

BATON ROUNDS

**A review of the human rights implications of the
introduction and use of the
L21A1 baton round in Northern Ireland
and proposed alternatives to the baton round**

by the Omega Foundation



NORTHERN
IRELAND
HUMAN
RIGHTS
COMMISSION

ISBN: 1 903681 33 2
Published March 2003

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FOREWORD

The Northern Ireland Human Rights Commission engaged the Omega Foundation to carry out the research documented in this report because the Commission had concerns about potential breaches of human rights related to the use of baton rounds. We were especially concerned about the right to life.

Baton rounds, or plastic bullets, have been a controversial issue since they were first deployed in Northern Ireland. In June 2001 a new baton round was introduced. The Commission was concerned at suggestions that this was potentially more dangerous than its predecessor. This report therefore examines the use of this L21A1 baton round by the police and army since its introduction. Omega concludes that there is indeed much to be concerned about.

As well as looking at the potential human rights implications of the baton round currently in use, the Commission wished to contribute constructively to the debate on safer alternatives to the baton round. The Patten report had advocated urgent research into safe alternatives. The Commission therefore asked Omega to provide advice on some of the alternatives currently being considered by the authorities.

The need for safe alternatives to the baton round is urgent, in the interests of civilians, police officers and soldiers. The Commission recognises the difficult and dangerous task that police and army carry out in the face of violent attack. It is imperative that they are well prepared for this work, as regards not only policing methods which will reduce conflict but also access to equipment which will protect themselves and others from physical attack. It is vital that such equipment is as safe as possible, both for civilians (especially children) who may be caught up in violent situations and for officers themselves.

The Commission would like to thank the Omega Foundation for its work on this report, and to thank all those who contributed to it. We intend to follow it up by pressing those in authority to extend the research into alternatives to the baton round, to make that work more independent and to set a strict timetable and deadline for finding a safe alternative.

Brice Dickson
Chief Commissioner

ACKNOWLEDGEMENTS

The authors would like to thank the following individuals and organisations for their help and co-operation in compiling this report:

The staff and Commissioners of the Northern Ireland Human Rights Commission (NIHRC)

Mark Backhouse and Dr Tim Trimble - Office of the Police Ombudsman
Jim McDonald - Independent Assessor of Military Complaints Procedures
Robin Masefield - Steering Group, NIO
Dr Graham Cooper - Group Leader Trauma, Biomedical Sciences, DSTL, Porton Down
Inspector Jon Vogel - Firearms Instructor, Surrey Police
Kevin McNamara MP
Martin Collins - Aide to Kevin McNamara MP
Maggie Beirne - Committee on the Administration of Justice
Clara Reilly - United Campaign Against Plastic Bullets
Mark Thompson - Relatives for Justice
The staff of the Pat Finucane Centre

Despite repeated attempts by the NIHRC, the British Army and the Police Service of Northern Ireland refused to be interviewed by the researchers. The Policing Board was unable to provide a representative to meet the researchers on the requested dates. Subsequently, following completion of the draft report, the researcher from the Omega Foundation observed PSNI baton round training on 6 March 2003.

Given the statutory remit of the Northern Ireland Human Rights Commission to advise on the human rights implications of public policy it is unacceptable that these public bodies failed to cooperate with the writing of this report. Consequently this report may have suffered from not hearing directly from those who have been sanctioned to use baton rounds, although it draws extensively on official documents and public comment about the weapon.

THE AUTHORS

The Omega Foundation is an independent organisation which specialises in research into military, security and police technologies, with particular emphasis on the medical, legal and human rights implications of their deployment and use. The Omega Foundation has written a number of reports on this area including two for the European Parliament on crowd control technologies and is currently undertaking research for the European Commission.

WHAT'S IN A NAME - BATON ROUND OR PLASTIC BULLET?

One issue that constantly causes argument and anger across the community is the naming of this weapon. The official name, used by the Government and security forces is 'baton round'. The name widely used across the community by politicians, victims and NGOs is 'plastic bullet'.

Changing the name (or the 're-branding') of a product or weapon, can be done for a variety of reasons - but most often is done in order to distract attention, bury any negative associations and to create an impression that the 'new' is quantifiably different from the 'old'.¹

So it is in Northern Ireland with the many names for riot control weapons. According to the Defence Attache journal, "The rubber bullet was designed partly as a public relations exercise with a slightly humorous intent, and looking back on it, it does seem as if that aim was achieved".² Then came the plastic bullet. The term bullet was recognised as giving the weapon a harder image and so the name was changed to 'plastic baton round'. This name has stuck in official circles over the years but has been stubbornly resisted by the public. With the introduction of the L21A1 we now have a new variation - the 'baton round' so named because 'it is not plastic anymore' - even though both the old and new are made of polyurethane.

With each new variant introduced the community has been assured that it is quantifiably different in its effects than the last version, that it is a 'new weapon' and that it is safer. Civil servants and officials are quick to correct any misuse of the term used to describe the weapon and this simply creates another area of tension between the community and the security forces.

In this report we have used the term 'baton round'. This is not because we dismiss the term 'plastic bullet' but simply for convenience. In technical terms the previously used L5A7 version of the baton round is called the 'old baton round', the L21A1 newly issued version is called the 'new baton round'.

¹ Solomon, N, *Branding new and improved wars*, www.fair.org/media-beta/29/10/2002.

² Clayton, P.H., Major (Rtd), '1.5 inch Anti-Riot Weapon System of Schermuly Limited', *The Defence Attache*, January 1973, p36.

EXECUTIVE SUMMARY

1. The terms of reference for this report were to review the human rights implications of the introduction and deployment of the L21A1 baton round and to review proposed alternatives to baton rounds.
2. The research was commissioned by the Human Rights Commission in March 2002. Interviews took place in May 2002.³
3. The Patten Report recommended that: “an immediate and substantial investment be made in a research programme to find an acceptable, effective and less potentially lethal alternative to the PBR”.⁴ Patten advocated an open and objective search for alternatives and consulted some of the communities in Northern Ireland most affected. However even whilst the Patten report was being written, the British Army was finalising performance trials on its preferred option - a new baton round - which was designed to deal with technical problems of the old baton round rather than with any concern about human rights. Despite the best efforts of the government led Steering Group set up to look for an alternative, the army’s favoured choice of a new baton round has been adopted in the meantime.
4. In carrying out the current study the Omega Foundation used research adapted from commissioned work undertaken for the European Parliament as well as new data on the technical characteristics of possible options.
5. Omega concludes that, both in relation to the introduction of the L21A1 baton round and to the search for alternatives, there have been fundamental weaknesses in the process: the data used for selection, the record keeping procedures instituted and the overall level of accountability.
6. Omega recommends that the Government should commit to a binding timetable for the withdrawal of the baton round in Northern Ireland.
7. The new baton round travels faster and hits harder than the one it replaced, and we conclude that its lack of accuracy in use makes it potentially more lethal. We found that over 10% of the new baton rounds fired have caused injury compared with a 1.14% injury rate with the previous round. We also found that the new round is 2.5 times more likely to penetrate the skin, than the previous round.⁵
8. Medical reports commissioned from the Defence Scientific Advisory Council (DSAC) to examine the biomedical effects of the new round, suggest that if this

³ Meetings were held with representatives of the Northern Ireland Office, the Police Ombudsman’s Office, the United Campaign Against Plastic Bullets, Relatives for Justice, the Committee on the Administration of Justice and Inspector Jon Vogel of Surrey Police. Detailed discussions were also held in person or by telephone with the Independent Assessor of Military Complaints Procedures in Northern Ireland, Kevin McNamara MP, Martin Collins, and the staff of the Pat Finucane Centre.

⁴ *A New Beginning: Policing in Northern Ireland: The Report of the Independent Commission on Policing for Northern Ireland*, September 1999 (hereafter referred to as the Patten report), paragraph 9.15.

⁵ See section 2.1.3 of this report.

projectile hits the skull end on the risk is that it will lodge in the brain with fatal effect. The higher velocity of this round also leads to a greater potential for ricochet. This will lead to innocent bystanders being affected by indiscriminate and disproportionate force. Yet the authorities have refused to release relevant documentation on this risk. This failure to be transparent about the hazards of the weapon make any claims for its safety unconvincing.

9. The DSAC report was crucially predicated on the premise that the new round and weapon system were extremely accurate only if fired strictly in accordance with the guidelines. This condition is often not met. Firstly our research found that one in three rounds missed its target, secondly there is extensive experience in the past, and some recent experience, of rounds being fired apparently in violation of the guidelines.
10. Following its deployment, fears about inappropriate targeting have been realised - children have been hit and injured. Given the threat of injury or to life for children, the UN Committee on the Rights of the Child called for the abolition of the use of the baton round as a means of riot control.⁶ We concur with this view.
11. Whilst the government chose to introduce the new baton round in 2001, it also began a process of assessing and recommending other alternative weapons. Such a process was in the spirit of what Patten had in mind. Unfortunately there is inadequate independent input into the work of the Steering Group. Furthermore, in implementing the process the authorities have begun purchasing weapons (for example water cannon) before a full evaluation has been made. This illogical approach critically undermines confidence in the adequacy of the safety evaluation procedures.
12. This report suggests a more informed, objective and legally sustainable methodology of technology assessment. Our most critical point is that any such evaluation should be made by truly independent teams and we suggest that weapons manufacturers be held legally responsible for any inadequacies in their products, when used within the agreed guidelines.
13. Given the history of policing in Northern Ireland, it would be highly inappropriate to introduce electrical stun weapons, which according to the Medical Foundation for the Rehabilitation of the Victims of Torture, are the “universal tool of the torturer”.
14. Technology is not neutral and Patten himself recognised that the use of baton rounds was the most controversial policing issue.⁷ Recognising that good policing is not merely about technology, we recommend that a process of “Social Impact Assessment” is developed to inform the decision process about potential unforeseen social and political impacts of any proposed weapon system.

⁶ Concluding remarks of UNCRC, 2002, CRC/C/15/Add.188, paragraphs 27 and 28.

⁷ Patten report, para 9.12.

15. Patten suggested that baton rounds should be treated as if they were firearms.⁸ Even a lay reading of this recommendation would suggest that record keeping should be exemplary. In practice the official reporting of numbers of rounds fired by both the police and the army shows lamentable inconsistencies. Previous reports have shown the police to have failed to adhere to even basic levels of record keeping and problems remain in this area.⁹ This undermines public confidence in all the desired accountability processes, including all military and police adherence to official guidelines.
16. The involvement of the Police Ombudsman in investigating baton round discharges has resulted in some welcome degree of accountability – but problems of perception within the communities remain.¹⁰ Firings by the army are outside the Ombudsman’s remit. Given that the army is acting as military aid to the civil power when using baton rounds, we recommend that the Ombudsman is given the power and resources to investigate *all* firings of baton rounds.
17. Accountability for all firings would be greatly enhanced and assisted by forensically marking all baton rounds with a unique identifier which cannot be removed. This is not technically difficult. This should go alongside enhanced audit trails.
18. Whilst calling for a Government commitment to withdraw baton rounds and for urgent, independent research into safe alternatives, we have also made recommendations covering their use until withdrawn. Guidelines should include specific warning to firers about the potentially fatal impact of baton rounds to children. The army should operate to the police guidelines on firing baton rounds, not, as is presently the case, to a weaker standard that does not meet the UN Basic Principles on the Use of Force and Firearms (reproduced in Appendix 2).
19. The new baton round is potentially a more lethal weapon than that which it replaced. Presently there is both a flawed record keeping and a flawed accountability process.

⁸ Patten report, para 9.17.

⁹ See also NIHRC, *The Recording of the Use of Plastic Bullets in Northern Ireland*, May 2001.

¹⁰ See for example, Pat Finucane Centre, *A Clean Bill of Health?*, Pat Finucane Centre’s response to the report of the Police Ombudsman on the use of plastic bullets April 2001 to March 2002, Derry 2002.

1. INTRODUCTION

The Omega Foundation has compiled this report in order to meet one of the key objectives of the Northern Ireland Human Rights Commission's Strategic Plan 2000-2002, in regard to adoption of new crowd control weapons in Northern Ireland. The Commission was concerned about the introduction of a new baton round at a time when the Patten Commission had recommended an urgent search for alternatives to the baton round.¹¹ The Commission was deeply concerned about potential breaches of human rights caused by the new baton round - especially that of the right to life.

The NIHRC therefore asked the Omega Foundation to review the human rights implications of the introduction and deployment of the L21A1 baton round and to review proposed alternatives to baton rounds.

This report primarily focuses on the steps taken in implementing the Patten Report recommendations 69 and 70 relating to public order equipment. The Patten Report recognised that: "the most controversial aspect of public order policing in Northern Ireland has been the weaponry used by the police, in particular plastic baton rounds".¹² Patten went on to express surprise and concern that so little work was going on in the UK to find an acceptable alternative to the plastic baton round (PBR), except in seeking more accurate PBRs. It compared the research accomplished in the UK unfavourably with the work then being undertaken in the USA. It concluded that: "In common with many groups that gave us submissions, we would like to see the use of PBRs discontinued as soon as possible".¹³ The Patten Report went on to recommend:

Recommendation 69: That an immediate and substantial investment be made in a research programme to find an acceptable, effective and less potentially lethal alternative to the PBR;

Recommendation 70: That the police be equipped with a broader range of public order equipment than the RUC currently possess so that a commander has a number of options at his or her disposal which might reduce reliance on, or defer resort to, the PBR.

Three further recommendations are relevant to the L21A1 baton round:

Recommendation 71: The use of PBRs should be subject to the same procedures for deployment, use and reporting as apply in the rest of the United Kingdom. Their use should be confined to the smallest necessary number of specially trained officers, who should be trained to think of the weapon in the same way as they would think of a firearm, that is, a weapon which is potentially lethal. Use of PBRs should in the first instance require the authorisation of a district commander. This should be justified in a report to the Policing Board, which should be copied to the Police Ombudsman. Wherever possible, video camera recordings should be made of incidents in which the use of PBRs is authorised.

¹¹ Patten report, para 9.15.

¹² Patten report, para 9.12.

¹³ Patten report, para 9.15.

Recommendation 73: The Policing Board and, as appropriate, the Police Ombudsman should actively monitor police performance in public order situations, and if necessary seek reports from the Chief Constable and follow up those reports if they wish.

Recommendation 74: Guidance governing the deployment and use of PBRs should be soundly based in law, clearly expressed and readily available as public documents.

A Steering Group led by the Northern Ireland Office was set up by the Government in July 2000 to take forward recommendations 69 and 70 of the Patten Report. To date the Steering Group has produced three research reports.

The current report by OMEGA assesses the extent to which both the spirit and the intent of the Patten Report recommendations have been implemented in Northern Ireland, and the adequacy of both the research and associated deployment mechanisms. The aim of the report is provide an analysis for the Human Rights Commission and others, of the human rights implications of the process and decisions taken to date relating to the new baton round and proposed alternatives.

The framework used by the Omega Foundation in making this evaluation has previously been outlined in two reports to the European Parliament's Scientific and Technological Options Assessment Committee (STOA); (i) 'An Appraisal of the Technologies of Political Control'¹⁴ and (ii) 'Crowd Control Technologies: An Assessment of Crowd Control Technology Options For the European Union'.¹⁵

A key observation of these reports was that every weapon brings with it a range of different hazards and unforeseen consequences. These reports also outlined the many and varied ways in which the design or the operational use of crowd control weapons facilitate human rights violations. Abuse of these weapons consists both of unintentional and deliberate breaching of the safeguards. This includes: undermining set rules of engagement; failure to ensure that any deployment of force is appropriate, transparent and accountable and the inherent characteristics of the technology itself which might lend themselves to abuse.

If the Patten Report recommendations had been taken seriously the research into alternatives and new technologies would be a truly independent effort - rather than the 'internal' Steering Group with little independent input that has been set up. A selection and testing process which is less than rigorous, or taking short cuts in any process which could allow the deployment of dubious technologies, will have consequences far beyond Northern Ireland.

Whilst some commentators have dismissed the idea that the Northern Ireland conflict over the last 30 years has become a laboratory for field testing new public order strategies and technologies, the fact is inescapable that less-lethal weapons like the

¹⁴ Omega Foundation, *An Appraisal of the Technologies of Political Control, A report to the Scientific and Technological Options Assessment Committee of the European Parliament (STOA)*, (PE 166.49), December 1997. See <http://iva.com/stoa-atpc.htm>.

¹⁵ Omega Foundation, *Crowd Control Technologies: An Assessment of Crowd Control Technology Options for the European Union*, (EP/1/IV/STOA/99/14/01), European Parliament, May 2000. See <http://www.europarl.eu.int/dg4stoa/en/publi/default.htm>.

rubber bullets first deployed in Northern Ireland in 1970, have now proliferated all over the world.

