“Red-Dotted!”

A case study analysing how the national Taser training standards are received, interpreted and operationalised by
Specially Trained Officers

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Declaration

Whilst registered as a candidate for the above degree, I have not been registered for any other research award. The results and conclusions embodied in this thesis are the work of the named candidate and have not been submitted for any other academic award.
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<td>ACLU</td>
<td>American Civil Liberties Union</td>
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<td>ACPO</td>
<td>Association of Chief Police Officers (Formally the NPCC)</td>
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<td>AFO</td>
<td>Authorised Firearms Officer</td>
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<td>APP</td>
<td>Authorised Professional Practice</td>
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<td>ARV</td>
<td>Armed Response Vehicle</td>
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<td>Attenuating Energy Projectile</td>
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<td>BWV</td>
<td>Body Worn Video</td>
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<td>CAD</td>
<td>Computer Aided Dispatch</td>
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<td>CAST</td>
<td>Centre for Applied Science Technology</td>
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<tr>
<td>CED</td>
<td>Conducted Energy Device</td>
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<td>CEW</td>
<td>Conducted Energy Weapon</td>
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<td>COP</td>
<td>College of Policing</td>
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<td>DOMILL</td>
<td>Defence Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons.</td>
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<td>DSO</td>
<td>Designated Senior Officer</td>
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<td>ECD</td>
<td>Electronic Control Device</td>
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<td>HOSDB</td>
<td>Home Office Scientific Development Branch</td>
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<td>IOPC</td>
<td>Independent Office for Police Conduct (formally the PCA and IPCC)</td>
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<td>MP</td>
<td>Member of Parliament</td>
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<td>NDM</td>
<td>National Decision Model</td>
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<td>NMI</td>
<td>Neuro Muscular Incapacitation</td>
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<td>NPCC</td>
<td>National Police Chiefs Council (formerly ACPO)</td>
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<td>NRT</td>
<td>Neighbourhood Response Team</td>
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<td>NYPD</td>
<td>New York Police Department</td>
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<td>PC</td>
<td>Police Constable</td>
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<td>PCC</td>
<td>Police Contact Centre</td>
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<td>QCMC</td>
<td>Queensland Crime and Misconduct Commission</td>
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QMUL  Queen Mary University London
RTC   Road Traffic Collision
SACMILL  Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons
SFO   Specialist Firearms Officer
STO   Specially Trained Officer
TTPOU  Tactical Training and Public Order Unit
US    United States
USA   United States of America
XDPM  Extended Digital Power Magazine
Dedication
This thesis is dedicated solely, whole heartedly and unequivocally to my wife Elizabeth. Lizzy, without your help, guidance and unwavering support I would never have succeeded. Thank you for being my rock.

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Firstly, I would like to offer a sincere message of thanks to my supervisor Dr Paul Smith. Paul, thank you for your wisdom, direction and steadfast support throughout this process. Your constructive critique has been invaluable. Secondly, I would like to thank my two young children. Thomas, Eleanor, your mere presence and love has been instrumental to the completion of this project. I hope that one day, you will thumb through this thesis and think maybe you could do one of your own. Secure of course, in the knowledge that yours will be much better! Finally, Mum, Dad thank you for everything, I hope this makes you all proud.
Abstract

The police use of Conducted Energy Devices (CEDs) remains an under-researched and under-evidenced topic of ongoing socio-political concern. This thesis answers an urgent academic call to address a number of gaps in scientific knowledge and understanding of this area. Particular attention is afforded to the current standards of training, and operational use of these controversial devices. This research aims to further advance the extant use of force literature through the exploration and analysis of ethically disclosed, operational CED use. Using a qualitatively driven, single case study approach, two quantitative surveys were conducted before a series of semi-structured interviews with fifteen Specially Trained Officers. The content and sufficiency of initial training is critically explored, as are the officer’s perceptions and interpretation of the pedagogical process. The results indicate that initial training is currently robust and delivered in the manner intended by governing organisations. The exacting standards are being applied broadly in-line with policy and scientific expectation but improvements are urgently required in order to better safeguard vulnerable population groups from unethical exposure, clarity is needed on the position of CEDs within the use of force hierarchy and officers could benefit from additional decision making guidance.

Keywords

Police use of force, policing by consent, culture, discretion, Tasers, Conducted Energy Devices, Conducted Energy Weapons, less-lethal weapons, equipment, technology, decision making, training.
Chapter one

Introduction

The recent introduction and ongoing proliferation of Conducted Energy Devices\(^1\) (CEDs) such as the Taser, is arguably the most controversial technological advancement in the recent history of the British police service (De Angelis & Wolf, 2013). This thesis comprises a qualitatively driven, single case study approach which investigates the so called Taser phenomenon by using the real-world perspective of 15 CED equipped officers employed by a single police organisation based in Southeast England. This current research focuses specifically on the guidelines for initial CED training which are developed and disseminated by the College of Policing (COP) but also critically examines the extent to which these exacting standards are operationalised in the live-policing environment. This thesis comprises eleven chapters in total, which are summarised below.

Chapter one provides an overview of CEDs (specifically the Taser X26) and gives some relevant background information on these controversial devices. It then introduces the COP approved less-lethal weapons training curriculum. This chapter concludes with a section on deployment and use statistics which discloses how, and how often, CEDs are being used by police officers in England and Wales.

Chapter two highlights the specific gaps in academic understanding which form the reasoning for this thesis. The research aims and overarching objectives are then discussed, before an exploration of the key research questions. The strategy used to identify and obtain relevant academic material is also provided.

Chapter three comprises the overarching theoretical framework within which this current research is situated. It focuses on the fundamental principles of policing by consent in the United Kingdom with an emphasis on the use of both lethal and non-lethal force; in addition it addresses the causal correlates which are known to influence a forceful police-citizen encounter.

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\(^1\) Conducted Energy Devices (CEDs) may also be referred to generically in-text as Tasers, Conducted Energy Weapons (CEWs), Electronic Control Devices (ECDs), Stun-Guns or Electro-Shock Weapons.
Chapter four explores the concept of police decision making including a critical discussion of training, legislation, the National Decision Model (NDM) and use of force continua. This chapter also discusses the array of less-lethal weapons available to the police service. It describes exactly how uniformed response officers are deployed to a call for service and the command structure within which they will operate. Both of which are capable of informing their operational decision making particularly as it relates to the use of force.

Chapter five analyses the literature relating specifically to the police use of CEDs in both the United Kingdom and abroad. The chapter begins with an in-depth critical discussion of key academia, beginning with the limited material available in this country. The medical consequences of CED use is then considered followed by the ethical concerns associated with the use of these devices. Chapter five finishes by discussing the seemingly juxtaposed position of CEDs in our society, as effective police accoutrements on the one hand, or instruments of death on the other.

Chapter six outlines the research methodology. It begins with a description of the research setting and the strategy used to select the research sample. This chapter continues by describing the various research instruments used during the project and also explains how the data was analysed. Chapter six concludes with a summary of the most pertinent ethical concerns.

Chapter seven begins by analysing the results of two self-completion surveys which were used to assess the initial feasibility of the proposed research and to explore the content of initial training and the current standards of operational CED use. This chapter also explores the application and pre-joining process.

Chapter eight reports on the content and sufficiency of initial CED training. It includes a breakdown of various elements of the curriculum, including theory input, weapon handling, the classification and scenario based role-play exercises. Throughout this chapter, an enhanced understanding of how the exacting standards are received by prospective STO’s is provided. Overarching academic richness is provided by reflective observations from the sample population and where appropriate, this data is analysed against the core base of academic literature.

Chapter nine examines the under-researched topic of CED operationalisation. It scrutinises a number of operational examples of CED use, assessing the dynamic nature of each encounter against
academic and organisational expectation. After briefly addressing post-incident procedures, chapter nine pits this information against the existing scientific data on the use of force, specifically the relevant force predictors.

Chapter ten addresses the decision making guidance. There is a general under-use of the NDM and an evident disconnect in officers opinion of where CEDs ought to lie as a use of force option. This chapter also assess the protection of vulnerable population groups, concluding that not enough has been done to mitigate the risk in what is an area of high liability for the police service.

Chapter eleven concludes this research. Firstly, by passing comment on its limitations, most notably generalisability, the position of the researcher within the research setting and the problem of future-proofing. There follows a number of evidence-based suggestions for institutional improvement and change. These, if implemented, would help inform professional practice and provide a solid platform for future research in this dynamic and exciting area.

An overview of Conducted Energy Devices

Conducted Energy Devices belong to a class of tactical options known as “less-lethal”, meaning they are intended to subdue or temporarily incapacitate a non-compliant subject rather than cause serious harm or death (Bozeman & Winslow, 2005). The brand of CED predominantly used in the UK is the Taser which was named by inventor John Cover as the **Thomas A Swift Electric Rifle**, in a jocular salute to the *Tom Swift Fantasy Stories* written by Victor Appleton (Sousa, Ready & Ault, 2010).

Tasers are manufactured exclusively by Arizona based global conglomerate Axon®. The model commonly deployed in the UK is the Taser X26 (see Figure 1.1. below). The X26 is bright yellow in

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2 Common less-lethal weapons include the extendable baton (also referred to as an ASP, a truncheon or a nightstick) and chemical spray. Law Enforcement Agencies use a variety of brands of chemical spray. All of which are designed to temporarily incapacitate a subject by causing localised pain and a temporary inability to open the eyes. Common brands include OC, CN, PAVA, Captor™ and CS.

3 When the term Taser is used in this thesis it relates specifically to the brand of CED manufactured by Axon (i.e. the M26, X26 or X2). The term Taser is not used generically to refer to all brands of CED unless this is expressly stated by the author, or the term forms part of a quotation.

4 Formerly Taser International®.

5 In December 2014, production of the X26 ceased and the Scientific Advisory Council on the Medical Implications of Less-Lethal Weapons (SACMILL) were tasked to find a suitable replacement. SACMILL considered several viable options, but eventually categorised the Taser X2, the only viable candidate. On 2nd March 2017, this device was authorised by the Home Office for future UK use (Police Federation, 2017b).
colour which distinguishes it from a conventional firearm and is designed to be carried in a holster on the non-dominant side of the body. This helps to prevent it from being drawn and used in the same manner as a conventional firearm (Martin, 2016). A standout feature of the Taser is the integrated red-dot laser sighting system which illuminates automatically when the device is armed. This operational aid (which is colloquially referred to as “Red-Dotting”) may be used as a visual guide for accurate shot placement or offered tactically as a deterrent to a non-compliant aggressor (Home Office, 2014).

**Figure 1.1. Taser X26 with associated nomenclature**

When the trigger is pressed the Taser X26 uses compressed nitrogen gas to emit 2 sharp probes attached to copper wires. The probes naturally spread when the device is fired and will connect with a subject up to 6.4 meters (21 feet) away. At the point of initial deployment 50,000 volts of pulsed electricity are generated. If both probes make firm contact with the subject the peak voltage will drop to around 1,200 volts which is passed through the body in a straight line between the 2 points of contact.

On average, the Taser X26 will generate 0.0021 amps. The shock duration is factory pre-set at 5 seconds. This can be extended or shortened at the operator’s behest by maintaining pressure on the trigger or de-arming the device respectively. Successful Taser use will result in a condition known as

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6 The proposed upgrade to the Taser X26 (the Taser X2) provides a red-dot for both top and bottom probe which assists the operator with point-of-impact prediction (SACMILL, 2017).
Neuro Muscular Incapacitation (NMI) which is a temporary but complete loss of motor function (National Police Chiefs Council [NPCC], 2016).

The Taser timeline

CEDs were first introduced into the British police service in 2003 after a Home Office request to explore the market for a suitable less-lethal alternative to the rudimentary plastic baton round\(^7\) commonly deployed by Authorised Firearms Officers (AFOs), (Donnelly, 2001). During this exploratory research the Taser model M26 was identified, assessed and subsequently recommended for operational trial (Boatman & Mitchell, 2002).

On 23\(^{rd}\) April 2003 a 12 month trial involving 5 police forces began. General oversight of the trial period was provided by professional services firm Price Waterhouse Cooper\(^\circledR\) (PWC). The direction from the Home Office was that the Taser M26 be made available to AFOs for use during spontaneous or pre-planned firearms operations. AFOs were asked to complete a questionnaire and participate in a semi-structured interview each time the device was used. During the trial period the Taser was deployed on 58 occasions, usually when the encounter involved a knife or firearm. In 26 cases (44.8%) the incident was resolved when subject was red-dotted. The Taser was only discharged 14 times (19% of cases). Of the 56 uses the suspect was arrested 53 times which equated to a 95% successful arrest rate.

At the conclusion of the trial PWC disseminated a survey to the general public which received 1164 responses. The survey aimed to establish a baseline for public awareness of, and tolerance towards, CEDs. The results indicated that public awareness of CEDs was low. Only 36% of the respondents knew what a CED was and no-one had witnessed one being used. Eighty one per cent of the sample population considered that CEDs should be available to more police forces and 90% thought that only AFO's and / or suitably trained officers should be authorised to carry one. Public opinion was against routine availability with only 38% of the sample supporting this position (Price Waterhouse Cooper [PWC] & the Association of Chief Police Officers [ACPO], 2004).

In 2004 the Defence Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons (DOMILL) assessed the medical implications of CED use. Specifically, adverse cardiac events and a heightened risk to those under the influence of intoxicating substances. DOMILL

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\(^7\) Also known as an Attenuating Energy Projectile (AEP) and sometimes referred to colloquially as a “rubber bullet”.
concluded: “The risk of life threatening or serious injuries from the M26 Taser is very low.” (2004, p. 32)

In the same year, the then Home Secretary, David Blunkett allowed all UK forces the option to routinely issue CEDs to AFO’s (ACPO, 2013). A recommendation which was officially actioned on behalf of the Home Office, by Caroline Flint MP on 15th September 2004. This event marked the first wide scale roll out in UK history (Martis, 2005).

In March 2005, an upgrade from the Taser M26 to the more superior X26 was proposed by the Home Office. DOMILL supported this technological advancement reporting that: “The risk of a life threatening event arising from the direct interaction of the currents of the X26 Taser with the heart is less than the already low risk of such an event from the M26 Advanced Taser.” (2005, p. 27-28)

In 2007, ACPO proposed a trial allowing unarmed officers from Specially Trained Units access to CEDs. This previously unprecedented shift in national policy, was fully backed by the Government who funded a 12 month trial which began on 1st September 2007 and involved 10 police forces (Bebbington, 2007). DOMILL predicted a general increase in CED use but concluded that the training packages provided by ACPO were sufficiently robust and “…provide a common foundation to minimise the potential for adverse medical effects from use of…Tasers in non-firearms incidents.” (2007, p. 22)

In 2008, the then Home Secretary, Jacqui Smith announced that an additional 10,000 CEDs would be issued in Britain for general use by unarmed officers. A radical development which was reported to have cost in excess of £8 million (Mason, 2008). DOMILL assessed the potential medical implications of allowing non-specialist officers ready access to CEDs and concluded, “…the risk of serious adverse medical outcome from exposure to the Taser is low, provided the system is employed by trained users in accordance with ACPO policy and guidance.” (2012, p. 11 emphasis added)

Since this development a steady increase in the number of Specially Trained Officers officers can be seen. The Police Federation declares that 25% of officers now carry a CED and strongly campaign for the device to be standard issue (The Police Federation, 2016). At the time of writing, routine armament is not a stance supported by the NPCC. They do however, support the government proposed increase in overall numbers, a process which remains on-going (NPCC, 2016a).
On 12th September 2016, a briefing paper was delivered to the House of Commons. This document formed the basis of a nationally recognised Authorised Professional Practice (APP) governing CED use. It provided a summary of medical implications as well as various social and ethical concerns raised by the IPCC. The most important inclusion was the auditable list of risk factors which must be considered by an STO prior to using a CED most notably: head injuries caused by unsupported falls, flammability, repeated and / or prolonged use, avoidance of sensitive areas, pre-existing medical conditions, Acute Behavioural Disturbance or excited delirium, vulnerable citizens, children and people of small stature (McGuiness, 2016, p. 8).

In January 2017, the results of a survey conducted on behalf of the Police Federation by Ipsos Mori® were published. CEDs received broad support with 82% of surveyed officers stating that such devices should be routinely available, an increase of 8% since 2014. This proposal was also supported by 71% of the general public (Ipsos Mori & the Police Federation, 2016).

On 2nd March 2017, the Home Office authorised use of the Taser X2 as a replacement for the X26 which is no longer manufactured (Police Federation, 2017b). The X2 is technologically superior to the X26. It is also more versatile, has a higher maximum power output, a separate laser sight for top and bottom probe, a 25 foot maximum operating distance (as opposed to the 21 feet offered by the X26) and a warning signal when the 5 second cycle is approaching completion. Crucially, the X2 allows arcing with the cartridges attached and gives the operator the option of an immediate second shot in the event of a miss. Under these circumstances both the top and bottom probe can invoke NMI, provided the spread is sufficient (SACMILL, 2017).

This significant development was preceded by a comprehensive medical statement from SACMILL who were “. . . broadly satisfied by the evidence it has examined, and is of the view that the medical implication of the Taser X2 system – when used by trained operators in accordance with UK policy and guidance – would be in line with those expected for a less- lethal system of this type.” (2017, p. 1)

**CED training**

The authority for a non-firearms officer to carry a CED operationally, is dependent upon successful completion of a nationally accredited training course developed by the College of Policing (COP).
This course is widely considered to be one of the most robust training programs in the world (NPCC, 2016a). Unlike many overseas jurisdictions, officers in the UK are not instructed on the use of CEDs during probationary training, neither is there currently an automatic right to undertake such training at any stage during an officer’s career.

The training curriculum is developed by a small group of specialist instructors employed by the COP. The content is delivered to a lead instructor from each individual police force who will further disseminate the information to nominated in-force trainers (McGuinness, 2016). Whilst the specific content of CED training is regarded as sensitive data (COP, 2016), open-source searching discloses a rigorous pre-selection process and suggests that not every officer who undertakes the training course will necessarily be successful (NPCC, 2016).

The time officers spend training in the use of less-lethal weapons is referred to as ‘contact time’. The current minimum period for initial CED training is 18 hours over 3 days. A minimum of 6 hours continuation training per officer, per year is further mandated. The UK curriculum is widely regarded as robust especially when compared internationally. Some countries (e.g. the USA) complete CED training in a single day and provide no further refresher training (Chesterman, 2013).

When an officer has passed the training course they are designated a Specially Trained Officer (STO) and are permitted to carry a CED whilst on duty. STOs are usually front-line, uniformed response officers. They will carry the device openly on a utility belt or tactical vest. Although STOs will generally conduct routine police work they may also be deployed in circumstances of heightened risk which do not fit the criteria for a firearms-led approach. This may be the planned arrest of a violent offender or a more spontaneous incident such as the response to a person brandishing a potentially lethal weapon (COP, 2013).

The ongoing operationalisation of CEDs is overseen by the Home Office and governed nationally by the COP, the NPCC and a National Less-Lethal Weapons Working Group. Medical and scientific oversight is provided on behalf of the Home Office by the Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons (SACMILL) and the Centre for Applied Science Technology (CAST) who have published a series of open source medical statements (see Defence Scientific Advisory Council on the Medical Implications of Less-Lethal Weapons [DOMILL], 2004; 2005; 2007; 2012; NPCC, 2015; SACMILL, 2017). If death or serious injury occurs as a result of CED
deployment the Independent Office of Police Conduct\(^{8}\) (IOPC) is the lead agency responsible for the investigation of the incident (Chesterman, 2013).

**Statistics on CED use in England and Wales**

At the time of writing, the only quantifiable statistics on CED use in England and Wales are published on behalf of the Government by the Home Office. The data is gathered from individual police forces before amalgamation into a single document which is published annually via open source forums. The fact that the Home Office is responsible for gathering, analysing and presenting the data would appear to be somewhat of an ethical risk, because this body also has ultimate national oversight of CED operationalisation. In addition, the primary data relies on timely submissions from deploying officers, accurate recording mechanisms by individual police forces and a degree of consistency in ongoing dissemination to a centralised agency. Somewhere along this seemingly fragmented line, it is not inconceivable that a true variance in the published statistics may exist. It is perhaps for this reason that certain commentators have called for a single use of force database which is utilised by every agency and accessible to a wider audience such as the academic community (Dymond, as cited by Amnesty International, 2016, para. 8).

For the purpose of Home Office recording and analysis, an STO will have “Used” a CED in one of seven possible ways. The device is “Drawn” if an officer removes it from the holster. The unit is “Aimed” if it is drawn and pointed at a subject. “Arcing”, sends a visible and audible current of electricity between the contact points and serves as a warning. “Red-Dotting”, occurs when the laser sight is placed on the body of the subject. The “Drive-Stun” technique can be applied in two further ways. Firstly, by removing the front cartridge and pressing the device hard into the subject’s body whilst maintaining pressure on the trigger. This allows the device to operate like a conventional so-called “Stun-Gun”, relying on pain not NMI to control the subject. Secondly, the “Angled Drive-Stun”, may be preferred if, after a full-probe deployment, one dart misses the target or becomes displaced. Under these circumstances, the device may be pushed into the body with the expended cartridge still attached. If in the execution of this tactic, the operator allows sufficient spread between the head of the device and the accurate probe then secondary NMI may follow. Finally, a CED is “Fired” with a full-probe deployment.

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\(^{8}\) Formerly the Independent Police Complaints Commission (IPCC)
According to the Home Office, CED usage has followed a predictable pattern of low use during times of scant availability and higher use with increased availability. The relative paucity of deployments during the initial trial in 2003 is a prime example, the low statistics being attributable to a limited trial period involving only AFOs taking part in spontaneous or pre-planned firearms operations.

An increase in use post-trial is demonstrated by the 2004-2007 statistics. The first recording period where CEDs were authorised nationally. CEDs were used 1374 times, arced 41 times and red-dotted 613 times. The drive-stun was used on 69 occasions, and full-probe discharge occurred 521 times (Home Office, 2008).

CED trials were extended to non-firearms officers 2007. There logically followed an incremental increase in recorded use. In the year 2010, there were 5,278 uses, almost a quarter of which were full-probe or drive-stun deployments. A further increase was reported in 2011 where the device was used 6,269 times, 25% of which were operational discharges. Moving closer to the present day, 2014 saw CEDs “used” 10,062 times (an average of just over 27 times per day) and “discharged” 5 times per day (1,724). This marks a 3% decrease in use compared to 2013 (-318) but a 51% (+3,413) increase when compared to 2010 (Home Office, 2014).

The most recent figures available at the time of writing, indicate a possible emerging consistency in the use of CEDs. Indicative of this hypothesis, is the statistical similarity between 2014 and the most recent published figures which show that CEDs were used 10,329 times in 2015. Reflecting a previously unprecedented consistency in recorded use when compared with the 10,062 uses in the year prior. Interestingly, non-discharges accounted for 8,408 (81%) of the 10,329 recorded uses in 2016. This shows the value of the red-dot as a compliance tool (Home Office, 2016).

By way of background, the above chapter has provided a relevant summary of the introduction and evolution of CEDs in Great Britain, and has also touched upon deployment and use statistics. This information provides a broad contextual understanding of the overarching topic area. The following chapter discusses why this research is necessary.
Chapter two
Research context

The above chapter has provided some relevant background information detailing the conception and evolution of the Taser phenomenon in the United Kingdom. The following chapter builds upon certain facets of this data, most notably, the relative paucity of peer reviewed research in the field, which justifies why this current research is needed. Chapter two continues by outlining the research aims and ultimate objective, before an in-depth evaluation of the key research questions.

Why this research is needed

Several academics have highlighted a general lack of empirical research on CED related topics (e.g. Dymond, 2014; Dymond & Rappert, 2014; Gau et al., 2010; Millar, 2010; Neyroud, 2007; Thomas et al., 2010). Dymond (2014) and Gau, Mosher and Pratt (2010) posit that the peer reviewed literature pertaining specifically to the use of CEDs in the UK is scarce, and Neyroud (2007) suggests that further research in this key emerging area must be attended to as a priority. Squires and Kennison suggest that “. . . the period between police arriving on the scene and the resort to potentially lethal firepower is the ‘window of opportunity’ for the utilisation of less-lethal options. Thereby discovering more about the circumstances and opportunities for alternative resolution strategies is a question of vital priority.” (2010, p. 163 emphasis added). And finally, very little academic attention has been paid to the CED training process, which is a topic that “. . . future research should examine . . . in considerable detail” (Thomas, Collins & Lovrich, 2010, p. 307). This observation was further solidified by Dymond who declared: “Thus key un-answered questions include the content of the UK national training package and how it has been received and interpreted and crucially, applied by trainers and police officers.” (2014, p. 4 emphasis added).

Research aims and objectives

The overarching aim of this research is to critically investigate the current standards of CED training and operational use from the point of view of 15 STOs working in a single police organisation. To achieve this goal, relevant literature is used to underpin the inquiry and identify topics of social concern. Survey data as well as reflective observations from the sample population are used to fortify the research outcomes and solidify recommendations for institutional reform. A qualitative approach explores first-hand perceptions of the pedagogical process with specific emphasis on
course structure, content, delivery, decision making strategies, ethical use and the position of CEDs within the hierarchy of force. By using specific examples of real-world use, this research also aims to establish not only, the sufficiency of initial training but also, the corresponding patterns and predictability in operationalisation and the extent to which the identified trends correlate with the existing scientific data on the use of force.

Because of the relatively small-scale parameters of the research framework, the data and associated outcomes are not necessarily representative nationwide. Operational practice may differ from force to force and the opinions of the sample population are not necessarily generalisable. That being said, this research is unique in content and composition and provides a clear platform for further inquiry. Ultimately, it is both hoped and anticipated that the findings and recommendations embodied in this thesis will be used to facilitate immediate organisational improvement to current training and operational practice. On a wider scale, this research could be used as a platform for comparative purposes, contrasting uniformity in CED training and delivery on a regional, national or international scale.

Research questions

In order to achieve the research aims and ultimate objectives this study proposes four research questions which are discussed in detail below.

**Research question one:** What is the content of the CED training package and how is the training received by prospective Specially Trained Officers?

This is the primary research question. It was formulated in direct response to various academically highlighted knowledge gaps. Specifically, the content and sufficiency of the initial CED training course devised by the COP. This question also ties in directly with the primary research objective, which is the general advancement of the core literature base.

**Research question two:** How are CEDs operationalised by Specially Trained Officers and is this practice compatible with existing scientific data on the use of force?

The broader use of force literature in the UK suffers from the same volume deficiency as the narrower Taser phenomenon. This particular research question will provide a valuable contribution to the existing literature and the case study approach will add a deeper qualitative understanding to
what is a predominantly quantitatively researched topic area. Specifically, by analysing a number of examples of operational CED use and comparing the various force predictors with the existing base of evidence in order to identify patterns or methods of predictability. The results will tie in directly to both the research aims and the ultimate research objective which is the promotion of further comparative study.

**Research question three:** Where do STO’s position CEDs within the use of force hierarchy and how effective is the National Decision Model (NDM) as a mechanism to support a force application decision?

Linked intrinsically to the subjective interpretation of the training guidance this research question directly addresses the operational value of the NDM as a decision making tool. It critically explores the premise that the NDM has effectively (although not explicitly) rejected the continuum approach, as the preferred force election framework. This research question also assesses the true operational value of the NDM and explores the current level of clarity, and parity in the position of CEDs within the force hierarchy.

**Research question four:** Is the training and operationalisation of CEDs being conducted ethically and with due regard to the protection of vulnerable citizens?

This question emerged as a social dilemma during the literature review phase. It is intended to directly address the significant ethical concerns raised not only, by individual academics, (e.g. Gau, et al, 2010; Kleinig 2007; Oriola, Neverson & Adeyanju, 2012; Ryan, 2008) but also, by human rights protection groups such as Amnesty International UK (e.g. Amnesty International, 2004; Sprague, 2007) who are vociferous in their opposition to increased CED availability in the UK. This research question allows the critical exploration of ethical safeguarding as mandated by governance. It further assesses whether these controls adequately protect society’s most vulnerable members from pernicious exposure to CEDs. Where it is identified that organisational improvement may need to be considered, this is duly stated.

