclude that the unbonded construction of the bullet used by the Armed Policing Unit was a possible cause of this death. Accordingly, I ruled that this</p>

	<p>issue would not be left to the jury.</p> <p>Nevertheless, the use by this joint Armed Policing Unit of unbonded ammunition gives rise to the concerns addressed below.</p>
5	<p><u>CORONER'S CONCERNS</u></p> <p>During the course of the inquest the evidence revealed matters giving rise to concern. In my opinion there is a risk that future deaths could occur unless action is taken. In the circumstances it is my statutory duty to report to you.</p> <p>The MATTERS OF CONCERN are as follows. --</p> <p><u>Use of unbonded ammunition by Bedfordshire, Cambridgeshire and Hertfordshire Police.</u></p> <ol style="list-style-type: none"> 1. The joint Armed Policing Unit (APU) of Bedfordshire, Cambridgeshire and Hertfordshire (BCH) Police issued their firearms officers with a type of 5.56mm jacketed soft point ammunition which was unbonded (the lead core of the bullets was not chemically treated to bind it to the bullet jacket). It is likely that this type of ammunition was compliant with (now historic) guidance on police ammunition issued in 1988. However, it was not the ammunition contained in (non-binding) recommendations by the Association of Chief Police Officers (ACPO) since December 2005. The Inquest heard that this ammunition had been used by BCH for very many years, was used at the date of Mr Davies' death in October 2015, and continued to be used until last month, June 2017. <p><u>The National Position: the use of specified bonded ammunition is recommended but not mandated; no bullet mass retention specification issued</u></p> <ol style="list-style-type: none"> 2. In 2005 and again in 2012, the Association of Chief Police Officers (ACPO) issued ammunition recommendations to police force firearms leads. For 5.56mm ammunition, the ammunition that was recommended was the Federal 62 grain Tactical Bonded round (2005) to which was added, as an alternative, the Federal 55 grain Tactical Bonded round (2012). These are both bonded jacketed soft point bullets. 3. The selection of this limited number of recommended types of ammunition (both of a bonded construction) from 2005 followed ballistics studies carried out on behalf of the Nordic police forces in 2004. The UK Home Office Police Scientific Development Branch (PSDB) contributed to the Nordic specification and studies because many of the requirements of the Nordic countries were shared by police forces in the UK. The Nordic studies identified that several kinds of ammunition tested were considered to cause unjustifiable and excessive injuries due to their propensity to fragment after impact on test firing into a muscle-tissue simulant. 4. The inquest evidence suggested that the selection by ACPO (on the basis of PSDB advice) of bonded jacketed soft point ammunition following these Nordic studies was due to a combination of two features. First, their favourable operational performance characteristics for police use (including retaining their effectiveness and stopping power when shot through glass). Second, the fact that they did not show the concerning fragmentation risks identified in some other rounds during the Nordic studies. In particular, a PSDB letter to ACPO dated 13 July 2005, having identified the desirability of the Federal 62 grain Tactical Bonded round, stated "Some of the other rounds tested [in the Nordic Studies] exhibited undesirable characteristics, particularly excessive fragmentation, that might call into question their continued use by some forces" (emphasis added). The particular unbonded ammunition used by BCH was not tested in the Nordic studies.