The debate on operational effectiveness, biomedical effects, acceptability, abusability and democratic accountability of such weapons is not taking place in a political vacuum. The Steering Group implementing the Patten Report recommendations is working closely with the Association of Chief Police Officers (ACPO). ACPO is closely liaising with the US Joint Non-Lethal Weapons Directorate (JNLWD) and the US National Institute of Justice (NIJ).¹⁶

What is missing from this process of evaluating new weapons,, is involvement from the public, victims and human rights organisations - the social dimension. Despite requests, the NIHRC has not been involved in the Steering Group set up to look at alternatives to the baton round. The authorities are failing to fully engage with, and use the knowledge and experience of, these groups.

The presentation of public order equipment has consistently been that of replacing the need to use lethal weapons within the context of the 'minimum use of force.' However, without proper technical evaluation, adherence to guidelines and real public accountability, it is very easy for these weapons to allow policing to go beyond what is lawful. Such episodes of less-lethal weapons being used to augment lethal weapons have been well documented in our own reports to the European Parliament.¹⁷

An overriding concern in regard to every use of force by state security forces should be whether or not it is lawful and carried out with due regard for human rights. Some of the weapons deemed to be benign or non-lethal, for example electro-shock and stun devices, have been shown to be systematically involved in torture or cruel, inhuman and degrading treatment as well as serious injury.¹⁸ These concerns, raised by Amnesty International have been adopted by the British Government and both now label these devices as instruments of torture.¹⁹ The British Government has enacted legislation to forbid their export from the UK. This stance is now being followed both by the EU²⁰ and the UN²¹. Yet such electro-shock weapons are still included in the range of weaponry being tested by the Steering Group.

The challenge to all those wishing to see the principles of democratic policing being universally applied is to make such principles objective, transparent and accountable. Within this vital human rights context, the Omega Foundation recommends that the

¹⁶ Intense liaison between the MoD and the US Joint Non Lethal Weapons Directorate was facilitated by the US-UK Master Information Memorandum of Understanding on Non-lethal Weapons which was signed on 2 February 1998, eg five formal meetings took place between 1998 and 2000 (*Hansard*, 10/4/01, 52W).

¹⁷ The Omega Foundation, *Crowd Control Technologies*, May 2000.

¹⁸ See for example Amnesty International, *Stopping the Torture Trade*, 2001.

¹⁹ The UK Government asked all EU member states to follow its example in taking "the necessary measure(s) to prevent the export or transshipment of 'portable devices designed or Modified for riot or control purposes or self protection to administer an electric shock, including electric shock batons, electric shock fields, stun guns and tasers, and specially designed components for such devices'", Statement of the Secretary of State for Foreign and Commonwealth Affairs, 28 July 1997.

²⁰ Commission of the European Communities, 'Proposal for a Council Regulation concerning trade in certain equipment and products which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment', COM (2002) 770 final. 30 December 2002.

²¹ United Nation's Economic and Social Council, 'Torture and other cruel, inhuman and degrading treatment or punishment', Commission on Human Rights, Resolution 2001/62, E/CN.4/RES/2001/62, 25 April 2001.

NIHRC promotes the key principles adopted by the United Nations Commission on Human Rights in relation to the use of force.²² The UN advocates that the use of force should be strictly regulated by law, controlled by superiors and be subject to clear guidelines and basic principles. These basic principles require:

- No exceptions or excuses for unlawful use of force
- Use of force to be always proportional to lawful objectives
- Restraint to be exercised in the use of force
- Damage and injury to be minimised.

This means that the use of force should never be disproportionate or indiscriminate. In practice any weapon that indiscriminately affects innocent bystanders or creates disproportionate injuries is unacceptable. Such disproportionate damage also relates to any medical consequences such as long term impacts on health, including carcinogenic, mutagenic and tetragenic effects arising from either inadequate biomedical evaluation, use of weapons outside of operational safety parameters or an inaccurate technical specification. In furthering these principles, adequate note should be taken of the implications of international human rights standards which, according to expert legal opinion, apply equally to lethal and less-lethal weapons in regard to the targeting of non-combatants. These legal standards are reflected in, for example, European human rights legislation, embodied domestically in the Human Rights Act This protects the right to life and guarantees freedom from torture or inhuman or degrading treatment or punishment. All members of the EU, including the UK, are signatories to the Convention Against Torture.

Why are these legal frameworks so important? Any use of force, by whatever technology, has potential human rights implications. The Government has signed up to the international human rights laws and standards and must ensure that any technology and its use is consistent with them.

This report looks at the Patten proposals and principles and the flaws which have emerged in the process of establishing the criteria for the weapon options and alternatives being proposed for selection. The substantive sections provide an audit of the selection process used for the new baton round, the L21A1, and the technical evaluation criteria adopted. The report examines the technical, human rights, potential for abuse (abusability), legal and political considerations and asks why no social impact assessment was undertaken. Actual usage of the new baton round is evaluated and an analysis presented which criticises the adequacy of the underlying research which the authorities have suggested justifies the conclusion that it might be a safer alternative than the baton round which it replaced.

Whilst the Steering Group has made efforts to articulate the processes and procedures by which alternative public order technologies should be evaluated and implemented, these are not yet sufficient. The refusal of the Government to publish

²² See for example: *Code of Conduct for Law Enforcement Officials* and the *Basic Principles on the Use of Force and Firearms by Law Enforcement Officials*, www.un.org. Also see UN Human Rights Training Document (2001), OHCHR CIVPOL Training Guide, Section 8, Use of Force.

key documents, and the lack of timely and accurate data on the use of the baton round are undermining the process. Public faith in this process has been undermined by the parallel process of implementing a replacement for the plastic baton round governed by the pre-Patten requirements of the Ministry of Defence and not the original spirit of Patten and his team.

We recommend that the NIHRC takes a lead in using international human rights laws and standards to monitor the use of police technologies in Northern Ireland (Recommendation 1).

1.1 Key Developments in Baton Round Technology

It is interesting to note some of the key developments from the rubber bullet to the baton round. If we were dealing with just a question of the technology available successive governments have repeatedly failed the community of Northern Ireland. They have not invested adequate time or money to either methods of policing capable of significantly reducing public disorder or the search for more benign public order control equipment. Sadly for the 17 people killed and the hundreds maimed by the baton round over the last 30 years, the present search for an alternative has come too late.

- 1970 - rubber bullets introduced, first fired August 1970.
- 1974 - the plastic bullet introduced - a “more accurate” and “less lethal” replacement for the rubber bullet, designed to reduce casualties.
- 1974 onwards - misfires and breach explosions occur with the new bullet.
- 1977 - MoD tasked Royal Ordnance with developing a new weapon system.
- 1978 - MoD aware that the ammunition was unstable, expanded in hot conditions causing breach explosions, misfires and inaccurate firing. A Royal Ordnance internal report states that this could happen at room temperature.
- 1979 - Royal Ordnance Arwen weapon prototypes ready, demonstrated to army and police over next 3 years.
- 1982 - MoD’s Ordnance Board report “Board project G/220A” states that plastic bullets are often unsuitable for use.
- 1984 - Royal Ordnance developed Arwen-multishot weapon already in use in the USA, single shot Arwen-Ace developed.
- 1994 - a “more accurate” weapon introduced - the Heckler & Koch 37/38mm anti-riot launcher L104.
- 1997 - 2 batches of defective plastic baton rounds withdrawn because of lax quality checks, one batch was travelling too fast, one batch was found to have batons above the weight limit.
- 2001 - a “more accurate” and “potentially less lethal” baton round is introduced to Northern Ireland.

Fifteen year old Seamus Duffy was the last person to be killed by plastic baton rounds in August 1989. Eight of the 17 people killed by rubber or plastic bullets were children.

2. THE L21A1 BATON ROUND

The L21A1 baton round was introduced into Northern Ireland in June 2001. At the time, statements by Government Ministers claimed that it was less lethal than the existing baton round. This assertion was made on the basis that the new baton round was more accurate and would therefore neither hit innocent bystanders, nor those who were not actually targeted by the security forces. It was also emphasised that this enhanced accuracy of the L21A1 meant that the new baton round would be safer because the parts of the body that are especially vulnerable - ie head, neck and chest could be avoided. In the following pages we examine these claims and present data from actual usage of the baton round. This evidence suggests it is neither an accurate nor a safe weapon and therefore does not fulfil the requirements of the Patten Commission recommendations.

The development of the L21A1 began in 1997 and cost about £1.65 million.²³ Development was spurred following the widespread use of the previous baton round in 1996 in public order incidents across Northern Ireland surrounding the Drumcree crisis. This resulted in many serious injuries, evidence of misuse and the breaking of usage guidelines. Her Majesty's Inspector of Constabulary reported on the use of the baton round and made various recommendations - including the tightening of guidelines. Furthermore in 1996 and 1997 many thousands of baton rounds were withdrawn from service because they were overpowered and therefore travelled too fast.²⁴

The existence of the programme to develop a new round was not made public except in an obscure parliamentary answer given by the Secretary of State for Defence, John Spellar, in 1997: "...a programme has been in hand to take advantage of emerging technologies, with the aim of developing improved baton round equipment to meet operational needs but with reduced injury potential. We will continue to look at other effective means for controlling public disorder and riot situations".²⁵ The conclusion of this programme was the L21A1, which was announced by the then Home Secretary on 2 April 2001.

During the development period of the L21A1, the Patten Commission was at work. Yet the report refers only in passing to research into baton rounds: "We were able to discover very little research work being done in the UK (except in the development of more accurate PBRs)".²⁶ Assuming Patten was aware of the development of the L21A1, he clearly felt that there was still a need to urgently find an acceptable, effective and less potentially lethal alternative to the plastic baton round.

Patten Report recommendation 69 implies that a technology to replace plastic baton rounds should be found. However, the signs are that the authorities regard the L21A1 as **the** alternative to the plastic baton round, and that any other technologies developed and deployed will supplement rather than replace it. This view was

²³ DCC Brereton, B and PC Nash, S. (North Wales Police), *Baton Gun*, paper presented at Jane's Less Lethal Weapons (LLW) Conference, Manchester, 17-18 September 2002.

²⁴ *Hansard* col 372, 10 June 1997.

²⁵ *Hansard* col 372/373, 10 June 1997.

²⁶ Patten report, para 9.14.

articulated by a number of speakers at a conference in Manchester²⁷ which gathered together police, scientists and government officials to discuss experiences of using less lethal police technologies, as well as future developments. This dubious interpretation of Patten's recommendation is certainly counter to most commentators' understanding of what Patten wanted.

We recommend that the NIHRC seeks official clarification from the Government that its policy is to withdraw the baton round from Northern Ireland once an acceptable, effective and less potentially lethal alternative is found (Recommendation 2).

We recommend that the Government commits to a binding timescale for the completion of the search for an alternative and withdrawal of the baton round in Northern Ireland (Recommendation 3).

2.1 Technical Briefing

Many people in Northern Ireland will be only too familiar with the baton round, but it is useful here to lay down a few standard descriptions.

2.1.1 What is a baton round?

The baton round is a projectile, fired from a weapon, which is intended to strike the target with sufficient force to cause compliance through the application of pain. It is one of a family of so-called impact projectiles. More specifically the baton round is a non-flexible impact projectile (also called a kinetic energy round), launched from a grenade launcher. Because it is rigid and does not deform on impact it will transfer most of its energy to the target.

Impact projectiles gain their energy from the explosion of the propellant charge of the ammunition used. This causes the projectile to be fired at high velocity (although it is important to note that this velocity is low when compared to handgun or rifle ammunition). The kinetic energy is transferred to the target on impact, causing tissue cells to move away from the path of the projectile. This energy may be in the form of fluid shock or the kinetic energy transfer of a solid object that strikes a fluid mass object such as the human body. The physical consequences of this action, depending on the rate of speed of the cell displacement or the effects of fluid shock, may result in two possible outcomes - blunt or penetrating trauma. The maximum desired effect of a crowd control munition is blunt trauma defined as the impact from an object that leaves the body surface intact, but may cause sufficient (non life threatening) injury to incapacitate. However, any application of force to a human body may cause injury.

2.1.2 The new baton round

The L21A1 ammunition consists of an aluminium cartridge case (ejected after firing), the explosive charge which is ignited when the trigger is pulled and the projectile - the baton round. The cartridge is sealed by means of the top edge of the aluminium case

²⁷ Jane's LLW Conference September 2002.

being crimped over.

Impact projectiles were developed in order to enable the security forces to create a “sterile area” between themselves and rioters²⁸ - ie clear space to put distance between themselves and the rioters, up to the distance that rioters can throw objects such as bricks or petrol bombs - generally this is regarded as being between 20-50m. This enables the security forces to manoeuvre, have space and time to plan responses, keep at a safe distance those who could otherwise pose a serious threat to life and minimise casualties on both sides.

The current baton round is designed to be aimed at an individual who has been positively identified as posing a serious threat to the life of the officer. It should be aimed at the belt buckle and is designed to strike the target directly, not to be intentionally bounced off the ground. However gravity causes the trajectory of the projectile to drop over distance, and because the firer should not “aim off” ie aim higher than the belt buckle, the baton round may hit the ground and bounce up to hit the target when fired over greater distances.

2.1.3 Physical properties

A comparison between the new (L21A1) and the old baton round (L5A7) is presented in the following table.

²⁸ Applegate, R, Col, ‘Non lethal police weapons’, *Weapons Technology*, July/August 1971, p62.

Table 1. Comparison of physical properties of new (L21A1) and old (L5A7) baton rounds²⁹

	New - L21A1	Old -L5A7
Mass	96.8 - 99.2g	132 - 135g
Minimum and maximum velocity (at 2m)	69 - 76 m/s	55-70 m/s
Mean velocity (at 2m)	70 - 74 m/s	60.5 - 65.0 m/s
Shape	37mm calibre with a 9mm nose edge radius and a boat-tail on the base	37mm calibre with a 3mm nose and base edge radius
Impact area	284 mm ²	755mm ²
Aerodynamic properties (estimated drag coefficient, Cd)	0.24	0.64
Composition	Polyurethane polymer	Polyurethane polymer with an additive to increase density
Hardness (oIRHD)	92-95	85-90
Average (mean) Kinetic energy at:		
2m	257J	274J
20m	244J	246J
35m	230J	216J
50m	215J	200J
Risk of penetration of body tissues by the projectile Joules/mm ²	0.859 (2.5 times more likely to penetrate than the old baton round)	0.326
Weapon	Heckler + Koch 37mm riot grenade launcher (L104) with optical sight (XL 18E3) – “L104 37mm Baton Gun” Cost £1082	Heckler + Koch 37mm riot grenade launcher with battle sights
Ammunition	Flash-less and noiseless Shelf life 1.5 years Cost approx £4.50 per round Supplied by Heckler & Koch, manufactured by Silberhutte (Germany) and Eley (UK)	Black powder type producing loud bang, flash and smoke. Supplied by a variety of companies including PW Defence (Pains Wessex)

²⁹ Information from *Hansard*, 8 May 2001, Col 88W/ 89W.

What does this table tell us?

Hitting harder - The new baton round differs in mass, velocity, shape and material from the L5A7: it is lighter, faster, more aerodynamic, harder and stiffer. Although it is lighter it is able to deliver a high level of energy because it is launched at a higher speed.³⁰ The energy, speed and stiffness will cause this round to “hit harder”.

More damage - The new round impacts over a significantly smaller area than the L5A7. A smaller surface area of impact leads to increased energy density and potential problems with penetration and potentially more damage to tissues if no penetration occurs. This is confirmed by the index of the risk of penetration of tissues, which for the new round is 2.5 times the old round - ie the new round is 2.5 times more likely to penetrate the skin.

Ricochet potential - Because the new baton round is lighter, faster, harder and stiffer it will ricochet more than the previous round. This is confirmed by the Government’s own testing report which stated: “the probability of ricochet within the normal operational range of batons will be higher with the L21A1”.³¹ However, because the L21A1 is more aerodynamic it retains its kinetic energy over a greater distance and thus has a higher kinetic energy at higher distances. This means it has the potential to cause significant injuries to those hit by ricochets, even over very long distances, perhaps as far as 100 metres.

Effect on a crowd - The propellant (explosive) used in the L5A7 produced the characteristic bang and copious smoke. The new propellant in the L21A1 is virtually noiseless and flashless. This has two results:

- people in a crowd cannot identify who is firing baton rounds or where they are coming from. Despite the duty on the police and army to provide warnings several injured victims mention in their statements that they were unaware that baton rounds were actually being fired until they felt the pain of impact or heard a round flying past.³²

- the weapon has lost the psychological effect when the bang and flash were seen and heard by the crowd, this has been mentioned by both the community and the police,³³ as well as the Independent Assessor of Military Complaints Procedures.³⁴

Previously the weapon may have had a deterrent effect on a crowd. Now they have to be hurt, or see people hurt, before the danger is really clear. An opportunity to disperse people prior to any injuries seems to have been lost by these technical changes.