To summarise, research question one was selected in direct response to the demands of the academic community who have voiced explicit concern over the lack of knowledge in these particular areas (see Dymond, 2014; Dymond & Rappert, 2014; Gau et al., 2010; Millar, 2010;
Neyroud, 2007; Thomas et al., 2010). Question two pays critical attention to the use of CEDs by STO’s and also assesses the extent to which current operational practice compares with the evidence base relevant to the police use of force. Questions three and four emerged and evolved during the literature review and active research phases. As such, they were incorporated into the reflexive conceptual framework. Maxwell confirms this process as compatible with the case study design.

Each component of the design may need to be reconsidered or modified in response to new developments or to changes in some other component. . . . The activities of collecting and analyzing data, developing and modifying theory, elaborating or refocusing the research questions and identifying and eliminating validity threats are usually all going on more or less simultaneously, each influencing all of the others. (1996, p. 2-3)

This reflexivity in research design is integral to the overarching agenda, and critical given the researcher’s position as a practitioner-academic. The elected research questions explore operational concerns which are police specific, and sociological concerns which are predominantly citizen-focused. This targeted approach affords an equal level of critical attention to police officers and wider society alike. By natural consequence this will ensure a well-balanced research agenda.

**Literature search strategy**

In order to explore relevant academic material, a systematic search for literature containing certain keywords and terminology was conducted⁹. From initial and continuation searches somewhere in the region of 500 results were received and triaged for relevance. For the most part, the literature included in this thesis is peer reviewed, published and reports on the results of research findings. Subjective opinion pieces, Masters Degree level dissertations and studies written in a language other than English were excluded. Whilst relevant UK scholarship does feature in this thesis, a cursory glance at the reference list will show that this subject area has been most extensively developed in North America.

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⁹ Search terms included but were not restricted to: *Police use of force, policing by consent, police coercion, police encounters, police use of less-lethal weapons, police use of Taser, police use of Conducted Energy Devices, police use of Conducted Energy Weapons, police use of Stun Guns, police use of firearms, police protective equipment, police use of technology, police training, police professional development, police deployment, police use of reflective practice, police use of the National Decision Model.*
Continued awareness of newly published research to the point of submission, was maintained by systematic repetition of the search criteria and via automated e-mail notifications, which periodically recommended newly published material based on the initial search terms. The literature review strategy produced a rich and relevant corpus of contemporary academic scholarship which is discussed in this thesis and reflected by the reference list.

The above chapter has outlined the strategy underpinning this current research by discussing its justification, aims, objectives questions and literature search strategy. The following chapter evaluates the theoretical concept of consent-oriented policing in a liberal democracy.
Chapter three

The police use of force

The following chapter introduces an overarching theoretical framework which permeates various sections of this thesis. The hallmark concept of policing by consent in a pluralistic democracy is key to this current research because there has been a notable derision in recent years and the addition of a CED to rank-and-file officers could serve to dramatically exacerbate an already deteriorating construct. This naturally raises a plethora of theoretical and sociological debate as to whether this is appropriate, warranted, desirable or even necessary in contemporary society. Issues such as police culture, excessive force, race relations and police accountability are all fundamental to this argument, which is why they are featured heavily in the chapter that follows.

Policing by consent or coercion?

The contemporary police officer is charged with the ever-expanding societal responsibility to address: “Something-that-ought-not-to-be-happening-and-about-which-someone-had-better-do-something-now” (Bittner, 1974, p. 30). According to Klahm and Tillyer (2010) this broad mandate incorporates plethoric roles and functions, including but not restricted to crime fighting, maintaining peace and order, solving problems and delivering a public service, However, it is the dispense of force that remains the most politically contentious police function (Bittner, 1970; Muir, 1977; Reiss, 1971; Sherman, 1980b; Walker & Fridell, 1993). The unique discretion of the police officer, acting on behalf of the state, to apply force to uphold the law is a phenomenon that has been studied by academics for over 65 years, yet even to this day it is not clearly understood (Klahm & Tillyer, 2010).

The importance of advancing this understanding, particularly in the field of lethal or excessive force cannot be overstated. Punch argues that “. . . of the various forms of deviance associated with policing . . . it is excessive, unjustified and illicit violence that can be the most controversial and emotive, if not explosive” (2011, p. 104). To confirm this assertion, we only need reflect upon the fatal shooting of the young black male, Mark Duggan by a police firearms officer in 2011. This tragic event is widely believed to have been at least a contributory causal factor of the 2011 London Riots which shook the foundations of our society to the point where a breakdown of social order ensued. According to Davies, Fry, Wilson and Bishop (2013) the disorder which followed, resulted in an estimated 3,443 reported crimes, £250 million in property damage and 5 deaths.
Further widespread disorder (although not to the extent of the 2011 attacks) occurred following the in-custody death of a black Portuguese male Edson Frederico Da Costa who was arrested by police officers on 15th June 2017 after he was found to be in a vehicle linked to a street robbery. During the arrest chemical spray was deployed to-which Mr. Da Costa apparently suffered a severe adverse reaction which led to his death. This conclusion is disputed by the family of the deceased male who claim that in fact, he had received grievous internal injuries at the hands of the police during the course of the arrest. On 25th June 2017 a crowd gathered outside Forest Gate Police Station to protest against the use of excessive force and the lack of progress and transparency with the subsequent investigation. The initially peaceful protest later turned violent and resulted in 6 officers being assaulted (4 requiring hospital treatment) 4 arrests and a series of criminal offences including arson, assault, property damage and serious public disorder (Townsend & Quinn, 2017).

Similar circumstances prevail when we consider the coercive arrest related death of 20 year old black male Rashan Charles on 22nd July 2017 (Townsend, 2017) and the death of newspaper seller Ian Tomlinson (who was subject to an unprovoked and excessive assault by a police officer) during the G20 protests in London 2009 (Taylor, 2013).

The above deaths arguably point to a gradual erosion of the policing by consent doctrine but perhaps more importantly, they appear to indicate that the UK police service has not fully reformed in the wake of the Macpherson Inquiry which highlighted a culture of institutional racism in the British police force (Macpherson, 1999); and as such, may still be prone to isolated manifestations of excessive or unnecessary force perpetrated on vulnerable population groups (Erfani-Ghettani, 2018). It is perhaps the crux of this particular argument which bears especial relevance to the Taser phenomenon. Many commentators argue that the addition of CEDs will only to serve to further sway an already teetering cultural imbalance between the police and the policed, and as such, any operational benefit such devices bring, will ultimately fail to outweigh the risk they pose to wider society (Kleinig, 2007; Oriola, et al., 2012; Ryan, 2008; Shaw, 2015; Sprague, 2007).

Developing this argument further, empirical research has shown that the celebration of violence remains, to some extent, embedded within the cultural dynamic of the police service (Loftus, 2009a). There is evidence to suggest that police officers view their primary function as crime fighters, involved in the relentless pursuit of hardened criminals (Cain, 1973; Ericson & Hegarty, 1997; Fielding, 1988; Holdaway & Parker, 1998; Jackson, 2003; Loftus, 2009b; Paoline, Myers, &
Worden, 2000; Waddington, 1999a) and as such, relish the opportunity to engage in conflict. Loftus points to the police service as rife with “. . . powerful undercurrents of masculinity . . . [which] . . . encourages an aura of toughness and celebration of violence.” (2009a, p. 96). When recounting stories of coercive encounters to their colleagues, research has shown that officers have the propensity to exaggerate certain details such as the level of violence offered by the subject and how their own actions in response could have fallen outside the conventions of morality, policy or even legislation. Officers may embellish certain situational characteristics such as the physical attributes or combative capability of the person they were confronted with and may trivialise and normalise the fact that the subject received serious injuries as a result of the encounter (Van Maanen, 1973; Waddington, 1999a).

Some researchers suggest that the sharing of such stories not only, helps to create and maintain a healthy cultural balance and cohesion within a police team or unit (Fletcher, 1996; Loftus, 2009a; Schein, 1984; Van Maanen, 1973; Waddington, 1999a) but also, provides a vital avenue of escape from the stress, fatigue or mundanity of everyday policing (Holdaway, 1983). Whereas, other researchers attribute these behavioural traits to the fact that violent confrontation is an accepted and even desirable facet of everyday police work (Loftus 2009a; Reiner, 2000; Skolnick, 2008; Waddington, 1999a; Westley, 1953).

Brandl, Stroshine, and Frank (2001) claim that such an organisational mind-set encourages the use of excessive force, particularly by young-in-service male officers who are keen to seek acceptance and build a reputation within their organisational environment. Loftus (2009b) linked this behaviour to a culture of silence whereby officers will not speak out against colleagues who had used excessive force for fear of social isolation and Anshel (2000) claims that this mentality promotes mutual distrust between the police and the public.

In the light of the above observations, it is of interest to consider the effect the addition of a CED to the armory of rank-and-file officers could have on existing cultural attitudes within the police service. Also, the extent to which this significant organisational shift represents a divergence from consent oriented policing in a pluralistic society such as the United Kingdom. The UK has long been celebrated for its “unarmed” police service, which functions according to the willingness of society to be policed by a civilised agency adopting the least intrusive measures of law enforcement (Waddington, 1991).
This image of civility is characterised by the traditional English “Bobby”, who has long been celebrated as a hallmark of liberal society (Emsley, 2009). The altruism of “Bobby” is exemplified by the fictional TV character PC Dixon from a 1949 film entitled The Blue Lamp. PC Dixon epitomises what have been referred to as the “Golden Years” of UK policing (McLaughlin, 2007; Reiner, 2000). Dixon walks his beat of Dock Green immaculately attired in a blue tunic, polished dress shoes and a traditional Custodian helmet. He is of course, unarmed. Weapons are not required for PC Dixon because he is a respected member of the community and is able to effectively exercise his function by conversation as opposed to coercion: ‘For almost one and a half centuries, then, the iconic “Great British Bobby”, patrolling alone and with his truncheon concealed beneath his tunic, symbolised the aversion to the use of overt force in the policing of British society.’ (Punch, 2011, p. 25)

The image and glory of PC Dixon remains to this day, resonant and relevant to UK society but at the same time it is arguably becoming increasingly redundant (Squires & Kennison, 2010). Brady, (1990) and McLaughlin (2007) claim that the liberal principles exemplified by PC Dixon have always been, at least to some extent, fictitious. They refer to the concept as the “Dixon Myth” and point out that the police service has never lacked the capacity to employ various degrees of force (including lethal measures), should the need arise (Gould & Waldren, 1986; Waldren, 1992; 2007).

Expanding on this point a little further, it is perhaps beyond contention that the UK police cannot currently be described as “unarmed.” Punch and Markham, (2006) refer to the UK police as “Semi-armed” and Squires and Kennison agree: “In reality the notion of an unarmed police cannot now be seriously sustained. In our view they are neither one nor the other. They occupy a mid-way point between both positions . . .” (2010, p. 194). This premise is of increasing relevance today. In direct response to recent terror atrocities, the UK is in the midst of a significant “Event Driven” (Squires & Kennison, 2010, p. 56 see below) uplift in the number and availability of firearms officers and Armed Response Vehicles (ARVs), particularly in the Capital and these officers (along with the associated hardware) are now more visible than ever before (Evans, 2016).

Even the beloved “Bobby” has not escaped a degree of so-called “para-militarisation” (Jefferson, 1987, 1990, 1993; Kraska & Kappeler, 1997; Waddington, 1999). In the contemporary policing

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10 In 1955 the BBC first aired a show titled “Dixon of Dock Green” which was a spin-off of the Blue Lamp film and featured the exploits of PC Dixon. This show was incredibly successful in the UK and aired on Saturday night television for over 21 years. It is perhaps from these episodes that the true fondness for the “Great British Bobby” and by proxy the principle of policing by consent was nurtured and realised in this country.
environment, “Bobby” is rarely seen on foot and is seldom wearing a traditional Custodian helmet or tunic. He now drives a high powered marked response vehicle. He is issued with black combat trousers, a fitted black t-shirt and steel-capped boots. He often wears a US style baseball cap along with high specification body armor underneath a tactical vest. He is adorned with technology such as a compact personal radio, a smart phone and a Body Worn Video Camera (BWVC). He is equipped with leg restraints, a “spit-hood”, handcuffs, an extendable baton, chemical spray and now, a CED. An image which appears to portray the current policing style as one of increasing coercion as opposed to consent, and further confirms the “Dixon myth” (Squires & Kennison, 2010).

Squires and Kennison (2010) claim that the principle of consent based policing (if it ever really existed) has been subject to gradual erosion over time and in response to a series of critical incidents which the police service have faced. They describe the increased resort to coercive measures (and concomitant erosion in consent based policing) as “Event Driven” and necessary in response to the increasing demands of contemporary law enforcement. This would perhaps go some way to explaining the increased availability of CEDs to uniformed officers, the roll out “Event Driven”, in direct response to a reduction in police numbers and an increase in assaults against officers (Police Federation, 2017).

CEDs are electronic control tools designed to incapacitate people, either through pain compliance or by restricting a person’s normal bodily function. Research has shown that CEDs can bring significant operational benefit to the police service, such as a reduction in rates of injury to officers and subjects during a coercive encounter (Kaminski, 2009; Kaminski et al., 2015; Lin & Jones, 2010; MacDonald et al., 2009; Smith et al., 2007; 2009) and a reduction in the number of instances whereby officers resort to lethal force (Kaminski et al., 2009; White & Ready, 2007). But, the question remains as to whether the operational benefits will ultimately justify the wider erosion of public trust and confidence which could befall the police service if these devices are not used ethically.

When an individual police officer aims his or her weapon at a fellow citizen, and has to decide whether or not to pull the trigger, that highly contextual and emotionally charged moment carries with it a raft of wider social, cultural, political and professional factors.

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11 A “spit-hood” is a dense piece of fortified material that is placed over the head of a subject who has, or is likely to, spit at officers. When deployed it completely covers the face and head of the subject.
These relate to training, selection of personnel, tactics and choice of weapons but, above all, to a philosophy of policing and its foundations in a culture and structure of accountability. This ensures the legitimacy and acceptance of the police and its legitimate use of force. (Punch, 2011 p. 5)

It is vital that the ongoing implementation of CEDs into the British police service be handled sensitively and professionally by governing organisations. CEDs are controversial and their use has already attracted considerable criticism in many overseas policing jurisdictions analogous to our own, and some worrying trends have emerged. Not least, the overrepresentation of CED use on non-white and vulnerable citizens. Of crucial concern is the apparently discriminate nature of the problem. CEDs appear to be consistently overused on the population groups considered a minority or regarded as an otherwise vulnerable citizen of the country to which the research relates. For example, CEDs are reportedly used in a disproportionate manner on the indigenous population of Australia (Ryan, 2008); the black and Hispanic population of the USA (Gau et al., 2010), the Maori and Pacific Island population of New Zealand (Cornege, 2011) and homeless or mentally vulnerable citizens of Canada (Braidwood Commission, 2010; Oriola et al., 2010).

Despite a relative paucity of CEDs, this worrying trend also appears to have emerged in the United Kingdom (Shaw, 2015). A full critical discussion of the ethical concerns associated with CED use is provided in chapter five of this thesis, but it is also worthy of mention here because of the potentially serious consequences which could befall the UK if the incumbent risks are not effectively managed. If CED use is not handled professionally and with due diligence then it is possible that this significant change in organisational practice will do little more than promote a further shift away from consent doctrine policing. This will, in turn, promote further derision between the police and the policed and will ultimately (and perhaps inevitably) prove detrimental rather than beneficial to our society: “Police use of force is always an emotive issue and especially if it is associated with race, discrimination, lack of due care, the failure to seek alternatives or seemingly excessive violence.” (Punch, 2011, p. 73)

With these concerns in mind, it is important to empirically explore the introduction and implementation of CEDs into the British police service. Also, to critically assess the standards of initial training (see chapter eight) and robustly investigate the current trends in CED operationalisation with an emphasis on decision making and ethical use (see chapter ten).
In order to expand upon the relevant theory underpinning this current research, the wider use of force literature is considered below, as context is key. To this end, the following section will explore the origins of use of force research before affording brief consideration to the concept of lethal measures. This is followed by a more detailed exploration of the police use of less-lethal force (with a focus on CED use) and the force predictors that have been shown to influence a coercive police-citizen encounter. This overarching framework is used in the later part of this thesis to critically analyse a number of real-life CED-led encounters as described by the sample population (see chapter nine).

Use of force

Bittner (1970; 1974), is widely credited for laying the foundations for use of force studies as they exist today. In his early work Bitner categorised the very Office of Constable as “. . . nothing else than a mechanism for the distribution of situationally justified force in society” (1970, p. 39). Whilst this narrow confinement is unsuited to the current mandate of police officer omni-competence, it is indisputable that the police use of force is a key area of societal focus and concern. Such was highlighted by his early research which highlighted the difficulties faced by academics seeking to identify, correlate and quantify common predictors of police behavior (Bittner, 1970; 1974).

Whilst not expressly acknowledging Bittner’s early contributions, Sherman (1980) authored a literature review which, for the first time, organised and codified the results of quantitative research (both published and unpublished) detailing various aspects of police behavior. A field at that time, clearly lacking in academic substance, and one which he described as merely “. . . a series of bivariate assertions about the impact of certain variables on police behavior about which a moderate amount of empirical evidence has accumulated” (1980, p. 70).

Whilst the primary focus of this research was not police coercion, the use of excessive, justified and lethal force did feature in the study. More importantly, Sherman’s literature review formulated a rudimentary framework for the correlation and quantification of certain force correlates. Sherman proposed 5 “causes” which could be used for the bivariate or multivariate analysis of empirically acquired data. These correlates were categorised as “individual explanations” (such as officer age, sex or length of service), “situational explanations” (e.g. a proactive or reactive police response to call for service), “organisational explanations” (such as the way crime is prevented or reports investigated by the force), “community explanations” (such as the political landscape or the
economic area demographic) and finally, “legal explanations” such as the seriousness of the alleged offence or the availability of primary evidence at the crime scene (Sherman, 1980, p. 71-92).

Whilst novel in concept, and sound in suggested approach, Sherman’s framework in its purest form was not sufficiently scrutinised by a battery of empirical enquiry, making its true effectiveness somewhat difficult to judge. However, his research was key in that it kick-started an increased academic engagement in use of force as a standalone topic.

Bayley & Garofalo (1989) is a good example. Building upon previous research by Reiss (1996) and Friedrich (1980), this inquiry focused on 467 coercive encounters. The primary research aim was the identification of highly effective officers, but use of force habit featured strongly. The research entailed the systematic observation of police interaction by trained observers.

Bayley & Garofalo linked 3 of a possible 6 prediction variables as statistically significant force indicators. Perhaps unsurprising (but until this study unconfirmed by empirical enquiry); was the indication that encounters involving a weapon, verbal abuse conflict upon police arrival, were statistically more likely to end in coercion. The results were compelling. But, the study was small scale, involving a single police agency and a relatively small data set. This makes generalisability a problem. Also, the research failed to control for key officer demographics and the use of trained observers may have rendered the data liable to subjective misinterpretation.

Worden (1995) analysed 1,528 encounters. Using multi-nominal logit as a means of multivariate analysis, Worden classified 6 (of a possible 30) factors as statistically significant predictors of reasonable or improper force. Four of which, shared some commonality with Friedrich (1980) and Bayley & Garofalo (1989). These factors included the seriousness of the index offence, the public nature of the police / suspect encounter, the presence of other members of the public and the intoxicated state of the suspect. Despite this apparent conformity of data it is worthy of note that not a single predictor is rated as statistically significant or indeed statistically insignificant across all three agendas.

From this early research the development of a loose methodological framework for the accurate quantification of force can be seen. However, it was not until 1995 that a compendious definition was presented to the academic community. Garner et al. (1995) considered 1,585 surveys
completed by officers, and 185 interviews of suspects involved in a coercive encounter. The surveys examined relevant situational characteristics. Interviews were completed after the fact, in order to better understand the mechanics of the encounter. Garner et al., established that only 1 in 5 recorded detentions necessitated coercion. Accouterments were required in only 2% of interactions, and the most reliable predictor of police use of force was suspect use of force. Perhaps more important than the reported results was the research design. Garner et al. adopted a three measured approach to describe force used by police: physical force, maximum force and the continuum of force.

The physical force category was used to record when any level of force, including strong verbal commands was used by the officer. Although, the value of this broad approach has since been called into question by Kaminski et al. (2015). The maximum force category relates to the highest level of force used, rather than relying on the analysis of a single sub-category e.g. less-lethal measures which could include a variety of methods. The severity of force used by the officer, and/or resistance displayed by the suspect during the encounter, was also measured using the continuum as a template. Multivariate analysis of a systematic arrest sample (1585 of 1777 adult arrests which occurred over a fourteen day period in June, 1994) was completed.

The research used data from officers as well as suspects, developed and defined multiple force measures and employed effective multivariate statistical testing to identify consistent, inconsistent and consistent non-predictors of force. Not only was the research framework successfully replicated across six policing jurisdictions (Garner, Maxwell & Heraux, 2002), it was also cited by academics as a definition “... that most, if not all studies after 1995 would use ... in their assessment of this phenomenon.” (Klahm & Tillyer, 2010, p. 215).

**Lethal-force**

The Police use of lethal-force is not a primary focus of this current research. However, a general awareness of this particular research area is relevant because many of the hard “lessons learned” through the systematic dissection of lethal-force encounters, can be applied to the non-lethal arena, particularly in regards to the use of less-lethal measures such as a CED. With this in mind, the topic of firearms and deadly force is afforded succinct consideration.
Wilson declares that “... no aspect of policing elicits more passionate concern or more divided opinion than police use of lethal-force” (1975, p. 17). A bold declaration, clearly reflected by UK scholarship, which highlights state-level accountability to individual officer decisions.

One of the most important decisions the state can make is to take the life of one of its own citizens. By implication the gravest judgment a police officer may have to make – on behalf of the state, but also of society – is to kill someone by shooting him or her dead. (Punch, 2011, p. 4)

Statistical analysis of several hundred lethal-force encounters has exposed a number of commonality factors. These include suspect or officer demographics, location of the incident and the time of day (see Alpert & Dunham, 1995; Alpert & Fridell, 1992; Blumberg, 1989; Fyfe, 1988a; Geller & Karales, 1981a; 1981b; Geller & Scott, 1992). At the time of writing no consistent explanations for the link between these causal factors has been provided. A degree of academic consensus has arisen citing suspect intoxication (through drink or illegal street drugs), the suspect use of aggravated force, and the suspect attempting to escape from lawful custody as common precursors of police use of lethal-force, but again there is little plausible explanation as to why.

The desirable goal of a marked reduction in lethal-force encounters, is only exampled by North American research completed after the case of Tennessee v Garner (1985). In a landmark ruling, the Supreme Court declared that police use of lethal-force to prevent a suspect evading lawful custody was illegal unless exceptional circumstances exist (see Fyfe & Walker, 1990; Walker & Fridell, 1993). Whilst significant, these research findings are unlikely to be generalisable to the United Kingdom due to the significant variance in use of force policy and procedure between these two very different policing organisations.

Moving to the United Kingdom, Best and Quigley (2003) were commissioned by the Police Complaints Authority12 (PCA) to analyse 20 police shootings which occurred between 1998 and 2001. The research set out to identify commonality factors present in lethal-force incidents. More specifically, what situational or encounter characteristics are likely to precede a police shooting or

12 Formally the Independent Police Complaints Commission (IPCC) now the Independent Office for Police Conduct (IOPC).
have an influence on the timeframe of the first shot fired. A secondary research avenue was the investigation into the seemingly disproportionate number of black or ethnic minority victims of police shootings. From this study, some interesting arguments were presented. For example, the authors disclosed that without a clear working strategy in place or an effective command structure present at the scene, a police shooting was more likely to occur within a shorter period of time. Similar arguments were presented if officers were not provided with adequate ballistic protection or if the subject was intoxicated, suffering from a mental illness, in a public place or not properly contained.

Interestingly, the researchers could offer little more than an untested hypothesis based on institutional prejudices which would now be regarded as “unconscious biases” (see chapter five) to explain the ethnicity imbalance. They went on to declare that “. . . the disproportionate representation of non-white victims of police shootings in the PCA review (5 out of 24 or 20.8 per cent of the sample) would certainly suggest that this is a topic that requires considerable investigation.” (Best and Quigley, 2003 p. 362 emphasis added). Despite this early warning, the avenues for further research in this vital area have not yet been followed and as a result, the problem of disproportionate ethnic minority representation has filtered from the firearms arena into the Taser phenomenon, a topic discussed in detail in chapter five.

Squires and Kennison (2010) developed some of these key arguments further. Their case study analyses of a number of police involved shootings, focused heavily on the events leading to the death of Jean Charles De Menezes in Stockwell tube station in 2005. Using the controversial Operation Kratos policy which was developed by ACPO as a tactic to instantly incapacitate suspected suicide bombers, Mr. De Menezes was shot 8 times to the head at close range by two police firearms officers after he was mistakenly identified as a terrorist about to detonate a body worn explosive device. It later transpired that Mr. De Menezes was innocent. During the course of the investigations and inquests that followed this tragic event (IPCC, 2007a; 2007c) there was some debate as to whether the use of Operation Kratos, which was developed in secret by an unelected police body (ACPO now the NPCC), amounted to a “Shoot to Kill” policy and whether the “direction” to shoot given by the Designated Senior Officer (DSO) amounted to an “order” and as such removed individual accountability (and therefore discretion) from the firearms officer.
Squires and Kennison identified the importance of effective organisational oversight to both spontaneous and pre-planned firearms operations. They stressed the need for appropriate selection, training and equipping of armed officers, as well as an identifiable, well-informed chain of command making effective use of the available intelligence to better inform strategic, tactical and operational decision making. They highlight the importance of a pro-active as opposed to a re-active or “Event Driven” policing response to the management of armed operations and advocate the so-called “New Public Management” (Squires & Kennison, 2010, p. 50-51) approach, whereby the police service retains ultimate accountability for the end result of a critical incident which includes the, in-good-faith, actions and even errors of individual agents.

Punch (2011) dissected many of the same firearms incidents and made some valuable suggestions as to how the wider accountability rhetoric could be married to UK operational practice. Punch used the Dutch judicial system as a mechanism of comparison, pointing out that in Holland relevant branches of central government represented by a body of elected officials are given legislative oversight and ultimate operational accountability for the police use of firearms. This is in stark contrast to the UK approach that retains constabulary autonomy by passing responsibility of this critical area to a body of unelected senior police officers (i.e. the NPCC) with ultimate accountability still resting with the individual officer who is answerable to the courts.

The Dutch approach certainly appears compatible with the New Public Management ethos and could be a viable avenue for the UK to follow, albeit a significant shift in national policy and current working practice would be clearly be required. Punch also advocated the principal of elongating firearms incidents by containment and negotiation as opposed to pushing an early resolution. This so-called “playing it long” approach was said by Best and Quigley (2003) to be a reliable means of reducing the number of instances that police will resort to the discharge of firearms during spontaneous and pre planned operations and is a tactic that should be employed if the prevailing circumstances and risk permit.

Crucially, all three commentators cite the use of less-lethal weapons such as CEDs, as a vital means of reducing rates of firearms discharge and as a by-product, lethal-force (see Best & Quigley, 2003 p. 361; Punch, 2011, p. 85; Squires & Kennison, 2010, p. 180-181) however this position is, in itself fraught with difficulty because even less-lethal weapons have the capacity to kill or seriously injure people. For example, there have been 17 associated fatalities in this country since CEDs were
introduced in 2003 (SACMILL, 2017) and deaths caused by less-lethal weaponry have the potential to instigate negative social consequences akin to, and perhaps even indistinguishable from, a firearms related fatality.