5. Correspondence dating back to 2005 shows that ACPO/PSDB were on the brink of issuing a new performance specification for 5.56 mm ammunition in the summer of 2005: "We are ...nearing completion of trials to evaluate 5.56 ...mm ammunition and publish performance specifications for these calibres for the first time" (26 May 2005); "The next stage of the process is to finalise the performance specifications. This will be carried out over the summer, with the intention of having them available by the end [of] September" (13 July 2005). Such specifications would presumably have drawn heavily on the Nordic specification and studies, including avoiding the risk of unnecessary injuries from excessive bullet fragmentation.
6. For reasons which remained unclear at the inquest, no such performance specification was issued, whether in 2005 or since. Instead, the (non-binding) ACPO recommendation for the use of the Federal 62 grain Tactical *Bonded* round was issued on 20 December 2005. Thereafter, while ACPO/PSDB recommended the use of this specified bonded ammunition, police forces were not mandated to use them and could instead opt to use alternative ammunition of their own choice.
7. In 2009, the Metropolitan Police Service issued an ammunition specification which did draw on the Nordic specification and studies. It included a scoring system for the percentage of bullet mass retained following impact, which favoured bullets which are less likely to fragment. However, the inquest heard that this specification was not adopted nationally, and indeed Bedfordshire Police were apparently unaware of its existence until this inquest.
8. During the course of this coronial investigation, it was made clear to me that neither the Metropolitan Police nor CAST (the Home Office Centre for Applied Science and Technology, successor to PSDB) had ever tested the type of unbonded ammunition being used by the APU of BCH Police.
9. In May – June 2012, there was an exchange of emails between the Chief Firearms Instructor of Bedfordshire Police and a Senior Scientific Officer of CAST. The email sought confirmation that the unbonded round being used by BCH was "still suitable". I was told in evidence by the Senior Scientific Officer that his reply was not meant to convey any approval for BCH's continued use of the unbonded ammunition. However, it appears that the Chief Firearms Instructor of the APU did not interpret the response in this way. The evidence heard at the inquest suggests that there was a misunderstanding in this exchange and a missed opportunity to consider the appropriateness of the unbonded ammunition being used by the APU of BCH.
10. The *Authorised Police Practice on Armed Policing* (2013) makes clear that:
 - CAST has published guidance in respect of ammunition (an apparent reference to the ACPO recommendations of 2005 and 2012 which was based on PSDB/CAST advice);
 - Only ammunition subject to strict factory quality control should be issued for operational purposes;
 - "Where forces choose a calibre or bullet configuration that has not been assessed by CAST to ACPO operational requirement, the ammunition must comply with international conventions **and any policy issued by ACPO**. In addition forces must be satisfied that the ammunition functions correctly in the weapon issued and that the ballistic performance of the ammunition meets operational requirements." (emphasis added)
11. The evidence called at the inquest suggested that no policy had in fact been issued by ACPO or CAST to cover ammunition specifications in the event that police forces opted not to adopt the bonded JSP ammunition recommended by ACPO/CAST. Accordingly, the evidence suggested that there was no nationally


available policy or specification which would guard against the risk of excessive injury through bullet fragmentation in the event that forces did not adopt the non-binding recommendation to use one of the two bonded 5.56 mm rounds.

12. Specifically, evidence from Bedfordshire police suggested that the Nordic specification had included a requirement that the bullet shall retain at least 93% of its weight when shot with a long reference weapon at 10 m into a 20x20x25 cm block of defined 10% ballistic gelatine. The inquest received no evidence to suggest that this 93% threshold had been adopted as a national requirement for ammunition for police forces in England in Wales despite the Nordic report that several bullet types tested were considered to cause unjustifiable and excessive injuries due to their propensity to fragment.
13. Accordingly, as of today's date, I have received no evidence to suggest that the risk of excessive injury from bullet fragmentation identified in the 2004 Nordic studies has been addressed for police forces in England and Wales other than by a recommendation for the use of two types of bonded 5.56mm ammunition, in circumstances where that recommendation is not binding on police forces. The risk of excessive injury from bullet fragmentation is not addressed in the ammunition section of the Authorised Police Practice on Armed Policing and there appears to be no national specification for 5.56 mm ammunition which police forces can apply if (for whatever reason) they do not adopt the non-binding recommendations to use either the Federal 62 grain Tactical Bonded round or the Federal 55 grain Tactical Bonded round.

The Local Police Force Position

14. The current Deputy Chief Constable responsible for the Armed Policing Unit for Bedfordshire, Cambridge and Hertfordshire police gave evidence to the inquest to seek to explain the reasoning for that unit using the unbonded ammunition rather than the ACPO/CAST recommended bonded ammunition. I also received evidence from the former Chief Firearms Instructor of the Armed Policing Unit.
15. The Deputy Chief Constable recognised that the Force had experienced difficulty in retrieving the audit trail of decisions historically on why these three police forces had chosen particular ammunition.
16. Of concern were the following matters:
 - (1) A report prepared for the purpose of the inquest and adopted by the Deputy Chief Constable set out the background without any reference at all to the ACPO circular of 2005 which had recommended the Federal 62 grain Tactical Bonded round;
 - (2) The report sought to maintain that the guidance issued by ACPO in 2012 did not supersede previous lists of ammunition. In fact, the 2005 circular had stated in terms that "Forces should be aware that these are currently the only two products to meet the new performance specifications";
 - (3) The report sought to rely upon a tender process that had been ongoing in 2005 when a different police force leading the tender had corresponded with the Home Office's PSDB. While it is right that at that stage the Home Office advised that the previous (1988) guidance could be followed for this tender, the report from Bedfordshire police failed to acknowledge that the Home Office had cautioned in May 2005 that "It may be prudent to consider your needs for the next 6-12 months as any changes are likely to be introduced during this period". The report further omitted to mention that seven months later, in December 2005, ACPO issued the guidance recommending the Federal 62 grain Tactical Bonded round;
 - (4) The report suggested that minutes of an ACPO meeting dated 24 May 2012 evidenced that the police forces and officers present raised concerns