³⁰ The calculation of kinetic energy (KE) is dependent on 0.5 times the mass times the velocity squared – thus velocity is the most important factor in KE.

³¹ Defence Scientific Advisory Council, *Statement on the comparative injury potential of L5A7 baton round fired from the L104 Anti-riot gun using the battle-sights, and the L21A1 baton round fired using the XL 18E3 optical sight*, para 16(e), August 2000.

³² Witness statements supplied by the United Campaign Against Plastic Bullets.

³³ See for example *Jane’s Police Review*, 14 December 2001.

³⁴ Independent Assessor of Military Complaints Procedures in Northern Ireland, *A review of military use of baton rounds in Northern Ireland*, 10 December 2002.

2.1.4 The weapon

The baton round itself is one part of the weapon system that also comprises the grenade launcher and the sight. The weapon is identical to that used previously - the 37mm Heckler and Koch anti riot grenade launcher, commonly called the baton gun.³⁵

Much has been made of the new weapon sight. Crucially, the safety claims made for the new baton round are based on the improved accuracy this sight allegedly gives the weapon system. The previous simple "iron battle sights" have been replaced with an optical sighting system. This presents the firer with an illuminated red dot in the sight which can be positioned over the point of aim on the image of the target. It has a back up fixed aiming sight. It is used with both eyes open in order not to lose peripheral vision. It is designed to be relatively simple requiring little training. It works in both day and night firing although in low light levels or conditions where smoke is partially obscuring a target it will not operate well. The new sight went through a number of Modifications during its development. Where previously it allowed adjustment for various distances, it now is a fixed sight. Whilst this sight is an improvement on the old there still appear to be some problems.

Other types of sights exist, one of which is laser sight systems. However laser sights were never included in the original technical specification of technologies to be considered.³⁶

Laser sights have some advantages, as well as some drawbacks. They are now extremely common in policing and military circles. They project a visible red laser light onto the target, which produces an instantly visible red dot. Much has been written, and many police officers have reported from their personal experience, about the psychological effect of such a "red dot" on the target, in many cases subjects desist from their behaviour immediately they see they are targeted.³⁷ An added advantage is that the laser will illuminate the first object it hits. For instance, if there is smoke partially obscuring a target the laser will illuminate that and not the target. This would provide an added safety: if a police officer or soldier is aiming a weapon and could not see and illuminate the target clearly, they should not fire. A further advantage is that observers could see clearly who the firer was targeting - a good aid to accountability. Some would argue that a laser would reveal the position of the firer, a tactical disadvantage to the police. However the position of a firer should not be concealed, and should be fairly obvious to the crowd in a public order setting, and the firing of baton rounds should be announced to the crowd before commencement of any firing. Laser sights require some maintenance and battery checking - but this is easily accomplished as part of the regular routine of weapon checks, and indeed the current sight needs battery checking. They are however more expensive than simple optical sights.

The relative advantages and disadvantages of laser aiming devices should have been spelled out in the technical evaluation of any new weapon system considered, and

³⁵ This was especially developed by Heckler & Koch, at that time a subsidiary of Royal Ordnance/British Aerospace, and introduced in 1994.

³⁶ Conversation between author and Colin Burrows, formerly Chief Superintendent PSNI at Jane's LLW Conference, September 2002.

³⁷ See for example Boatman, P, *Conducted Energy Weapons*, and James, S, *Less Lethal Weapons Programmes* presented at Jane's LLW Conference, September 2002.

this should have been made public, especially as the authorities place crucial emphasis on this aspect of the new baton round system. In this way the public could be reassured that all technologies were evaluated before decisions made.

It is interesting to note that it was not until 1994 that the new Heckler and Koch weapon was introduced to replace the totally inadequate launcher used until then. This was despite the fact that an alternative weapon, developed by the Ministry of Defence, was available in the early 1980s. This was the Royal Ordnance Arwen. The Steering Group's second report does mention the Arwen weapon system that was developed in the late 1970s, though not by name: "the baton round system used by the Canadians had previously been considered for use in the United Kingdom, but was considered to be inferior in comparison to the L21 round".³⁸ This seems a highly disingenuous statement when we consider that the single shot Arwen was available in the early 1980s and the L21A1 was not developed until after 1997. Also the Arwen was tested in the late 1980s by the Police Scientific Development Branch and described as having "pinpoint accuracy at 30 yards".³⁹

The reason that the Arwen was not introduced seems to be one of cost and political will. Successive governments simply would not provide enough money to evaluate and introduce the Arwen weapon. It is probable that the development cost of the Arwen would have been significantly less than the amount of compensation paid out to victims of baton rounds. It is welcome that the Steering Group is now carrying out more rigorous testing of crowd control weapons, even though the processes are still insufficiently robust.

2.1.5 Accuracy

Accuracy is defined in the Steering Group's second report as "the ability to hit a 400mm x 600mm target with a 95% probability with a bench mounted system, 85% with an officer dressed in appropriate clothing".⁴⁰ This definition was also used to test the L21A1 during its development.

No figure is given for the percentage drop in accuracy expected under actual conditions of use, ie with an officer dressed in appropriate riot clothing, under stress, in low light conditions, possibly surrounded by smoke, fire and the threat of missiles and worse. More importantly no minimum acceptable percentage is defined, below which the accuracy of the weapon is deemed unacceptable. This is an important point - the weapon may have an acceptable accuracy in the laboratory but may have unacceptable accuracy in use. This is further discussed in the section on actual usage below.

³⁸ Steering Group led by the Northern Ireland Office, *Patten Report recommendations 69 and 70 relating to public order equipment - A Research Programme into Alternative Policing Approaches Towards the Management of Conflict*, Phase 2 report, 30 November 2001, p57. Hereafter, 'Steering Group second report'.

³⁹ 'Police press for new riot weapon', *Sunday Times*, p1, 5 February 1989.

⁴⁰ Steering Group second report p57.

2.2 Medical Briefing

The primary source of information on the medical effects of the baton round is a report issued by the Defence Scientific Advisory Council (DSAC) in 2001 on the injury potential of the L21A1 compared with the L5A7.⁴¹ This is the baseline study on the medical effects expected to be caused by the new baton round. The report concentrated on the medical aspects of the new baton round although it gives an insight into the problems surrounding the testing and selection regime employed.

Most of the testing of the new baton round was co-ordinated by the Defence Science and Technology Laboratory, Porton Down.

The main findings of the DSAC report were:

“The use of the L21A1 is likely to increase the *incidence* of some intra-abdominal injuries.

The use of the L21A1 is not predicted to lead to an increase in the *severity* of thoracic and abdominal injuries, given an impact to these regions.

Both types of baton round will produce serious injuries if they strike the head. There is unlikely to be a clinically significant difference in the severity of skull fracture. The severity of injuries to the brain is likely to be greater with the L21A1, due to higher pressures in the brain, and greater penetration of the projectile. It is not possible to define quantitatively the patho-physiological consequences of the increased pressure and penetration, but it is judged that the overall clinical outcome will be marginally worse.

If the L21A1 does contact the head, and it strikes perpendicular to the skull (“head on”) there is a risk that the projectile will be retained in the head. This is less likely to occur with the L5A7. For glancing blows, there is not likely to be any difference in this respect between the L5A7 and the L21A1.”

DSAC also noted: “that the consequences of a deliberate or inadvertent elevation of the mean point of impact of the L21A1 will have more serious medical implications to the target than elevation of the mean impact point of the L5A7. This is due to the increased accuracy and reduced dispersion of the L21A1. Elevation of the mean point of impact could occur either through misuse of the system or ineffective zeroing.”⁴²

The DSAC findings were critically predicated on the assumptions of adherence to firing guidelines and acceptable competent training. It further stated:

“The guidance to firers is beyond DSAC’s remit. DSAC recognises that it may be difficult to maintain the acceptance incidence of injury at the low level currently envisaged, in all operational as distinct from test and training circumstances. We emphasise that DSAC’s recommendations are critically predicated on such

⁴¹ DSAC statement, 21 August 2000.

⁴² DSAC statement, Aug 2000, para 19. The statement (para 14) also mentions inaccuracy at 40m. Parliamentary Answer, 8 May 2001, col 89w states that this was addressed by a change to the gun zeroing policy.

assumptions of acceptable competent training; this needs to be kept in mind by those who make the policy decisions.”

This means that the L21A1 could only be considered a less potentially lethal replacement to the old baton round if the guidelines to firers were strictly adhered to and if baton gunners were competently trained. None of these conditions were met under the previous baton gun regime, as highlighted by numerous reports including those by NGOs, the EU, the UN and the Patten Commission.⁴³ We will discuss in a later section whether these conditions have been, or indeed could be, met under the current regime.

A baton round is intended to cause a blunt trauma on impact rather than a penetrating trauma. How severe this will be is dependent on the kinetic energy of the projectile, its size and impact area, how much of the energy is transferred to the body and how fast this occurs. Damage is also dependent on the area of the body hit, for instance the head, neck, chest, spine and kidney areas are considered the most dangerous areas to hit, whereas abdomen, legs and arms are the least dangerous.

The understanding of how an impact projectile damages a body is only just becoming known - and the research into chest impacts and head impacts is at a relatively early stage - and certainly was not fully developed when the new baton round was being tested. There are a great many variables to consider. Some are more straightforward, for instance a sharp or pointed projectile would be expected to produce much greater penetration than a blunt projectile. A projectile that impacts over a smaller surface area of the body would be expected to produce greater trauma.

The new baton round has approximately the same Kinetic Energy at 20m as the old baton round, however it is faster, stiffer and has a smaller impact area. This leads to a greater energy transfer over a shorter period of time - typically an impact to the chest will cause a greater deformation over a shorter time period, leading to a higher peak pressure acting on the chest. This measurement has been found to be one of the critical operating conditions on the severity of injuries caused by projectile impact on all regions of the body.⁴⁴

2.2.1 Minimum firing distance

It is worrying that during the testing of the new baton round the requirements of the MoD and ACPO were changed three times. This led to four separate statements from DSAC on the potential medical implications. The changes highlight that officials could not agree at the outset on the conditions under which the baton round should be used. The minimum distance of fire was first one metre and then lengthened to 20 metres. Such changing of requirements and imposition of new criteria has the effect of undermining the validity of testing regimes.

The reasons for these changing distances have since become clear. The requirement for a distance of 1m came from the police who wanted to use the

⁴³ See for example publications by the Committee on the Administration of Justice (Belfast); Pat Finucane Centre (Derry); and Patten report, para 9.16.

⁴⁴ Presentation by Dr Graham Cooper, Group Leader Trauma, Porton Down, Jane's LLW Conference, see above.

weapon against violent individuals where a firearm would otherwise be used. The official position was that the new baton round was intended to be used at a minimum distance of 20 metres. However, although not publicly stated, it was intended to decrease that distance to one metre. This has now happened for the use of the baton round as a less lethal option.

The DSAC impact testing is based on theoretical models or simulations and takes the best case scenario. It does not take into account experiences of the use of the previous baton round. For example, the probability of impact to the upper torso is based on a theoretical model - not on the actual firing conditions. If actual conditions are included, ie low light levels, stress, riot situations, short time to aim, and the history of their actual use, accuracy would be compromised and therefore the probability of upper body shots increases.

2.2.2 The danger of ricochets

The medical implications of ricochets are touched upon in the DSAC report, but no detail is given. Despite parliamentary questions ministers have refused to publish any of the research into ricochets. The ricochet potential of the new baton rounds is vitally important - if more batons ricochet more innocent people, including children, will be hit. This may have an important legal implication, since if it is shown that the new baton round is more prone to ricochet this can be cited in cases of people who have been hit but were not the intended target. There is already one documented case where a ricochet has hit someone.⁴⁵

We recommend that the NIHRC urgently presses the Government to publish full details of all ricochet testing, including the testing mentioned in the DSAC statement and all subsequent testing (Recommendation 4).

2.3 Guidelines

Patten stressed that guidance governing the deployment and use of PBRs should be soundly based in law, clearly expressed and readily available as public documents.⁴⁶

The guidelines issued to officers deployed in public order situations are crucially important to prescribe the circumstances under which baton rounds can be used. Past versions of the guidelines were vaguely worded and allowed baton rounds to be used in everyday policing operations. This led to officers viewing these weapons as a part of normal policing equipment, rather than as lethal firearms.

Following the recommendation by Her Majesty's Inspector of Constabulary in 1996 the guidelines used by the RUC were brought into line with those used in the rest of the UK. New guidelines were issued in 1999 by the Association of Chief Police Officers (ACPO). Although a copy of the guidelines was put in the House of Commons Library, they are not, according to ACPO, officially a public document. The current PSNI and ACPO guidelines are set out in Appendix 1.

⁴⁵ Independent Assessor of Military Complaints Procedures in Northern Ireland Report, 10 December 2002, Annex 4.

⁴⁶ Patten report, para 9.20.

The baton round can also be used in situations where a firearm would otherwise be used, as a so called less lethal option. The guidelines for use in these situations allow a minimum firing distance of 1m. In Northern Ireland this type of usage is confined to specialist firearms units. This use is covered by a set of guidelines which is reproduced in Appendix 1.

Until very recently the guidelines relating to the army's use of baton rounds were not in the public domain. Ministers refused to publish them claiming that because they formed part of the army's rules of engagement, they were a classified document. Contrary to assurances from Dr John Reid when introducing the new baton round in 2001 that there was now "more openness and transparency" in fact we had less. Ironically the army's guidelines for the previous baton round were public documents, albeit after having been leaked over the years.

Finally, after many parliamentary questions and pressure from the community in Northern Ireland, the army guidelines have now been published. They are included in Appendix 1. There is no reason why these guidelines could not have been published as soon as the new baton round was introduced. There is nothing in them that would in any way compromise the army's effectiveness, give away its tactics or operational plans.

The guidelines do however raise a number of questions, and are certainly not as rigorous as the police guidelines. The level of detail in the PSNI/ACPO guidelines is far greater. The army guidelines do not place sufficient emphasis on the proportionate and legitimate use of force. For example they allow the use of the baton round against "a violent crowd posing a risk to life by singling out the perceived ringleaders and troublemakers", even if these targets do not present any immediate threat to life. They also allow the use of baton rounds "to protect own forces or others under their protection from physical violence". They do not seem to prohibit the use of baton rounds fired from moving vehicles and do not give any details about reporting on their use.

The initial refusal to publish the army guidelines led to an unnecessary corroding of public trust and confidence. The army guidelines do allow a much broader scope of use of the baton round. Because military forces are not nominally covered by the UN Basic Rules on Force and Firearms and the Code of Conduct for Law Enforcement Officials, the guidelines have not been written with rigorous regard to these standards.

The Independent Assessor of Military Complaints Procedures has recommended some minor changes to the army guidelines, but these changes will not go far enough.

We recommend that the army operates strictly in accordance with the PSNI/ACPO guidelines on the firing of baton rounds when carrying out public order policing duties in Northern Ireland (Recommendation 5).

In the past children have been disproportionately injured and killed by baton rounds. The police and army guidelines both have serious consequences for children. Both sets of guidelines refer to the aiming point: "baton rounds should be aimed to strike directly (ie without bouncing) the lower part of the target's body ie below the rib cage". If the crowd contains both adults and children, or even people of various heights

which they frequently do, the rib cage of one could easily be the head height of another. The consequences of the baton round missing an adult target could be a devastating head impact on a child. The particular dangers posed by the new baton round to children are discussed further in section 2.4.1.

Recognising that children are uniquely vulnerable to the new baton round we recommend that the guidelines to firers include specific warning about the potentially fatal impact to children (Recommendation 6).

Guidelines are there to ensure that firings are lawful. If they are ignored or broken then the firing is potentially unlawful. This was certainly the case with the previous baton round where guidelines were routinely flouted. There is now more scrutiny of baton round firings and a more robust, though not ideal, accountability system (see section 2.5). Strict adherence to the guidelines is a prerequisite for lawful firing.

2.4 Experiences of Use

In this section we have analysed the use of the new baton round to highlight the issues arising out of its use.

The new baton was introduced in June 2001. Both the PSNI and the army have fired it in the intervening period. Figures up to the end of October 2002 show that since the L21A1 was introduced well over 300 have been fired by the PSNI and 100 have been fired by the army.