**Less-lethal force**

The research focusing on the police use of less-lethal force is crucial to this current inquiry, particularly when the analysis relates to coercive encounters involving a CED. The use of a CED is purported to decrease rates of officer and suspect injury (Lin & Jones, 2010; MacDonald, Kaminski & Smith, 2009; 2009; Smith et al., 2007; Taylor et al., 2012) and to reduce instances of police resorting to lethal-force (Kaminski et al., 2013; White & Ready, 2007; 2010). The empirical grounding of these claims are considered at various stages throughout this thesis.

At the time of writing, the empirical research conducted by Jenkinson et al. (2006) remains the only peer reviewed article relating to the police use of less-lethal force in the United Kingdom. Due to its links to the debate around CEDs, this article is considered in-depth during chapter five. At present, the majority of research on police coercion originates from North America and focuses on non-lethal measures. Legal constraints such as those imposed by the Supreme Court in Graham v Conner (1989) demand that the level of force used must be *objectively reasonable* given the circumstances. Relevant parameters ensuring compliance with this doctrine are provided by law enforcement agencies through departmental policy often manifested by a force continuum (Terrill & Paoline, 2013). UK policy and practice differs slightly from this approach, relying more heavily on adherence to legislation and use of the National Decision Model (NDM) (see chapter four).

Lacking in the field of police use of non-lethal force, is a strict academic consensus as to the exact point when “force” has actually been “used”; particularly at the lower end of the force continuum. Terrill and Reisig (2003), posit that “force” has been “used” when a police officer threatens or elects to inflict any degree of physical harm to a suspect. A threshold which clearly places the officer as the primary instigator of a force encounter. In contrast to this narrow confinement are the parameters adopted by Williams and Westall who argue that force is used with “… any act or behavior that compelled a person into submission.” (2003, p. 471)

This definition suggests that force usage is dependent upon nothing more than a positive act of submission from the subject. If interpreted in its strictest sense, this would imply that a suspect who
raises his hands in surrender at the mere sight of an approaching police vehicle has had “force” applied on him. Such inconsistency in approach would not only account for the disparate findings across various research agendas, but would also explain why many researchers provide no concrete definition of force at all. Instead they control only for the application of some form of physical or verbal coercion as the primary force measure. The subjective nature of this methodology may well serve the individual need of each research project, but does little to further a cohesive understanding of the phenomenon in its entirety.

As discussed above, Sherman’s (1980) literature review was one of the first studies to amalgamate existing empirical evidence in order to increase scientific understanding of police behavior, including the use of force. Riksheim and Chermak (1993) took on this mantle by providing a thorough synopsis of the academic field since Sherman’s review, including specific focus (unlike Sherman) on the use of less-lethal force. Supported by these two studies, Klahm and Tillyer (2010) effectively rejected situational and organisational explanations as reliable force predictors. Instead, they preferred the now universally accepted categories of suspect, officer and encounter characteristics. The empirical evidence relating to each of these correlates as well as a number of associated sub-correlates will now be discussed.

**Suspect characteristics**

Suspect characteristics are often examined by academics researching police use of force. Demography is arguably the most commonly researched area, with particular attention paid to race / ethnic background, gender and age. Other independent variables of interest include suspect behavior during police contact, social status and the prior consumption of intoxicants. A brief summary of the research relevant to each of these factors is provided below.

**Race / ethnic background**

A growing body of empirical research has explored the connection between race and coercion, yet findings remain inconclusive. Sherman (1980) reported mixed causality, and since this time several projects have achieved similar results (Kaminski, Digiovanni & Downs, 2004; Paoline & Terrill, 2004; 2007; Terrill, Leinfelt & Kwak, 2008). Certain studies have reported that a suspect’s ethnicity had no influence on a police officer’s decision to apply force (e.g. Friedrich, 1980; McCluskey & Terrill, 2005; McCluskey, Terrill & Paoline, 2005) but these findings can be contrasted with research by Gau et al. (2010); Shaw (2010); Terrill & Mastrofski (2002) Terrill, Alpert, Dunham & Smith (2003) and Garner
et al. (2002) who all claim that Black or ethnic minority citizens are more likely to experience force than Caucasians, particularly during low-level encounters.

**Gender**

Considerable attention has been paid to gender in the force literature. The evidence suggests that male subjects are statistically more likely to have force applied to them than female counterparts (Garner et al., 2002; 2006; McCluskey & Terrill, 2005; McCluskey, Terrill & Paoline, 2005; Miller 2010; Terrill & Mastrofski, 2002; Terrill & Reisig, 2003; Terrill et al., 2003). Research by Croft (1985) and Klinger (1995) offers a plausible explanation for this. They present a solid case to argue that police generally perceive men to pose more of a threat to them than women. Only a handful of studies reported mixed or no relationship in this area (e.g. Morabito & Doerner, 1997; Engel, Sobol & Worden 2000).

**Demeanor**

Although vulnerable to subjective misinterpretation, the demeanor of a suspect as perceived by the attending officer is a relevant force predictor. Again the research findings in this area are not conclusive. Paoline & Terrill (2004); McCluskey et al. (2005); McCluskey & Terrill (2005) and Terrill & Mastofski (2002) all report that a suspect who uses foul or abusive language or displays otherwise disrespectful behavior is no more or less likely to have force applied to them than a passive suspect. On the other hand, multivariate analysis completed by Engel et al. (2000), Garner et al. (2002) and Kaminski et al. (2004) report a positive association.

**Intoxication**

Police use of lethal-force has been conclusively linked with an intoxicated recipient (Garner et al, 2002; Geller & Scott 1992; Alpert & Fridell 1992; Fyfe, 1988a; Blumberg, 1989). The association between intoxication and non-lethal measures is less concrete. Boivin & Legacé (2016); Engel (2015); Engel et al. (2000); Kavanagh (1997); McCluskey et al. (2005); McCluskey & Terrill (2005); Morabito & Socia (2015); Terrill & Mastrofski, (2002) Terrill et al. (2003) and Terrill, Leinfelt & Kwak (2008) all argue that suspects who are drug or alcohol induced, are more likely to be subject of force than those of a sober disposition. However, Crawford & Burns (1998) concluded that drug use was not related to police use of force and Morabito & Doerner (1997) reported that intoxicants had no bearing on an officer’s decision to apply a less-lethal tactic.
Mental illness

Engel (2015) declares that “One of the leading concerns among law enforcement agencies in this country is the appropriate handling of persons with mental disorders . . . [and] . . . the research community is poorly positioned to assist in the development of appropriate strategies to alleviate these well-known problems” (p. 247). The relevance of this social concern to UK law enforcement is certainly at a parity with North America, and the empirical evidence deficiency remains a sociological concern. Recent research by Morabito & Socia (2015) has taken initial steps to quantify the impact of mental illness on coercive a statistically significant predictor of injury to either subject or officer.

In recent years the UK police service has dramatically altered its approach to first point of contact encounters with mentally impaired individuals. In a revolutionary development, initial calls for service are resourced by a uniformed police officer in company with a fully trained and accredited mental health triage nurse. Where possible, the nurse will conduct initial communication with the subject, access relevant medical history and then decide on an appropriate course of action.

The intention of the street triage project was to reduce the number of persons detained in police cells under the Mental Health Act. Ensuring instead, that patients receive care at an appropriate facility such as a hospital or secure mental health institution. Recent research has suggests that this approach can reduce the annual number of custody detentions by up to 56% and result in significant financial savings for the police and health services (Cole, 2014; Keown et al., 2016). A reduction in rates of force application is also a feasible by-product; but as yet, there is little published research in this niche area. So, the true science remains to be seen.

Officer characteristics

The personal characteristics and professional background of the attending officer have been the subject of increased focus in recent years. Specific attention has been afforded to race, gender age and length of service. This study will address two of these characteristics. Race will be excluded as the research sample all self-identified as white British. Age will be excluded as the age gap between the participants is negligible.

Gender

Officer gender as it relates to the likelihood of force application during an encounter has been well researched. Academic consensus indicates that an officer’s decision to resort to force is not affected
by their gender (Paoline & Terrill, 2004; McCluskey & Terrill, 2005; McCluskey et al., 2005; Paoline & Terrill, 2007; Terrill & Mastrofski, 2002; Terrill et al., 2008). Interestingly, gender differentiation does occur when the severity of elected force is controlled for. A notable example is the study completed by Garner et al. (2002) which suggested that male officers were statistically more likely to resort to force and employ higher levels of force than their female counterparts.

Ethnicity
The majority of empirical studies indicate that no significant relationship exists between an officers’ racial or cultural background and his or her propensity to use force (Boivin & Legacé, 2016; Freidrich, 1980; Lawton, 2007; McCluskey et al., 2005; McCluskey & Terrill, 2005; Morabito & Doerner, 1997; Sherman, 1980; Terrill & Mastrofski, 2002). However, somewhat mixed results can be seen when other situational or organisational variables are introduced into the data set. For example, Sun and Payne (2004) reported that Black officers were more likely to resort to force when intervening in conflict than white officers (see also Garner et al., 1999; 2002; 2005 which reported mixed or inconclusive results in this area).

Length of service
The link between service length and force usage is unclear. For example, Paoline & Terrill (2007); and Terrill & Mastrofski (2002) report that more experienced officers were less likely to use force than those who were younger in service, but Boivin & Legacé, (2016); McCluskey et al. (2005); McCluskey & Terrill (2005) and Terrill et al. (2008) all came to a contrary conclusion, finding that more experienced officers were no more, or less likely to engage in force than less experienced colleagues.

Encounter characteristics
Research exploring the influence of certain impact factors external to the officer-suspect dynamic has increased in popularity in recent years. Common variables include the suspect use of a weapon, resistance, and the fact that the officer was effecting an arrest during the encounter. Research relevant to each of these characteristics is discussed below.

Weapons
It is perhaps unremarkable that the suspect possession, threat or use of a weapon during police contact, will dramatically increase the likelihood that the officer will elect to apply force in order to quell the situation (Boivin & Legacé, 2016; McCluskey et al., 2005; Paoline & Terrill, 2007; Terrill,
What is surprising, is the inconsistency in results when other variables are introduced. For example, in a comparative study focusing on male–female, police behaviours, Paoline & Terrill (2004) used data gathered from a quasi-experimental study on neighborhood policing tactics, to report that the presence of a weapon had no bearing on a female officer’s decision to resort to force, but the same could not be said for male counterparts. Perhaps more surprising, is the research by McCluskey & Terrill (2005) which reported that this encounter characteristic had no bearing on a force decision, regardless of gender.

**Suspect resisting arrest or engaging in conflict**

In early research, predictors such as the behavior of the suspect during the encounter, were generally overlooked (Riksheim & Chermak, 1993; Sherman, 1980). The failure to control for the unpredictable dynamic of forceful encounters did little to facilitate scientific understanding. Contemporary research has addressed this shortfall. The results unanimously indicate positive associations. Boivin & Legacé (2016); Garner *et al.* (1996); Kavanagh (1997); McCluskey & Terrill (2005); McCluskey *et al.* (2005); Paoline & Terrill (2007); Terrill *et al.* (2003) and Terrill *et al.* (2008) all confirm that suspects resisting officers, or otherwise engaging in conflict, are more likely to experience force application.

Chapter three has explored the principle of policing by consent, highlighting a cultural propensity towards the celebration and use of excessive force, that some academics claim is entrenched within the ranks of the police service. The possibility that the addition of a CED could exacerbate this situation has been raised, with a particular focus on race relations, police legitimacy and organisational accountability. The police use of lethal and less-lethal force measures has also been analysed. It is apparent from this data that a number of different factors can influence the application and severity of force used during a confrontational police – citizen encounter. What is unapparent, is a clear consensus as to the extent these influences play. Crucially, the reason why particular force factors are capable of affecting the encounter in the way that they do. Chapter nine of this thesis will help to answer some of these key questions by providing a deeper qualitative perspective to what is a predominately quantitatively researched topic area. The following chapter will address the guidance tools used by police officers to inform their operational decision making.
Chapter four

Operational decision making aides

The preceding chapter raised the argument that the hallmark principle of policing by consent has gradually eroded in recent years, and that the common addition of a CED to rank-and-file officers will only serve to further exacerbate this situation. The following chapter introduces and describes the various guidance tools, aides, technology, legislation and tactical considerations put in place by the COP to assist officers with operational decision making, particularly as it relates to the use of less-lethal force. This information is crucial because in the later stages of this thesis, qualitative reflections from the sample population are used to critically assess the extent to which technology, legislation, policy and the NDM are truly utilised in the training and operational environment.

Equipment

CEDs represent not only, a significant addition to the armoury of a general duties officer, but also a further shift away from consent-oriented policing. Albeit this altruistic concept has already been challenged by many researchers (see above), the principles enshrined within this historic doctrine could go some way to explaining why the carriage of a CED is not yet routine and is more rigidly controlled in the UK than in comparable overseas organisations (NPCC, 2016; 2016a).

Dymond declares that in order to truly understand the scientific impact of CEDs on UK law enforcement, the device must be considered in a broader sense. Not as a single entity, but rather a new piece in the use of force jigsaw: “... it is important to consider the Taser in the context of the socio-technical network that surrounds it... how this network is intertwined with other forms of policing weaponry, and their associated socio-technical networks and patternings.” (2014, p. 2)

With this position in mind, it is necessary to explore the array of equipment carried by operational officers. Whilst, the use of less-lethal weaponry other than CEDs is not a key driver of this current research, such items cannot be entirely discounted because they have a role to play in the training and operational environment. Even if the decision making process ultimately negates their use. As such, a selection of this technology is briefly discussed below.
Extendable baton

Historically, the only less-lethal weapon carried by a police officer in the UK was a small wooden truncheon. In the early 1990’s, 13 police forces took part in a series of trials assessing the operability of friction lock, side-handled batons commonly used by officers in the USA. Trials were overseen by the Home Office who reported that officers strongly preferred the extendable baton to the truncheon. Trial data disclosed that the modern baton was no more or less likely to cause serious injury than its predecessor, and that the public were generally open to the proposed change (Kock, Kemp & Rix, 1993).

In the wake of the trials, an extendable baton is now issued to every warranted officer in the UK. Common brand names include “Asp™”, “Monodnock™” and “Camlock™.” Practicality issues directed a move away from the longer rigid side-handled baton, with police forces unanimously preferring the extendable friction-lock model which can be stored discreetly in a holster on the utility belt.

Usually made from metal or a fortified plastic composite, extendable batons are intended to be drawn and subsequently extended by a sharp flick of the wrist. When the weapon is no longer needed, it is collapsed, either by a button on the base of the model, or by the operator striking the end, hard into a solid surface. The extendable baton is commonly viewed as an effective albeit rudimentary piece of equipment (Roberts, Noakes, Leadbetter & Pike, 1994).

The extendable baton is marketed, and primarily intended to be, a less-lethal impact weapon. When used, it should cause the recipient no more than low-level motor dysfunction. In the UK, authorised use is reflected by way of a “Red. Amber, Green” system. Officers are shown an outline of a person and are instructed to strike at different areas of the body depending upon the seriousness of the threat posed (Travis, 1998).

Officers are generally trained to strike soft tissue such as the side of the arms and legs (designated “Green”) which carry a low risk of permanent injury. “Yellow” areas are used if the threat is perceived to be higher and corresponding target areas are bones and joints which carry a higher risk of serious injury. “Red” areas (which include the head, neck and groin) may only be targeted in the most extreme circumstances because striking these areas has the potential to cause serious injury or death (Jenkinson et al., 2006). In some circumstances the baton may also be used to aide joint manipulation or pressure point application techniques or for general self-defence (Kock & Rix, 1996).
**Chemical spray**

Chemical sprays are stored under pressure in a small can (akin to a deodorant or hairspray) and kept in a discreet holster on the utility belt. When needed, the can is removed and pointed at the subject. On most occasions a warning is given before a button on the top of the can is pressed and the spray is emitted. Chemical spray is designed to be administered into the eyes causing them to close. It also causes temporary pain and severe irritation to the eyes, mouth and nasal passages.\(^{13}\) The intended result of deployment is for the subject to stop resisting so that they can be safely apprehended (MacDonald, Kaminski & Smith, 2009; Morabito & Doerner, 1997).

There are many different varieties of chemical spray\(^{14}\) all of which contain different active ingredients, affect the subject in different ways and are decontaminated by various methods (Rappert, 2007). Chemical spray was first tested in the UK in March 1996. The trial took place over a 6 month period involving 16 police forces and 3,818 police officers and explored the value of this technology as a less-lethal alternative to the extendable baton, or empty handed tactics. During the trial period chemical spray was drawn and used 726 times and was drawn but not used 381 times. The desired result was generally achieved within 5 seconds and was effective 90% of the time. It was perceived by officers to be a safe and effective tool, often deterring a non-compliant subject without recourse to deployment (Kock & Rix, 1996). In the wake of a successful trial period, (and in parity with the extendable baton) a derivative of chemical spray is now mandatorily carried by every warranted officer (Rogers & Johnson, 1999; Morabito & Doerner, 1997).

Common critique of chemical agents is overspray and secondary exposure (Kock & Rix 1996; Rappert 2007). More importantly, the use of chemical spray has been linked to a number of deaths, both nationally (Granfield, Onnen & Petty, 1994) and internationally (American Civil Liberties Union [ACLU], 1995); however in a later, more comprehensive study, the IPCC investigated 333 in-custody deaths between 1998-2009 but could not conclusively link the use of chemical spray as the sole cause of death (IPCC, 2010).

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\(^{13}\) The organisation subject of this research has elected to issue all officers with a chemical spray known as *Captor™*. Which is a 50ml pressurised canister containing ethanol and water as well 0.3% *Nonivamide* which is an irritant akin to an extreme concentration of chili peppers. Captor is designed to cause localised pain and discomfort and forces the subject’s eyes to close temporarily.

\(^{14}\) For example, *CS™, CN™, OC™, PAVA™, Captor™*
Handcuffs

Handcuffs are perhaps the most symbolic item of police equipment. Early models were made from iron and were chain linked with the shackles fabricated in a “D” shaped pattern. In 1992 most UK forces provided officers with a more contemporary form of rigid handcuffs. This advancement in technology afforded officers the ability to control a resistant suspect through the use of pain measures (such as the “push-pull” technique) or controlled take-downs with one or both wrists restrained (Rogers, 1998).

Rigid handcuffs have been associated with serious injuries (Chariot, Ragot, Authier, Questrel & Diamant-Berger, 2001; Ball, Ferran & Barton, 2008) but are still commonly used. Certain UK forces have rejected rigid handcuffs, preferring instead the rotational chain-link design made by Chubb™ or Asp™. On the positive side, chain link models offer a lower injury potential, as they are not intended to be used during takedown techniques or for pain compliance. On the negative side the lack of rigidity takes away a valuable coercive compliance contingency.

Body worn video cameras

The introduction of Body Worn Video Cameras (BWVCs) to police officers is a significant technological advancement (Lum et al., 2015). BWVCs vary in design, durability reliability and technical specification (Sykes, 2014). The organisation subject of this research has issued a Reveal RS2-X2™ to every uniformed officer. The unit is black in colour and smaller than the average smart phone. It is carried overtly, clipped to the shoulder connector of the officer’s body armour. The unit is easily activated by a single button and when recording, it emits a red light, serving as notification. The device records both visually and audibly. Data is stored initially on the device itself, but can be downloaded to a secure storage system for evidential or developmental use. It is expected that the unit be carried at all times and deployed either at the officer’s discretion, or, as mandated by organisational policy.

Given the relative infancy of BWVC technology, it is interesting to note a steady advancement in empirical scholarship. Ariel, Farrar and Sutherland (2015) for example, explored the effect of BWVC deployment on use of force and citizen complaint figures. The study took place over a 12 month period and involved frontline officers. Using the 12 hour shift as the primary unit of analysis, the study assigned officers either a “treatment shift” where they were required to wear a BWVC or a “control shift” where they were not. Data analysis disclosed that officers who use BWVC, are less
likely to use force, and less likely, to be subject of a complaint, than those who do not (Ariel et al., 2015). Other operational benefits may include a decrease in citizen complaints, instances of excessive force and assaults against police, as well as an increase in positive court outcomes during criminal proceedings (see Ariel et al., 2016a; 2016b; 2016c; Ariel et al., 2017; Ellis et al., 2015; Grossmith et al., 2015; Jennings, Lynch & Fridell, 2015; Katz et al., 2015; Owens, et al., 2014).

**Legislation**

Officers are further guided in their force decision making by both British and European legislation. A selection of the most relevant statutory authorities will now be discussed.


**Article 2 - Right to life:** Everyone’s right to life shall be protected by law. No one shall be deprived of his life intentionally save in the execution of a sentence of a court following his conviction of a crime for which this penalty is provided by law.

The UK does not ascribe to capital punishment. So the Convention provides a caveat to protect citizens who take life in limited circumstance, such as self-defence or legitimate law enforcement activity. Article 2 also places a positive obligation on member states to protect life where possible, and to investigate or intervene if life is lost, or taken unlawfully.

**Article 3 - Prohibition of torture:** No one shall be subjected to torture or to inhuman or degrading treatment or punishment.

This provision is especially relevant to an STO. Unethical CED use could clearly constitute an Article 3 breach. During a 5 second cycle, the recipient is caused significant pain and suffering. When the cycle is finished the barbs remain attached, and can be re-activated at the behest of the operator by a simple push of a button. Likewise, if the operator unnecessarily maintains pressure on the trigger, the cycle will continue indefinitely. The drive-stun technique could also be used for the application of warrantless pain. The power wielded by an STO, must be supervised at state and local level. CED deployments should be scrutinised and inappropriate use must be identified, challenged and remedied. Article 3 provides a control mechanism, to ensure requisite ethical compliance (European Convention on Human Rights [ECHR], 2010).
Criminal Law Act (1967)

S.3 (1) Use of force during arrest: 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.

This provision is relied upon heavily by police officers, albeit the provisions may also be used by civilians. The two key elements which ensure legally defensible actions is this use of reasonable force to prevent crime or effect an arrest. This legislation ensures that an STO deploying Taser on a person threatening to harm another with a knife is justified in doing so (British Self Defence Governing Body [BSDGB], 2016a).

Common law

“It is both good law and good sense that a man who is attacked may defend himself. It is both good law and good sense that he may do, but only do, what is reasonably necessary.” (Archibold 19-41).

The common law comprises hundreds of years of judicial precedent, which have evolved to become binding legislation. Often in lieu of statutory governance. The common law system is incredibly complex, particularly as it relates to the use of force in self-defence. However, from this body of law the right to defend yourself, another, or, your property from attack, has evolved. This power is open to police officers and civilians, provided the force used was objectively reasonable given the circumstances (BSDGB, 2016b).

Criminal Justice and Immigration Act (1988)

S.76 CJIA (1988) - Reasonable force for purpose of self-defence. This section can be read as a juristic continuation of the existing self-defence provisions. This piece of legislation clarifies and develops certain aspects of the defence, specifically concerning the mens rea (guilty mind) of the defendant. S.76 CJIA makes clear that a person is entitled to rely on the law of self-defence if he honestly believed that use of force was necessary and the level of force reasonable in the circumstances. This defence remains even if this belief later turns out to be mistaken. This statue also provides a degree of flexibility in application if the force used was objectively viewed as excessive, after the fact. As long as the defendant can show an honestly held belief that the force he used was proportionate at the time of the offence then he is entitled to protection under the self-defence doctrine. Unlike PACE, the CJIA is
not exclusive to police officers, so the legal protections it affords can be relied upon by anyone. (The National Archives, 2011)

**Police and Criminal Evidence Act (1984)**

**Section 117 PACE (1984) - The power of a constable to use reasonable force:** *Where any provision of this Act (a) Confers a power on a constable; and (b) Does not provide that the power may only be exercised with the consent of some person, other than a police officer, the officer may use reasonable force, if necessary, in the exercise of the power.*

S117 PACE (1984) is a concise, yet powerful piece of legislation that permits a police officer, to use reasonable force in the exercise of a lawful power, such as securing the arrest of a suspected offender (The National Archives, 2011b).

**Mental Health Act (1983)**

**S136 Mental Health Act (1983) - Mentally disordered persons found in public places:** *If a constable finds in a place to which the public have access a person who appears to him to be suffering from mental disorder and to be in immediate need of care or control, the constable may, if he thinks it necessary to do so in the interests of that person or for the protection of other persons, remove that person to a place of safety.*

S.136 gives a police officer the power to remove to a place of safety, any person who is in a public place, appears to be suffering from a mental disorder and is in immediate need of care and control. The officer may if necessary use reasonable force to execute this power (The National Archives, 2011c).

**Force continua**

Use of force continua are visual teaching aides which depict and exemplify the recommended police response the various levels of resistance displayed by a non-compliant subject. The most common models are linear in design, depicting force escalation or de-escalation as rungs on a ladder or a flight of steps. Other examples, include various tactical options displayed in a modified linear design, a matrix or a wheel configuration. Despite sharing similar characteristics, no single model or design is in common use (GAO, 2005; Terrill & Paoline, 2012; Thomas et al., 2010)
Continua will usually begin with an officer’s presence, or a strong verbal command. As resistance gradually increases, or decreases in gravity, so too will the officer’s expected level of response. For example, if an officer is faced with aggravated resistance, they may use chemical spray to control the subject. If a weapon is presented, the continua may suggest presentation or use of a Taser. If the officer is faced with a potentially lethal weapon then the continua may warrant the use of a firearm (Millar, 2010).

Use of force continua are designed to provide an auditable framework for independent or departmental scrutiny of a forceful encounter, due to the rebuttable presumption that an officer who has followed the continuum has used proportional force (Terrill, 2005). Regardless of form, all continua are designed to provide training and guidance to officers on the appropriate level of force to employ, depending on the situation they are trying to resolve (Alpert & Dunham, 1997; Sykes & Brent, 1980; Terrill, 2001; 2003; 2005 Terrill et al., 2003).

The position of CEDs on the force continua has been the subject of recent academic debate due to reports of alarming policy variance. Some jurisdictions (particularly those in North America) authorise CED use at a low-level on the continuum (i.e. on a passively resisting subject) and others place them at the penultimate stage, second only to lethal-force.

Thomas et al., (2010) considered the placement of CEDs on the Use of force continuum; albeit as part of a wider research agenda. One hundred municipal police forces in the United States were surveyed. Respondents were asked to reflect their official CED policy using a simplistic 1 – 10 scale; 1 being no resistance at all and 10 being the use of lethal-force. The survey results indicated that 61% of police departments place CEDs between 5 and 7 on a standard continuum, effectively permitting use on nothing below an actively resisting subject.

Whilst these results are notable due to contrast with other empirical enquiries which point to a degree of institutional inconsistency in this area (e.g. Adams & Jennison, 2007; Alpert & Dunham, 2010; Amnesty International, 2004; GAO, 2005) the research is not without methodological shortfall. For example, the surveys were not sent to smaller, regional or federal jurisdictions so representativeness is a problem. The scale itself contained little explanatory guidance and was weighted heavily towards the midscale response as this was the only option available other than an officer’s presence or use of lethal-force. It also relied on the subjective interpretation of the person.
completing it. Moreover, this particular research question took little account of the widespread variances in force continua configuration such as matrices, wheel-based designs or even models of reflective practice such as the NDM. The authors themselves also make the valid point that certain departments may have been politically overly-cautious in their responses and may have based their replies on estimated as opposed to official statistics (ibid, p. 305).

Millar (2010) focused on the effect of an organisational policy change repositioning authorised CED use from a passive, to a resistive subject. In a simplistic pre-post design, quantitative data was collected from a total of 890 force incidents. Pretest data from the 12 months immediately before the policy change, and posttest data from the 12 months immediately after the policy change were compared.

The findings were in some ways predictable, but in other ways more surprising. Indicative of the officers strict adherence to departmental policy, was a marked reduction in Taser use in the year after the policy change. Perhaps less predictable (and contrary to the popular opinion of the surveyed officers) was the finding of no significant difference in the frequency or severity of injury to suspects, and no difference in the frequency of injury to officers since the implementation. Womack, Morris and Bishop (2016) and Alpert and Dunham (2010) reported similar results.