	<p>regarding the over penetration of the recommended bonded ammunition. The Deputy Chief Constable accepted in evidence that, in fact, based on the relevant minutes, that meeting had appeared only to consider the relative performance of the two bonded ammunition types recommended by ACPO;</p> <p>(5) BCH police relied upon the fact that in 2012, the ammunition being used by the APU was tested as part of a new tendering process. As part of that testing, the ammunition met a series of technical specifications for ammunition quality. However (in the continuing absence of any ACPO/CAST specification and any standard for bullet mass retention), there was no evidence to suggest that this testing had applied the 93% Nordic standard (or indeed any particular standard) for bullet mass retention;</p> <p>(6) The exchange of emails with CAST in 2012 appears to have been interpreted by BCH as confirmation that the unbonded ammunition it was using was still suitable. The evidence suggested that this was not CAST's intention. Making allowance for the possible misunderstanding in this exchange of emails, there was nevertheless no evidence available to this inquest to suggest that those responsible for ammunition within the APU of BCH were aware of (or had applied their minds to) the risks of excessive injury through ammunition fragmentation, as identified in the Nordic studies, at any time prior to June 2017 when it arose in the course of this inquest.</p> <p>(7) The BCH report prepared for this inquest and produced on 9 July 2017 relied on manufacturer's data (indicating a bullet mass retention of 92% at 10 yards) and appeared to suggest that this was close enough to the Nordic standard of 93% at 10 metres to aver that the Nordic standard had been met. At least on the evidence produced to the inquest, this was the first time that consideration had been given to the bullet fragmentation risks of the ammunition being used by the APU of BCH police.</p> <p>17. Accordingly, I am concerned that the Armed Policing Unit of Bedfordshire, Cambridgeshire and Hertfordshire police forces:</p> <ul style="list-style-type: none"> • Is or may be treating NPCC (previously ACPO)/CAST ammunition recommendations as not superseding previous recommendations contrary to the wording of those recommendations. • Does not have in place a system to ensure that if NPCC/CAST recommendations on ammunition are not followed, the ammunition it adopts avoids the risk of excessive / unnecessary injury identified in the Nordic studies. • Has not retained proper records of decisions made in respect of operational ammunition when it has decided in the past not to follow non-binding national guidance.
6	<p>ACTION SHOULD BE TAKEN</p> <p>In my opinion action should be taken to prevent future deaths and I believe you AND/OR your organisation have the power to take such action.</p>
7	<p>YOUR RESPONSE</p> <p>You are under a duty to respond to this report within 56 days of the date of this report, namely by Monday 18 September 2017. I, the Assistant Coroner, may extend the period.</p> <p>Your response must contain details of action taken or proposed to be taken, setting out the timetable for action. Otherwise you must explain why no action is proposed.</p>

8	<p>COPIES and PUBLICATION</p> <p>I have sent a copy of my report to the Chief Coroner and to the following Interested Persons</p> <ul style="list-style-type: none">(1) Members of Mr Davies' family c/o Matthew Gold & Co Solicitors;(2) The Chief Constable of Cambridgeshire Police c/o Weightmans Solicitors;(3) The Independent Police Complaints Commission. <p>I have also provided copies for information to the Police and Crime Commissioners for Bedfordshire Police and Cambridgeshire Police.</p> <p>I am also under a duty to send the Chief Coroner a copy of your response.</p> <p>The Chief Coroner may publish either or both in a complete or redacted or summary form. He may send a copy of this report to any person who he believes may find it useful or of interest. You may make representations to me, the coroner, at the time of your response, about the release or the publication of your response by the Chief Coroner.</p>
9	<p>24 July 2017</p> <p style="text-align: right;"> Nicholas Moss Assistant Coroner</p>