Table 2. Numbers of baton rounds fired 2000-2002⁴⁷

Year	Police	Army
2000	22	4
2001	91	15 (The army fired two further rounds in February 2001 before the L21A1 was introduced)
2002 (to 31/10/2002)	255	85

The number of baton rounds fired during 2000 accounted for the smallest number ever fired in one year. The significant reduction in use of plastic baton rounds was used by Dr John Reid (then Secretary of State for Northern Ireland) as one of the ways of justifying their introduction. At the time he stated that numbers fired had fallen “from 7,000 used a few years ago to 26 last year”.⁴⁸ Although the numbers of rounds fired is still significantly lower than at the peak of their use, the current rise in usage is worrying, particularly given concerns about the safety of the new round.

Tables 3 and 4 below list the individual incidents of baton round discharge by the PSNI and army. The information for police firings was supplied by the Police Ombudsman’s office.

⁴⁷ Independent Assessor of Military Complaints Procedures report, 10 December 2002.

⁴⁸ *Irish Times*, 16 April 2001.

There should also be an ongoing analysis by statutory bodies involved in policing as to whether there is a sectarian element in the use of the baton round - this was an alleged problem with the old baton round.⁴⁹ It has not been possible to do this with the current figures. The table includes a number of incidents that were not included in the Ombudsman's Baton Rounds Research Report issued in May 2002.⁵⁰ Some occurred in the time period covered by that report but were still under investigation, some have occurred since.

The tables show the geographical spread of incidents, but also that incidents of baton round usage are occurring repeatedly in a small number of areas - the interface areas between Protestant and Catholic communities. This is an important point. The repeated use of baton rounds against localised communities, over a small number of streets, combined with an elevated level of injuries in those communities, could lead to a traumatising effect. In relation to international human rights law this could perhaps be classified as cruel, inhuman or degrading treatment.

The number of baton rounds fired can be compared with the number of strikes claimed to produce a "hit rate".

In 2001 the police hit rate was 70% and in 2002 the hit rate was 67% (this figure is based on an incomplete data set supplied by the Ombudsman's office). The Ombudsman's report gives a strike rate of 78%, but included two incidents that took place before the L21A1 was in use. The claimed army hit rate was 70.6%.⁵¹

These figures give us the first indication of the real accuracy of the baton round. This can be compared to the theoretical accuracy that the L21A1 and subsequent less lethal rounds are measured against. This is the ability to hit a 400mm x 600mm target with a 95% probability with a bench mounted system and 85% with an officer dressed in appropriate clothing.

The conclusion that can be drawn from this is that the new baton round is not a sufficiently accurate weapon when used in situations of public disorder.

⁴⁹ See for example Human Rights Watch, 'To serve without favour', May 1997, Pat Finucane Centre, *In the Line of Fire*, 1996.

⁵⁰ Police Ombudsman for Northern Ireland, *Baton rounds report*, Research Report 1/2002, May 2002.

⁵¹ Independent Assessor of Military Complaints Procedures report, 10 December 2002.

Table 3. Incidents of PSNI baton round discharge
(Information obtained from the Office of the Police Ombudsman)

Location	Date	Number Fired	Number of "Strikes" claimed
Ardoyne, Belfast	20/6/2001	11	8
Garvaghy Rd, Portadown	26/6/2001	6	5
Brompton Pk/Estoril Gdns, Belfast	12/7/2001	46	29
Corcrain Estate, Portadown	12/7/2001	5	5
Ardoyne, Belfast	27/7/2001	3	3
Cambrai St, Belfast	26/9/2001	10	8
Cambrai St, Belfast	27/9/2001	7	5
Crossmaglen	9/12/2001	2	1
Ardoyne, Belfast	9/1/2002	9	8
Ardoyne, Belfast	10/1/2002	29	15
Lawther Court, Belfast	2/4/2002	1	0
Limestone Terr/Tigers Bay, Belfast	3/4/2002	18	11
Ardoyne Belfast	21/4/2002	1	1
Madrid St/Bryson St, Belfast	12/5/2002	2	2
Ardoyne, Belfast	4/5/2002	40	Unknown
Mountpottinger Road, Belfast	14/5/2002	3	2
Garvaghy Road, Portadown	25/5/2002	2	1
Newtownards Rd, Belfast	3/6/2002	61	Unknown
Donegal Pass	9/6/2002	2	1
Mountpottinger Rd, Belfast	13/6/2002	Unknown	Unknown
Springfield Rd, Belfast	12/7/2002	30	24

Table 4. Incidents of army baton round discharge⁵²

(Information from the Military Assessor of Military Complaints Procedures report)

Location	Date	Number Fired
Portadown	12 July 2001	1
Ardoyne Road	4 September 2001	1
Crumlin Road	4 September 2001	2
Lake Street, Lurgan	31 October 2001	1
North Queen Street	11 November 2001	9
Crossmaglen	9 December 2001	1
Brougham Street	3 April 2002	1
Ardoyne	21 April 2002	2
Arthur's Bridge, North Belfast	6 May 2002	1
Mountpottinger Road	13 May 2002	10
Short Strand	13 June 2002	10
North Queen Street	23 June 2002	7
Drumcree	7 July 2002	1
Sandy Row	28 July 2002	33
Mountpottinger Road	16 August 2002	1
Short Strand	28 August 2002	17
Shore Road, Mount Vernon	11 September 2002	2
		100 (TOTAL)

2.4.1 Injury data

Table 5 below presents a survey of some injuries caused by the L21A1. Data was gathered from a variety of witness statements lodged with solicitors as well as newspaper reports. Whilst not in any way a complete picture of the overall number and type of injuries caused, it gives a snapshot of some of the most common types of injury.

What can be seen is that a number of people have been hit in the head, shoulder or upper torso, causing some serious and potentially life threatening injuries. The age of the victims is also interesting to note. There is a high rate of injury amongst children. This is a very worrying trend which suggests a number of reasons:

1. the security forces are targeting children; the Police Ombudsman's report on the use of baton rounds mentions the targeting of "youths", but gives no indication of age and whether some of those targeted were children;⁵³
2. the weapon is inaccurate; and/or
3. ricochets are occurring where the baton round has sufficient energy to cause serious and life threatening injuries.

This last point re-iterates the need for the government to immediately publish the results of any ricochet testing that has been carried out.

⁵² Independent Assessor of Military Complaints Procedures, Northern Ireland, *A Review of Military Use of Baton Rounds in Northern Ireland*, 10 December 2002.

⁵³ Police Ombudsman report, May 2002, as above.

Table 5: A survey of some injuries caused by the new baton round in Northern Ireland

Place of Incident	Date	Injury	Male/Female	Age	Reference
Short Strand, Belfast	August 2002	Internal injuries to chest, ribs	M	Unknown	Witness statement
		Internal injuries to chest, ribs lung	M	Unknown	Witness statement
North Queen St/Tigers Bay, Belfast	April 2002	shattered ankle	M	15	Andersonstown News, 8/4/02
		Broken Leg	M	Unknown	
		Bruising to leg	F	14	
Ardoyne, Belfast	21/4/2002	Bruised shoulder + triggered epileptic fit	M	12	North Belfast News 27/4/02
Short Strand, Belfast	14/5/2002	Internal injuries after hit in chest	M	16	Irish News 15/5/02
		Leg injuries	M	Unknown	
		Arm broken in two places - pins required	M	30	Irish News 16/5/02
		Elbow shattered, arm broken in two places	F	27	
		Leg injuries	F	19	
North Queen Street, Belfast	11/11/2001	Leg injury	M	11	
		Chest injury	F	14	
Brompton Park, Belfast	26/7/2001	Compound fracture of arm and open wound	M	Unknown	Witness statement
		Ripped muscle and torn tissue on rhs of body	M	Unknown	Witness statement
Ardoyne, Belfast	12/7/2001	Broken leg	M	Unknown	Witness statement
		Open wound to back of knee	M	Unknown	Witness statement
		Bruising, broken skin on leg	M	17	Witness statement
		Internal chest injury	M	18	Witness statement
		Eye, nose injury, open wound	F	16	Witness statement

In relation to point 1 above it is interesting to note that the Special Rapporteur for the UK on the UN Committee on the Rights of the Child visited Northern Ireland in September 2002 and held meetings with victims of baton rounds, lawyers, the Northern Ireland Office and NIHRC. Subsequently the UK Government was examined and questioned on its compliance with the UN Convention on the Rights of the Child.

The Committee's concluding remarks and recommendations stated:

(27) The Committee is concerned at the continued use of plastic baton rounds as a means of riot control in Northern Ireland as it causes injuries to children and may jeopardise their life.

(28) Following the recommendations of the Committee Against Torture (A/54/44, para. 77(d)), the Committee urges the State party to abolish the use of the plastic baton round as a means of riot control.

The UN Committee defines children as all those under 18 years of age. There is no doubt that children may be involved in rioting and consequently may pose a threat to police officers. Children can easily be swept up in the activities surrounding public disorder, mostly out of assisting or peer pressure. However, whilst under-18s can be involved in disorder, it is worrying that so many child victims in the past have been killed in non riot situations, and that the present use of the baton round is still producing child injuries.

As long as baton rounds are used in public order situations they will pose a risk to children. We concur with the UN Committee's recommendation that they should be abolished as a means of riot control. This reinforces the need for an urgent, time limited search for a safe alternative to baton rounds.

We recommend that the NIHRC promotes the recommendation of the UN Committee on the Rights of the Child that baton rounds be abolished as a means of riot control (Recommendation 7).

The new baton round is also producing complex and severe injuries such as shattered bones and severe nerve damage. A number of victims have suffered injuries where bleeding was profuse and long term which led to difficulty in treating wounds and injuries. It is vital to record these types of injuries - it confirms that the new baton round hits harder and causes more tissue and bone damage.

There is anecdotal evidence, both from usage of the old baton round and during usage of the new round that many people will not present themselves at hospital for treatment of baton round injuries. For example, "first aid houses" have in the past been set up to give an unofficial alternative to hospital emergency departments.⁵⁴ This cannot be totally explained away by regarding these people as rioters who want to avoid police action. The evidence⁵⁵ includes many cases where people hit by baton rounds, have expressed unwillingness to attend hospital casualty departments for fear of being reported to the police. Previously the HSS Executive has felt it

⁵⁴ Pat Finucane Centre, 1996 as above.

⁵⁵ Including witness statements provided by UCAPB.

necessary to remind staff not to release information on suspected plastic baton round injuries to the police.⁵⁶ This will obviously lead to many people's injuries not being logged, a lower than expected figure for the numbers of injuries, and consequently an elevated perception of the weapon's safety.

Information on injuries caused by actual usage of weapons is vital to understand the weapon's risk and safety. It may be that a weapon performs adequately, or well, in the perfect test environment, but when used on the streets, is impossible to use without causing excessive casualties. Data from actual use is also vital to verify any system of testing for less lethal weapons. It could, for example, highlight false assumptions made about aspects of the weapons performance or factors that have a significant effect on a weapon's performance.

Using official data on numbers of baton rounds fired and injuries caused by them it is possible to calculate a figure for the likelihood of the new baton round causing injury. The figures used for the old baton round were given in parliamentary answers,⁵⁷ the figures for the new baton round were those given in the Ombudsman's report.⁵⁸

Injury rate for old and new baton round

Type	Number fired	Injuries	% of rounds causing injury
Old baton round L5A7	26,459	398	1.14%
New baton round L21A1	29	3 ⁵⁹	10.3%

Statistics surrounding baton round usage are notoriously unreliable. An analysis of parliamentary answers on numbers fired and injuries caused reveals that answers are often partial or misleading. There is no definitive figure for the numbers of baton rounds fired - and this situation continues with the new baton round. The PSNI supplied figures for this report which were accompanied with the statement that "figures for 2002 may be subject to adjustment". It is surprising that the PSNI cannot supply accurate figures for the number fired by its officers - it must be remembered that this weapon is a potentially lethal firearm.

Timely and accurate information must be supplied by the authorities so that independent scrutiny can be applied to the police and army. This is not the case at present making it extremely difficult, if not impossible, to carry out an independent assessment of this weapon's alleged safety.

The Government has recently published a review of the new baton round after a year's usage. This was requested in the original medical evaluation report of the Defence Scientific Advisory Council. The statement was prepared by the MoD and presented to DSAC in June 2002. DSAC has now prepared a report on the MoD statement in which it states: "DSAC notes that from the available data there is no

⁵⁶ Letter from HSS Executive: "Confidentiality: Disclosure of Information to RUC", 6 October 1997.

⁵⁷ *Hansard* 9/1/2002 Col 879W, *Hansard* 13/3/2001 Col 507W, *Hansard* 24/1/2001 Col 647W.

⁵⁸ Police Ombudsman, May 2002, as above.

⁵⁹ The Ombudsman's report states that five injuries were reported, but only three are mentioned in the descriptions of incidents involving the L21A1.

definitive or even indicative evidence that there is a higher frequency of thoracic impacts from the L21A1; thoracic impacts will occur occasionally in operational use”.⁶⁰ It also states: “it remains the view of SC, DSAC that the L21A1/L104 weapon system is a safer system than its predecessors, when operated in accordance with agreed guidelines”.

The DSAC review raises many issues. No detail is given about the information that as used by the MoD to conduct the review, whether they considered all firings or only army firings. Did the information consist of the Ombudsman’s report on firings? This did not contain any detail about the injuries sustained by people hit by the baton rounds, nor any information on injuries caused by the 30% of baton rounds that missed their target. There is no system in place to collate information on injuries caused by baton rounds from hospitals or doctors in Northern Ireland - how can a medical evaluation be made without the appropriate information? A medical evaluation of a technology can only be accomplished when the information to do so is available, it is fatally undermined when only a fraction of the data is used. The review as published by the Government is deeply flawed and simply inadequate.

We recommend that the NIHRC presses the Government to publish the statement prepared by the MoD on which the DSAC report was based in order to evaluate its relevance and adequacy (Recommendation 8).

At present there is no system in place to adequately and transparently record the effects of weapons. It should not be left to human rights organisations to try and collate data. The Government needs to implement a system that collects relevant data - this could act as an early warning system to highlight problems, for example if the numbers of injured children is excessive, or if injuries to one particular area of the body are excessively dangerous.

We recommend that the Government sets up a national monitoring system to log injuries caused by baton rounds. This could consist of a website system which logs the incident, time, date, place, numbers fired and by whom. The information must be timely, accurate and public (Recommendation 9).

2.5 Accountability

A much greater level of accountability has been introduced into the police firing of baton rounds through the role of the Police Ombudsman. However there are shortcomings in the present system. The referral of incidents relating to the discharge of baton rounds by police officers to the Ombudsman by the Chief Constable is accomplished by the means of an agreed protocol, rather than being legally binding. We recommend that this should be rectified by an amendment to the Police (NI) Act 1998.

We recommend that the Police (NI) Act 1998 is amended to make it legally binding for the Chief Constable to report all baton round firings to the Police Ombudsman (Recommendation 10).

⁶⁰ Defence Scientific Advisory Council, *Statement on the review by MoD of medical issues arising from the use of the L21A1 Baton Round from June 2001-April 2002*, released 30 October 2002.

The Ombudsman investigates every discharge of a baton round and files a "Reg 20" report, on completion of the investigation, to the Secretary of State, the Chief Constable and the Northern Ireland Policing Board. Although the Ombudsman published a research report on baton rounds in May 2002 covering seven of the eight incidents referred by the Chief Constable,⁶¹ there appears to be no mechanism or plan to regularly publish summaries of these Regulation 20 reports. It was also unclear from the report how many incidents of baton round discharge had occurred in total. The report referred to eight, but then mentioned a further six incidents referred by the Chief Constable.

The provision of regular reports by the Ombudsman is especially important because the PSNI has already refused to provide the NIHRC with details of incidents where baton rounds have been fired, by claiming that this is a job for the Ombudsman.⁶² In turn the Ombudsman has refused as the information comes from the PSNI. At present the NIHRC is unable to gain access to regular, up to date information about the firing of baton rounds. This is unacceptable.

There is no reason at all why details of incidents cannot be provided publicly, on a web site, which would in no way compromise any subsequent investigation. Location, date, time and the number of baton rounds fired should be able to be provided on almost a daily basis as the PSNI should have in place a sufficiently robust recording system to provide these details. This applies equally to the army firings.

We recommend that the NIHRC be informed by the PSNI of every occasion of baton round discharge (Recommendation 11).