From this literature an arguable case in support of the consistent positioning of CED’s at an intermediate stage of the force continua (i.e. used on nothing lower than an “actively resisting” suspect) can be made. This stance is supported by academics such as Kleinig (2007); Oriola et al. (2012) and Sprague (2007) but rejected in the UK by Jenkinson et al. (2006) who campaign for an even more conservative approach.

The National Decision Model

The National Decision Model (NDM) is a pentagonal model of reflective practice but offers 6 key phases. It is unique to the police service and distinguishable from other models due to the centrality of the Code of Ethics which is incorporable to each and every cycle. The Code of Ethics was introduced by the NPCC to further professionalise the police service. It is based on the Core Principles of Public Life devised in 1995 by the Committee on Standards in Public Life. These principles (Accountability, Fairness, Honesty, Integrity, Leadership, Objectivity, Openness, Respect and Selflessness) have been amalgamated alongside the standards of professional behavior
(Honesty, Integrity, Authority, Equality, Diversity, Use of Force, Orders and Instructions, Duties and Responsibilities, Confidentiality and Fitness for work) into the Code of Ethics. A one-encompassing step, linked intrinsically to each phase of the NDM, and intended to sit at the core of every decision (COP, 2014).

The NDM is designed to flow in a clockwise direction beginning with Step one, which is naturally positioned at the top center of the model. Step one is the **Information and Intelligence** phase, where the decision maker is expected to define the current situation, establish the existing state of knowledge and identify key deficiencies.

Step two, is the **Threat / Risk Assessment and Working Strategy** phase. The user is expected to weigh the threat and risk against the potential reward, crucially assessing whether immediate action is needed and whether the current risk is tolerable.

**Figure 4.1. The National Decision Model**
Step three, is the **Powers and Policy** phase, where the practitioner considers the legal framework within which he is working. Actions must be legal, proportionate, justifiable and necessary given the prevailing circumstances.

Step four, is the **Options and Contingencies** phase. Preferred and alternative methods of resolving the situation are considered, depending upon certain impact factors such as available resources, immediacy of threat and the impact of the proposed action on the community.

Step five, is the final stage of the NDM. The **Action and Review** phase where the police take action then reflect upon it after the fact, in order to establish if the correct decisions were made and correct actions taken.

The NDM is cyclic in nature. It is not intended as a single use tool. Rather a dynamic entity which may be returned to and re-assessed at any time if for example, further information and intelligence is received which alters the level of risk. Argyris & Schön (1974) refer to this process as a “Double Loop” learning model which comprises either “Reflection on action” or “Reflection in action”. Reflection “on action” logically takes place at step 5 of the NDM when the incident has concluded. If things could have been done differently these are discussed during either an immediate (“hot”) or more formal de-brief (COP, 2013a). This process allows practitioners the time, space and emotional freedom to critically reflect upon performance without the added pressure of being in the “there and then.” During for example a critical incident the NDM may be revisited on numerous occasions, a process colloquially referred to by police officers as “Spinning the Wheel” but explained more concisely by Argyris and Schön (1974) as “reflection in action” i.e. a process of regular and continuous critical review occurring during the natural course of a more protracted incident.

General awareness of the NDM has been heavily promoted recently, through PowerPoint™ presentations, electronic learning packages and national fortification by some of the country’s most senior police officers (NPCC, 2015a). It is now expected that every police officer and staff member will embed the NDM and use it as their primary decision making aide. Depending on the situation, practitioners may be expected to record their decision in writing, using the NDM as a template. This provides an auditable framework to systematically articulate decision making. Officers are encouraged to commit the NDM to memory so that the model can be used when writing a statement, completing a use of force form or giving evidence at court.
A good working knowledge of the NDM is vital to the role of a prospective STO. Candidates are required to have a good working awareness of the model prior to attending CED training and this knowledge is formally tested as part of the written examination. Notwithstanding its importance, no empirical research has addressed the true operational benefit of the NDM, nor has a single project explored how it is used by practitioners. A knowledge gap that is addressed in chapter ten of this thesis.

Deployment and command

Whilst warranted police officers are afforded a certain level of operational autonomy and discretion, a number of institutional and policy driven factors are capable of informing their decision making, particularly when it comes to the coercive function. These factors can include but are not restricted to, the manner in which officers are deployed to calls for service and the existence or implementation of a formal chain of command when they arrive on scene.

Although there is a degree of centralised guidance from governing organisations, it is ultimately left to individual Chief Constables to decide how to grade and manage calls for service within their own organisation. At the time of writing, telephone contact from the public to Westshire Constabulary is facilitated by the Police Contact Centre (PCC). If the call is made via the 999\(^{15}\) emergency number it will be triaged by an independent operator who will route the call to the appropriate emergency service (i.e. fire, ambulance police). If the police are requested, the call will be taken by a call handler based in the PCC at Westshire Headquarters. That person will generate a Computer Aided Dispatch (CAD) report. Although software, format and terminology may differ, the CAD system is fairly typical and broadly representative of the country.

Each CAD contains a unique reference number, as well as basic details of the call for service. It will be given a response grading depending on the urgency of the situation and the readiness with which it can be resolved. The grading decision is made by the call taker and is based on policy guidelines and also, professional judgement. When graded, the CAD is passed electronically to police radio operators, (dispatchers) who are responsible for prioritising and resourcing the call. Table 4.2. (below) depicts the current resource and grading policy of Westshire Constabulary.

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\(^{15}\) Equivalent to 911 in the USA or 000 in Australia.
Table 4.2. Deployment policy of Westshire Constabulary.

<table>
<thead>
<tr>
<th>Incident Grade</th>
<th>Expected response time</th>
<th>Expected resource</th>
<th>Expected method of resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1 – Emergency response</td>
<td>Within 15 minutes of first notification</td>
<td>Uniformed Police Officer (NRT)</td>
<td>In person Police officer response</td>
</tr>
<tr>
<td>Grade 2 – Prompt response</td>
<td>Within 1 hour of first notification</td>
<td>Uniformed Police Officer (NRT)</td>
<td>In person Police officer response</td>
</tr>
<tr>
<td>Grade 3 – Planned response</td>
<td>Within 72 hours of first notification</td>
<td>Police officer or police staff</td>
<td>Pre-arranged telephone response</td>
</tr>
<tr>
<td>Grade 4 – Resolved contact</td>
<td>No response required. Call resolved at source</td>
<td>Police staff (call handler or radio operator)</td>
<td>Spontaneous resolution at point of initial contact.</td>
</tr>
</tbody>
</table>

A Grade 1 emergency will receive an immediate response. Westshire Constabulary endeavours to attend a Grade 1 within 15 minutes of it being received, failing that officers will arrive as soon as possible. A Grade 2 call (requiring a prompt but not immediate response) will be resourced within 1 hour. The response to Grade 1 and 2 calls is the primary remit of NRT. Grade 3 or Grade 4 calls will be finalised by planned appointment or resolved at source. NRT will be notified of the need to respond to a call by radio operators or by accessing the CAD system personally. If a Grade 1 response is required NRT will usually attend in a marked police vehicle using blue lights and sirens however, this will be at the discretion of the police driver. Having arrived on scene the officer(s) will be expected to provide and appropriate initial response to the situation. Whilst officers are proceeding to, or present at, a scene they operate under a command structure which may, to some extent, inform their decision making during the incident. The chain of command becomes increasingly relevant if the call for service is designated a “Critical Incident”.

A “Critical Incident” is defined as: “Any incident where the effectiveness of the police response is likely to have a significant impact on the confidence of the victim, the family and / or the community” (COP, 2013a p. 1). Such incidents could range from a serious criminal offence such as rape or murder, a suicidal missing person, a fatal Road Traffic Collision (RTC) a death or serious injury after police contact, a large scale public event, a serious case of hate crime / anti-social behavior or an outbreak of widespread public disorder.
In order to effectively manage critical incidents, the police service will often have a pre-set hierarchy in place based on the Gold, Silver and Bronze command structure. This model may apply to various critical incidents but is particularly prevalent in pre-planned large-scale public order events such as protests, carnivals or street festivals, premiership football matches, or planned firearms operations. The Gold Commander is usually an officer of the rank of Superintendent or above. This person has ultimate responsibility for the policing operation, is in overall strategic command and will set the overarching strategic parameters within which the deployed officers are expected to work. A Gold may well take advice from a Tactical Advisor when formulating this strategy. The Silver Commander could be an Inspector or Chief Inspector who will work under the supervision of the Gold Commander and will be responsible for setting and implementing the tactical parameters required to fulfill the strategy set by Gold. The Bronze Commander could be an officer of PS rank (or PC rank in a Team Leader capacity) and this person will be responsible for executing the tactical plan on the ground. The Bronze role is also known as the Operational Commander (COP, 2013a).

Prior to the policing operation, officers may be gathered together for a formal NDM structured briefing delivered by one of the incident commanders. Officers may be provided with information and intelligence relevant to the event as well as the associated risks. They will be informed of the strategic intention of the operation, advised of relevant legislation powers and policy and informed about any contingencies that have been put in place. The benefits of a formal command structure to help inform effective operational decision making have been well publicised in recent times. It has been suggested that when firearms officers are appropriately briefed and operating under a set command structure they are less likely to resort to lethal-force quickly and less likely to make an erroneous judgement decision (Best & Quigley, 2003; Punch, 2011; Squires & Kennison, 2010).

The existence of a formal chain of command supported by a robust and auditable strategy which has been effectively communicated to operational officers is also a further manifestation of the developing New Public Management theory, whereby individual officers can be somewhat shielded from errors made in good faith during the course of a policing operation. In these circumstances, accountability will, in-theory, rest with the organisation as opposed to the individual. The necessity for this revised approach was dramatically brought to bear during the trial of a police firearms officer who was charged with murder after he mistakenly shot dead an unarmed man in Hastings in 1998 and given worldwide prominence in the aftermath of the erroneous police shooting of an unarmed and innocent man in Stockwell Tube station in 2005 (Punch, 2011; Squires & Kennison, 2010).
The above chapter has explored the concept of police decision making which is both dynamic and multi-faceted in nature, particularly when it comes to the use of force. It clear that a number of different approaches may be used to execute this core function either in isolation or in combination with one another. The process that is ultimately selected appears to be largely dependent upon the subjective policy priorities of individual law enforcement agencies. From the various mechanisms and strategies in common existence no clear framework has emerged as comprehensively effective. This thesis will use first hand qualitative information to investigate the true operational effectiveness of the NDM and will also explore the premise that good use could be made of a national continuum for use alongside this model (see chapter nine). The following chapter critically examines the police use of Conducted Energy Devices with a focus on medical implications, ethical use and overall operational effectiveness.
Chapter five

The police use of Conducted Energy Devices

The preceding chapter has explored police decision making aides. The following chapter provides an in-depth discussion of the police use of CED’s, beginning in the United Kingdom where the corpus of empirical research is limited. Medical and ethical concerns are then considered, as is the juxtaposed sociological position of CED’s in society as effective police accoutrements on the one hand, or instruments of death on the other. The academic literature relevant to each specific area is paramount if we are to effectively assess the adequacy of CED training and operational use.

CED use in the United Kingdom

In the early stages of CED availability, a small number of articles discussing the device can be found (e.g. Herbert, 2003; Mason, 2004; Williams, 2005). However, this literature was published in professional journals and written for the benefit of practitioners not academics. Such articles contained little or no research of empirical substance and were subject to peer review (Dymond & Rappert, 2014).

In the years that followed, academics began to pay passing scientific attention to the topic of CED’s (e.g. Burrows, 2007; Glass, 2007; Neyroud, 2007; Rappert, 2007; Waldren, 2007) and some specifically championed these devices as pivotal to their argument (e.g. Kleinig, 2007; Sprague, 2007). From these articles the relative paucity of peer reviewed literature relating to Taser was made evident, and numerous authors expressed the urgent need for further UK specific research (e.g. Neyroud, 2007).

More recently, Dymond & Rappert (2014) provided a valuable insight into the evolution of CEDs in the UK, highlighting missed opportunity for social research in the conceptual years, and disclosing several relevant knowledge gaps such as medical, scientific and technical device aspects.

Dymond (2014) then made a further valuable academic provision, suggesting that a truly independent assessment of the sociological impact of CEDs could not be effectively made because researchers will invariably approach the phenomenon from a dichotomised “for” or “against” approach. A valid observation she eloquently describes as a significant ‘flaw’ in the overarching debate.
In addition, Dymond directly addressed the difficulties faced by academics seeking to fully understand this key emerging issue and in-so-doing, confirmed the urgent need for this current research:

. . . if we conceive of Taser in a broad sense – as a socio-technical system, not simply as a discrete, physical object – then understanding not just the device but the guidelines and training around it is clearly crucial. Although UK national guidelines for the use of Taser are publicly available, there have been no peer reviewed studies assessing their content and, similarly, little attention has been paid to training given to police officers, which is more restricted. (2014, p. 3)

Dymond (2014a) suggested that the quality of Taser related literature could be reliably enhanced by the application of social theory such as Actor Network. In a novel approach, she suggests that Taser should be considered as an entity in its own right; as should the operator, suspect and characteristics which influence a Taser related encounter. This reflexive approach adds value to the existing literature. It also offers an alternative sociological perspective, which will likely act in future furtherance of research agendas intrinsic to the area.

In the only empirical study in the UK to date, Jenkinson et al. (2006) compared the injury risk when Taser is deployed in comparison to other less-lethal measures. Data from departmental use of force forms was gathered over a 12 month period. The information was compared with 2050 instances of Taser deployment over a 3 year period in the USA. The results showed that officers were more likely to be injured deploying a chemical spray (+ 12.6%) or a baton (+ 23.7%) than they would be if they used a Taser. Suspects were also less likely to be injured during a forceful encounter involving a Taser when compared with CS™ spray (- 20.5%) or a baton (- 46.1%).

The conclusions support Taser use and the ongoing proliferation appears directly attributable. However, the inquiry is not without limitation. Firstly, the comparative data was extracted from incompatible subject populations. Secondly, the use of force forms may have been subject to responder recall bias. And finally, key data was extracted from the Taser International database, which Jenkinson et al. confirm “. . . was extremely vulnerable to responder bias. . .” (2006, p. 237). Notwithstanding the significance of this research, the Taser phenomenon has progressed exponentially since 2006, yet the academic community has failed to maintain pace. One of the key
research recommendations, a suggested alteration of the position of CEDs on the use of force continuum (see Figure 6, p. 239) is now effectively obsolete given the introduction of the NDM, and we have lost the opportunity to assess, through empirical enquiry not only, the philosophical effect of this major transition but also, the sociological impact of providing CEDs to non-specialist officers.

The lack of scientific research is an ongoing risk. The result is an organisational overreliance on limited, grey or biased material upon which policy and practice is shaped. A danger Dymond & Rappert highlighted as a significant public safety concern: “Missing data - or ‘undone science’ - have consequences. One consequence is that it leads to claims about safety that, irrespective of their ‘accuracy’ (if such determinations can even be reached) are outright discounted by some and vulnerable to challenge by many” (2014, p. 6).

This risk is exemplified by recent comments from Commander Neil Basu (the National Less-Lethal Weapons Group lead) who defended the use of CEDs in the UK: “All options carry some form of risk. Taser is a less-lethal weapon. It poses significantly less risk than other tactical options used by the police such as metal batons, police dogs and CS spray” (Travis, 2014, para. 5). This declaration can only originate from research which is dated, open to challenge and published prior to significant events such as the implementation of the NDM, or the introduction of CEDs to non-specialist officers. If astute claims of safety are made by senior police commanders, then surely they should be evidence-based and reliant on sound contemporary research? This does not appear to be the case here.

**Medical implications**

The medical profession was one of the first to publish Taser-specific material (e.g. Bleetman & Steyn, 2003; Bleetman, Steyn & Lee, 2004). Although these articles were written by medical practitioners, for the benefit of medical practitioners, many of the concerns they raise are now reflected by official training, policy and guidance manuals (see DOMILL, 2004; 2005; 2007; 2012; NPCC, 2016; SACMILL, 2017).

Table 5.1. below, provides an empirical snapshot of the relevant research. Whilst, a comprehensive review of every potential medical, scientific, psychological and pathophysiological risk associated with Taser use, is beyond the scope of this thesis, the studies most relevant to Taser training and operationalisation are addressed by the following section.
Bozeman et al. (2009) and White et al. (2014) share concern that the electric current produced by the Taser could adversely affect normal heart function, particularly if the electrical current were to pass directly over this sensitive area. The worst case scenario was hypothesised to be death by heart attack. A risk reportedly heightened, if the subject was under the influence of alcohol or drugs had a pre-existing heart condition, was a child, an adult of small stature, pregnant or had been fitted with a pacemaker (IPCC, 2010; Williams, 2008). For further discussion in this area see Ideker & Dosdall (2007) and McDaniel et al. (2005).

DOMILL (2004) also addressed specific concern that the Taser may cause unintended cardiac events to subjects with pre-existing heart conditions, or those under the influence of intoxicants. DOMILL confirmed that the prior use of illegal street drugs could significantly increase the risk of an adverse cardiac event following Taser use and recommended officers remain constantly cognisant. DOMILL also considered other risks factors but maintained, “The risk of life threatening or serious injuries from the M26 Taser is very low.” (2004, p. 32)

Following a technological upgrade from the Taser M26 to the X26, DOMILL (2005) again explored the risk of adverse cardiac reaction by exposing Taser to the beating hearts of live animals. It also addressed other medical concerns raised but not conclusively addressed during the 2004 phase of testing. DOMILL eventually reported it “... unlikely that the electrical discharge from the M26 and X26 Taser devices will influence cardiac rhythmicity by a direct action on the heart of healthy individuals.” And concluded, “The risk of a life threatening event arising from the direct interaction of the currents of the X26 Taser with the heart is less than the already low risk of such an event from the M26 Advanced Taser.” (2005, p. 27-28)

DOMILL (2012) assessed the effects of Taser on vulnerable persons and for the first time, included research on human volunteers. The risk of head injuries caused by Taser induced falls was highlighted, as was soft tissue injury caused by probe penetration and musculoskeletal injury caused as a natural consequence of NMI. The 2012 report even passed comment on 337 Taser associated deaths in the USA and 2 in the UK. Despite a number of recommendations, DOMILL concluded that operational risk of serious of serious injury caused by a CED was tolerable provided the stringent training guidelines were followed.
Table 5.1. The medical implications of Taser deployment

<table>
<thead>
<tr>
<th>Genre of Journal / Article</th>
<th>Author(s) / Date</th>
<th>Injury / Medical Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>Alpert &amp; Dunham (2010); Bleetman &amp; Steyn (2003); Bleetman et al. (2004); Gall &amp; Payne-James (2016); Jenkinson et al. (2006); Terril &amp; Paoline (2011).</td>
<td>General medical concerns and comparative injury rates</td>
</tr>
<tr>
<td>Medical</td>
<td>Becour (2013); Jenkinson et al. (2006); Nislow (2005);</td>
<td>Subject falling heavily to the ground post-deployment</td>
</tr>
<tr>
<td>Medical</td>
<td>Bozeman et al. (2009); White et al. (2014); Ideker &amp; Dosdall (2007); McDaniel et al. (2005).</td>
<td>Subject experiencing cardiovascular issues post-deployment</td>
</tr>
<tr>
<td>Medical</td>
<td>Williams (2008); IPCC (2010)</td>
<td>The heightened risk of sudden in custody death / death after police contact</td>
</tr>
<tr>
<td>Medical</td>
<td>White et al. (2014)</td>
<td>Impairment of cognitive functioning</td>
</tr>
<tr>
<td>Psychological</td>
<td>Kunz et al. (2012); Jauchem (2011)</td>
<td>Subject experiencing pathophysiological complications post-deployment</td>
</tr>
<tr>
<td>Scientific</td>
<td>Clarke &amp; Andrews (2014); Donnelly (2001)</td>
<td>Ignition of proximate flammable liquid</td>
</tr>
</tbody>
</table>

SACMILL (2017) assessed the medical implications of a further technological upgrade from the Taser X26 to the X2. After a battery of comprehensive medical tests SACMILL were “...broadly satisfied by the evidence it has examined, and is of the view that the medical implication of the Taser X2 system – when used by trained operators in accordance with UK policy and guidance – would be in line with those expected for a less-lethal system of this type” (2017, p. 1). In the light of such statements it is vital that the critical review of CED training is conducted because the training guidelines provide clear benchmarking for the ongoing safe operational use of CEDs:

Most areas of high liability for police rely on a training component to ensure that officers are indoctrinated in the proper application of policy. Limited research has been done to assess
the effectiveness of training in achieving the desired outcomes in these areas. . . . By identifying variables that influence officer and suspect behavior in incidents common themes or characteristics could be identified. These themes could be incorporated in training programs to provide instruction that would allow officers to make better decisions related to use of force (Millar, 2010, p. 127-128).

Continuing the medical debate, Clarke and Andrews (2014) conducted a number of field experiments which tested the use of Taser around flammable liquids. Working predominantly for the benefit of the Fire and Rescue Services, they demonstrated how easily the sparks from Taser probes will ignite petrol, gas and other flammable liquids, potentially causing serious injury to both the subject and operator. Notwithstanding the fact that Clarke & Andrews did not focus on the ignitability of different brands of Chemical Spray commonly used by police forces (for this concern see Donnelly, 2001) their research was undoubtedly an informative and impactful addition to the topic area.

White, Ready, Kane and Dario (2014) conducted a pilot study testing the after-effects of Taser use on the cognitive functioning of 21 police recruits. The overarching aim of the research was to establish the extent to which a 5 second Taser exposure could impair an individual’s ability to comprehend basic legal principles; specifically the recusal of Miranda rights (i.e. the right to remain silent or to have a Lawyer present during questioning).

Participants were asked to undertake three memory, concentration and assimilation tests. The first test was conducted 3-4 hours before CED exposure, the second test was conducted immediately after Taser exposure, and the final test was conducted 24 hours later. The test results indicated that Taser recipients experienced significant reductions in both cognitive function and mental performance immediately after exposure, but these were short term and did not present 24 hours later. The interim results of this appeared to indicate that CED exposure could potentially cause a subject to experience a temporary lack of cognitive understanding which could lead to the inappropriate waiving of fundamental legal rights.

Although the results of this pilot study bring to bear a number of important legal and moral concerns which are warranting of further empirical enquiry, the research project was relatively small in scale and lacked a comparison sample. Thus generalisability is an issue. In addition, the researchers did not specifically test participant’s understanding of basic legal concepts, which was the justification
for the study and the sample were presumably young, sober, reasonably intelligent, healthy adults of good character (or they would not have been successfully recruited into the police service) so were not representative of the population group the researchers were seeking to protect.

Bui, Sourkes and Wennberg (2017) reported on the results of a case study whereby a police officer was inadvertently shot in the back of the head with a single CED dart by his colleague during the course of a foot pursuit. This incident caused the onset of a condition known as Generalised Tonic-Clonic Seizure which resulted in the patient falling unconscious, foaming at the mouth, fitting, and later experiencing severe head pain as well as short term memory loss. The patient was young and in good health, he was not on medication and had no relevant prior medical history. This incident clearly shows the importance of safe weapon handling and selecting an appropriate point of aim when firing a CED.

Furthering the topic of medical concern, an interesting academic debate has arisen about the correct recording of suspect injury following Taser discharge. There are two schools of thought here. One side suggests that the puncture wound injuries caused by the Taser probes should be recorded as an injury (see Terrill & Paoline, 2012; Macdonald et al., 2009; Taylor & Woods, 2010). The other side counters that barb penetration is a natural consequence of Taser use so should not be recorded as a quantifiable injury (see Lin & Jones, 2010; MacDonald, Kaminski & Smith, 2009; Smith et al., 2007; 2009; Taylor et al., 2012). Highlighting this academic disconnect, Terrill & Paoline called to the academic community for an explanation for the inconsistent findings and an agreed academic consensus on “... how to operationalize police-inflicted injuries as a result of CEW usage” (2011, p. 24).

In response, Kaminski et al. (2015) examined the effect of including and omitting puncture wound injuries in the quantification process. They were able to ascertain with apparent certainty that the inconsistencies highlighted by Terrill and Paoline (2011) were caused by their decision to record routine probe puncture as an injury. A method they roundly rejected:

It is clear from our results that when routine CEW punctures are excluded from the injury measure, CEW’s are associated with reductions in injuries to suspects or are benign, neither increasing nor decreasing injury rates. It is also clear that including CEW punctures as injuries
consistently inflates injury rates, whether or not they were used in conjunction with other
types of force. (2015, p. 615)

This argument presents a compelling case to argue that the incidental injury caused by less-lethal
technology should not be quantified. The efficiency of any less-lethal weapon is judged on many
factors including the ability to control a subject causing minimal injury. If unavoidable (routine)
injuries are counted, then there is a risk that the safety of CEDs could be called unfairly to question.
There is the potential for injury figures to become over-inflated which could lead to unwarranted
negative publicity or even prohibition of an otherwise effective device. It remains to be seen
whether this approach will be roundly accepted by the academic community.

**Ethical and social concern**

The Taser phenomenon is overshadowed by an evolving body of literature highlighting a number of
ethical and socio-political concerns which cannot be separated from the argument around continued
use (Neyroud & Disley, 2008). Topics of significance include the (in) appropriate positioning of the
device within the force hierarchy, an institutionalised culture of pernicious use (especially on ethnic
minority citizens), a series of potentially avoidable CED associated deaths and a general
inconsistency in training and operational use. A selection of the peer reviewed research most
relevant to this key emerging area is critically discussed below.

The Braidwood Commission (2010), for example, dissected the events preceding the CED associated
death of Robert Dziekański in Vancouver International Airport on 14th October 2007. The
commission unearthed significant unethical conduct by the attending officers, who purportedly
exaggerated the true threat posed by Mr. Dziekański in a bid to post-justify the use of the excessive
and multiple CED shocks, which undoubtedly contributed to his death.

The Braidwood inquiry not only, made a number of firm recommendations regarding CED use,
including a substantial elevation of the position of CED’s on the force continuum, and the
discouragement of multiple cycles, (for the true scientific (in) effect of these recommendations see
Williams, 2012) but also, prompted a further array of academic interest in the topic (e.g. Goldsmith,
2010; Gordon, 2012; Hall, 2009).
Beginning poignantly with the vision of Mr. Dziekański laying lifeless on the floor after an episode of “egregious police brutality”, Oriola et al. (2012, p. 65) argued that this tragic incident triggered one of the largest political controversies in Canada’s recent history. The authors then bring to bear wider ethical concern commonly associated with CED use, such as disparity in application on minority ethnic groups and the associated continuum position.

In addressing the continuum paradigm, Oriola et al. appear to show a lack of understanding of the concept. In their publication, they unfairly criticise the Vancouver Transit Police’s 2007 decision to alter the position of CEDs on the force continuum, claiming the organisation simply replaced the term “non-compliant” with “actively resistant” when authorizing use (ibid, p. 68). In fact, the former did not, and was not intended to, replace the latter. These two levels are distinct, and represent very different examples of suspect behavior, for which continua provide suggested officer responses. Rather than covering up improper use by semantic alterations, the organisation appears to have made the decision to raise the level of authority for CED use from a “passive” to an “actively resistant subject.” In so doing, it appears to have responded to public concern and adjusted their internal policy accordingly. A change made prior to the Braidwood Commission recommendations, and deserving of praise rather than admonishment. After all, do these actions not show effective managerial foresight and an affirmative response in the wake of widespread public concern?

Ryan (2008) positioned herself firmly against use of CED’s in Australia. She cited as justification, isolated instances of improper use, inadequate training and a general lack of confidence in the ability of officers to use the device responsibly. Whilst this article does highlight relevant ethical concerns (such as the risk of increased use on ethnic minorities such as the Aboriginal community); the piece lacks impartiality and reflexivity.

Ryan focuses on the CED as a tool primarily intended, to prevent officers resorting to lethal-force. Caution is needed when viewing the situation within such binary confinements. CEDs do play a role in the reduction of lethal-force encounters (Kaminski et al., 2009; White & Ready, 2007) but they are also pivotal in reducing rates of officer and suspect injury during a forceful encounter. A fact which research prior to 2008 strongly supported, and research after this period, has proved beyond contention (Kaminski et al., 2015).