The eighth incident, not included in the Police Ombudsman's research report, was a major incident in Ardoyne in Belfast on the 12 July 2001 when 46 baton rounds were fired by the police. The Ombudsman referred in passing to this incident, and five others, in the research report: "investigators from the Police Ombudsman's Office are currently investigating a further six referrals from the Chief Constable dealing with the discharge of baton rounds and five complaints from members of the public in relation to the discharge of baton rounds during these latter incidents". This lack of clarity may have led some of the public to believe that the eighth incident was not being fully investigated. Whilst it is not appropriate to comment in detail on investigations still in progress it would have been useful if the Ombudsman had included the date and incident location for the outstanding investigations.

These concerns have been highlighted in a report by the Pat Finucane Centre.⁶³ They detail the concerns of affected communities that have undermined public confidence in the Ombudsman. Worryingly they conclude by stating: "we no longer have confidence in the ability or willingness of the office of the police ombudsman to investigate such complaints".

We recommend that the NIHRC works with NGOs, community organisations and statutory bodies, including the Police Ombudsman, to ensure that the accountability process is strengthened (Recommendation 12).

⁶¹ Police Ombudsman for Northern Ireland, May 2002, as above.

⁶² Letter from S. Hamill, Superintendent, PSNI to Chief Commissioner, NIHRC, 20 December 2001.

⁶³ Pat Finucane Centre, 2002 as above.

We recommend that the Police Ombudsman commits to publish regular reports on baton round use including details of all incidents whether still under investigation or not (Recommendation 13).

A further lack of accountability was raised by the Oversight Commissioner, who oversees the compliance by the policing structures in Northern Ireland to implement the Patten Report recommendations.⁶⁴ This relates to a lack of any internal post utilisation review by the PSNI of baton round use, due to PSNI's position that such a review is the authority/responsibility of the Ombudsman. The Oversight Commissioner points out that it is "good practice" for the police to establish such reviews in order to identify such areas as future training needs. The Oversight Commissioner reports that the PSNI is in the process of introducing a post utilisation review that will consist of four senior police officials who will review the findings contained in the Ombudsman's report on each incident, as well as forms prepared by the police service, for any matter of policy, discipline, human rights or training which requires to be actioned.⁶⁵ This system finally came into place in January 2003.

A further important point is raised by the Oversight Commissioner relating to the central repository to collate the records of deployment of baton rounds which is still not in place. It would aid the timely provision of statistics on baton round usage if this facility were in place. The Commissioner also mentions that video recordings of some incidents, but not all, are being made. It would be good policy for the PSNI to video all incidents, and store them centrally and accessibly.

The NIHRC has also raised serious concerns about record keeping relating to baton round usage.⁶⁶ Basic failures by PSNI officers in reporting and recording the use of baton rounds were discovered. There was evidence that reports were often standardised, filled out late and files were both poorly maintained and incomplete. The NIHRC is still not satisfied that its recommendations have been fully taken on board and that the recording of the use of the new baton round is sufficiently robust.

It is instructive to compare the experience of usage of the L21A1 round in Northern Ireland to that in the rest of the UK. Since its introduction in June 2001 the L21A1 round has been used at least four times, twice in Wales and twice in England. All these incidents were "one on one" - ie a single target, confronted by one officer (backed up by another with access to lethal force). Usage in these incidents is covered by the guidelines on the use of the baton gun as a less lethal option detailed in Appendix 2.

The first ever use in England and Wales occurred in North Wales on 27 February 2002. It was a serious incident of a knife wielding man at a doorway, who had threatened to kill his children. The baton round was fired at a distance of about 20 feet. It did not knock the man over and he was able to shut the door, although he collapsed inside the house. Following this incident an investigation was immediately commenced by the Police Complaints Authority (PCA). The outcomes of this

⁶⁴ Office of the Oversight Commissioner, Report 4, April 2002, p48.

⁶⁵ 'Public Order Policing' in *Overseeing the Proposed Revisions for the Policing Services of Northern Ireland*, Office of the Oversight Commissioner, 10 September 2002.

⁶⁶ NIHRC, May 2001, as above.

investigation led to four national recommendations:

1. Police Use of Firearms Working Group works with the Police Scientific Development Branch (PSDB) to review the effectiveness of the single shot baton.
2. Police Use of Firearms Working Group offer further advice on tactical options surrounding the baton gun, including dogs.
3. Police Scientific Development Branch (PSDB) urgently review the effectiveness of multi-shot weapons such as the Excalibur.
4. PSDB continually evaluate LLW options and pass recommendations to the Home Office.

According to North Wales Police, the PCA is interested in the development of a multi-shot weapon.⁶⁷

The Surrey incident on 7 April 2002 concerned a man armed with a samurai sword, who wielded it at officers. He then pulled out a handgun, bringing it up to an aiming stance. He was shot with a baton round, which impacted in the belt buckle area. He immediately dropped the weapons and collapsed to the ground, bent double.

These two incidents (and two further incidents in November 2002) of one-on-one use of the baton round, in situations where firearms would otherwise be used, are very different from their use in a crowd control situation. Despite England seeing some very serious rioting in Bradford and Oldham in 2001, baton rounds have still never been used in a public order situation. It is possible that public opinion in the rest of the UK is being tested first by the use in cases where less argument could be made against their use.

It is interesting to note how speedy and public the investigation of these incidents was and that the Welsh incident led immediately to national recommendations from the PCA.

2.5.1 The firing of baton rounds by the army

Perhaps the most serious accountability issue relates to the firing of baton rounds by the armed forces. This has constantly been raised by members of the public, the press and human rights organisations.

The armed forces are deployed in Northern Ireland to provide military aid to the civil power in support of the Police Service of Northern Ireland. The police have primacy. Thus it is the Chief Constable who requests their assistance in any given incident. However, if the armed forces fire baton rounds, they are not subject to the procedures of accountability through the Police Ombudsman. At present they are not subject to any routine public investigation (although the Independent Assessor of Military Complaints Procedures has published a report on army firings).⁶⁸ If members of the public have cause to lodge a complaint against a soldier they can do so either through

⁶⁷ Brereton, B and Nash, S, paper presented at Jane's LLW Conference, 2002.

⁶⁸ Independent Assessor of Military Complaints Procedures, 10 December 2002.

the police or the Ministry of Defence. Complaints made to the army are investigated internally unless there is reason to believe that a criminal offence may be involved or if there is injury to the person in which case the police will investigate.

The public can also lodge a complaint with the Independent Assessor of Military Complaints Procedures if they feel their complaint to the army has been handled unsatisfactorily. The Assessor investigates the procedures the armed forces use to handle complaints. In the last two years no individual has lodged a complaint, although some organisations have lodged complaints on behalf of an individual or a group of individuals - it seems that an individual has to complain personally for the Assessor to be able to investigate. This may be because the public is unaware of the Assessor's office and remit, or that they are wary of pursuing a complaint in person. However the level of accountability able to be imposed by the Assessor cannot be compared with that imposed by the Police Ombudsman - the role of the Assessor is inferior to that of the Ombudsman in terms of powers, authority and remit. The Assessor also lacks the personnel and financial resources to investigate the army firings to the same level of detail.

Whilst it is welcome that the Assessor has recently published a review of baton round usage by the military,⁶⁹ this is no substitute for bringing military accountability in line with police accountability.

The ambiguity surrounding army accountability should not be allowed to continue - it has created a widespread feeling within the public that the army is unaccountable and is being used as a proxy by the police in order to escape investigation by the Police Ombudsman, although the police have vehemently denied this. The Military Assessor, however, in his report on military use of baton rounds states: "on occasions it may be necessary to deploy Military Public Order Company(s) as the main response at a scene of disorder or potential disorder". In these circumstances the army firings are unaccountable and potentially an entire public order incident would receive no public investigation.

The Ombudsman has also recognised the problem of joint investigations: "in public order situations in which soldiers and police officers have fired baton rounds, the Chief Constable asks me to investigate the actions of the police but the army discharges are not routinely investigated under the same procedures".⁷⁰

The army should be as accountable in their actions as the police. As they act at the request of the PSNI they should be accountable to the Ombudsman, who should have the power to investigate all army firings to the same level of detail as those by the PSNI. It makes no sense to have two bodies investigating baton round firings - this leads to duplication of effort and a sense of mistrust in the community.

We recommend that the Police Ombudsman is statutorily empowered and given the requisite staff and financial resources to investigate ALL firings of baton rounds (Recommendation 14).

⁶⁹ As above.

⁷⁰ Police Ombudsman for Northern Ireland, *First Annual Report 2000-2002*, p11.

2.5.2 The forensic trail

Investigation of any baton round firing would be made much easier if there was a credible and robust forensic trail. The new baton round is different in one respect from normal firearms - it provides no forensic trail. The ammunition cannot be linked to a gun or firer because the projectile does not get scored and marked by the rifling grooves in the barrel of the weapon. This leads to confusion as to who has fired which baton round. This may not be a problem in a one-on-one incident of the types that have occurred in England and Wales. In a public order situation however, who fired which round is vital to the accountability process, especially if injuries are caused and subsequent legal claims made. There is no technical reason why a serial number, or even a bar code, could not be marked on the baton round and the ammunition casing. This could then be logged against the firer withdrawing the ammunition and used later to aid in the identification of the firer. It is not a foolproof system, it is open to abuse if firers swap ammunition for example, but would add to the level of accountability. It would also discriminate between the police and the army firing baton rounds.

To aid accountability we recommend that all baton rounds and cartridge cases are forensically marked with a unique identifier which cannot be removed (Recommendation 15).

2.6 Policing without the Baton Round

If serious public disorder is occurring on a regular basis across Northern Ireland (one of the justifications for the baton round) then we should expect that there should be a significant number of arrests of people involved. Statistics provided by the PSNI⁷¹ show the following numbers of people arrested for riotous behaviour:

2001	57
2002	34 (up to September 2002)

These figures contrast with the number of baton rounds fired at identified, violent rioters posing an immediate threat:

2001	over 100
2002	over 300 (up to September 2002)

and the generally reported level of public order incidents. It seems incredible that so few people have been arrested when so many batons rounds fired would suggest a very serious level of public disorder.

These figures should be contrasted with the rest of the UK where one single serious public disorder incident in Bradford around 7 July 2001 has so far led to 155 people charged with riotous behaviour and 111 convictions.⁷²

⁷¹ Dempster, K, Security Statistics, Police Service of Northern Ireland, 25 September 2002.

⁷² Information supplied by the press office of the West Yorkshire Police, September 2002.

It would appear that the PSNI is failing to carry out even the basic policing requirements of arrest, investigation and bringing violent rioters to court. This seems especially so when many incidents occur in the same location year after year. This point is re-iterated by the Independent Assessor of Military Complaints Procedures in his report on baton round usage: “the options in terms of dispersing the groups (of rioters) are often limited as each operates from within the areas where they live”.⁷³

We recommend that the Policing Board investigates why the numbers of people arrested in public order incidents are so low and makes appropriate recommendations aimed at redressing this situation and reducing reliance on baton rounds (Recommendation 16).

Baton rounds are justified by the PSNI because of the levels of life threatening violence. If, however, the PSNI is not taking every step possible to stop the repeated levels of violence from occurring, there could be an argument that they are using disproportionate force. The Patten Report recommended that the police video events for later evidential and accountability purposes. Some events have been videoed but there does not seem to be a strict policy in force to cover every event. This videoing needs to occur with strict regard to the civil liberties of the population. Concerns about the illegitimate use by the police of video images have resulted in CCTV cameras being dismantled by some communities.

In the Police Ombudsman’s report some mention is made of the police liaison with the community in efforts to defuse a public disorder situation. However this was not reported for every incident where baton rounds were used. The police should have excellent communications not only on the ground, between officers and commanders, but also with the community in order to defuse situations before they become riots.

We recommend that the NIHRC investigates how the police liaise with the community before, during and after public order incidents (Recommendation 17).

Another possibility to reduce the incidence of baton round usage was outlined in the Patten Report. Policing with the community was highlighted and some examples given.⁷⁴ The repeated use of baton rounds completely undermines community policing.

⁷³ Independent Assessor of Military Complaints Procedures, December 2002.

⁷⁴ Patten report, p42.

3. ASSESSMENT OF THE FRONT RUNNER ALTERNATIVES

The Steering Group charged with reporting on alternatives has already produced three comprehensive reports. The first report was an initial prioritisation and evaluation based on a literature search,⁷⁵ the second report covered an evaluative process to select the five front runners.⁷⁶ The third report detailing medical and safety testing was published in December 2002.⁷⁷

However the MoD, for reasons discussed in detail above, was already secretly working on its own new alternative to the existing baton round, an option which was not subject to independent review by the Steering Group, who merely rubber stamped the technical and medical findings. Yet senior politicians and the media promoted the new baton round as a safer less lethal alternative and a new part of the 'Patten friendly' stable of new alternatives.

It is difficult to imagine a situation in another sphere, say the pharmaceutical industry, where safety fears over one drug, for example Thalidomide, because of its tendency to cause foetal deformations, was substituted by a more powerful variant of the same drug with the same characteristics. The implications for litigation would make pharmaceutical companies very aware of the financial risks of such actions. The parallel is important since what we have is a key user setting its own guidelines and its own weapon and by-passing the democratic, albeit not entirely independent, structures set up to vet and evaluate future public order technology.

The Steering Group in its second report suggested that the alternative weapon programme might best be taken forward by dividing the potential weapons into three categories. Category A, the front runners (which includes devices such as kinetic energy rounds, long range chemical delivery devices, water cannon, electrical devices such as tasers, laser light devices and noise generating devices) which may be subject to immediate more in depth research; Category B, which covers devices warranting further research over a more extended time frame (such as malodorants and tranquillisers) and Category C which covers devices (such as stun grenades, smoke, acoustic devices, electromagnetic waves, nets and wire, glue, foam and grease) which the team judged do not require further research at present. It should be noted that there is no consistency of what is an acceptable or even safe option by different states. For example, the US is actively researching category B and C weapons. Other countries such as Korea and Japan in policing the 2001 World Cup competition rejected the taser and adopted capture nets.

Table 6 below examines each of the front runners in turn.

⁷⁵ Donnelly, T, *Less Lethal Technologies – Initial Prioritisation and Evaluation*, PSDB, first published in April 2001 and then in a glossy illustrated format in December 2001.

⁷⁶ Steering Group second report.

⁷⁷ Steering Group led by Northern Ireland Office, *Patten Report Recommendations 69 and 70 Relating to Public Order Equipment – A Research Programme into Alternative Policing Approaches Towards the Management of Conflict*, December 2002. Hereafter: Steering Group third report.

TABLE 6. Potential Health and Rights Impacts of Alternative “Less-Lethal” Weapons

Weapon Technology	Mechanism	Health Impacts	Legal & Human Rights Impact
<p>(i) Impact Devices – Kinetic Energy (KE) Rounds</p>	<p>Consist of a custom-built gun or adapted shotgun and ammunition consisting of a pyrotechnic charge firing single or multiple projectiles made from wood, rubber, plastic, metal.</p> <p>Impact of projectile on the human body is designed to cause an immobilising trauma. Designed to be non-penetrating.</p> <p>Performance of some of these rounds changes with the weather which impacts both on the level of explosive energy and the ballistic properties of the projectile(s).</p>	<p>Energy of most kinetic energy devices is in what US military scientists have called the severe damage region.(Having a KE In excess of 122 joules) This means their impact can cause death at close range or scalping, internal injury to brain, bones, kidney, heart, liver and spleen and maiming injuries including blindness. The proposed alternative kinetic devices will not be greater in energy than the current L21A1 round but with a muzzle KE of 257 joules, this is already more than twice the designated severe damage KE of 122 joules.</p> <p>Inaccuracy means many of these weapons are indiscriminate - ricochets are a major worry with some variants. Children are especially vulnerable.</p>	<p>Excessive and indiscriminate force.</p> <p>Correct safe usage relies on strict adherence to guidelines rather than any intrinsic qualities of the weapons itself.</p> <p>No forensic marking means any misuse can not be adequately tracked back to a specific abuser</p>
<p>(ii) Water Cannon - (a)Vehicle Mounted</p>	<p>Usually a large vehicle with jet gun and large storage of water. Most have capacity for adding foam, chemical irritant, or dyes to the water jet. Many variants in size, pressure and volume delivered. Pulsed jet variant delivers ‘slugs’ of water at high pressure which extends service time between fills, less water wastage and greater accuracy.</p> <p>Electrified versions are also marketed.</p>	<p>Disperses crowds at ranges of 30 metres by knocking them over or causing soaking and discomfort. Additional trauma can be caused if jets continue to be aimed at supine bodies especially the head.</p> <p>Main health problems are associated with both eye injury from high pressure water jet and tumbling injuries associated with the force of impact. Also danger of being knocked over by the vehicle. Pulsed variants are at higher pressure and carry more risk of causing injury.</p>	<p>Inaccuracy leads to indiscriminate targeting.</p> <p>The addition of marker dyes facilitates the identification of protestors later and for other less public punishments for anyone marked. UV variants enable this process of targeting to be undertaken by helicopter or at night.</p> <p>Electrified versions bring a new</p>

		Added chemical irritants introduce additional hazards associated with toxic chemicals being introduced into the eye, nose and mouth at high pressure.	dimension of abuse and punishment.
(ii)Water Cannon - (b)Portable Hand Held	From 0.25 litres to 5 litres or more, shot out from a handheld launcher attached to a backpack tank. Can also have chemical or dye added.	Enables a single person to be an effective water cannon but hazards are similar to vehicle variants covered above.	See above.
(iii) Electrical Devices (Particularly the Taser)	High voltage (50,000 Volts) stun gun that has ability to fire two darts attached by trailing wires up to 21 feet. The electronic pulses are designed to interfere with neuro-muscular co-ordination and the person collapses.	Inadequate testing means that effects on pregnant women, the elderly, those with heart conditions and children are under researched. Some evidence has emerged to suggest that certain forms of pacemakers maybe affected. Longer term health effects need to be examined particularly in regard to induction of motor neurone disease.	All the potential for human rights abuse associated with electroshock and stun batons. The Taser's design enables it to be used as a portable stun baton. Stun batons have been called the universal tool of the torturer and the UK government prohibits the export of such devices for this reason.
(iv)Distraction / Disorientation Devices including (a)Laser-Light Dazzlers	Dazzling lasers are based on small diode lasers intended to temporarily deny a subject of their vision as long as the person's eyes are targeted by the beam. Hand held device using the green part of the spectrum which is six times more powerful than red in day light and 3,000 times as bright at night.	Allegedly safe because they are within the safety limits set down for lasers by US authorities. However, it has been recently suggested the margin between eye safe and not eye safe is a close one. The frequencies used in some UV variants (which are designed to make the lens of the eye itself glow), have been linked with long term damage and cataracts.	Not been fielded yet but could fall within the scope of the existing international treaties prohibiting blinding lasers.
(b) Noise Generating Devices	Essentially a percussion grenade which can be used to create a very loud bang accompanied by a dazzling flash of light. Causes temporary disorientation. Can be fragmenting or non-fragmenting. Used either indoors as a surprise weapon prior to secondary action by special forces or outside as a crowd	There is a risk of permanent deafness. Pyrotechnic nature of devices can cause fires or shrapnel wounds.	Indiscriminate weapons by their nature and there is no way of selecting and separating legitimate targets from innocent bystanders. In these circumstances some countries treat such devices as a firearm.

	dispersal distraction weapon.		
<p>(v) Long Range Chemical Delivery Devices</p>	<p>Commonly called tear gases. A number of chemicals are commonly used CN, CS, CR, OC, and PAVA.</p> <p>Numerous launch mechanisms such as hand held aerosols, backpack sprayers, thrown or launched grenades, vehicle dispersed.</p> <p>Can generate a cloud of irritant, an aerosol, a smoke or fog, or be a micro powder. Often mixed with a carrier agent such as an alcohol or water.</p> <p>The chemical irritants cause intense eye and respiratory discomfort, temporary blindness, photo-phobia, coughing and in larger doses, violent retching.</p>	<p>Negative health impacts including dermatitis, positional asphyxia, high blood pressure, and lethality in enclosed spaces. CN and CS have been shown to cause skin blistering and damage to the cornea which can result in partial blindness. Helath problems also with any solvent used, eg UK uses MIBK which has a recognised health hazard to both public and officers alike. No testing of medical implications of CS and MIBK have yet been reported. Potentially dangerous synergistic effects when different chemical irritants are mixed eg. OC and CS. Mutagenic, carcinogenic and tetragenic issues remain a matter of high concern. Unusual cancers have been reported with alleged CR use in Northern Ireland.</p>	<p>Can be used to punish, eg Amnesty International called the use of pepper-gas against peaceful protestors in the US ‘tantamount to torture’.</p> <p>Can be used to flush targets out of buildings for more into harms way of more lethal technologies.</p> <p>With high doses in enclosed spaces these chemicals can kill.</p>

3.1 Impact Devices or Kinetic Energy Rounds

The conclusion of the Steering Group that accuracy is important regarding all kinetic energy rounds if officers are to avoid causing injury, fails to take account of the possibility that the infliction of damage could be a deliberate objective of certain officers. Increased accuracy would facilitate rather than obviate this. However the report is absolutely right to insist on independent testing rather than rely on the assertions of performance given in individual manufacturers' specifications. The report notes that the Penn State assessment highlighted the general inaccuracy of these rounds - inaccuracy equals indiscriminate and therefore inadvisable.

The criterion agreed by the Steering Group is that these devices be suitable for use between 1-20 metres and up to 50 metres if possible. This was the original criterion for the L21A1. The Steering Group does not state an objectively assessed kinetic energy above which, at any range, the weapon would create severe damage or death. It is hard to understand how a committee assessing the suitability of impact weapons can do so without clear definitions of the extent to which kinetic impact devices affect human flesh and bone at preset distances or how they react after hitting a target from ricochets.

On the basis of Police Scientific Development Branch (PSDB) testing bean bags, these and multi-projectile rounds were ruled out. A range of other projectiles went forward for further testing. However, only one round, a 12 gauge sock round, was taken forward for medical evaluation, which highlighted some serious problems. Testing should be finalised in early spring 2003. Because of the lack of commercially available products, additional research has been initiated into an attenuating energy projectile (AEP) designed to have less injury potential than the L21A1. This is at an early stage but several possible designs have emerged. The aim is to fire this projectile from the current weapon.

Accuracy (ie a potentially discriminate weapon) has been favoured by the Steering Group as a criterion over and above the level of energy delivered to the target. The report does discuss testing of the L21A1 in terms of its enhanced accuracy but fails to use previous data compiled by medical practitioners who have noticed the frequency of head shots. This may not be accidental and therefore claims that the new bullet will reduce head and thorax injuries does not fit the evidence of how such weapons are often used in practice. The context of accountability or lack of it is crucially important in weapon firing and this factor seems to have been lost in such assessments which involve technology-human interaction as one system.

It is highly unlikely that any kinetic impact projectiles that are currently commercially available would be any more suitable to public order situations than the new baton round. As a class of weaponry, kinetic impact devices suffer from serious drawbacks.

3.2 Long Range Chemical Delivery Devices

Disabling or incapacitating chemicals for policing purposes are normally restricted to three or four chemicals, which have generally been described as tear gases. The most common agents are CS, CN, OC, PAVA and CR. The weapon consists of the chemical, a carrier agent, a propellant and a delivery mechanism. They usually

consist of a mechanism to create a particulate aerosol via either pyrotechnic burning or using a spray device which holds the chemical in a suitable solvent. Many different types of chemical irritant device are available on the market, ranging from small keyring aerosol devices, to backpack sprayers able to dispense a couple of litres of spray or produce clouds of incapacitating gas. Any application of a chemical, especially one specifically designed to cause discomfort or pain, can have serious health consequences or cause death.

The Steering Group once again emphasized accuracy rather than technical and toxicological concerns about the amount of chemical irritant being dumped on a particular target and the nature of that chemical, its carrier, concentration and decontamination. Porton Down researchers have long warned of the longer term toxicological hazards of such chemicals. Police Scientific Development Branch (PSDB) testing is mentioned but without reference to the standard Himmsworth Committee recommendations (coming out of the use of tear gas to excess in Northern Ireland) which successive governments have informed us is the bedrock behind the scientific approach used to assess such devices. Himmsworth recommended that chemicals used for riot control should be treated as if they were drugs, with all the relevant research being published in open scientific journals prior to any authorisation. Brian Rappert, a sociologist at Nottingham University, has made an extensive critique of the adequacy of such testing in regard to CS. Authorisation for the use of CR, CS and PAVA has breached these guidelines in that such research advocated by Himmsworth was not completed before authorisation was given. If a drug company followed such a reckless approach it would be seen as legally culpable.

There is also evidence that scientists at PSDB were unfamiliar with some of the most basic tenets of work accomplished in the US. For example, they denied an adequate decontaminant existed for these chemicals when devices such as "Bioshield" in the US have been available for years and are a standard part of police decontamination procedures. Officers are particularly at risk (with chemical systems) given that they will endure multiple exposures. There are some questions too about the competency of the staff who co-ordinated the research. The background of the person in charge of the earlier evaluations was metallurgy and it is a moot point whether someone whose expertise was actually in chemical toxicology would have come to the same conclusions.

The paradigm of how CS sprays came to be adopted in the UK is instructive since quite basic errors of evaluation were made. The question must now be that if such sloppy practices were adopted for future development of chemical paralysis, pain and sleep inducing chemicals, would they protect us and the officers from longer term harm? The research presented here to date is not convincing and a pattern emerges of authorisation before full publication of relevant scientific studies. Former prisoners are particularly sensitive to such issues since it is widely believed that the use of CR in the Maze prison in October 1974 has led to unusual forms of cancer.⁷⁸ The Northern Ireland Office continues to deny that any new chemical was used despite eye witness accounts from both loyalist and republican prisoners and the fact that blood tests were taken from everyone afterwards.

The current research programme seeks to develop a discriminating irritant projectile

⁷⁸ Neeson, A., 'Gassing the Truth', *Andersonstown News*, 14 October 2000.

(DIP) that would deliver an incapacitating cloud of irritant to an individual at some distance. From the third steering group report it would appear that the current design envisaged will require a new type of launcher, not as had previously been reported, a CS tipped or filled version of the L21A1.

We recommend that no chemical irritant device is deployed by the PSNI until it has undergone a testing regime that is as rigorous (and treats the irritant) as if it were a drug. This would rule out all the current chemical irritant options - especially the current CS spray used in the rest of the UK (Recommendation 18).

3.3 Water Cannon, both Vehicle Mounted and Portable Systems

Water Cannon consist of a vehicle, with water tanks and possibly dye and chemical irritant tanks. These feed into a pump system, usually roof mounted on the cab and controlled from inside the armoured cab. As the Patten Implementation Team notes, their operational utility is rather limited to certain set piece confrontations. However, a wide variety of vehicle types exist, and an Israeli version has been developed which fires “bullets” of water, very small quantities of water at high pressure. A variety of configurations exist with some recently developed options enabling ultra-cold slugs of water to be fired, or for the jets to be electrified. Portable versions have come on the market in the last few years but as yet little empirical data is in the public domain. Any comprehensive evaluation should cover the integration of chemicals into water stream and the extent to which the biomedical data and research on both irritant and carrier agent is adequate. There are very few medical reports in the literature dealing specifically with water cannon vehicles. However, at high pressure, water can be dangerous, especially to the eyes. The water stream has sufficient force to knock a person over and “bowl” them along the ground, potentially causing injuries; it may also pick up debris from the ground and force it at high speed into the body.

The DSAC Sub-Committee on the Medical Implications of Less Lethal Weapons (DOMILL) produced an interim report on water cannon over the summer of 2002.⁷⁹ Although DOMILL reported an absence of reported deaths from water cannon in the literature, the committee expressed its frustration at the short timescale it was given to accomplish the job. “In view of the short time scales necessary to inform the procurement process, the Steering Group was advised by DOMILL that the statement could only be considered expedient.” (A Steering Group meeting in December 2001 requested the interim report by February 2002 subsequently extended to March 2002).⁸⁰ According to the DOMILL authors: “The interim statement was required to facilitate the consideration of future water cannon use and in particular, the proposal for purchase of water cannon by the Police Service of Northern Ireland”. Domill made some sound suggestions regarding scientific testing of the water jets especially in regard to specific injuries such as ocular trauma (eye damage).

However the decision to buy six water cannon vehicles was made before the work on

⁷⁹ DOMILL, *Medical Implications of Less-lethal Weapons - interim statement on the medical implications of the use of vehicle mounted water canon in public border role*, March 2002.

⁸⁰ As above.

assessment was complete.⁸¹ This type of decision completely undermines the selection and testing process. Either the testing regime is comprehensive and transparent, or it becomes a meaningless PR exercise.

We recommend that no technology is selected before full independent evaluation of its possible biomedical effects is published (Recommendation 19).

3.4 Electrical Devices, particularly the Taser

The taser is a hand held stun gun about the size of a torch which also has the facility to fire two fish hook type barbs approximately 21 feet which pulse 50,000 volts into the target. The taser is designed to deliver electric pulses which interfere with the muscle-skeletal systems, causing a painful paralysing spasm which causes the victim to collapse. It is possible to inflict multiple 5 second shocks with the taser. There is a strong lobby supporting these weapons as the holy grail of less lethal weapons in the US. The UK Government policy is still to ban the export of stun weapons, including tasers, because of the evidence that such weapons have been used to commit torture and other human rights violations. The Steering Group supports their introduction.

Several issues emerge. The weapon that is being tested, the M26 taser, is a stun gun first and foremost, that can also fire darts. Amnesty International has catalogued numerous cases worldwide of stun gun abuse to inflict gratuitous pain or torture. Importantly the assertion that the weapon is safe is not based on adequate scientific research. Key documents finding that certain groups of people are vulnerable have not been given sufficient weight.⁸² If the authorities are convinced it is safe - let the manufacturers underwrite any legal liability arising from deaths or injuries resulting from its use according to the manufacturer's instructions.

It is instructive that the Police Federation has rejected the line that tasers can prevent the use of firearms against them since there is a time delay and the devices don't always work effectively on some people. There are also questions about the accuracy of the weapon at a distance - the feature that is claimed to be the reason for introducing it. If the police truly wanted a 'stand off' weapon they should disable the taser's ability to be a stun gun.

The new higher power 26 Watt tasers are alleged to be more effective, but despite their repeated firings against largely healthy police officers in the US and Canada, their operational safety should be viewed as experimental. Proper medical research has not been carried out. The second Steering Group report is inconsistent because we are not treated to similar technical biomedical impact discussions in the case of chemical and kinetic weapons.

The third Steering Group report also reveals that the taser is capable of igniting flammable materials, especially when vapours exist (for example at a petrol station). It reveals that the taser would ignite the solvent used in the police personal CS incapacitant sprays, common throughout the rest of the UK police services. This is not an unlikely scenario - new police weapons are most often used together with other

⁸¹ See Written Answer No 5 from Jane Kennedy, *Hansard*, 18 July 2002.

⁸² Rappert, B, *Non-Lethal Weapons as Legitimizing Forces?* Frank Cass, London, 2003.

existing weapons, not to replace existing weapons. Thus when the CS incapacitant doesn't work or isn't quick enough the officer would reach for his or her taser - possibly igniting the target. The third report merely states that tasers should not be used on a subject doused with the CS spray "if it is possible to avoid doing so".⁸³ Some UK police forces are investigating synthetic pepper spray (PAVA) or are already introducing it, in order to overcome this problem with the taser. However there are no safety or medical evaluations in existence for the use of chemical incapacitants used together with electricity.

We recommend that the PSNI is not equipped with any type of electroshock weaponry (Recommendation 20).

3.5 Distraction / Disorientation Devices, particularly laser/light devices and noise generating devices.

These technologies have not been put forward yet for medical evaluation. The third report mentions optical and acoustic technologies and states that if lasers can be made eye-safe and achieve deterrence they should be considered further. The report looks at optical and acoustic technologies and the health and safety perspective adopted is admirable.

Laser Dazzlers are now on the market which, working in the more effective green end of the spectrum, remove the targets' vision as long as the beam is shone on them. The manufacturers claim they are eye and retina safe, operating at a fraction of the level of radiation which is known to cause harm.

Almost no medical studies have been done on distraction/disorientation devices but a recent article claims that they may cause serious injuries to the eyes.⁸⁴

The third report rightly raises serious concerns that malodorants and tranquillisers have the potential to breach the Chemical Weapons Convention. The Steering Group appear to be unaware that these are now commercially available – cadaver stench systems were being promoted at the Millipol Police and Internal Security Exhibition in Paris in November 2001. However, the health and safety issues highlighted in the report ieeg toxicity and impact of the agent chosen on people with respiratory illnesses are well made. Despite these concerns the Steering Group does not rule them out.

3.6 Further Less Lethal Weapons

Many alternative, or 'second generation', less than lethal technologies are emerging from the US. These include malodorants and tranquillisers. It is vital that a procedure is developed for determining what weapons allow police to use discriminate, reasonable and lawful force within UK civil laws and international human rights legislation.

Again we emphasise that technological options are not a fix for the problems in NI - or

⁸³ Steering Group third report, p79.

⁸⁴ Hambling, D, 'A gleam in the eye', *Science Guardian*, 31 October 2002.

anywhere else in the UK. More weapons for the police bring about the potential for more human rights abuses. This can be illustrated by the introduction of CS gas aerosols in England where guidelines stated that they were not to be used unless life was in danger - almost the first use broke these guidelines, but instead of penalising the officer the government changed the guidelines. The danger is that new weapons can be used more often and together in combination.