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16 For the benefits of such a policy change see Millar (2010).
Ryan also casts aspersion on the ability and integrity of police officers. Implying that they cannot be trusted to use their coercive mandate appropriately, “. . . no officer wants to see good training hours go to waste . . .” (2008, p. 4-5). Such critique would be understandable if it was supported by a compelling evidence base. However, Ryan makes little mention of peer reviewed literature, instead relying heavily on grey material, including numerous citations by “unknown” authors. The end result is a subjective and partial position piece, struggling to achieve academic balance and reflexive longevity.

Having done similar in the USA and Canada, (see Amnesty International, 2004), Amnesty International provided a summary of their political position on CED use in Britain. Writing on behalf of the organisation, Sprague (2007) suggested that due to the inherent risk of death, serious injury or improper use, CEDs should be categorised as “potentially-lethal” as opposed to “less-lethal” or “non-lethal” weapons. He also argued that CEDs should be positioned at the penultimate echelon of the force continuum, second only to the use of lethal-force.

Sprague opposed CED use by any officer not trained to Specialist Firearms Officer\(^{17}\) (SFO) level, and called for a complete ban on using the device in “stun-gun mode\(^{18}\)”, suggesting that a reliance on pain compliance amounts to tortuous treatment. This narrow interpretation shows a lack of operational knowledge. Not only did Sprague fail to distinguish between the “drive-stun” and the “angled drive-stun”, but he also, failed to address the operational value of this technique as a legitimate tactical option. In confined spaces such as a vehicle, or mobile home, it would be irresponsible for operatives to discount the drive-stun because this could be the only less-lethal contingency available. Conversely, the angled drive-stun technique can be used to achieve NMI, if one probe misses the target or becomes dislodged (NPCC, 2016). Another tactic which, if automatically discounted, could at best pose heightened risk to both officer and subject and at worst, evoke an avoidable police shooting.

De Angelis and Wolf (2013) investigated the various sources of controversy surrounding CEDs and attempted to assess the potential sociological impact of their findings. In a study that is similar in both conception and methodology, to this current research, 27 police training officers were

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17 The label of police SFO involves a considerably higher level of firearms training in the UK than that of an Authorised Firearms Officer (AFO). It is assumed here that Sprague was referring to the later skill level.
18 It is presumed that Sprague is referring to the drive-stun or angled drive-stun technique here.
interviewed. Officers were asked for their opinion on the relative safety of CEDs, the origins of public controversy surrounding such devices and what could be done to alleviate the associated concerns. Training officers generally regarded CEDs as relatively safe and operationally essential items of equipment. They suggested that the controversy around CEDs is often heightened and sensationalised by the media, who do not fully understand the coercive function of police officers or the role of CEDs within the force hierarchy. In order to mitigate such concerns, participants suggested that police services could participate in programs of outreach to the media and the general public in order to better inform them about the technical and operational purpose of CED’s.

Whilst this research did field some interesting qualitative observations and made a number of valid recommendations, the interviews were conducted by telephone which meant that the subtleties of face-to-face conversational contact and non-verbal communication were lost. Participants may have been wary about a telephone call and could have withheld data they may otherwise have disclosed if the interviews were conducted in person. Also, the participants were training officers as opposed to operational police officers. Officers who carry CEDs and interact with the public on a daily basis may have been in a better position to offer an opinion on societal impact, than full-time instructors.

Kleinig (2007) disclosed that CEDs were being overused by many police departments due to a relatively low position on the continuum. Kleinig claimed that the device was being used as a matter of convenience and often in unjustifiable lieu of other less extreme measures “. . . as a way to cut short verbal communication or even one that could reasonably require more direct physical intervention say, carrying or applying an escort hold or joint manipulation on a passively resistant demonstrator” (p. 287). That CEDs may be used to control subjects resisting at the lower end of the force hierarchy, is a concern highlighted by empirical inquiry (e.g. Alpert & Dunham, 2010; Crow & Adrion, 2011; Thomas et al, 2010) and remains ethically valid.

Gau et al. (2010) published further evidence of unethical CED use. The study disclosed racial disparity by Highway Patrol officers disclosing that Hispanics were two times more likely to be Tasered on first application of force than Caucasians. An intriguing statistic when comparison is drawn with the results of a similar study recently completed in the UK, which concluded that black people were three times more likely to be subjected to CED use than persons of white origin (Shaw, 2015). Such statistics naturally bring the question of racial prejudice in officer decision making to the fore. A concern recently and explicitly acknowledged by the then Home Secretary (now Prime
Minister), Theresa May, in a recent public address (Home Office, 2015). And, a topic certainly worthy of further inquiry.

Whilst the conclusions drawn by Gau *et al.* (2010) are supported by compelling evidence, generalisability is an issue. The primary remit of the Highway Patrol is road related matters. Officers in this department will not habitually patrol high crime areas, investigate volume crime or intervene in trigger offences such as alcohol related disorder, domestic disputes or calls involving weapons or illegal street drugs. Operational factors which could substantially increase the likelihood of CED use (Garner *et al.*, 1995; Garner, Maxwell & Heraux, 2002; Government Accountability Office [GAO], 2005). In addition, the study did not include an officer’s length of service as a variable during statistical analysis. A characteristic which influence an officer’s decision to use force (Terrill & Mastrofski, 2002; Paoline & Terrill, 2007).

When discussing CED misuse by officers, neither Sprague (2007); Gau *et al.* (2010) or Shaw (2015) took into account the fact that these devices have in-built memories which record the number and length of discharge as well as the time and date each one occurred (Kleinig, 2007). Each cartridge also contains aphids with unique identifying numbers which fall to the floor when it has been fired. Some international police forces, for example, New South Wales in Australia are even using CEDs with in-built camera technology which begin recording when the device is armed (Ryan, 2008). Combine this with the growing popularity of BWV, the increased coverage of CCTV and widespread availability of a smart phones with recording capability, and one could reasonably assume that the opportunity for unethical CED use would become increasingly self-limiting.

So why does this not appear to be the case? Why are ethnic minority citizens disproportionately subject to force in general and CED’s in particular? Several compelling theories have been offered. For example, Engel *et al.* (2002) point to outright racial prejudice. Black & Reiss (1967); Bratton & Knobler (1998); and MacDonald (2010) claim that the disparity is attributable to the greater involvement of ethnic minority citizens in the commission of volume crime, and their greater propensity to resist arrest.

In recent years, the concept of unconscious or *implicit bias* has received increased attention. Also emerging, is the so called *counter bias* theory which stands juxtaposed to the implicit bias perspective. Implicit bias theory, suggests that officers for the most part are not personally or
institutionally prejudiced. Rather they unconsciously perceive certain characteristics or physical traits (e.g. race) as more of a threat, based on pre-existing stereotypes, historically associated with that particular group and their own personal background and upbringing (Fiske, 2010). Clearly this unconscious unawareness could have a marked effect on the type and severity of force used during a coercive encounter.

Correll, Park, Judd and Wittenbrink (2002) conducted computer simulation exercises subjecting officers to simplistic “Shoot” or “Don’t Shoot” scenarios. The results comprehensively indicated the presence of implicit bias. Officers shot an armed black assailant faster than an armed white assailant and the most common threat perception failures were officers not shooting an armed white male but shooting an unarmed black male. Results echoed by several additional studies (e.g. Correll et al, 2007a; Correll et al, 2007b; Fachner & Carter, 2015; Payne, 2001; Plant & Peruche, 2005); but which can be compared with James, Klinger & Villa (2014) who could not link subconscious racial bias to lethal-force decisions.

Fridell & Lim (2016) have attributed recent instances of widespread public disorder, following the shooting of black subjects by white police officers in the US, to an emerging psychological theory known as counter bias. The counter bias paradigm opposes earlier implicit bias findings. Contemporary research appears to indicate that current serving officers are becoming increasingly reluctant and statistically less likely to shoot black subjects, even if they pose a lethal threat. A trend not followed if the lethal threat emanates from a Caucasian aggressor. A phenomenon attributed predominantly to the far reaching societal consequences which historically follow the erroneous shooting of an unarmed black male (James, Vila & Dartha. 2013; James, Klinger & Vila, 2014; James, Vila & James, 2015).

Despite the presence of seemingly opposing, yet equally compelling psychological theorem, Devine (1989) introduced the concept of controlled response. A mechanism for officers to override their unconscious biases through a period of awareness training (for successful examples of this see, Monteith, Ashburn-Nardo, Voils & Czopp, 2002 and Monteith, Arthur & Flynn, 2010).

Further research in this politically charged area is certainly warranted (Fridell & Lim, 2016). It is also, without doubt, key to this current research. Not least due to the fact that an officer, ignorant to unconscious bias, has the potential to deploy a CED in error on a citizen of ethnic minority.
Conversely, due to counter bias, an officer may hesitate to use a CED when to do so would have been entirely warranted. There are far reaching societal consequences relevant to each principle, not only, for the prevention of widespread public disorder but also, for the protection of officers and the public. This current research will critically evaluate the training curriculum for sufficient recognition of this sensitive issue.

CEDs as life takers

Since their introduction to US law enforcement in the 1980’s, CEDs have suffered from a negative societal stigmatism. Moving from one sociological extreme to the other CEDS can be found at the far end of each ideological spectrum depending on the political stance of the commentator. CEDs may be viewed as weapons which torture and kill on the one hand or tools which assist police officers in the safe execution of their duties on the other. This section will briefly address the evidence relevant to both sides of this argument, beginning with the research on CED associated deaths.

Greenwood suggests that if a police operation results in death then it should be viewed as a categorical failure, regardless of the prevailing circumstances: “There must be no heroics, no James Bond style individuality. There must be no military style thinking of assaults with metaphorical fixed bayonets and an acceptance of a ‘reasonable’ casualty rate . . . in a police operation the only acceptable casualty rate is zero” (1979, p. 59). If this premise is to followed it appears that the continued police use of CEDs should be robustly questioned. Since 2003 there have been 17 CED associated fatalities in this country (SACMILL, 2017). That the prior use of a CED holds a causal connection to each death is not disputed. A CED was used and after this exposure, death occurred. What is yet to be confirmed is any direct evidence linking CED use (proper or otherwise) as the sole causal factor. This explains why no criminal charges in relation to these reported fatalities have been instigated. That being said, in a relatively recent development, the High Court has ordered a further investigation into the CED associated death of Jordan Begley (BBC News, 2016) and the initial inquest into the tragic death of former professional footballer Dalian Atkinson is still in progress (Dodd, 2016).

In direct response to this string of fatalities, various human rights protection groups19 have written to the head of the Home Affairs Select Committee, Keith Vaz MP, demanding a public inquiry be

19 Such the Omega Research Foundation, Amnesty International and the Children’s Rights Alliance
conducted in order to assess the training, use and reporting policies currently governing CED usage in the UK:

Following a series of tragic incidents, serious questions must now be asked. We need a thorough investigation to determine whether these weapons are being used properly and responsibly, particularly given the increasing number of these weapons on our streets . . . . Tasers can be a valuable tool, but they are extremely dangerous and can kill, especially when misused. This is why it’s important that there is absolute clarity in when and how these weapons are used and the toughest and highest professional standards in place to train, monitor and evaluate its use. (Sprague, as cited by Amnesty International, 2016, para. 5)

A valid observation which further solidifies the urgent need not only, for a public inquiry but also, this current research:

It is important to ensure that the training and policy around Taser - and, indeed, all police use of force - is striking an appropriate balance between enabling officers to use their discretion, and giving them sufficient guidance on when its use is appropriate . . . . It is also important to ensure that, once Taser has been used, robust accountability mechanisms are in place, both inside and outside the force in question. There’s a real need for an informed, transparent discussion on these important topics – and, as such, a Home Affairs Select Committee Inquiry would be most welcome. (Dymond, as cited by Amnesty International, 2016, para. 8)

Moving from the United Kingdom to North America, Kornblum and Reddy (1991) conducted a detailed examination of 16 CED related deaths after police contact. In the majority of cases (68.8%) the primary cause of death was an overdose of illegal street drugs. A suspect characteristic recorded as an impact factor in 13 of the reported incidents. One cause of death was indeterminate and one further death was linked to heart disease, a condition exacerbated by exposure to a CED. Of the 16 mortalities investigated, the study concluded that not one of them could be conclusively linked to CED use.

The same 16 deaths were further scrutinised in the United Kingdom by Bleetman and Steyn (2003) who also reported a series of heightened risks which predisposed the individuals to an elevated
chance of death after coercive police contact. These included a history of street drug abuse and presenting with excited delirium prior to arrest. This report also concluded that the deaths could not be solely and conclusively linked with prior use of a CED, albeit this research was commissioned by, and conducted on behalf of, Taser International so an element of research bias cannot be discounted (Azadani, Tseng, Ermakov, Marcus & Lee, 2011).

Strote and Hutson (2006) reviewed 37 autopsy reports. Again, a strong connection with the consumption of illegal street drugs (75.7%), excited delirium (78.4%) and pre-existing cardio-vascular disorder (78.4%) was discovered. Interestingly, the study also stated that use of CED was a potential cause of death in 6 of the reported cases (16.2%) and at least a contributory factor in a further 4 (10.8%).

Williams (2008) examined 213 CED associated deaths and reported 2 cases where the prior use of the device was either the primary or at least a significant causal factor. They also highlighted the increased risk of a fatal outcome if CEDs were combined with additional risk factors such as illegal drug use, pre-existing heart conditions and excited delirium.

CEDs as an effective tactical option

From the above research data it is apparent that exposure to a CED can cause or at least contribute to death. However, this is a rarity and certain additional factors will predispose an individual to a heightened risk. With this in mind it is necessary to look objectively at the bigger picture, to balance the risk of CEDs against their operational benefit.

CEDs are intended to quickly and effectively incapacitate a non-compliant subject on first deployment. Early research indicated that this was possible between 50–85% of the time (Donnelly, 2001 cited by Kaminski et al., 2013). Research by White & Ready (2007) accredited advancement in technology to an increased success rate of 80-94%. Whilst these results should be viewed sceptically given that the research was commissioned and funded by Taser International (who hold a vested interest in publishing favourable statistics) several independent studies also report high percentage efficacy.

For example, Meyer defined effectiveness as “... if the application of force ended the altercation.” (1992, p. 16), and attributed an 86% success rate to CEDs. Mesloh, Henych, Hougland and Thompson
(2005) studied 400 use of force reports and suggested that CEDs were immediately effective 67.7% of the time. Mesloh, Henych and Wolfe (2009) reported a 59.8% rate of success. Meyer (2009) disclosed similar results. According to Kaminski et al. (2015) technological failure of the device itself seldom occurs.

When failures were reported these were generally attributed to operator error. Common mistakes included one or more barbs missing the target or becoming detached, barb under-penetration due to thick clothing or the suspect being in a state of excited delirium, or under the influence of intoxicants (Jenkinson et al, 2006). According to Kaminski et al. (2015) technical failure of the device itself seldom occurs.

From the above data, there is increasing evidence to suggest that CEDs are effective law enforcement tools which have the capacity to quickly control combative subjects. They also appear to have the capacity to reduce rates of injury to both officers and subjects during a forceful police-citizen encounter (Kaminski, 2009; Kaminski et al., 2015; Lin & Jones, 2010; MacDonald et al., 2009; Smith et al., 2007; 2009). In the light of this research, CEDs appear to be operationally efficient devices, with the potential to proliferate exponentially if policing organisations come to the conclusion that the benefits they bring to law enforcement outweigh the risk they pose to wider society.

The preceding chapter has critically examined the police use of CEDs such as Tasers with a focus on UK academia and associated medical and ethical concerns. Both sides of the juxtaposed argument that CEDs are both effective tools but at the same time, instruments that kill, have also been explored. The following chapter outlines the research methodology.
Chapter six

Research methodology

The above chapter has critically examined the police use of CEDs. The following chapter explores the chosen research methodology (the thematic analysis of qualitatively obtained data, framed using a single case study design), and proceeds a description of the research setting and sample population. The process for the formulation and dissemination of the primary and secondary research instruments is then described, as are the techniques used for initial and secondary raw data analysis. Chapter six concludes with a discussion of the ethical considerations intrinsic to this research and includes a synopsis of the measures taken to mitigate any identified risk.

Methodology

After careful consideration an inductive approach using a qualitatively driven, single case study design was selected as the most appropriate methodology for this current research. In order to investigate the content of CED training and to explore how the exacting standards are applied in a real-life context, a flexible research framework was required. Survey data was used to identify potential candidates and themes warranting further exploration, and semi-structured interviews were necessary in order to secure an enhanced understanding of the pedagogical processes by using the first-hand, real-world perspective of individual research participants. This concept was summarised by Webber as a “Verstehen” approach which describes the study of human behaviour as a “… science which attempts the interpretive understanding of social action in order to arrive at a causal explanation of its course and effects” (1947, p. 88).

Although a significant quantity of primary information was gathered during this process, the survey and interview data is localised to 15 police officers employed by a single organisation, and it was gathered by an insider researcher who outranked the participants. Therefore the research outcomes embodied within this thesis are not necessarily representative nationwide (Denscombe, 2014), and the data may have been subject to responder bias which could affect its overall representativeness and validity (Labaree, 2002; Taylor, 2011; Unluer, 2012).

Notwithstanding the above concerns, it was still possible to conduct reliable and empirically useful evidence-based research as an insider researcher because a stringent ethical framework was formulated and adhered to (McLain & Kim, 2018). For the purposes of this current research, control
measures included the use of gatekeepers to disseminate information and conducting active-phase research out of uniform, in the public domain and with unknown research participants, which significantly reduced the risk of responder bias (for a more detailed discussion of this area see below).

Case study research was specifically chosen because this approach provides a rigorous examination of a complex circumstance, explainable by analysis of individual, group and event dynamics. Yin describes the case study design as “… an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (1984, p. 23). Stake (1995) and Yin (2003) suggest that a case study design should be utilised if certain criteria is met. Firstly, the research aims to answer “How” and “Why”, type questions. Secondly, the researcher is unable to manipulate the behaviour of the sample population. Thirdly, the research proposes the analysis of contextual conditions linked to the case. And finally, the study is inextricably linked to the situational context within which it exists. These factors demonstrate the appropriateness of the case study approach because the research questions key to this current research are all open ended. The ethical control measures in place (see below) ensures data integrity and the CED phenomenon cannot be properly investigated without consideration of the situational context of the officer within the constraints of the learning and operational environment.

Yin (2003) and Stake (1995) stress that case studies present in various guises and can be single or multiple in design. Yin categorises case studies as either explanatory, exploratory or descriptive, whereas Stake prefers the terms intrinsic, instrumental or collective. For the purpose of this current research a single descriptive case study was best suited to the design because this research seeks “… to describe an intervention or phenomenon and the real-life context in which it occurred” (Yin, 2003, as cited by Baxter & Jack, 2008, p. 548).

The case study approach is based on a constructivist philosophical underpinning (Yin, 2003; Stake 1995) which is suited to this current study, not only because this approach supports a close relationship between researcher and participant (Crabtree & Miller, 1999) but also, because it embraces subjectivity, allowing interviewees the flexibility to impart data they personally deem relevant. This facilitates a better understanding of the overarching phenomenon (Lather, 1992; Robotttom & Hart, 1993).
Despite a largely qualitative structure this current research also makes use of research instruments traditionally associated with the quantitative paradigm (i.e. self-completion surveys). This does not change the nature of the research to a quantitative or mixed methods design. Indeed the use of multiple data sources is celebrated as a hallmark of the case study approach, enhancing the credibility of the data achieved.

Unique in comparison to other qualitative approaches, within case study research, investigators can collect and integrate quantitative survey data, which facilitates reaching a holistic understanding of the phenomenon being studied. Each data source is one piece of the “puzzle,” with each piece contributing to the researchers understanding of the whole phenomenon. This convergence adds strength to the findings as the various strands of data are braided together to promote a greater understanding of the case (Baxter & Jack, 2008, p. 554).

Setting

Westshire Constabulary is a small regional police service located in the South Eastern region of England. It currently employs 2,748 warranted police officers (J. Rodgers, personal communication, June 30, 2016). Because this organisation is not commonly the subject of evidence-based research it was able to offer a degree of uniqueness to the field. However, due to its relatively small size and location in an affluent area with comparatively low rates of ethnic diversity, the research outcomes are not necessarily generalisable countrywide; albeit they are at least comparable.

A further ethical concern related to the position of the researcher as an employee. Whilst the “Insider” status can offer a degree of pragmatic benefit to the project, for example close assistance with administrative requirements of the research, such as obtaining permissions, accessing the infrastructure and identifying the sample population (see Brown, 1996a); according to certain academics, the Insider position may also inadvertently bias the research data. For example, Bartunek and Louis (1996) argue that an Insider researcher may lack true independency due to a level of pre-existing organisational knowledge, and that participants may withhold, exaggerate or embellish key information because they are talking to a trusted colleague. Other researchers take this point further and claim that Insider research is effectively pointless (Weatheritt, 1986). For a fuller discussion of how the position of the researcher within Westshire Constabulary (as both an employee and manager) could have impacted the research data, see the Ethical Compliance section below.
Research participants were selected from a department within Westshire Constabulary known as the Neighbourhood Response Team (NRT). This department was chosen because STOs operate from NRT after they have completed CED training. Officers from the NRT work on a rotating shift pattern and provide a 24/7 emergency response capability. Westshire Constabulary currently parades 5 NRT teams or “Sections” (A-E). NRT officers operate in uniform, and usually patrol and respond to calls for service in marked police vehicles. During their time on NRT, officers have the opportunity to acquire a range of enhanced professional skills by attending relevant training courses. CED training is one such example.

Less-lethal weapons training is managed by the Operations Department and is delivered by the Tactical Training and Public Order Unit (TTPOU). The TTPOU is made up of 9 full-time instructors: 1 Inspector, 1 Sergeant, 6 Constables and 1 civilian staff member. CED training is conducted in the grounds of a decommissioned nuclear bunker which was acquired by Westshire Constabulary as a training venue. The site is equipped with several classrooms, a weapons range and a rudimentary mock village. Entry to the grounds is generally restricted to police personnel, but on occasion, civilians are permitted on-site to observe certain aspects of training, or even contribute to the learning process, by acting as stooges.

Sample

The sample population was made up of 15 uniformed police officers. To select the research population purposive sampling was used. The only officers in a position to provide the requisite data were current accredited STO’s. This automatically excluded any other officers. Of the 2,748 warranted officers employed by Westshire Constabulary only 230 (8%) had completed CED training. (M. Gander, personal communication, June 16, 2016). Of this already small population, 30 members had since moved to other departments so were no longer accredited. This left an approximate potential sample population of 200 officers which equated to less than 6% of the workforce. A list of these officers was obtained from the Human Resources Department. The officers were all sent an initial survey by e-mail and web-link. The survey contained information about the proposed research and included expression of interest forms.

The intention was to conduct a minimum of 12 interviews which is a sufficient number (given the topic area) to achieve the point of data saturation (Guest, Bunce & Johnson, 2006). From the e-mail responses, a total of 17 expressions of interest were received. One potential participant left the
organisation before the interview could be conducted, and a further interview had to be terminated prior to completion because the researcher and the participant, were recalled to duty. As a result, 15 interviews were conducted.

Table 6.1. shows a demographic breakdown of the sample population. All participants were current STO’s, of PC or A/PS rank working on NRT. In total, 12 males and 3 females were interviewed. The officers had between 8 and 15 years’ police service. The minimum time spent as an STO was 6 months and the maximum was 4 years. From the sample population a reasonable spread of home stations as well as rural and urban policing environments was achieved. All officers’ self-identified as White British in ethnic origin.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Rank</th>
<th>Gender</th>
<th>Age</th>
<th>Length of Service</th>
<th>Time as an STO</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>A/PS</td>
<td>M</td>
<td>34</td>
<td>10 years</td>
<td>2 years</td>
</tr>
<tr>
<td>P2</td>
<td>PC</td>
<td>M</td>
<td>38</td>
<td>8 years</td>
<td>1 year</td>
</tr>
<tr>
<td>P3</td>
<td>PC</td>
<td>M</td>
<td>34</td>
<td>8 years</td>
<td>1 year</td>
</tr>
<tr>
<td>P4</td>
<td>PC</td>
<td>M</td>
<td>32</td>
<td>10 years</td>
<td>3 years</td>
</tr>
<tr>
<td>P5</td>
<td>PC</td>
<td>M</td>
<td>30</td>
<td>11 years</td>
<td>4 years</td>
</tr>
<tr>
<td>P6</td>
<td>PC</td>
<td>M</td>
<td>33</td>
<td>11 years</td>
<td>4 years</td>
</tr>
<tr>
<td>P7</td>
<td>PC</td>
<td>M</td>
<td>29</td>
<td>12 years</td>
<td>4 years</td>
</tr>
<tr>
<td>P8</td>
<td>PC</td>
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<td>M</td>
<td>36</td>
<td>15 years</td>
<td>4 years</td>
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<tr>
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<td>PC</td>
<td>M</td>
<td>40</td>
<td>8 years</td>
<td>2 years</td>
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<tr>
<td>P13</td>
<td>A/PS</td>
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<td>3 years</td>
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<td>1 year</td>
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<tr>
<td>P15</td>
<td>PC</td>
<td>M</td>
<td>34</td>
<td>11 years</td>
<td>1 year</td>
</tr>
</tbody>
</table>

Self-completion surveys
At the time of this research, officers from Westshire Constabulary had been inundated with a number of survey requests. These included the annual Police Federation Survey, the annual Employee Satisfaction survey and various other requests, both internal and external. With this in mind, the surveys used as part of this current research were kept deliberately short and concise, comprising only 10 questions each. This helped to maximize rates of completion and minimise responder fatigue (Hibbard & Bennett, 1990).
Both surveys were constructed by the researcher, using a web-based survey provider. They were sent by e-mail request which contained the web-link. This ensured that officers could open, complete and return the survey quickly and easily. The primary focus of the first survey: “Tactical Options” (see Appendix A) was the use of personal protective equipment, with particular emphasis on the availability of CEDs and potentially firearms to non-specialist officers. It was created in order to assess the overall level of organisational interest in the use of less-lethal force. This survey was sent in February 2015, to 140 uniformed response officers working on NRT. It was live for 30 days with a follow up request sent after 15 days. The survey closed in March 2015 and generated 67 responses which was slightly lower than hoped.

The second self-completion survey: “Red-Dotted!” (Appendix B) was disseminated in June 2016. It was targeted solely at current STO’s, and focused on areas specific to the research agenda. The line of questioning included the content and sufficiency of initial training, the operational value of the CEDs, and the suitability of post-incident procedures. The data from this survey were used to inform the line of questioning for the semi-structured interview schedule. Specifically the content and sufficiency of initial training and the operational effectiveness of the device. The survey request also contained information about the proposed research and explained how officers could express an interest in participating. It is from these expressions of interest, that the sample population for the battery of semi-structured interviews was ultimately selected. This survey was sent to approximately 200 officers. It was live for a 30 day period, with a follow up request sent at the halfway mark. In total 91 responses were received equating to a take up rate of 46% which was again, slightly lower than hoped and anticipated.

In order to present the survey data legibly within this thesis, the numeric outcomes were transformed by the researcher into both a coloured graph and tabular depiction. Detailed analysis of the survey data is presented in chapter seven and the surveys in-full are also appended to this thesis (see Appendix A and B).

**Semi-structured interviews**

The use of in-depth interviews is compatible with both a qualitative approach and the case study design. In order to achieve high quality data, a degree of planning and preparation is required (Patton, 1990). Prior to commencing the interview process, an interview template was created.
(Appendix C). Considerable time and care was taken in the formulation of this document and it was followed closely during the course of the interviews.

Stake (1995) and Yin (2003) stress that well-structured, carefully selected questions are fundamental to a good quality case study. With this in mind, several introductory questions were used to put the participants at ease with the interview process. A number of initial exploratory questions were then posed. These were deliberately open-ended in order to facilitate a naturally participant-led conversation. Initial questions were then followed by a number of probing questions, which add a layer of depth and clarity to the data (Bryman, 2012).