The danger with these second generation weapons is that they are being researched and promoted for military purposes within the US non-lethal warfare doctrine, where civilian deaths might be minimised by such weapons but are not ruled out.

We recommend that the NIHRC works with other human rights and community organisations to develop knowledge and intervention techniques in order to influence the selection process for policing technologies and weaponry (Recommendation 21).

4. CONCLUSIONS

The whole area of baton round research is characterised by an extreme difficulty in obtaining accurate and consistent information from the authorities - whether RUC/PSNI, the army and especially the Government.

Obtaining timely and accurate information is vital if the public and independent authorities are to be able to assess police and government claims. The Steering Group looking at alternatives to the baton round seems especially pleased with itself for publishing a number of reports - this is the least that a publicly funded body should do. There is still a culture of obsessive secrecy that permeates government.

The ridiculousness of this approach is perhaps best highlighted by a statement in a report from the Police Scientific Development Branch, forming part of the Steering Group's second report. After listing in depth the academic and police institutions it has contacted to help with its research, the report then goes on to say: "The assistance of manufacturers and suppliers has also been invaluable, but for commercial confidentiality reasons, a list cannot be included", this despite the fact that products from these manufacturers are pictured in colour on the front cover, and in the body of the report, with company names visible in some cases.⁸⁵ This approach could be compared to the position in the USA, where a report published by the Los Angeles Sheriffs Department on testing of impact munitions includes the names and contact details of companies whose products were evaluated.⁸⁶

This obsession with secrecy is also illustrated by the refusal of ministers to release the unit cost of the new baton round. Jane Kennedy MP in an answer to Kevin McNamara MP on 9 January 2002 said: "costs in relation to purchase of baton rounds...are not readily available and could be provided only at disproportionate cost". Adam Ingram MP in an answer to Kevin McNamara MP on 28 January 2002 said: "I am withholding information on costs on the grounds of commercial confidentiality in accordance with Exemption 13 of the code of practice on access to government information".

This contrasts with the Metropolitan police who had no difficulty including the cost on their press release announcing they were introducing the weapon: "Notes to editors 6. Each baton gun costs £1,082, and a box of 100 rounds of ammunition costs £450".⁸⁷ Within the less lethal industry there is no real commercial confidentiality - companies know who is supplying whom and who is supplying what - in many cases their PR departments are happy to supply copy to industry journals and publications with the details of the deals - the people who do not get to know these details are the general public and their elected representatives.

⁸⁵ Tara Donnelly, *Less Lethal Technologies – Initial Prioritisation and Evaluation*, Police Scientific Development Branch, Publication No 12/01.

⁸⁶ Kenny, Dr J.M. Capt., Heal, Capt, S. and Grossman, Capt. M, *The Attribute Based Evaluation of Less Than Lethal, Extended Range, Impact Munitions*, Applied Research Laboratory, Pennsylvania State University and the Los Angeles Sheriff's Department, 15 February 2001.

⁸⁷ "MPA approves less lethal weapons for Met", Metropolitan Police Authority press release, 19 July 2002.

4.1 Patten Recommendations on Alternatives to the Baton Round

Members of the Patten team consulted with some of the communities in Northern Ireland on policing and found that the most controversial aspect of policing was the weaponry used by the police, particularly plastic baton rounds. Patten recommended that baton rounds be replaced with a more acceptable, effective and less potentially lethal alternative. The L21A1 is not that alternative.

The British Army began experimenting with a new baton round from 1997 when it was forced to withdraw thousands of old rounds because of technical problems. The MoD was already developing the L21A1 before Patten reported and its technical characteristics, as shown in the report, are certainly no less hazardous than the previous baton round.

The Omega Foundation's research found that the replacement baton round failed all the criteria recommended by Patten and that no account has been made of the damage that such a cynical exercise will have on the communities that he worked with. Our analysis found failings to understand the technical inadequacies of the new round, its biomedical impacts and a lack of adequate procedures to allow accountability of all security forces. This failure of procedure gives the community very little confidence that the proposed alternatives to the baton round will be any better researched, or that their views on alternative policing methods will be listened to.

4.2 Technical Inadequacies of the New Round

From an analysis of the use of the weapon one in three rounds fired missed its target. This is crucial since the new round will ricochet if it misses the target and yet still have sufficient kinetic energy to cause life threatening injuries. However, the authorities' response to this technical failing has been to suppress the data on ricochets. The studies undertaken on ricochets should be made public.

Despite claims to the contrary, the baton round system is not sufficiently accurate to be used in public disorder incidents. Its higher velocity than the previous round means that innocent bystanders could be affected by indiscriminate and disproportionate levels of force.

4.3 Biomedical Effects

The injuries caused by the new round can be severe. We found that 10.3% of new L21A1 rounds caused injury as compared to 1.14% of the old L5A7 rounds.

We also found that the new round is 2.5 times more likely to penetrate the skin than the one it replaced.

The number of children injured is very high - further investigation on why this is should urgently be undertaken. If we are to believe that this weapon is accurate, targeted and used within the guidelines this is a puzzle.

4.4 Guidelines and Accountability

There are major accountability issues surrounding the army use of baton rounds. The army is acting under the arrangement governing military aid to the civil power when it fires baton rounds. It is a nonsense in this context for the army not to subject to the same level of accountability and scrutiny than the PSNI.

We also recommend that trials begin of computerised forensic round identification systems to establish if certain manufacturers' claims that they can parent the fired rounds to a specific weapon are viable.

The public would have more confidence in the utility of army and police guidelines if the process of prosecuting those who abuse the guidelines was a matter of record. To date there have been no such prosecutions despite convincing evidence that the previous baton round was fired in breach of the guidelines.

4.5 Proposed Alternatives

Any logical process of evaluating alternative weapons would suggest that full technical and biomedical evaluation takes place prior to purchase. Whilst useful steps have been made towards this goal, the PSNI continues to purchase weapons in advance of adequate testing, for example water cannon.

Key technical data to establish the alleged safety of any proffered option should be in the public domain. This approach has not had any negative impact where it has been adopted by other states, such as the US. The current UK official obsession with secrecy, for example in the authorities' reluctance to publish any data on ricochets, does not inspire confidence in their willingness to be open.

We recommend that the testing of any future weapons should be undertaken by truly independent bodies and that the results of such testing should be subject to both constructive criticism from other police forces, from commercial bodies who may have a more technically informed view and from fully independent human rights organisations, academics and community groups affected.

Public confidence would be enhanced if weapons manufacturers were held to be legally responsible for any inadequacies of their products when used within the guidelines.

4.6 Social Impact Assessments

The number of baton rounds fired has increased dramatically from 2000 to 2002. Commentators have unfavourably compared the policing of last summer's Bradford riots with the tactics used in Northern Ireland. All the communities in Northern Ireland including the army and the police would prefer a non weapon based approach to conflict management. It is recommended that new approaches be adopted which look at the wider social impact of any proposed solution to conflict management including those that use social skills rather than weapon technologies.

Where weapons technologies are seen as an inevitable part of policing, the procedures for the introduction of any proposed “new” weapons should actually follow evaluation before introduction not vice versa and include a formal process of “social impact assessment”.

We recommend that the NIHRC works with human rights NGOs to set up a police monitoring system and a team of independent observers to investigate the use of baton rounds at public order incidents, and police tactics more widely. This should include international human rights NGOs and observers (Recommendation 22).

5. RECOMMENDATIONS

1. We recommend that the NIHRC takes a lead in using international human rights laws and standards to monitor the use of police technologies in Northern Ireland. (Section 1)
2. We recommend that the NIHRC seeks official clarification from the Government that its policy is to withdraw the baton round from Northern Ireland once an acceptable, effective and less potentially lethal alternative is found. (Section 2)
3. We recommend that Government commits to a binding timescale for the completion of the search for an alternative and withdrawal of the baton round in Northern Ireland. (Section 2)
4. We recommend that the NIHRC urgently presses the Government to publish full details of all ricochet testing, including the testing mentioned in the DSAC statement and all subsequent testing. (Section 2.2.2)
5. We recommend that the army operates strictly in accordance with the PSNI/ACPO guidelines when carrying out public order policing duties in Northern Ireland. (Section 2.3)
6. Recognising that children are uniquely vulnerable to the new baton round we recommend that the guidelines to firers include specific warning about the potentially fatal impact to children. (Section 2.3)
7. We recommend that the NIHRC promotes the recommendation of the UN Committee on the Rights of the Child that baton rounds be abolished as a means of riot control. (Section 2.4.1)
8. We recommend that the NIHRC presses the Government to publish the statement prepared by the MoD on which the DSAC report (on the use of the baton round after a year) was based, in order to evaluate its relevance and accuracy. (Section 2.4.1)
9. We recommend that the Government sets up a national monitoring system to log injuries caused by baton rounds. This could consist of a website system which logs the incident, time, date, place, numbers fired and by whom. The information must be timely, accurate and public. (Section 2.4.1)
10. We recommend that the Police (NI) Act 1998 is amended to make it legally binding for the Chief Constable to report all baton round firings to the Police Ombudsman. (Section 2.5)
11. We recommend that the NIHRC is informed by the PSNI of every occasion of baton round discharge. (Section 2.5)
12. We recommend that the NIHRC works with NGOs, community organisations and statutory bodies, including the Police Ombudsman, to ensure that the accountability process is strengthened. (Section 2.5)

13. We recommend that the Police Ombudsman commits to publish regular reports on baton round use including details of all incidents whether still under investigation or not. (Section 2.5)
14. We recommend that the Police Ombudsman is statutorily empowered and given the requisite staff and financial resources to investigate ALL firings of baton rounds. (Section 2.5.1)
15. To aid accountability we recommend that all baton rounds and cartridge cases are forensically marked with a unique identifier which cannot be removed. (Section 2.5.2)
16. We recommend that the Policing Board investigates why the numbers of people arrested in public order incidents are so low and makes appropriate recommendations aimed at redressing this situation and reducing reliance on baton rounds. (Section 2.6)
17. We recommend that the NIHRC investigates how the police liaise with the community before, during and after public order incidents. (Section 2.6)
18. We recommend that no chemical irritant device is deployed by the PSNI until it has undergone a testing regime that is as rigorous (and treats the irritant) as if it were a drug. This would rule out all the current chemical irritant options – especially the current CS spray used in the rest of the UK. (Section 3.2)
19. We recommend that no technology is selected before full independent evaluation of its possible biomedical effects is published. (Section 3.3)
20. We recommend that PSNI is not equipped with any type of electroshock weaponry. (Section 3.4)
21. We recommend that the NIHRC works with other human rights and community organisations to develop knowledge and intervention techniques in order to influence the selection process for policing technologies and weaponry. (Section 3.6)
22. We recommend that the NIHRC works with human rights NGOs to set up a police monitoring system and a team of independent observers to investigate the use of baton rounds at public order incidents, and police tactics more widely. This should include international human rights NGOs and observers. (Section 4)

Appendix 1

ASSOCIATION OF CHIEF POLICE OFFICERS (ACPO)

GUIDELINES ON THE USE OF BATON ROUNDS AND FIREARMS IN SITUATIONS OF SERIOUS PUBLIC DISORDER

INTRODUCTION

1. Responsibility for setting the policy as to weapons and equipment which may be used in any force area rests with the chief officer of police. Where this equipment includes baton rounds and/or CS munitions for use in public order situations, the chief officer may delegate authority for the deployment of this equipment to an officer of Assistant Chief Constable/Commander rank. Such delegated authority may be for a specified time period, or within a specific geographical location or for a particular operation.
2. Public disorder includes a wide spectrum of unlawful activity which at the upper level may include serious rioting. In these situations conventional public order policing responses may have been tried and failed; and taking account of the level of violence and risk to officers, be considered no longer appropriate. Where on the basis of risk assessment of existing intelligence it is believed that serious rioting would involve a risk of loss of life, serious injury or significant damage to property, an officer of Assistant Chief Constable/Commander rank may, with the prior agreement of the chief officer or police, deploy officers who are trained in the use of baton rounds and/or suitable CS munitions as a less than lethal contingency in dealing with serious disorder. In addition where there is reason to believe that lethal weapons may be used it will be appropriate to consider the deployment of specially trained officers armed with convention firearms. These instructions should be read in conjunction with the Police Health and Safety Manual, Volume Three Appendix A.
3. The use of baton rounds can cause serious injuries. Use of baton rounds in Northern Ireland between 1974 and 1989 regrettably resulted in a number of deaths. The weapon system and baton rounds currently in use are of a significantly different design. However, as with all applications of force, there remains a potential for unintended serious and even fatal injury. The design and use of baton rounds is therefore subject to strict criteria. They may only be used as part of the common weapon system approved for use by members of the police service of HM forces in the United Kingdom. These revised guidelines take account of the continuing developments in the weapon system, baton round design criteria, command, control and training, all of which is designed to reduce the potential for serious and life threatening injuries. Nothing in these guidelines should be construed so as to constrain the police serious in its fundamental responsibility to save life, protect property and maintain the peace. Police officers shall at all times fulfil the duty imposed on them by law, by serving the community and by protecting all persons against illegal acts, consistent with the high degree of responsibility required by their profession. In discharging their duties police officers will be cognisant of the provisions of the UN Code of Conduct for Law Enforcement Officers and of their obligations to uphold human rights.
4. This document provides guidelines in responding to these levels of threat and on the use of baton rounds.
5. The deployment of specialist firearms teams in situations of public disorder must be closely co-ordinated and gives rise to specific command and control issues. For this reason specialist firearms resources should not be deployed without the express authority of an officer of at least Assistant Chief Constable rank.
6. Baton rounds are designed to prove a less than lethal option in dealing with threats of serious violence and provide an effective means by which rioters armed with petrol bombs or other weapons can be kept at a distance, contained or dispersed. They also provide a means of keeping at a safe distance those posing a serious threat to life which would otherwise require the intervention of officers at close quarters, and thus potentially placing them at great risk.
7. Baton rounds should only be used:

- i. Where other methods of policing to restore or sustain public order have been tried and failed, or must from the nature of the circumstances be unlikely to succeed if tried
- And
- ii. Where their use is judged to be necessary to reduce a serious risk of:
 - a) Loss of life or serious injury; or
 - b) Substantial and serious damage to property where there is or is judged to be a sufficiently serious risk of loss of life or serious injury to justify their use.

In assessing the risk of loss of life or serious injury occurring, account should be taken of the risks to police officers and members of the emergency services as well as to members of the public and others.

Use of Force: Legal Provisions

- 8. Nothing in these guidelines affects the legal principles pertaining to the use of reasonable force as provided for under:

The common law duty to preserve the peace
 The common law rules of self-defence
 The Police and Criminal Evidence Act 1984 sec 117
 And
 The Criminal Law Act 1967 sec 3 which states:

“A person may use such force as is reasonable in the circumstances in the prevention of crime, or in effecting or assisting in the lawful arrest of offenders or suspected offenders or of persons unlawfully at large”.

- 9. The reasonableness of individual action will be subject to the combined tests of necessity and proportionality; in that, the objective cannot be achieved by a lesser degree of force and threat the injury or harm to be prevented is greater than the harm which is likely to be caused by the firing of a baton round.

Conditions of Use

- 10. Only baton rounds and baton guns of a type authorised by the Home Office may be used. Details of the approved equipment is included in the ACPO police user manual.
- 11. Baton guns are not to be loaded unless their use is imminent.
- 12. Baton gun commanders, in charge of tactical formations which contain baton gunners, will be responsible for giving directions to baton gunners including instructions to load and unload, authority to fire and directions to cease firing.

Warnings

- 13. Unless circumstances do not permit, baton rounds are to be fired only after an oral warning, for example by means of a loud hailer or PA system, has been given to the crowd to disperse. The warning should make clear that, unless the rioting stops or the crowd disperses, baton rounds will be used without further warning. A record is to be kept of the words used in giving the warning. The following words should be used whenever possible:-

“Attention, attention, this is a police message. Unless you stop rioting immediately, baton rounds will (again) be fired. No further warnings will be given”.
- 14. Baton rounds should be fired at selected individuals and not indiscriminately at the crowd. Baton rounds should be aimed to strike directly (ie without bouncing) the lower part of the target’s body ie below the rib cage.
- 15. Unless there is a serious and immediate risk to life which cannot otherwise be countered use at under 20 metres or aiming the weapon to strike a higher part of the body is prohibited. In these circumstances the

risk of serious and even fatal injuries is significantly increased and the firer must be able to justify the increased use of force.

16. Steps are to be taken to ensure that medical attention is provided at the earliest opportunity for any casualties.
17. When possible, baton rounds should be recovered.
18. Baton gunners may be deployed on foot or in specially adapted protected vehicles from which baton rounds may be fired. Baton rounds should not be fired from moving vehicles. Tactical formations will differ dependant on the local circumstances and resources of a particular force.

Reports

19. Baton gunners must complete reports pertaining to the reason for firing baton rounds and information about the outcome and number of rounds fired. The record should also list any known injuries that may have occurred as a result of using baton rounds.
20. In England and Wales the chief officer should supply to the Home Secretary a written report on the circumstances surrounding the firing of baton rounds as soon as possible after the incident.

PRE PLANNED OPERATIONS

21. In situations where serious public disorder is anticipated an officer of Assistant Chief Constable/Commander rank may, with the prior agreement of the chief officer of police, give authority for the deployment of officers trained and equipped with baton guns.

Command and Control

22. Police and command decisions in respect of the issue, deployment and use of baton rounds should be subject to continuous critical review during the lifetime of any incident. The officer in overall command of the incident (the Gold Commander) should ensure formal review and documentation of the requirement for baton guns as the disorder enters each new phase.

Authority for use

23. Before a decision to use baton rounds is put into effect, a designated senior officer, will by virtue of an on the ground assessment, confirm that the situation is sufficiently serious to justify the use of baton rounds, and that the criteria for use continues to be met. Except where urgent action is necessary, in circumstances where there is an immediate risk to life, baton rounds will only be used following authorisation by the Silver Commander.
24. Designated senior officers (DSO's) will be drawn from the Superintending and Inspecting ranks and will be fully trained for the role by virtue of a course approved nationally by the Association of Chief Police Officers. DSO's will have a detailed understanding of public order tactics and the ACPO guidelines governing the use of baton guns. The designated senior officer, will ensure that effective processes are in place for direction and control of baton gun commanders and baton gunners who have been specifically trained in the use of the equipment and know its characteristics.
25. Strict criteria applicable to the selection and training of baton guns commanders and baton gunners will ensure proficiency with the weaponry, through understanding of the conditions relating to its use, the injury potential and characteristics of baton rounds.

Records

26. All command decisions in respect of the issue, deployment and authority to use baton rounds should be fully recorded and documented. The DSO will be responsible for documenting the assessment of the situation and rationale pertaining to the decision to recommend the use of baton rounds. In addition baton gun commanders will ensure that a record is maintained of the firing of baton guns and that baton gunners complete reports pertaining to the firing of baton rounds.

SPONTANEOUS DISORDER

27. Chief Constables must have contingency plans for the availability and deployment of baton rounds in emergency situations. These should provide for the availability and deployment of baton gun resources and establishment of appropriate command structures to enable an effective response to serious spontaneous disorder. As in pre-planned operations an officer of Assistant Chief Constable/Commander rank may, with the prior agreement of the chief officer of police, give authority for the deployment of officers trained and equipped with baton guns. The officer authorising deployment will ensure formal review and documentation of the requirement for baton guns as the disorder enters each new phase.
28. The contingency plans should provide for the introduction of formalised command and control structures with the minimum of delay however, nothing in these guidelines should be construed so as to prevent an immediate and effective police response or the firing of baton rounds where their use is necessary. Baton rounds may only be used if the strict criteria set out at paragraph 19.7 is met.
29. The requirement to deploy officers with baton rounds should be formally reviewed by an officer of at least Assistant Chief Constable rank on a regular basis.

ACPO GUIDELINES

(Reproduced from original / section on training and associated appendices deleted)

GUIDELINES ON THE USE OF THE BATON GUN AS A LESS LETHAL OPTION

Conditions of Use

These guidelines apply to the use of the L21A1 Baton Round in policing operations. The L21A1 Baton Round may only be used in conjunction with the L104A1 Anti-riot gun using the L18A1 optical sight, hereafter referred to as the 'Baton Gun'.

The Baton Gun should be zeroed in accordance with current guidelines (see Appendix A).

The Baton Gun must only be issued to and used by officers who are fully trained in its use, currently authorised and have an understanding of firearms tactics. It is recommended that Forces employ Authorised Firearms Officers in this role.

The deployment of the Baton Gun is intended to provide a less lethal option and should be considered within the terms of the Conflict Management Model. The intention is to control and neutralise the threat without recourse to lethal use of force.

Legal restrictions with respect to the use of force apply, as they do with other tactical options.

Authority for Use

The minimum level of authority for granting the issue of the Baton Gun in situations other than public disorder should be identical with force procedures relating to the issue of conventional firearms.

Deployment

Baton Guns should be available for deployment at the earliest opportunity.

Tactical deployment must include the deployment of additional officers, in possession of conventional firearms, in support of the Baton Gun officers.

Command

The Command structure will be in accordance with current advice contained within the Manual of Guidance on Police use of Firearms with respect to conventional weaponry.

Operational Use

Baton Rounds should be aimed at the belt buckle area so that they strike directly the power part of a subject's body, i.e. below the rib cage.

Unless there is a serious and immediate risk to life, which cannot otherwise be countered, use at under one metre or aiming the weapon to strike a higher part of the body is prohibited. In these circumstances the risk of serious and even fatal injuries is increased and the firer must be able to justify the increased use of force.

Due to the nature of policing, it will never be possible to provide a definitive list of situations in which use of the Baton Gun may be appropriate. However, the Baton Gun is not intended to be a replacement for conventional firearms. It's use may be appropriate where immediate incapacitation is not imperative and the threat faced, at this time, could be controlled and neutralised without recourse to conventional firearms.

Post incident procedure should be in compliance with the current advice contained within the Manual of Guidance.

THE GUIDELINES ON THE RULES OF ENGAGEMENT FOR THE USE OF BATON ROUNDS BY THE ARMED FORCES IN NORTHERN IRELAND

GENERAL

- Only to be used on the command of the designated local commander, in situations of potential violent disorder. Its use must be no more than absolutely necessary in the circumstances, and there must be no alternative other than the use of lethal force. Personnel may only use items if they have been fully trained in its use and the application of these ROE.
- These ROE do not affect your general right to self-defence. **However in all situations you are to use no more force than absolutely necessary to achieve your aim.**

WARNING

- A warning is to be communicated before any items are used, unless to do so would increase the risk of death or grave injury to you or any other person. The commander at the scene or his representative is to give the following warning at the earliest opportunity:

“ATTENTION. UNLESS YOU DISPERSE/STOP, BATON ROUNDS WILL BE USED AGAINST YOU.”

- Where possible commanders are to order a change in profile for a visible demonstration of intent.

BATON ROUNDS

- L21A1 baton rounds may be fired, if authorised by the commander at the scene when absolutely necessary to protect own forces or others under their protection from physical violence. This may include dispersing a violent crowd posing a risk to life by singling out the perceived ringleaders and troublemakers.
- Baton rounds are to be fired at selected individuals, not indiscriminately. They are to be aimed so that they should strike directly (i.e. without bouncing) the lower part of the body (i.e. below the ribcage). They are not to be fired at a range of less than 20 metres unless there is an immediate and serious risk of loss of life or serious injury, which cannot otherwise be countered.

MEDICAL ASSISTANCE

- Medical assistance is to be provided to casualties as early as possible.

UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS

Basic Principles on the Use of Force and Firearms by Law Enforcement Officials

Adopted by the Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders, Havana, Cuba, 27 August to 7 September 1990.

Whereas the work of law enforcement officials is a social service of great importance and there is, therefore, a need to maintain and, whenever necessary, to improve the working conditions and status of these officials,

Whereas a threat to the life and safety of law enforcement officials must be seen as a threat to the stability of society as a whole,

Whereas law enforcement officials have a vital role in the protection of the right to life, liberty and security of the person, as guaranteed in the Universal Declaration of Human Rights and reaffirmed in the International Covenant on civil and Political Rights,

Whereas the Standard Minimum Rules for the Treatment of Prisoners provide for the circumstances in which prison officials may use force in the course of their duties,

Whereas article 3 of the Code of Conduct for Law Enforcement Officials provides that law enforcement officials may use force only when strictly necessary and to the extent required for the performance of their duty,

Whereas the preparatory meeting for the Seventh United Nations Congress on the Prevention of the Crime and the Treatment of Offenders, held at Varenna, Italy, agreed on elements to be considered in the course of further work on restraints on the use of force and firearms by law enforcement officials,

Whereas the Seventh Congress, in its resolution 13, inter alia, emphasizes that the use of force and firearms by law enforcement officials should be commensurate with due respect for human rights,

Whereas the Economic and Social Council, in its resolution 1986/10, section IX, of 21 May 1986, invited Member States to pay particular attention in the implementation of the Code to the use of force and firearms by law enforcement officials, and the General Assembly, in its resolution 41/149 of 4 December 1986, inter alia, welcomed this recommendation made by the Council,

Whereas it is appropriate that, with due regard to their personal safety, consideration be given to the role of law enforcement officials in relation to the administration of justice, to the protection of the rights to life, liberty and security of the person, to their responsibility to maintain public safety and social peace and to the importance of their qualifications, training and conduct,

The basic principles set forth below, which have been formulated to assist Member States in their task of ensuring and promoting the proper role of law enforcement officials, should be taken into account and respected by Governments within the framework of their national legislation and practice, and be brought to the attention of law enforcement officials as well as other persons, such as judges, prosecutors, lawyers, members of the executive branch and the legislature, and the public.

General provisions

1. Governments and law enforcement agencies shall adopt and implement rules and regulations of the use of force and firearms against persons by law enforcement officials. In developing such rules and regulations, Governments and law enforcement agencies shall keep the ethical issues associated with the use of force and firearms constantly under review.

2. 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 would allow for a differentiated use force and firearms. These should include the development of non-lethal incapacitating weapons for use in appropriate situations, with a view to increasingly restraining the application of means capable of causing death or injury to person. For the same purpose, it should also be possible for law enforcement officials to be equipped with

self-defensive equipment such as shields, helmets, bullet-proof vests and bullet-proof means of transportation, in order to decrease the need to use weapons of any kind.

3. The development and deployment of non-lethal incapacitating weapons should be carefully evaluated in order to minimize the risk of endangering uninvolved persons, and the use of such weapons should be carefully controlled.

4. Law enforcement officials, in carrying out their duty, shall, as far as possible, apply non-violent means before resorting to the use of force and firearms. They may use force and firearms only if other means remain ineffective or without any promise of achieving the intended result.

5. Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall:

(a) Exercise restraint in such use and act in proportion to the seriousness of the offence and the legitimate objective to be achieved;

(b) Minimize damage and injury, and respect and preserve human life;

(c) Ensure that assistance and medical aid are rendered to an injured or affected persons at the earliest possible moment;

(d) Ensure that relatives or close friends of the injured or affected person are notified at the earliest possible moment.

6. Where injury or death is caused by the use of force and firearms by law enforcement officials, they shall report the incident promptly to their superiors, in accordance with principle 22.

7. Governments shall ensure that arbitrary or abusive use of force and firearms by law enforcement officials is punished as a criminal offence under their law.

8. Exceptional circumstances such as internal political instability or any other public emergency may not be invoked to justify any departure from these basic principles.

Special provisions

9. Law enforcement officials shall not use firearms against persons except in self-defence or defence of others against the imminent threat of death or serious injury, to prevent the perpetration of a particularly serious crime involving grave threat to life, to arrest a person presenting such a danger and resisting their authority, or to prevent his or her escape, and only when less extreme means are insufficient to achieve these objectives. In any event, intentional lethal use of firearms may only be made when strictly unavoidable in order to protect life.

10. In the circumstances provided for under principle 9, law enforcement officials shall identify themselves as such and give a clear warning of their intent to use firearms, with sufficient time for the warning to be observed, unless to do so would unduly place the law enforcement officials at risk or would create a risk of death or serious harm to other persons, or would be clearly inappropriate or pointless in the circumstances of the incident.

11. Rules and regulations on the use of firearms by law enforcement officials should include guidelines that:

(a) Specify the circumstances under which law enforcement officials are authorized to carry firearms and prescribe the types of firearms and ammunition permitted;

(b) Ensure that firearms are used only in appropriate circumstances and in a manner likely to decrease the risk of unnecessary harm;

(c) Prohibit the use of those firearms and ammunition that cause unwarranted injury or present an unwarranted risk;

(d) Regulate the control, storage and issuing of firearms, including procedures for ensuring that law enforcement officials are accountable for the firearms and ammunition issued to them;

(e) Provide for warnings to be given, if appropriate, when firearms are to be discharged;

(f) Provide for a system of reporting whenever law enforcement officials use firearms in the performance of their duty.

Policing unlawful assemblies

12. As everyone is allowed to participate in lawful and peaceful assemblies, in accordance with the principles embodied in the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights, Governments and law enforcement agencies and officials shall recognize that force and firearms may be used only in accordance with principles 13 and 14.

13. In the dispersal of assemblies that are unlawful but non-violent, law enforcement officials shall avoid the use of force or, where that is not practicable, shall restrict such force to the minimum extent necessary.

14. In the dispersal of violent assemblies, law enforcement officials may use firearms only when less dangerous means are not practicable and only to the minimum extent necessary. Law enforcement officials shall not use firearms in such cases, except under the conditions stipulated in principle 9.

Policing persons in custody or detention

15. Law enforcement officials, in their relations with persons in custody or detention, shall not use force, except when strictly necessary for the maintenance of security and order within the institution, or when personal safety is threatened.

16. Law enforcement officials, in their relations with persons in custody or detention, shall not use firearms, except in self-defence or in the defence of others against the immediate threat of death or serious injury, or when strictly necessary to prevent the escape of a person in custody or detention presenting the danger referred to in principle 9.

17. The preceding principles are without prejudice to the rights, duties and responsibilities of prison officials, as set out in the Standard Minimum Rules for the Treatment of Prisoners, particularly rules 33, 34 and 54.

Qualifications, training and counselling

18. Governments and law enforcement agencies shall ensure that all law enforcement officials are selected by proper screening procedures, have appropriate moral, psychological and physical qualities for the effective exercise of their functions and receive continuous and thorough professional training. Their continued fitness to perform these functions should be subject to periodic review.

19. Governments and law enforcement agencies shall ensure that all law enforcement officials are provided with training and are tested in accordance with appropriate proficiency standards in the use of force. Those law enforcement officials who are required to carry firearms should be authorized to do so only upon completion of special training in their use.

20. In the training of law enforcement officials, Governments and law enforcement agencies shall give special attention to issues of police ethics and human rights, especially in investigative process, to alternatives to the use of force and firearms, including the peaceful settlement of conflicts, the understanding of crowd behaviour, and the methods of persuasion, negotiation and mediation, as well as to technical means, with a view to limiting the use of force and firearms. Law enforcement agencies should review their training programmes and operational procedures in the light of particular incidents.

21. Government and law enforcement agencies shall make stress counselling available to law enforcement officials who are involved in situations where force and firearms are used.

22. Governments and law enforcement agencies shall establish effective reporting and review procedures for all incidents referred to in principles 6 and 11 (f). For incidents reported pursuant to these principles, Governments and law enforcement agencies shall ensure that an effective review process is available and that independent administrative or prosecutorial authorities are in a position to exercise jurisdiction in appropriate circumstances. In

cases of death and serious injury or other grave consequences, a detailed report shall be sent promptly to the competent authorities responsible for administrative review and judicial control.

23. Persons affected by the use of force and firearms or their legal representatives shall have access to an independent process, including a judicial process. In the event of the death of such person, this provision shall apply to their dependents accordingly.

24. Governments and law enforcement agencies shall ensure that superior officers are held responsible if they know, or should have known, that law enforcement officials under their command are resorting, or have resorted, to the unlawful use of force and firearms, and they did not take all measures in their power to prevent, suppress or report such use.

25. Governments and law enforcement agencies shall ensure that no criminal or disciplinary sanction is imposed on law enforcement officials who, in compliance with the Code of Conduct for Law Enforcement Officials and basic principles, refuse to carry out an order to use force and firearms, or who report such use by other officials.

26. Obedience to superior orders shall be no defence if law officials knew that an order to use force and firearms resulting in the death or serious injury of a person was manifestly unlawful and had a reasonable opportunity to refuse to follow it. In any case, responsibility also rests on the superiors who gave the unlawful orders.

Note:

* In accordance with the commentary to article 1 of the Code of Conduct for Law Enforcement Officials, the term “law enforcement officials” includes all officers of the law, whether appointed or elected, who exercise police powers, especially the powers of arrest or detention. In countries where police powers are exercised by military authorities, whether uniformed or not, or by State security forces, the definition of law enforcement officials shall be regarded as including officers of such services.