The interviews were conducted in a consistent manner. Firstly, the participants were informed of the general nature and purpose of the study. They were then asked to confirm that they had read and understood the participant information sheet (Appendix D) and signed the consent forms (Appendix E). In order to commence the interview proper, participants were asked to provide a brief summary of their career to date. They were then asked to explain why they had applied to become an STO and what the initial application process consisted of.

In keeping with the primary research aim (a better understanding of the training curriculum) participants were prompted to reflect upon each individual day of instruction in sequential order. They were asked open ended questions about the content of the training, what input they received, what they were asked to do and how they felt during the process.

Further probing questions were then asked about individual elements of the course, such as the value of the theory inputs, the individual elements of the classification exercise and the content of the scenario based role plays. Participants were further encouraged to provide personal reflections of their individual experiences throughout the process.

A research question key to this current project, relates to the position of Taser within the use of force hierarchy. Specifically, how this concept subject with the recent introduction of the NDM. With this question in mind, participants were quizzed on their subjective interpretation of these notions as a fundamental part of the interview process. A number of conceptually interesting answers were provided. These are explored in the results chapters.
A further research question relates to the operationalisation of Taser. An area of particular academic interest. In order to fully explore this key emerging area, participants were asked to recount (within the stringent ethical guidelines discussed below), their experiences of operational Taser deployments. They were also asked a number of probing questions, exploring how their role has changed (in the operational sense) since becoming STO’s.

At the conclusion of the interview participants were asked if they had any further comments they wished to add about any aspect of CED training or operationalisation. Specifically, any improvements which could be made. They were then thanked for their time and the interview was concluded.

During the interview process, contemporaneous notes were taken by the researcher. These were subsequently used for the early identification of important patterns and emerging coding schemes.

The first interview was conducted in July 2016 and the final interview was completed in December 2016. The interviews generally took place at the participant’s home station. The researcher and the participant were the only persons present. Each interview was audibly recorded using a digital voice recorder which ensured an accurate and ethical record of the interview. The shortest interview lasted 23 minutes and the longest interview lasted 62 minutes. The more durative interviews tended to involve longer serving STO’s, discussing several instances of operational Taser deployment.

Each interview was professionally transcribed. Edwards (1998) confirms that this process ensures a verbatim record of the verbal account, and better facilitates both data coding, and thematic analysis. To ensure the security and integrity of data, discs and hard copy transcripts are secured in a locked safe. Electronic copies are secure and password protected. Hard copies were printed and also saved to CD disc. Electronic copies are stored on a USB device and a computer Hard Drive. When the data collection phase was fully completed the corpus was analysed.

Analysis

The data corpus comprised 2 self-completion surveys and 15 interview transcripts. For analytical purposes, the survey results were exported from the web-based platform. The data was then manually converted into percentage value answers to the survey questions. Coloured charts and numeric tables were also created in order to provide a better visual and comparative representation of the outcomes. The data from the first survey was primarily intended to assess the feasibility of the proposed research. This was achieved by exploring the general level of interest in CEDs from the
point of view of research participants. Also, to provide a more targeted direction for the second survey which was aimed specifically at current serving STO’s.

Akin to the first survey, data from the second survey was exported and manually converted into numeric value percentages. Graphs and tables also provided an enhanced visual representation of the results. This process provided a valuable initial insight into CED use within Westshire Constabulary and helped to underpin the content of the primary research instrument, with a number of additional questions emerging as relevant and warranting of further qualitative exploration during the semi-structured interview phase.

The process of initial data familiarisation was conducted by reading and re-reading the interview transcripts. From this process a number of potential candidate themes were identified. Initial coding was first conducted manually. Written notes identifying a number of recurring themes were made on hard copy interview transcripts (Bernard, 2000). Different colour highlighter pens were then used to identify existing and emerging patterns within the data set, and a numeric grading system ranked the evidence in terms of relevance and usefulness to the project (Braun & Clarke, 2006; Bryman, 2012). The purpose of this initial process was to secure an overarching understanding of officers’ perceptions relevant to the process, and to identify a number of potential patterns for subsequent exploration (Thompson & Barrett, 1997).

After the process of initial coding was completed, a secondary process of focused data coding commenced. Charmez (2010) declares that focused coding allows for a more detailed thematic categorisation of the sample and assists with the identification of patterns within each relevant context. From the process of secondary coding, a set of candidate themes for critical discussion were identified then quantified for regularity in appearance across the entire case. Whilst this process did not, and was not intended to, provide an indicator of overall generalisability to the topic area, it did allow for a reliable indication of recurring themes present with the current data set (Strauss, 1987).

The relevant text segments ascribed to each theme were identified and systematically attached to thematic headings and (where appropriate) sub-headings. Each theme was arranged hierarchically in terms of sociological importance to the topic area as underpinned by the research aims and objectives (Dye, Schatz, Roesnberg & Coleman, 2000). These included, but were not restricted to, the content of training, the presence of ubiquitous pressure, a disconnect between officers interpretation of CEDs within the force hierarchy, an operational disparity in appropriate use of the
NDM, and a lack of protection measures afforded to minority ethnic citizens who are disproportionately represented by CED use statistics (Oriola et al., 2012; Ryan, 2008; Shaw, 2015). The themes selected for discussion and critical analysis were all highlighted and exemplified by real-world reflections from the sample and they are critically examined as research outcomes in chapters seven through to ten.

**Ethical compliance**

Positivity in ethical safeguarding is an essential aspect of reliable scientific research (Miller, T., Birch, M., Mauthner, M., & Jessop, J, 2012). Prior to commencing the active phase of this current research, a Favourable Ethical Opinion was required from the University of Portsmouth. A detailed application form was completed, which clearly documented potential ethical risk, and included proposed measures for mitigation. This form was completed in May 2016 and a favourable ethical opinion was granted in April 2016 (see Appendix F). Confirmation that this current research was conducted within the specified guidelines is provided by a signed Ethics Declaration form (see Appendix G).

Official permission was also required by Westshire Constabulary before any form of research could commence. Again, this required the completion of a detailed application form. The application for this current research was submitted in March 2016. It was considered by an internal research panel, which sits on a quarterly basis and is chaired by the Force Research Co-ordinator. In June 2016 official written permission to conduct this research was granted (see Appendix H). During the application processes, a number of ethical safeguarding measures were highlighted and risk-managed. Space limitations preclude the discussion of each and every ethical dilemma, but the most pertinent considerations are documented below.

**Insider researcher**

Perhaps the most significant ethical concern of this current research was the position of the researcher as an employee of Westshire Constabulary. A fact which could compromise data integrity and must be fully acknowledged (Weatheritt, 1986). As such a brief summary of my professional background is provided below.

I joined Westshire Constabulary in 2006. I received initial training at a remote training centre after which, I was posted to NRT to complete the remainder of my probationary period. In 2008, I applied to join the Tactical Firearms Unit. After a 3 day selection process, I attended an 11 week initial
firearms course. After completing this gruelling process, I operated as an Authorised Firearms Officer. I received enhanced training in lethal and less-lethal weapons (including CEDs), marksmanship, foot strikes, vehicle strikes, rapid building entry and counter terrorism tactics. I was privileged to have received promotion within this unit, and was further trained as a specialist firearms Sergeant and an Operational Firearms (Bronze) Commander.

In 2012, I moved to Australia and re-trained as a police officer in the Queensland Police Service. I spent 2 years serving on general duties before returning to the UK to seek further promotion. Operationally, I have been extensively trained in and have deployed most use of force options available to a police officer, ranging from strong verbal commands, moving up the continuum to the deployment of chemical spray, use of a baton, CED and escalating as high as the use of a firearm.

The “Insider” status is an ethical risk which can affect data integrity in several ways. Brown (1996a) suggests, that insider researchers may enjoy ready access to people and resources, unavailable to an outsider. Bartunek and Louis (1996) declare that an insider’s professional background, is incompatible with a truly independent study. In their argument, they suggest an insider’s view of the organisational environment is already tainted by pre-existing knowledge, which consequentially affects the integrity of data. Weatheritt has described the results obtained by an Insider researcher as little more than a “forgone conclusion.” (1986, p. 19).

Whilst robust measures were put in place in order to prevent the researcher’s insider status from adversely affecting the data (such as the use of a gatekeeper to disseminate surveys and participation requests, conducting interviews out of uniform and with participants unknown to the researcher) it is possible that the information imparted from the sample population was to some extent compromised. That being said, the research data is both auditable, evidence-based and presented with reflexive balance. The research outcomes are, by-no-means, a forgone conclusion and in fact, a number of surprising and illuminating themes are analysed in the following chapters.

**Influence of the researcher over the sample population**

A further significant ethical concern related to Rank. As an Inspector, the researcher outranked each member of the research sample. By consequence, there existed a substantial risk of the interviewees feeling compelled to participate in the research because they had been asked to do so by a supervising officer (Brown & Walters, 1993).
In order to mitigate this concern, participants were recruited through the use of 2 anonymous questionnaires, sent on the researchers’ behalf by a Gatekeeper. The second questionnaire allowed participants to complete an Expression of Interest form, if they were prepared to participate in an interview. Completed forms were returned to the Gatekeeper who in turn, forwarded them to the researcher. Interview participants were previously unknown to the researcher and there was no direct supervisory relationship. The interviews were conducted out of uniform and not on duty time. These measures served to minimise the risk of rank adversely bearing on the interview process.

**Complaints / investigations**
A significant section of this current research is devoted to Taser operationalisation. A Taser deployment will, in many cases, result in the recipient making a complaint about excessive use of force. The circumstances will also invariably result in a criminal investigation of some description. If the incident resulted in death, serious injury or significant community tension then any subsequent investigation is managed by the IPCC.

Obviously, it was not appropriate to discuss an ongoing investigation. Such information would be classed as evidential and could be required for disclosure purposes which would compromise the anonymity guaranteed by the consent forms. In order to mitigate this ethical challenge, participants were not permitted to discuss any Taser deployment still subject to an investigation of any kind. This proviso was recorded on the consent form and signed by each participant.

**Health and safety**
CED use is, by its very nature, an emotionally charged and stressful event for those involved. Incidents where a CED is discharged can often involve a life threatening situation for the officer, the subject or members of the public. The risk that recounting such an incident could place a degree of stress upon participants even to the degree where post-traumatic stress arises or presents, was recognised. In order to mitigate the risk of exacerbating any underlying mental health concern, participants were required to sign and acknowledge that they were not undergoing treatment for, or feeling the effects of post-traumatic stress disorder, or any other form of mental or emotional illness, prior to the interview.
Disclosure of personal information

Officers participating in this current research were guaranteed anonymity. The survey data did not request or give the option to provide data which could serve to identify participants. During the interviews, only the first name of the officer was used. Each participant was allocated a number (1 - 15) in accordance with the order in which the interviews were conducted. When reporting the research results, this number was used to ascribe data to each particular participant. At no point in this thesis have names or unique warrant numbers been disclosed. Likewise the true identification of Westshire Constabulary is not published. When discussing operational examples of CED use participants were asked not to disclose personal details about the subject or the location of the incident. They were asked to recount the circumstances in general terms only. This further ensured confidentiality.

Financial assistance

The provision of financial support has been identified as a potential ethical risk (Robson, 2011). In a bid to alleviate the high cost of University tuition fees, various funding applications were submitted to Westshire Constabulary. These were all refused. In late 2016, an application to the COP Bursary Scheme was completed and approved. The grant was used retrospectively, to substantially reduce the cost of tuition fees, which were entirely self-funded prior to the award.

The fact that the COP has national oversight of the research area is an ethical concern that must be acknowledged. That this body has assisted financially with this research, could be perceived by some as a burden. Particularly when it comes to publishing an honest critique of the findings (Noakes & Wincup, 2004; Sheptycki, 1994). However, the active research phase was completed, and a full draft of this thesis was written prior to confirmation of the bursary award. No changes were made to this thesis in direct response to the funding allocation.

The above chapter has outlined the research methodology. It began with a brief description of the various strategies commonly used to conduct research and continued by outlining the research setting, sample and methods used to analyse the raw data. A detailed discussion of the primary and secondary research instruments was also provided. Chapter six concluded with a précis of relevant ethical concerns. The following chapter is the first of three to discuss the research outcomes.
Chapter seven

Survey Research and the initial application process

The preceding chapter has discussed the research methodology, the following chapter explores the data obtained from two self-completion surveys which were disseminated in the embryonic stages of this research. The survey outcomes point to an increased operational need for CEDs, a robust training process and a general feeling of reliability when it comes to field-use of these devices.

Survey research

The first survey, titled “Tactical Options” was completed by 67 respondents. The opening questions established demographic details. Seventy three per cent of the sample were male and 48% were of PC rank. Fifty three per cent were aged between 21 and 49 years of age and 58% had completed between 5 – 10 years police service.

The survey then explored the number of STOs within Westshire Constabulary. In the earlier years of the Taser phenomenon, various newspaper articles suggested that up to 13% of officers in the United Kingdom had access to Taser (e.g. Arnett, 2013; Leville, 2013). This current survey places the figure a little higher at 16%. In a more recent national survey, the Police Federation (2016), reported that somewhere in the region of 25% of current serving officers now carry a CED. This appears to show a steady rise in the number of STOs over recent years which is in line with Home Office recommendations.

Figure 7.1. Number of STOs in Westshire Constabulary
The value of CEDs as a legitimate and desirable law enforcement tool was evident from the survey responses. Seventy five per cent of surveyed officers were of the opinion that such devices should be standard issue to uniformed officers.

**Figure 7.2.** Should all police officers carry Taser?

This position is currently echoed by the Police Federation of England and Wales and was voiced by the Deputy Chairman Calum Macleod, who made the following observation on behalf of his members:

Taser is an option that can be used to protect the public and police officers themselves, and that is why we have been calling for every officer who wants to carry Taser - and is willing to be trained, tested and held accountable for its use - to be allowed to do so. This is not only to provide greater public reassurance but to offer greater protection for our members who risk their lives on duty, to defend the public, day in, day out (The Police Federation, 2015, para. 4).
Despite this assertion, universal CED carriage is not currently supported by the NPCC (NPCC, 2015). The emerging drive from serving officers towards standardisation in this area is of particular interest when comparison is drawn with the same question about routine carriage of a police firearm. This is a concept that was rejected by more than 60% of the survey respondents.

Figure 7.3. Should all police officers carry a firearm?

This general consensus of opinion demonstrates that police officers are not seeking the full array of coercive accoutrements; a concept Jenkinson et al. refer to as the “new toy” element that exists within the policing environment (2006, p. 238). Rather they are looking to acquire specific tools they consider essential to the safe operationalisation of their coercive mandate.

Developing the above argument a little further, this survey then explored the possibility of providing weapons training to front-line officers for emergent use. Over half (55%) of those surveyed were of the opinion that they should be trained to use a firearm, but they did not want to carry one routinely. Thirty five per cent of the sample population rejected even this premise and 10% were unsure.
Of relevance to the wider police organisation is the concern that experienced officers would look to leave the service if carriage of a firearm became mandatory. Although not generalizable countrywide, the responses to this current survey indicate that this would be a possibility for a relatively small, but not insignificant number of officers.
From the survey data, a clear desire to be routinely armed with a CED is evident. A logical explanation for this outcome is officer safety: “. . . officers never know when they may face sudden danger. Consequently they feel more secure with a weapon on their belt . . .” (Squires & Kennison, 2010, p. 71). A further theoretical explanation could be that this situation is a further manifestation of the gradual erosion of the policing by consent paradigm (Gould & Miller, 1977; Waldren, 1996; 2007), at least from the point of view of current serving officers. Regardless of motive, it is perhaps
some comfort to societal pluralists to note that the majority of the sample population remain unwilling to carry a firearm permanently. In order to further explore why CEDs are perceived to be such a desirable piece of operational equipment, a second survey targeted specifically at STOs was created.

The second self-completion survey titled “Red-Dotted!” was sent to approximately 200 STOs employed by Westshire Constabulary. It was completed by 91 officers of PC or APS rank and began by exploring the sample demographic. Eighty per cent of the respondents were male and 85% were experienced police officers with over 6 years’ service. Sixty eight percent of those surveyed had carried Taser for 12 months or longer.

Figure 7.6. Length of time as an STO
From the introductory questions, a good indication of the true strength of the training curriculum provided by Westshire Constabulary was disclosed. Eighty six per cent of the sample population stated that the course was either more challenging than they had expected or the most challenging course they had ever undertaken in the police service.

Figure 7.7. Participants experience of Taser training

A point fortified by the course failure rate within Westshire Constabulary which currently stands at around 10%.
Although these particular results are not necessarily generalisable countrywide they do give a good indication of the robustness of the training agenda within a single police service and provide a benchmark for further comparative research on a national or even international scale.

Moving from the training into the live environment, this survey then explored the operational value of CEDs from the point of view of current serving STO’s. There is compelling empirical evidence to suggest that police officers seldom resort to force (e.g. Alpert & Dunham 1999; Bayley & Garofalo, 1989; Croft, 1985; Fyfe, 1989; Kavanagh, 1997; McLaughlin, 1992; Russell, 1978; Worden, 1995). A concept broadly supported by this research which shows that of the 91 officers surveyed, only 22 (24%) had actually fired a CED operationally.
It is also frequently reported, that CEDs are effective weapons which have the capacity to resolve a volatile situation, often without recourse to discharge (Home Office, 2016). A premise qualified by survey data, which reported an 81% rate of success when the arc or red-dot function was used as a standalone tactic, to resolve a potentially forceful police – citizen encounter.
Finally, this survey addressed post-incident procedures. This particular question was hampered slightly, because 47% of the sample population had never fired a CED operationally. Notwithstanding this fact, 49% of those surveyed considered the post-incident procedures they had been taught or had experienced either very effective, or effective but in need of improvement. Only 3% of the sample were of the opinion that the current provision was inadequate.
In summary, the survey data reveals that only a small proportion (anywhere between 16-25%) of non-specialist officers are currently permitted to carry a CED whilst on duty. For the most part, those who do not have access to such a device, would like the option. Interestingly, though perhaps not surprisingly, the same could not be said of a firearm. When current serving STO’s were questioned about their experience of CED training, most reported the process to be challenging (which is
reflected by a 10% failure rate). When it comes to operational use, the device is regarded as an effective weapon especially when presented as a visual deterrent. Instances of firing are low and STO’s are generally satisfied with current post-incident procedures.

**The application and pre-joining process**

Prospective STO’s are required to submit a written application form which must be positively endorsed by a first and second-line manager before they can undergo CED training. The written application comprises a number of competency based questions, to which the candidate must provide written answer. To pass the paper sift and proceed to an initial course, officers must demonstrate a solid background in operational policing, decision making under pressure, appropriate use of force and sound application of the NDM.

Places on an initial course will be limited and competitive. A prospective candidate may not pass the paper sift at the first time of asking.

> “I didn’t get it the first time round, because I think there were quite a few people in the hat for it, and there were only two vacancies, but I got it the second time round.” (P3)

Those who are successful in the initial stages are required to gain medical clearance from the Occupational Health Department and pass an eyesight test (set at the national level for firearms training) before being allowed on the course.

Westshire Constabulary usually provides 2 or 3 initial courses per financial year. There are between 6 and 9 participants per course. The training period is currently 3 days (18 hours) in total. Although some longer serving STO’s undertook a 4 day process. Overall, CED training is perceived by the majority of students to be robust, particularly in comparison to other courses they have undertaken.

> “Some of our courses are turn up and pass. But this is certainly not one of those ones where you turn up and pass. They make you work for it, and they expect you to be switched on from day one.” (P12)
When asked why officers volunteered for CED training, the general consensus was these devices represent a valuable addition to their armory providing additional officer safety and a useful skill-set to the team environment.

“Something I think is actually quite useful . . . as a tool for us to have. I can think of quite a few incidents where . . . I would have drawn it and used it, that have been dealt with, with batons and spray . . . and the risk levels to us have been quite horrendous. In those incidents we could have just used [a CED] and had almost zero risk at all to both subject and us. So I thought it was quite a valuable thing to have.” (P2)

“I suppose the best way to describe it is it’s just another tool, another tool to the belt as such, you know, personal safety as well I think . . . quite often we can be sent out on our own nowadays . . . I want to have as much . . . protective equipment on me . . . as I can. I always like to take on a new challenge, seemed like a kind of natural, natural step really.” (P3)

The most noteworthy aspect of the pre-joining process is the aura which surrounds CED training. During the interview phase, several research participants reported a distinct feeling of trepidation in the lead up to the course and had evidently placed themselves under considerable self-induced pressure to pass it.

“I was really nervous, yeah. I found it quite stressful, quite nervous. I have never done anything like that before . . . you put a lot of pressure on yourself. You don’t want to fail. You don’t want to mess up . . . once you have gone for it you want to achieve it. So, yeah, you put quite a lot of stress on yourself and, it’s quite hard really.” (P8)

“I think everybody puts themselves under that pressure don’t they? Because they want to do well, they know it’s a pass or fail course within [Westshire Constabulary] or any police force, and you don’t want to come away saying no, you failed.” (P7)

Prospective STO’s are under no illusion that this course is different from many others they have attended. The training program has a formidable reputation. Even before the course begins, officers know they will be placed under considerable pressure, they are sure they will be challenged and ultimately, they are aware that they might not be successful.
This tangible feeling of pressure is a theme which runs throughout initial training and manifests in different ways depending on the psychology of the individual. For some participants, the pressure builds to the point where it becomes a negative and ultimately overwhelming influence. This leads to patent nervousness, resulting in poor weapon handling, erroneous judgement and ultimately course failure. For others this pressure acts as a positive driver, informing good decision making and allowing a sought-after assertiveness, which undoubtedly makes the course as a whole a more comfortable process. It is conceivable, if not likely, that the generally nervous individuals find the training process a more difficult and less passable endeavor than those of a more naturally self-confident disposition.

If governing organisations were keen (perhaps from a budgetary perspective) to reduce initial rates of failure, or if widespread CED armament was proposed (including training probationary officers or even Special Constables) then presumably they would look for measures to achieve high percentage pass rates, without lowering the expected training standards. In order to make this possible initial de-pressurisation measures would be beneficial in the pre-course stages. Instructors could work to alleviate the feeling of negative pressure by providing an input which “demystifies” the both the device and the training process. Prospective STOs could also benefit from a degree of prior familiarity with the device itself in order to conduct handling and dexterity exercises. Chapter five (below) discusses such measures in more detail and shows that if the intrinsic pressure is not checked at an early stage of training then it can result in negative consequences for the participant.

The above chapter has reported on the results of 2 self-completion surveys disseminated in the early stages of this current research. It has also addressed the initial application and pre-joining processes, and has introduced the idea of positive and negative pressure responses. These concepts are
referred to, and developed upon, throughout the following chapter which addresses, in detail the content and delivery of initial CED training.
Chapter eight

Training and content

The following chapter provides a detailed breakdown of the initial CED training course. For ease and structural continuity, the content of each individual day is addressed in sequential order. It focuses on safety and handling requirements, as well as the core assessed components such as the classification exercise, written examination and scenario based role plays. Reflective observations from the sample population litter this passage, and where appropriate, the relevant literature is cross-referenced for analytical purposes. The intrinsic pressure entailed by the training standards is a theme which runs throughout this chapter and is manifested by extremes of positive or negative performance. Chapter eight concludes with a battery of overreaching reflections from the sample population which includes some valid avenues for potential improvement.

Initial training - Day one

For what is generally perceived to be a dynamic and intensive program, the initial training course does contain a significant proportion of classroom based activity. This takes place at various stages during the three day course, beginning with an information session on the morning of day one, where candidates are exposed to a series of PowerPoint™ presentations.

In formulating the quantity and placement of classroom based content within the training curriculum, the COP appears to have achieved a rare balance of relevance and proportionality.

“I will say that you know we weren’t sat in a classroom for more than an hour and a half at a time, so the balance of you know classroom input to practical input, as far as a police course goes, was pretty good to be honest with you.” (P3)

Extended classroom based presentations are historically amongst the most difficult training packages to deliver to seasoned police officers. The phrase “Death by PowerPoint” is commonplace within the ranks, and electronic inputs are often viewed with comedic dread by prospective recipients. But this does not appear to be the case with the Taser inputs. It was certainly not alluded to by any of the research participants. One officer even awarded the Taser related PowerPoints the highest police honor of being almost bearable!
“I actually find the PowerPoints and, the classroom based stuff for Taser, probably more bearable than most of the other training stuff that we do. I think they have got that pretty right to be honest.” (P9)

The first theory input covers the technical specifications of the Taser X26. Officers are given information on the location and nomenclature of vital device aspects including the cartridge housing bays, the safety catch, the sighting system(s), the Extended Digital Power Magazine (XDPM) and the trigger. They are then shown how the device should be used under ideal operating circumstances. This includes information on full-probe versus drive-stun or angled drive-stun deployment, recommended operating distances and the science behind Neuro-Muscular Incapacitation.

Officers are then further briefed on the potential medical consequences of Taser deployment. This naturally indicates when Taser use should be avoided, save in exceptional circumstances. It is encouraging to see that these crucial guidelines appear to have been formulated in direct response to official guidance, (i.e. DOMILL, 2004; 2005; 2007; 2012; SACMILL, 2017) and the evidence-base.

For example, Becour et al. (2009) and Nislow (2005), expressed grave concern about secondary head injuries caused by a Taser recipient falling heavily to the ground and Clarke & Andrews (2014) warn against Taser use on a subject doused in flammable liquid due to the possibility of unintended ignition. These serious medical concerns are addressed in theory during classroom-based input and tested practically through assessed role play exercises.

Despite this positive development, there still appears to be at least some room for editing the content of the classroom based presentations, as the relevance of certain aspects has been called in question.

“I don’t really see the necessity to show us YouTube clips of dogs being Tasered, you know? I think a simple, ‘This is what could happen’, is sufficient . . . I found that to be unnecessary.” (P1)

On reflection, this appears to be a valid critique. The curriculum could arguably use the time set aside for valuable theoretical input to better use perhaps by addressing one of the many compelling
scientific studies which further explore the risks of Taser exposure to vulnerable members of society. Rather than focusing on the affect the device may or may not have on animals.

For example, Kornblum & Reddy (1991) and Williams (2008) address the increased risk of a Tasered subject experiencing death by positional asphyxia; whereas Bleetman & Steyn (2003); IPCC (2010; 2013) and Lee et al. (2009) discuss the increased likelihood of a death in police custody, after Taser is used. McGuinness (2016), provides a list of factors which must be considered by an STO before Taser is used. This includes consideration that the subject may be experiencing an episode of Excited Delirium or Acute Behavioural Disorder and further indicates that children, people of small stature and those with pre-existing health conditions are especially vulnerable. As such, Taser should only be used as a last resort. DOMILL (2012) cautions against use of Taser on children and pregnant women which is not specifically included in the APP. Also, international guidance advises strongly against the use of multiple Taser cycles (Braidwood Commission, 2010; QCMC, 2013). These are all very relevant, heightened risk factors, based on sound evidence, but are for the most part, overlooked during initial training.

It is both surprising and concerning, that certain serious risks appear to be comprehensively mitigated by the training curriculum, whereas others are not. An inquiry into the COP’s risk prioritisation strategy, would provide some much needed clarity here; particularly in the light of the recent decision by the home office to replace the Taser X26, with the more powerful and technologically superior Taser X2. A development which naturally incurs additional public safety concerns (SACMILL, 2017).

In the wake of an extended period of theoretical input, the first day of training continues with a more practical, weapons familiarisation session. Prospective STOs are presented with an inert training device and are encouraged to familiarise themselves with the weapon. Particularly general handling, attachment and removal of cartridges and the location of component parts.

“... so it's a safe removal and insertion of the cartridges ... red laser dot, red laser dot with the flash light, just the flash light, and then, turn them all off together and just being able to shoot through the cross hairs ... should any of the aids, malfunction.” (P7)
After a reasonable period of familiarisation, officers are further instructed on more specific, and nationally accredited, safety and handling techniques. This includes taking up a solid shooting platform, drawing the device from the holster, arming and pointing it in the nominated safe direction. Officers are shown how to safely load and unload the device by attaching and detaching the front cartridge. They are also further indoctrinated in the so-called “operational reload” technique whereby, the device is drawn, armed, fired then de-armed before the spent cartridge is removed, and the spare cartridge (housed in the XDPM at the bottom of the unit) is quickly attached. This allows the option of an additional shot.

Even at this early stage, the instructors begin to apply a degree of pressure on the candidates who are front-loaded with numerous tactile techniques which they are expected to assimilate quickly, and execute safely.

“Very slow . . . clear instructions, how to hold it, specifically, how to then insert it safely, where your fingers should be, i.e. not in the trigger, safety on, not off, and then you . . . very rapidly move on from that . . . [The instructors] only . . . tell you once or twice, and then you go into really doing it straight away, so you build up a muscle memory almost immediately.” (P7)

The introduction, familiarisation and handling session with the training unit represents the first “hands-on” experience officers will have had with the device. This may also be the first time the officer will have handled a weapon of any description. Officers are closely monitored by the instructors, and are given continuous advice and developmental feedback. The overarching aim is safety. If potentially unsafe Taser use is noted this is quickly corrected. Unsafe use includes placing a finger on the trigger at any time before the operator is ready to fire (which could invoke a “negligent” or “unintended” discharge), pointing the device in an unsafe direction, particularly at a person who is not a target (colloquially referred to as “muzzle sweeping” or “blue-on-blue”) and failing to de-arm (switch off) the device when loading or operationally re-loading, which can cause the operator to shock himself!

“Safety, that’s all they harped on about was safety, safety, safety! If you’re not safe in using that thing, then you’re not having it basically.” (P3)
The rigid process of closely supervised inculcation is a unique undertaking for officers, most of whom will not have experienced such intense scrutiny in previous training. Whilst some participants are able cope, the pressure of the situation can sit uncomfortably with others, who remain consciously aware that they are being individually monitored.

“You’ve almost got like one to one sort of coverage with the instructors, so they are there, monitoring your every move.” (P3)

After dry handling practice, officers are then taken to the weapons range, where they are first introduced to a live Taser. From here on in, work towards the classification exercise begins. Officers are given a safety briefing by the Range Commanding Officer (usually the senior instructor present) which highlights the conduct expected of them during live-fire exercises. They are then introduced to the static targets which officers are expected to shoot at.

The static targets are made of cardboard and are full colour, life-sized representations of a person, usually holding an offensive weapon such as a knife, iron bar or baseball bat. On the command of the instructors, officers stand at various distances from the target, draw the device, arm, aim and fire.

It is encouraging to note that officers are instructed to fire Taser within the safe parameters guided by scientific evidence. For example, Bozeman et al. (2009); White et al. (2013) and Ideker & Dosdall (2007), all document the increased risk of heart attack, or other serious cardio vascular-complications, if the electric current from the Taser probes were to pass directly over the heart. DOMILL (2004; 2005; 2007; 2012) and SACMILL (2017) all highlight the risk of serious injury to the neck, head, groin and eyes if the probes were to penetrate these particularly sensitive areas. This explains why the accepted point of impact for the Taser probes during training and classification, breaks the belt-line of the assailant i.e. the top probe should hit the large muscle mass above the waist and the bottom probe should ideally hit the upper leg / thigh area. It is essential that the probes do not pass over or near the heart, head or groin.

The live-fire practice can be a daunting and sometimes overwhelming experience for participants. Particularly if the candidate has little or no previous experience with firearms. The feeling of pressure is a theme which runs throughout Taser training and is heightened during live-fire
exercises. During this particular session, officers are treated robustly by the instructors, who assertively expose and rigidly correct safety and handling errors.

The officers who use this intense pressure as a positive driver tend to understand and make light of the process. Even thrive under it.

“I mean the training is strict. But it has to be you know. They know what they want you to do and if you mess it up, you are going to get shouted at or you are going to get the Mickey taken out of you . . . they are there to do a job, they are there to train you in a certain way.” (P9)

However, the officers who are negatively affected by the intrinsic pressure, will find themselves overwhelmed, and will start to make serious mistakes:

“On at least two occasions, I forgot to switch the Taser off, before doing the reload, and got a shot to my hand, so the feedback . . . was pretty sharp and pretty blunt, but it kind of needed to be.” (P3)

At the conclusion of day one, it is perhaps unsurprising, that officers will experience a diverse mix of emotions, depending on the extent to which they have been positively or negatively affected by the rigors of the curriculum. What is perhaps surprising, is the apparent lack of middle-ground. Officers are either well-within their comfort zone, and feel confident going forward.

“I felt good on day one, yeah, day one was all right.” (P4)

“Yeah I am a fairly confident person . . . so I was fine . . . I knew that I would pick it up, as I say . . . it wasn’t all smooth sailing, I made a few fuck ups but yeah everything . . . went alright. I knew that I would get it in the end.” (P11)

Or, they are far less confident having been consumed by the significant emotional pressure they have experienced. Even at this early stage, the less confident participants find themselves contemplating the prospect of either failing the course or voluntarily withdrawing.
“Pretty awful, day one... I felt relieved that the day was over. If I was honest, there was a small part of me that thought, I’m not going to come back tomorrow.” (P3)

“I left on the first day, and thought... I am not sure this is for me.” (P8)

Thought provoking and polarised reflections which clearly attest to the general difficulty and overall intensity of the training curriculum.

**Initial training - Day two**

Day two starts in much the same manner as day one finished. Officers are taken to the weapons range and look to perfect safety and handling techniques. The feeling of pressure continues, as does the omnipresence of the instructors who are now seeking demonstrable confidence with the weapon, as well as smooth, sharp and safe drills. These are essential because the classification exercise follows.

“...any errors in handling the weapon or anything are picked up very quickly.” (P12)

Although commonly referred to as the classification “shoot” the assessment proper involves more than just accuracy. Officers can fail the classification due to a safety issue even if shot placement is perfect. They may also fail the classification before even a single shot is fired, by for example, placing a finger on the trigger before the operator is ready to fire.

“If you’re not being safe, that’s it you’re gone!” (P12)

The various elements of the classification exercise are nationally proscribed. In theory, every police force should be conducting the assessment in the same way. The order of the various courses of fire does not appear to be so-prescribed, however the suggested process runs in a sequentially logical order, so one would presume that this would generally not be deviated from. Whilst the classification is designed to be challenging, it is also designed to be familiar to prospective STO’s, often mirroring handling exercises and courses of fire they have recently demonstrated.

“You do a dry handling practice, of everything you need to do, and then they tell you: “Right! We are going to do exactly the same thing again. But now is your classification.”” (P7)
The classification comprises 4 courses of fire, each of which must be executed within a set time limit. The officer is expected to demonstrate each command safely and accurately. If they run out of time, a miss is recorded. The pass mark is 100% so a miss or safety issue will be recorded as a classification fail.

Officers are given 4 live cartridges, and 1 training cartridge. Initially, the Taser will be holstered on the utility belt. A live cartridge will be attached to the front of the device and the training cartridge attached to the XDPM. Officers begin the classification by standing in front of their nominated target at a distance of five meters. The instructor will verbalise each expected course of fire and check to ensure understanding.

The first course of fire is a basic draw and shoot using the red-dot. Candidates are given 5 seconds to draw and fire. The Taser will run through a full cycle. Officers are expected to shout “TASER, TASER TASER!” each time the device is fired. At the conclusion of the cycle, officers will de-arm and unload the device before re-loading with a training cartridge. A further live cartridge is then added to the XDPM and the device is then holstered.

The second course of fire involves a simulated “miss” followed by an operational reload. Again from the 5 meter line, officers are given 10 seconds to safely draw, shoot reload and reengage. They are instructed to draw and fire before shouting “MISS!” They will then conduct a safe operational reload, taking one step back before re-engaging the target with a live cartridge. Accuracy is judged by a good spread of probes breaking the belt line.

This particular course of fire involves multiple drill techniques which must be completed safely within a time constraint. It is generally perceived to be the most challenging element of the classification.

“You fire the Taser, perform an operational reload, step back to the further line, and then do another shot, and I think that all had to be within like ten seconds . . . . so that was quite tricky . . . I was probably at twenty seconds to start and when you’re under pressure, trying to change the cartridge, it was quite tricky to be honest.” (P3)
The third course of fire simulates a technical failure with the red-dot sight. This system can be switched off using the illumination selector button on top of the Taser. From the 7 meter line officers are given three seconds to engage the target using the castle sight. They must then de-arm the device before the end of the 5 second cycle and reload with a live cartridge.

The final course of fire assesses competence in the angled drive-stun technique. Prospective STO’s stand on the 5 meter line, draw and shoot. They then dynamically approach the target and drive the front cartridge into an appropriate contact point on the assailant’s body, demonstrating a good probe spread. The drive-stun is a 5 second cycle which may be shortened at the instructor’s behest. After this course of fire the classification is complete. Participants will be informed immediately if they have passed or failed.

The classification exercise is the first assessment proper. It is a formal process and a nerve-racking experience that participants are universally relieved to have passed.

“That was nerve-racking, the classification . . . I was really nervous because . . . I wanted it so desperately . . .” (P14)

The classification also represents the first realistic juncture where an officer can fail the course. If this occurs, it will not usually be a surprise for either the officer or the instructors. A failed candidate will usually be one who has struggled in the early stages of the course and experienced a negative pressure culmination at the first formal assessment. When this occurs the officer will not usually be allowed to remain on the course.

“I was actually out with another chap off my section, he failed the classification shoot . . . he got sent away . . . back to section.” (P6)

The late morning and early afternoon of day two consists of the written examination, followed by classroom based inputs and a practical exercise. The written examination includes multiple choice and “fill in the blank” type questions. Key knowledge areas include naming the component parts of the Taser and the various elements of the NDM. Also given coverage are various technical aspects of the device and the situations where it should or should not be used.
The written examination is another nationally proscribed assessment, but it is not closely controlled like the classification. Candidates hint towards verbal collusion within the group and visual aids being left pinned to the classroom walls, which contain the answers to many of the questions. Of the 15 officers interviewed, not one failed or witnessed failure, of the examination. This naturally begs the question of component relevance.

“The only thing I would say about the exam is no one failed that and I don’t think anyone has ever failed it because I wouldn’t really call it an exam if I’m honest, I’d call it a police exam.” (P3)

After the written examination, officers receive a classroom based input on post deployment procedures. The lesson focuses predominantly on evidential requirements such as scene preservation and securing key exhibits.

The last exercise of the day, is colloquially referred to as the “21 foot drill.” A stooge stands 21 feet away from a prospective STO, usually in possession of a weapon such as a knife or iron bar. The officer must attempt to draw and fire the Taser before the stooge can engage him with the weapon. This exercise gives candidates an indication of how quickly they need to act under pressure. It also provides a visual representation of the limitations of the Taser and operator. And, it highlights the need for contingency planning, such as maintaining a reactionary gap, using hard cover and electing a tactical carry position, at an early stage of the encounter.

“But that was good. That highlighted . . . the impact you know. It’s only a 20 foot deployment, and how quick someone can close you down.” (P1)

At the end of day 2 the remaining officers feel more confident. Even those who struggled in the early stages. Presumably due to the fact that by this stage, officers will have successfully completed 2 of the 3 assessed course components. That being said there is still a general air of underlying concern even from the more confident officers.

“Yeah pretty good, I thought I was in with a chance of passing it, but again it comes down to whether or not you can perform under pressure on the day.” (P3)
Initial training - Day three

Day three is dedicated to a series of assessed scenario based role-play exercises. Arguably, this is the most important and challenging performance aspect of the training curriculum. Participants are required to complete at least three assessed scenarios during the course. Before the exercise begins, officers are given details of a call for service, akin to that which they would receive on operational duty. They are then dispatched to resolve the situation. The scenarios are designed to be as realistic as possible. Officers will be in full uniform, including body armour, and in possession of handcuffs, baton, inert chemical spray and a Taser. They may even begin the scenario by driving to the scene in a marked police vehicle.

Officers are deployed to various locations around the training site including a mock high street, bed-sit, shop, building society or petrol station. And, they are exposed to various hypothetical policing situations such as a domestic dispute, a man with a knife or a person behaving “oddly.” The scenarios are acted out by instructors, or other members of staff acting as stooges.

As with other components of the training curriculum, there is a marked disparity in approach to the scenarios, depending on the mindset of the officer. The more confident candidates tend to relax into the process, treating the exercises as if they were on operational duty.

“I just found, when I started in the scenarios, you’re back in, I mean you’re in uniform, you’re in a police car, you’ve got a radio on, and I felt really relaxed all of a sudden, it was like thank God the training is over and I’m now at work again. I can do all this sort of stuff.” (P5)

“You get on the radio, and you go out and actually get to shoot properly, and use the Taser, in more of a realistic environment . . .” (P14)

Whereas the less self-assured candidates approach these exercises with a more distinct trepidation.

“I hate scenarios at the best of times, I don’t think anyone likes them, but it’s just trying to get yourself into that police mode, get your police head on.” (P10)

Given the nature of the training, it is perhaps unsurprising that the presumption of incident resolution often lies with the Taser but this is not always the case. In certain scenarios officers may
be expected to resolve the situation using an alternative measure of force, or no force at all, instead relying on tactical communication.

The COP suggests a number of scenarios designed to test an officer’s knowledge, confidence and ability with Taser. Again the content of the scenarios are largely reflected by evidence-based safety concerns. Common scenarios include a call for service involving male acting strangely in a petrol station forecourt or doused in flammable liquid.

This particular scenario is designed to test whether prospective STO’s have assimilated the risk of the Taser sparks setting fire to flammable liquid. A concern first highlighted by Donnelly (2001); then further explored by Clarke & Andrews (2014); DOMILL (2004; 2005; 2007; 2012) and SACMILL (2017). The position of participants was abundantly clear. Taser use under these circumstances is not appropriate.

“Another one was the subject in a petrol station basically, threatening someone or having a fight I think it was, and again a big no-no!” (P3)

“And the third one was a chappie at a petrol station. Something to do with getting petrol, and he was getting very irate, so you had to think to yourself, having seen the video on Taser and petrol . . . obviously going to spark, you don’t want to spark anything up. For me it was just a case of using tac-coms [tactical communication] the whole way, and in the end they turned round and said, ‘We couldn’t . . . kick off with you, you were being too polite!’ . . . So I felt good on that one.” (P4)

Another common scenario is the report of a male standing over a high ledge threatening to jump off, or displaying aggressive behaviour whilst standing at the top of a flight of stairs. Becour et al. (2009) and Nislow (2005) highlight the risk of secondary head injury caused by a subject falling heavily to the ground after being Tasered. A risk which is exacerbated if the subject is standing in an elevated position. The more capable candidates recognised this heightened risk and adjusted their force mind-set accordingly:

“So one of them was a . . . violent subject, on like a grass verge, with a big drop . . . It’s basically high enough for someone to seriously injure themselves, so someone’s kicking off,
they’ve got a weapon or whatever, they’re threatening you, but the kind of general consensus is you can’t really be using Taser there because you Taser them, they’re going to fall back off the side and seriously hurt themselves.” (P3)

“The third scenario was a male with a baseball bat I think it was, who was standing on the edge of a wall. . . . I kept engaging him, talking to him, and there was nobody else around so no need to engage him with Taser at that moment. Waited for him for move away from the wall, when he carried on refusing to comply, then he was Tasered.” (P12)

But worryingly, some officers when faced with the same scenario, clearly succumb to the negative pressure. They fail to process the inherent risk, and instead elect to use Taser in a situation which, if translated to the operational environment, could have resulted in fatal consequences.

“I remember one of my scenarios, was a guy, with a, a weapon and they were standing on the edge of a wall. I didn’t even notice they were on a wall. . . . I Tasered him and he fell off, and instantly went unresponsive . . . that was like oh crap, because I knew what I had done, you know, you are taught, you know, you don’t Taser someone on the stairs, unless it’s so bad that, that’s your only option.” (P9)

This polarised method of same-situation resolution, is further demonstrated when the commonly used scenario of a male in possession of a knife or baseball bat is considered. The more assertive officers quickly realise that this is a case where Taser use is justified. They approach, draw and red-dot the subject. It is expected that if the subject does not immediately comply, then Taser will be fired.

“Yeah that one was like he was coming at you, with, clearly with a knife and you had to Taser him, and just go through the whole scenario . . . to the point of handcuffing.” (P8)

Whereas the less confident officers will succumb to the pressure and make erroneous judgement decisions. They may also struggle with accurate shot placement and general situation resolution.

“. . . I made ground on him and that’s when I shot it . . . it bounced off his head, and on his shoulder . . . I knew I had fluffed it because I had dinked him in his helmet . . .” (P10)
In this scenario CED use was clearly justified, but the probe struck the head of the intended subject. The medical consequences of this error are at best, very serious and at worst, potentially life-threatening. A Taser dart to the head has been proven to cause a medical condition known as Generalised Tonic-Clonic seizure (even in healthy adults) and as such, should be avoided at all costs (Bui, Sourkes & Wennberg, 2017).

Whilst this breach of safe weapon handling is a grave one, it is important to remember that the officer was working within the confines of the training environment. As such, operational errors are to some extent expected and accepted. What is important is the intrinsic process of constructive feedback and critical reflection after a “fluffed” scenario. Both the instructors and the candidates must work together to ensure that serious errors are not repeated in the operational environment. To this end, the sequence of scenario based role play exercises are vital to the development of prospective STO’s and are arguably the most valuable component of the initial training course.

The conclusion of the scenarios marks the conclusion of the course. Officers receive verbal and written feedback from the instructors and are informed whether or not they have passed. Positive notification comes as a welcome relief. Particularly to those officers who were less confident during the process.

“Yeah, relieved I suppose, glad that I could come back to my team and not be the first one to fail it. So yeah, I felt relieved.” (P3)

**Post-course reflections**

When asked to reflect on their overarching experience of Taser training, officers unanimously confirmed that the initial course was a robust and mentally taxing pedagogical process.

“It felt like a very intensive course so I was quite mentally drained.” (P5)

“. . . to be honest, the whole way through, I didn’t think I was going to pass it.”

“I didn’t turn up to the course thinking it was going to be easy, but it was a lot harder than I expected.” (P3)
They considered the coverage comprehensive and were confident to take their newly acquired skill-set forward into the operational environment. This is a testament to the training programme which has undoubtedly achieved its intended objective, which is to indoctrinate course participants in the safe and effective use of Taser.

“Very good, yeah. You came out confident that you knew what you were doing with the Taser . . . it was a good course, one of the best I’ve been on.” (P12)

“I think they have got it spot on, absolutely spot on, they cover everything, I think it’s a really good course, and it works really, really well and like I said before, I couldn’t think of anything that I would want them to change, because it worked, and I think it has a lot to do with the trainers because they were very good and they know their stuff.” (P14)

“Yeah I think pretty good to be fair. Yeah I don’t really think they could, I don’t think they could improve it too much.” (P3)

Course participants also made a number of interesting observations about the course. Their attitude towards scenario based role play was of particular interest. Especially when compared with other course components. For the most part officers are happy to talk with others about the various training requirements. There is even a degree of collusion with certain elements such as the written examination. However, officers are guarded when discussing the training scenarios, and are generally reluctant to disclose specific content to outsiders, or even co-participants.

“. . . from speaking to other STOs, you know, they don’t discuss the ins and outs of the course. You’re not told not to, you know, the instructors don’t tell you at the end of it, ‘Right, you must, you know, must keep secret everything that you’ve learnt’, but there’s obviously some unwritten rule somewhere that you can’t discuss the scenarios.” (P1)

A possible reason for this development appears to be the intrinsic process, which is seen as a rite of passage for course participants. Prospective STO’s feel that unqualified officers should approach the scenarios with unformed knowledge, and should act and react to the incumbent uncertainty, just as they would be required to in a live situation. Mistakes may well occur, but stringent assessment and constructive feedback, will help to ensure effective performance in the operational arena. If officers were to approach the scenarios with secure knowledge, having already decided on a particular
tactical option or course of action, then their response to an unfolding scenario will be disingenuous, and of little developmental value.

When asked about improvements to the course, certain officers suggested that the initial negative pressure could be eased significantly by prior familiarity with the Taser itself. This could be achieved by access (whether supervised or unsupervised) to an inert training unit for a period of time before the course.

“I just think it’s sometimes like putting a red Taser or something in the safe, so that once you know you’re on the course, one of the STO’s could show you how to use it.” (P8)

“. . . if there was some way we could, have, somewhere that we could practice, even with, inert cartridges, just to go through the procedures of it, in local stations, that would be helpful.” (P6)

A logical suggestion would be to make the red (inert) training devices available at larger police stations. This would allow officers selected for Taser training, to practice safety and handling techniques under the guidance and supervision of a current STO. This simple solution could help reduce course failure rates which is especially important if routine availability is actualised.

An additional avenue for improvement was the incorporation of BWV into the training environment. It was suggested that this would provide better opportunities for prospective STO’s to reflect on their performance during role plays.

“I . . . am gutted I didn’t record my scenarios . . . Body Worn Video is brilliant. I think it’s a really good training aid. . . . I don’t think it would be a bad thing to film your scenario, because you can look at other peoples and you can look back at yourself and you can see . . . how you are behaving, and sometimes you can’t even remember what you have said because you are just going along with it. So, I don’t think that’s a bad thing . . .” (P14)

This appears to be another simple, cost effective solution that could pay significant dividends. It is readily achievable, given that many police forces have now issued BWV to every uniformed officer and it is a stance that is strongly supported by SACMILL, who made the following observation.
when concluding their statement on the medical concerns of the Taser X2, which will eventually replace the X26.

SACMILL has previously made known its strong support for the use of body-worn video cameras by CED officers and would like to take the opportunity to re-state its position here. Body worn video imagery promises to provide medically relevant information from incidents in which an adverse outcome is associated with CED use (2017, p. 17).

Finally, officers were asked whether the experience of a 5 second Taser cycle should be offered during initial training. The overwhelming consensus was against this. Principally, because the sample population were all experienced police officers, who had already felt the effects of other force options such as chemical spray and saw no benefit in adding a further painful experience to this repertoire. Prospective STO’s are fully aware that Taser is unpleasant, they know it hurts, and they know what is supposed to happen when a person is shot with it. They do not feel the need to experience this personally, and are of the opinion that it should not be mandatory.

“Why put yourself through that? It hurts. I accidentally did it, it hurts. It’s a shock and I don’t see why we should. Especially neuro-muscular incapacitation. I don’t see why anybody should need to . . . feel that, unless they have committed an offence in law and it has to be used to incapacitate someone legally.” (P7)

“I don’t want to be Tasered, I don’t think I need to. I know it’s going to hurt . . . I have watched it being done, I know what effect it can have. I don’t need to feel that.” (P14)

A stance the author would echo having experienced a five second Taser cycle and would qualify further. We do not know the long term psychological effects of Taser exposure (SACMILL, 2017; White et al., 2014). So officer’s longer term mental well-being should not be put at risk needlessly. Also, if officers were subjected to Taser by the police service, then this could in theory, constitute a breach of Article 3 ECHR (1998) and the state could be legally regarded as complicit in the application of unjustified and inhumane treatment or punishment, in other words, torture.

The above chapter has examined the CED training curriculum, describing the various core components and detailing the effect of the entailed pressure on course participants. Potential improvements such as the introduction inert devices into home stations and BWV into the training
environment were also considered. The following chapter will explore how CEDs are being used in the operational environment.
Chapter nine
CED operationalisation

The following chapter explores the impact CEDs have had on front-line policing within Westshire Constabulary and how these devices are being used by non-specialist officers. The first section provides an overview of how officers perceive their role to have changed since becoming an STO. The second section comprises the breakdown analysis of eight ethically obtained examples of operational CED use and also briefly describes the post-incident procedures. Chapter nine concludes with a standalone section on CEDs and the use of force. The research data is pitted against relevant literature (predominantly the causal force factors); and reflective observations are to add qualitative weight to the findings. The intention of this chapter is to use the research data in combination with the literature in order to identify potential patterns in CED use.

Operational context

After the initial training process was fully explored, the sample population where asked whether their operational life had changed since becoming an STO. For the most part, STOs indicated that their core duties have remained much the same. They report that an STO may be preferred in the initial response to higher-risk calls for service such as those involving weapons, conflict or the arrest of violent individuals. They may also be occasionally abstracted from response tasking and used to assist in the execution of high-risk arrest warrants. But ultimately, there is no significant change in everyday function or responsibility.

“Business as usual. Yeah. Yeah. . . . Sometimes they ask for an STO to go to jobs, but normally . . . you just go because you are going anyway!” (P8)

Secondly, STO’s were quizzed about the reaction they had received from the general public since becoming a Taser officer. There was clear consensus. In everyday public interaction, the majority of STO’s reported no significant reaction. Positive, adverse or neutral. Most members of the public either did not notice, or merely expressed a passing interest, in the presence of Taser

“Yeah, no one bats an eyelid. I mean we’re here today at “Revival” [a large music festival], no one has batted an eyelid. I’m walking around, there’s 40 thousand people here, maybe, and
no one’s come up and said, ‘How dare you wear Taser?’, or ‘How dare you have a Taser?’” (P4)

That being said, some STOs also indicated that citizens who frequently come to the attention of uniformed police officers do exhibit significant behavioural changes when interacting with an STO when compared to an officer not in possession of a CED. This is manifested by consent, where it might otherwise have been unforthcoming and attests to the visual deterrent of a CED.

“The well-known ones, if they see a police officer with Taser and they need to be arrested, they don’t kick off. But the first thing they will clock is . . . if you have Taser or not. And if you don’t have Taser they will then run away, or think game-on!” (P4)

Thirdly, officers were asked whether they consider CEDs a necessary addition to the armoury of a contemporary police officer. This particular question evoked some alarming reflective observations relating to officer safety. Most notably, the increased preparedness of criminals to resist arrest and assault officers using weapons.

“I have had situations before where . . . they have pulled a machete out of their trousers, and all of a sudden, standing there with your spray in your hand and you know a 10 inch long metal stick, suddenly feels quite inadequate.”

“. . . even just from my experience people . . . are willing to get aggressive with the police. Willing to have a fight, take their chances and all the rest of it. That’s increasing, in a big, big way. As are, people who are carrying weapons, whether that be needles, razor blades, knives, bottles, bars, baseball bats, you name it, they are being carried, and they are being carried a lot more than we know about.” (P9)

These worrisome reflections, indicate the deterrent effect of CEDs. They also appear to confirm the capacity of such devices to help reduce rates of injury and defuse a potentially volatile situation by mere presence or presentation. The latest Police Federation statistics indicate that a Police officer is assaulted every 22 minutes in the UK (2017) and there is a growing base of evidence to suggest that these figures could be reduced by CEDs (e.g. Kaminski, 2009; Kaminski et al., 2015; Lin & Jones, 2010; MacDonald et al., 2009; Smith et al., 2007; 2009). In the light of this information (and
notwithstanding the valid moral objections posed by organisations such as Amnesty International) the case for further if not widespread availability is appears compelling.

The fifth topical question queried participant’s understanding of the injury recording requirements after a drive-stun or full-probe discharge. It must be said that the current training guidance is unclear. Officers are unsure of official guidance but tend to record routine puncture wounds as a separate and quantifiable injury.

“I mean I would record it. The forms that we do, obviously make note of it. It is incidental of the injury isn’t it? It’s not an injury as such, but like, it’s as a result of them being Tasered . . . There seems to be some sort of like, disconnect with Taser, in that every time we use it we are injuring someone, but that’s the intent . . . it’s as a result of being Tasered. It is what it is.” (P11)

Clearly this has wider implications for the use of force recording. CEDs could be viewed as higher liability weapons than in fact they are and empirical research could be rendered unreliable due to methodological inconsistencies. Public opinion could also be unfairly skewed against the device (Terrill & Paoline, 2015). Official clarity and a common approach is urgently required. To avoid any ambiguity, the common sense suggestion made by Kaminski et al. (2015) could be implemented (See chapter five). This approach would ensure that only non-routine CED related injuries are documented and would in-turn, result in a more consistent approach to injury recording.

And finally, officers were asked whether CEDs should be made available to every uniformed officer. Once again there was consensus towards the positive, but with a caveat. STO’s felt that officers who want to carry a CED should be allowed to but it should not be mandatory. They also stressed that carriage should be subject to successful completion of an intensive training course akin to that which they completed. They stress that the high training standards should not be lowered due to a general demand.

Question: “And do you think everyone should have Taser?”

Answer: “I do, yeah, my opinion is every response officer.” (P12)
Question: “And do you think everyone should go through the same training as you?”

Answer: Definitely. Yeah. Yeah. I don’t think you can lower the standards. I think the standard they’ve set it at is where we should be at. And that’s where it needs to stay really.” (P12)

Certain research participants also intimated that a number of police colleagues were simply not responsible enough to carry such a high liability device.

“There is certain people I wouldn’t trust with it.” (P6)

“Let’s face it, we all know people who are nightmares. Who are too heavy handed. Who haven’t quite got the right mind-set and the right attitude. Who, you know that if they had it would, would perhaps be a bit more of a risk, or a bit more gung-ho about it . . .” (P9)

“I don’t think every single police officer should carry it because . . . in any organisation, unfortunately there are a few people that sort of slip through the net and . . . I don’t think could be trusted with it.” (P3)

These concerns reflect a body of empirical research which suggests that the use of excessive force can be a desirable and celebrated facet of routine police work (e.g. Cain, 1973; Ericson & Hegarty, 1997; Fielding, 1988; Holdaway & Parker, 1998; Jackson, 2003; Loftus, 2009b; Paoline, Myers, & Worden, 2000; Waddington, 1999a). Officers with such a negative cultural mind-set could well be in the minority but they still pose a substantial risk to the British Police service. A risk which would be significantly enhanced if these officers were allowed access to a CED. Policing by consent relies on a contract of trust between society and the police service and this trust could be subject to significant erosion if CEDs are misused. This pertinent concern is one that individual police forces will need to address through appropriate internal channels if routine availability of CEDs is to be actualised.

**Operational CED use**

In total, 14 examples of operational CED use were disclosed by the sample population. **Table 9.1.** below provides a summary. Eight of the most relevant examples are sign-posted by relevant theme and analysed in this current section. All 14 instances of CED use are then pitted against the relevant
force predictors in the final section of this chapter. The selection includes a combination of arguably textbook CED use, somewhat disparate CED use and also instances where use of the device has proved either dangerous or ineffective. It should not go unqualified, that the following examples are real-life situations in which officers have faced extreme danger from violent suspects, often in possession of potentially lethal weapons.

Table 9.1. Summary of 14 CED uses as disclosed by the sample population

<table>
<thead>
<tr>
<th>Incident number/type</th>
<th>Taser use</th>
<th>Officer gender</th>
<th>Subject gender</th>
<th>Weapon used</th>
<th>Assault / resist</th>
<th>Intoxication</th>
<th>Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Criminal damage</td>
<td>Fired</td>
<td>M</td>
<td>M</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Domestic violence</td>
<td>Drive-stun</td>
<td>M</td>
<td>M</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>3. Mental health</td>
<td>Fired</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Robbery</td>
<td>Red-dot</td>
<td>M</td>
<td>F</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>5. Domestic violence</td>
<td>Fired</td>
<td>M</td>
<td>M</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>6. Domestic violence</td>
<td>Fired</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>7. Public order</td>
<td>Fired</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>8. Domestic violence</td>
<td>Fired</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>9. Mental health</td>
<td>Red-dot</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>10. Mental health</td>
<td>Red-dot</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>11. Serious assault</td>
<td>Red-dot</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>12. Serious assault</td>
<td>Red-dot</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>13. Public order</td>
<td>Drive-stun</td>
<td>M</td>
<td>M</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>14. Public order</td>
<td>Red-dot</td>
<td>M</td>
<td>M</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Textbook use

Officers were called to a mental health hospital. A male had forced entry and was trying to set fire to the building. On police arrival, staff members reported that the male was in the corridor area, causing significant damage to the building. He was in possession of an iron bar and he had removed his outer clothing. P12 attended the location in company with several other non STO’s. P12 drew and armed his CED and repeatedly challenged the male, ordering him to drop the weapon. The male
did not comply and instead he raised the metal bar above his head and charged at the officers. P12 fired the CED. Both barbs made contact with the male’s body, breaking the belt line. The male fell to the floor. He was exposed to a five second shock cycle. P12 then directed two officers in support, to move in and handcuff the male.

P12 was asked to describe and reflect upon his experience of this encounter. His response was very similar to those given by prospective STO’s discussing scenario exercises during initial training.

“I don’t even remember drawing my Taser. It was more of an instinctive thing . . . right he’s got a weapon, so I’m not going to put myself in harm’s way, or my colleagues, if we’ve got something else that we can use. He starts running towards us with the bar above his head, gets Tasered . . . he fell to the ground . . . at which point . . . everyone knew what to do.”

(P12)

P12’s response to this dynamic situation was both instinctive and effective. Whilst there is little evidence to support realistic use of the NDM, the response is entirely justified based on core principles of self-defence, and securing the arrest of an armed offender.

The fact that both the subject and the officer were male and a weapon was used during the encounter, meant that the police response (i.e. the use of a less-lethal measure) was in-keeping with both training and scientific expectation (e.g. Boivin & Legacé, 2016; McCluskey et al., 2005; Paoline & Terrill, 2007; Terrill, 2007). In this incident, the use of a CED was instrumental in the safe resolution, of an otherwise very dangerous encounter.

Dynamic risk assessment
P6 was patrolling alone when he was called to attend numerous reports of a male walking in a busy high street openly carrying a large kitchen knife. P6 arrives on scene and is immediately confronted by the male. He immediately draws his CED and red-dots the male. In response the male lifts the knife up to his throat.

“. . . as soon as I red-dotted him, he pulled the knife up to his throat, which made me think I don’t want to pull the trigger too fast because if he falls on that, then that’s, game over. So I just managed to talk him into getting . . . to the floor and, surrendering . . .” (P6)
During this dynamic incident, P6 clearly adheres to the standards imposed during initial Taser training. He conducts a risk assessment and elects not to fire his Taser due to the high risk of secondary injury caused by the subject falling heavily onto a knife (Becour et al. (2009); Nislow (2005). He adjusts his use of force mind-set and elects to use tactical communication, rather than any other level of force. This has the desired effect and the male is safely arrested. This is another example of a clinical Taser encounter which is conducted in-keeping with initial training standards and the evidence base.

Assaults on police

This example of Taser use was ultimately a successful deployment, but the circumstances are far more harrowing than in the previously documented cases. Officers were called to a house to investigate an allegation of domestic abuse. P12 was the first officer on scene and was in company with a colleague. P12 knocked the door and was met with an extremely aggressive male. P12 attempted to arrest the male. The male responded by repeatedly punching P12 to the face knocking him to the floor. His partner used multiple force options in self-defence, (including chemical spray and baton strikes) but these measures proved ineffective. As the male turned to assault his colleague, P12 took the opportunity to draw and fire Taser from a prone position on the floor.

“He got very aggressive . . . he’s turned around, swung, caught me straight on the left eye, which has swollen straight out, started straight away. Then he’s repeatedly rained eight or nine blows against my head, which has knocked me to the ground and I’ve been on my knees. My colleagues have emptied a can and a half of spray into his face, with no effect on him at all. One of my colleagues is then going in with a baton strike to his ribs, which has had the effect of him turning away from me . . . on the body-worn camera, you see him drawing back his fist to punch her in the face, but that gave me enough time to roll on to my side, draw the Taser and shoot him whilst laying on the ground. Which got a full connection in the back, it wasn’t a big spread, but it hit him, he went . . . down with the first one, he then took another two cycles, because he was fighting. He was trying to fight to rip the barbs out, two cycles before he complied, put his arms behind his back and stopped trying to resist.” (P12)

Rather than a clinical Taser deployment, this incident was resolved in desperation after all other use of force options had failed. From an analytical perspective the deployment was unique in that the outcome was scientifically unexpected. For example, no weapon was involved, a fact which is a
statistically significant precursor to CED use (Boivin & Legacé, 2016; McCluskey et al., 2005; Paoline & Terrill, 2007; Terrill, 2007); albeit the subject was both male, drunk and combative which increases the likelihood of use (Garner et al., 2002; 2006; McCluskey & Terrill, 2005; McCluskey, Terrill & Paoline, 2005; Millar 2010; Terrill & Mastrofski, 2002; Terrill & Reisig, 2003; Terrill Paoline & Manning, 2003).

It is perhaps of interest to note that the initial training does not teach or recommend that officers shoot from the ground. Also, the current COP guidelines caution strongly against the use of multiple CED cycles (Braidwood Commission, 2010; QCMC, 2013) as well as the use of the device after the deployment of chemical spray (Clarke & Andrews, 2014; Donnelly, 2001). This situation demonstrates the unpredictable nature of a coercive encounter and shows that CEDs can still be effective even if used outside of the training parameters. In addition, an incident such as this could be a real-life example of when the New Public Management approach could potentially be implemented in the event of a CED related death. In this incident the STO admittedly used a CED outside of the training guidance, but because he was effectively fighting for his life it would be arguably remiss for that officer to retain individual accountability for the outcome of the encounter. It would perhaps be more appropriate for the organisation to absorb this burden thereby allowing a path of accountability and legal resolution to any interested parties, but at the same time shielding the individual agent from the consequences of a tragic outcome occurring after an in-good-faith operational decision:

A situation that is fluid and essentially unmanageable and which requires officers to do what they themselves have described as ‘impossible’ is as unacceptable to individuals as it is to police culture as a whole. The ‘action oriented’ culture of policing impels officers to improvise, do their best and do what they can, assured that they will be protected from the consequences of a well-intentioned mistake . . . the very least an agency can promise . . . (Squires & Kennison, 2010, p. 50)

The operational reload

The following example took place the day after P3 completed Taser training. P3 was asked by a colleague to assist in the arrest of a male for a criminal damage offence. He attended the scene to find his colleague struggling to control a male, who was resisting arrest. Officers used knee strikes,
chemical spray and an extendable baton. These could not secure the arrest. The male is taken to the floor by officers, at which point he kicks P3 to the face and tries to escape. P3 draws his Taser and attempts a full-probe deployment. This is unsuccessful as the probes do not embed the skin. He performs an operational reload and fires again. Full NMI is achieved, and the suspect is arrested. P3 was asked to reflect on the immediate aftermath. He cites a state of relief at resolving the situation without incurring further personal injury.

“Okay so immediately after obviously your adrenaline is pumping and you know, you think . . . that’s a bit lucky, you know, I could have got a bit of a serious kicking there” (P3)

This situation is similar to example three (above) in that it is not a clinical Taser deployment. However, P3 does show competent use of the device. P3 fires and quickly recognises a miss. He goes on to perform an operational reload which resulted in full NMI. This demonstrates the effectiveness of rigid inculcation during the weapon handling sessions, and the benefit of including the operational reload as part of the classification assessment. A pedagogical process which clearly helps STO’s prepare for the dynamism and unpredictability of the operational environment.

**Effective use of the National Decision Model**

On Christmas day 2016, P12 is called to a domestic assault. An intoxicated male has assaulted his wife. She has locked herself in her flat and the male is trying to gain entry. The male has multiple previous convictions for assaulting police officers. P12 arrives on scene and immediately sees the male standing at the top of a flight of stairs.

“I initially went to Taser, then saw the stairs and thought . . . I can’t Taser him there.” (P12)

P12 knows he has to arrest the male to prevent him from forcing entry to the flat and further assaulting his wife. He walks up the stairs and tries to engage with him but the male’s wife opens the front door. The male tries to enter. P12 and another officer move in to restrain him but both are assaulted.

“Me and my colleague go in after him, ending up having a right old fight with him, taking punches and elbows and all the rest of it.”(P12)
P12 reassesses use of Taser. Due to proximity, he uses a drive-stun to gain acquiescence. Both officers are exhausted but still need to secure the arrest.

“He’s gone to the ground, at that point both me and my colleague were absolutely exhausted, so he’s then taken a third . . . shot from the gun to his back, to keep him on the ground, which had the effect, effectively stunning him for four, five seconds, at which point we managed to get the cuffs on and then after that he’s just gone ballistic again, and we’ve had to restrain him for the next twenty minutes.” (P12)

In this situation CED use was predictable because the encounter involved officers being assaulted by an intoxicated and violent male subject (Garner et al., 2002; 2006; McCluskey & Terrill, 2005; McCluskey, Terrill & Paoline, 2005; Millar 2010; Terrill & Mastrofski, 2002; Terrill & Reisig, 2003; Terrill Paoline & Manning, 2003).

What is perhaps more interesting, is the fact that this deployment appears to show rudimentary use of the NDM. Albeit this is not expressly stated. With the information and intelligence initially provided, P12 conducted a risk assessment and elected to use Taser as part of his initial working strategy. He was aware of his powers of arrest and he took action by drawing the Taser. Upon seeing the stairs he revisited the information phase, and in line with training, elected not to use Taser. As a contingency he engaged in tactical communication and made ground on the male.

When the risk again escalated, but the male was no longer standing on the stairs, P12 revisited the risk assessment and formulated a new strategy. This time involving the use of the drive-stun technique. He took action and secured the arrest. P12 even embarked upon a process of reflection after the fact, stating that he cannot see how the situation could have been safely resolved without the use of a Taser. The conclusion of this encounter also shows effective use of the drive-stun, and appears to counter the position of Sprague (2007) who feels that this technique should be banned.

“We had no other option, there was no room to baton, if we’d sprayed at the top of the stairs ... it was such a small space, we all would have been affected. I . . . honestly don’t know how we would have been able to control him if . . . I hadn’t had Taser.” (P12)
CED fallibility

The following two examples caution against overreliance on CEDs as they are not infallible. Police were called to a report of a male in possession of a knife outside the railway station of a busy urban town. P5 attends as a lone STO. P5 locates the male who is openly carrying a large kitchen knife. P5 draws his Taser and challenges the male. The male runs away from the officer towards the train station. He is still carrying the knife. P5 chases the male and fires the Taser into his back. Both probes make contact but get stuck in loose clothing. The discharge was ineffective and P5 had to use other force options.

“So I had to hit him with the baton, until he dropped his knife, which was fine, because he wasn’t actively seeking to kick my arse . . .” (P5)

On reflection, P5 considered himself lucky that the male did not attack him with the knife as Taser would not have saved him. This is particularly concerning given that he was single-manned at the time which clearly left him in a vulnerable predicament.

“. . . had he turned round after being Tasered and challenged me . . . the Taser would have been next to useless. I probably would have thrown it on the floor.” (P5)

An encounter such as this could have benefitted from the principles of Critical Incident Management being instigated at an early stage. Notwithstanding the obligation of police officers to intervene positively to protect life, often in dynamic circumstances, there is little evidence of organisational support or a pre-existing command structure here. P5 was effectively acting as a lone agent and was not operating within any strategic, tactical or operational parameters. As a result he was placed at significant risk. This incident could have benefitted from the early involvement of a set command structure even if these roles were assumed by the officer’s Sergeant and Inspector in the initial stages. Such a structure would almost certainly have recognised the increased risk to the public, the police officer and to the subject himself and could have worked to put contingency measures in place to mitigate this risk. Having reviewed this encounter it seems that nothing more than good fortune combined with a lack of willingness on the part of the subject to use the knife against the attending officer is the only thing that prevented the encounter resulting in serious consequences.
A common failure precursor

Police were called to the home address of a young male, reportedly in possession of a knife and iron bar. He had stated an intention to stab any police officers who approached him. Police tried to call him out of the address, but he refused. P5 entered the address with Taser drawn and began a room by room search for the male. The suspect approached an officer in the rear garden. He was still armed so P5 followed him out and, in a bid to protect his colleague, fired his CED. Only one barb struck the male, so NMI was not achieved. A baton and chemical spray were then used to facilitate the arrest. This encounter clearly demonstrates the fallibility of CEDs, they are not always effective and good contingency planning is essential. When CEDs fail officers are put in danger and this can lead to a lack of confidence in the device.

“So my two actual discharges have both missed and been ineffective . . . so my confidence is less high in Taser than it was . . . . I’ve never been hugely under the illusion that it’s a particularly effective tool . . . with Taser, you can hit them, and it can do sod all, or you can miss because it’s windy or something like that.” (P5)

The above two examples indicate that when CEDs fail operationally, a number of situational commonalities are likely exist. Problems arose when officers were faced with a subject wearing loose clothing, or moving dynamically. Also, when operators missed the intended target with one or more probe. These are common failure precursors, often attributable to the operator as opposed to the technology. Each precursor is addressed by prior research (e.g. Jenkinson et al., 2006; Kaminski et al., 2015) and mitigated at various stages of Taser training (see chapter five above). For example, accurate shot placement on a moving target is taught and practiced, as are operational contingencies, such as the operational reload or angled drive-stun technique, to follow up a single probe miss. These tactics were not attempted during the above examples, so the failures could reasonably be regarded as an individual training need, rather than a valid critique of the device which generally reports high percentage reliability (e.g., Kaminski et al., 2013; White & Ready, 2007; Mesloh et al., 2005; Mesloh et al., 2009).

Notwithstanding this assertion, it is perhaps advisable that more instruction and greater emphasis be afforded to limitations and common failure precursors during initial training. Such pedagogy would ensure that officers remain operationally uncomplacent, and could also lead to a reduction in rates of injury during a coercive encounter (Millar, 2010).
Unsafe use

The final example of operational Taser use highlights a problem when too many STO’s attend the same call for service and when untrained officers become involved in the encounter. The situation began when officers were affecting the arrest of a violent male. The subject had been secured in the rear of a police vehicle when his friend emerged from a nearby house in possession of a large knife. He made threats towards officers and attempted to free his friend from police custody. There were three STO’s present at this situation along with a number of other officers who had not completed Taser training. The subject was engaged by three Taser officers, including P6.

P6 had armed his Taser and red-dotted the subject however a non-Taser officer walked in front of the red-dot and directly in the arc of fire. This officer then used chemical spray on the subject at the same time that a Taser was deployed by another STO. As a result, both the STO and the subject were doused with chemical spray.

“... unfortunately, one of my colleagues ran in front of me, so, I had a great Body Worn Video shot of my Taser dot, on the chap and then on the back of ... this other PC. He got Tasered by the other STO, at the same time as, one of the other officers Captured him [deployed chemical spray], and, he hit the deck, and that’s why the STO ended up with the spray because the PC was aiming at the chap’s face, so it was just a bit of a mess really.” (P6)

This example highlights some significant areas of operational concern whereby both the subject and the attending officers were placed in serious danger. Firstly, no single STO acted as the primary officer engaging with the subject. As a result three STO’s engaged him. Had Taser been deployed under these circumstances, then the subject would have experienced multiple Taser shocks which would have placed him at heightened risk of death or serious injury (Braidwood Commission, 2010; Oriola et al., 2012; QCMC, 2013)

Secondly, the untrained officer clearly placed himself in danger of a “Blue-on-Blue” encounter by walking straight into the firing line of an STO. Had the STO made the decision to fire before processing this risk then the officer would have been struck by a Taser dart at close proximity. This has been known to invoke potentially life threatening medical consequences such as generalised Tonic-Clonic seizure (Bui, Sourkes & Wennberg, 2017).
And finally, the untrained officer elects to use chemical spray at the same time that a Taser was fired. As a result, he doused both the subject and his STO colleague with a flammable liquid which could have been ignited by sparks emitted from the Taser. Again this could have caused potentially fatal injuries to both the subject and the deploying officer (Clarke & Andrews, 2014; Donnelly, 2001).

This scenario was correctly described by P6 as a “mess” and several significant learning points naturally emerged which could be addressed or further highlighted during initial or refresher training. These include the need to quickly identify a single primary STO to control a Taser encounter. The need to inform untrained officers to tactically position themselves behind STO’s and not to use chemical spray unless all other force options have been exhausted.

**Post-incident procedures**

As the above examples show, CED use can, and often does, involve officers being seriously assaulted or threatened with deadly weapons. There can also be significant injury caused to the subject. Yet there is no national mandate whereby officers are referred to support agencies, or subject of regular follow-up support facilitated by their home force. Punch suggests that “In relation to coping with the after-effects, however, there is a fair amount of evidence that care for officers following a shooting often used to be primitive if not non-existent” (2011, p. 100). Albeit this discussion was raised in relation to the police use of lethal-force, the extant procedural deficiencies appear to remain to this current day and also appear to have cascaded down to the less-lethal weapons arena.

This unfortunate situation manifests in both the organisation and individual officers normalising potentially psychologically damaging incidents. There is an expectation that an employee who has fired a CED will return immediately to full operational duty, often without undergoing any process of mental healing. A concern exemplified by P3 in his reflection on a firing, during which he was kicked in the face by the suspect.

> “I think it just kind of, just got passed off as a normal-ish kind of incident . . . but to be honest it was very minor, so I wouldn’t have expected a follow up.” (P3)

The potentially devastating long term ramifications for individual officers cannot be overstated. Neither can the negative reputational consequence which could befall the police service as employers if they fail to make improvements in this area. Particularly, in the light of a projected
increase in CED availability. Improvement could begin with the simplest of measures. Such as a mandatory referral process after a full-probe discharge, combined with regular follow up meetings with a supervisor. Evidently, no such support is mandated or in place.

“But for me the biggest issue is . . . what I would call the post-post-incident procedure. There isn’t one.” (P3)

**CEDs as a standalone force option**

There is a growing evidence base which suggests that police officers are willing for the most part to police by consent and as such seldom resort to force (Alpert & Dunham, 1999; Bayley & Garofalo, 1989; Boivin & Legacé, 2016; Croft, 1985; Fyfe, 1989; Garner *et al.* 2002; 2006; Kavanagh, 1997; McLaughlin, 1992; Worden, 1995). This evidence is supported when the CED use disclosed by the research sample in considered. From a combined total of 37 years in the STO role the sample population reported only 15 uses which were broken down into 6 firings, 2 drive-stun applications and 6 incidents of red-dot compliance.

There is further evidence to suggest that CEDs are operationally effective devices (Kaminski *et al*., 2013; White & Ready, 2007; Mesloh *et al*., 2005; Mesloh *et al*., 2009). For the most part, these assertions have been validated by this research. Of the 14 disclosed CED uses only 2 proved ineffective. This demonstrates that in many cases the use of a CED will result in the swift resolution of a potentially dangerous encounter.

The capability of the device to prevent officers experiencing grievous harm at the hands of a violent attacker is exemplified by P12 who made the following observation after being asked what would have happened if he was not in possession of a CED.

“He wasn’t fighting us to get away. He was fighting us to do damage ... he had more than enough opportunity to run out of the house if he wanted to. . . . I thought he had fractured my cheekbone, that’s what it felt like. I’ve got no doubt we would have ended up with at least three or four officers in hospital.” (P12)

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20 In total, fifteen Taser uses were disclosed by the sample population. However, only fourteen could be discussed in this thesis. One incident was redacted in line with ethical guidelines because it related to an active criminal investigation.
A sobering account which validates research by Kaminski (2009); Kaminski et al. (2015); Lin & Jones (2010); MacDonald et al. (2009) and Smith et al. (2007; 2009) and highlights the capacity of CEDs to reduce rates of injury to both officers and suspects during a forceful encounter. Where injury to officers did occur this was predominantly attributable to the device being used in the later stages of an encounter where the officer had already been assaulted. This points to the operational benefit of using CEDs at an early stage. Something which should be highlighted more during initial training.

The tactical value of the mere presence or production of a CED, during the course of a potentially coercive encounter has been discussed in the literature (see ACPO & COP, 2013; Home Office, 2014; NPCC, 2016). The operational use of the red-dot function was specifically highlighted as a useful means to compel acquiescence. The value of this standalone tactic was supported by survey data (see Appendix B) and is further validated qualitatively by the research sample.

“. . . The red-dot is there for a reason, so you know where you’re aiming on the chest . . . because that’s where the top probe will technically go. And if they see that, then they know it’s live . . .” (P4)

“In my experience, the red-dot, sorts people out. If it’s backed up with the correct verbals...” (P6)

“I pulled the Taser out. Red-dotted him on the chest, and he instantly dropped, just went straight to the floor, put his hands behind his back. Complied.” (P11)

CEDs and less-lethal force predictors

The above section has focused on the use of a CED as a standalone force option. From the reflective observations provided by the sample population it appears that the devices are being used broadly in congruence with training guidelines and organisational expectation. That being said, coercive encounters are by-nature dynamic and unpredictable so CEDs may also be deployed in a manner that falls outside of standardised practice, sometimes out of sheer desperation and in unideal circumstances. The following section provides a balanced empirical snapshot of operational CED use by setting the research data specifically against the suspect, officer and encounter characteristics identified in key literature. This process allows for the identification and exploration of predictability.
in CED use. In a unique approach, relevant qualitative observations are used to provide a layer of explanatory depth to the findings.

**Suspect characteristics**

**Gender**
There is clear evidence to suggest that male subjects are more likely to have less-lethal force applied to them than females. From the instances of CED use disclosed by the sample population not a single recipient was female. This supports the conclusions drawn by Croft (1985); Garner et al. (2002; 2006); McCluskey, Terrill & Paoline (2005); McCluskey & Terrill (2005); Millar (2010); Terrill & Mastrofski (2002); Terrill & Reisig (2003); Terrill et al. (2003) which commonly ascribed statistical significance to males being more likely than females, to experience force at the hands of the police. A possible, albeit juxtaposed explanation for this divulgence is discussed in the gender as an officer characteristic section below.

**Demeanour**
Paoline & Terrill (2004); McCluskey et al. (2005); McCluskey & Terrill (2005) and Terrill & Mastrofski (2002) all report that a suspect using foul and abusive language towards a police officer is no more or less likely to experience a less-lethal force measure. Engel et al. (2000); Garner et al. (2002) and Kaminski et al. (2004) disagree. These inconclusive results are mirrored by this research. Some officers certainly experienced rude and abusive behavior prior to using Taser, but others did not.

This inconsistency could be explained by CED use as a preemptive and dynamic dominance tactic, effectively ending conflict before it has a chance to begin, and thereby limiting the opportunity of a subject to elevate his behavior to abusive, threatening or aggressive levels. A seemingly effective tactic which should arguably be highlighted more during initial training.

“We had keys to the flat. Made entry. I had the Taser . . . on as we went in. We went through the door, found him in bed, pulled the covers off. I kept the red-dot on him until we got him secured. No hassle.” (P11)

**Intoxication**
Similar results prevail when intoxication is considered. Engel (2015); Engel et al. (2000); Kavanagh (1997); McCluskey et al. (2005); McCluskey & Terrill (2005); Morabito & Socia (2015); Terrill &
Mastrofski, (2002) Terrill et al. (2003) and Terrill et al. (2008) all claim that intoxication is strongly linked to the use of less-lethal force. However, Crawford & Burns (1998) and Doerner (1997) found no significant relationship. Inconclusive results which are again reflected by this research, which disclosed that intoxication was a factor in several Taser uses, but was not a consistent presence.

Mental Health
Morabito & Socia (2015) declare that mental health alone is not a statistically significant force predictor. A presumption supported by this research. Mental health was a factor in three of the fourteen examples of Taser use, but on each of these occasions, the subject was also in possession of a weapon. A fact which instantly predisposed them to a heightened risk of being subject to Taser. Whilst STOs are prepared to show due sensitivity to persons with such conditions, they still feel that if a weapon is presented then Taser use remains justified.

“...don’t be afraid to Taser somebody because they have got... special needs or are a child. I mean it’s not ideal to do it, but if it’s your only option...” (P6)

Ethnicity
On the subject of ethnicity, various academics aired the concern that ethnic minority citizens are over represented by Taser use statistics (Gau et al. 2010; Oriola et al. 2012; Ryan, 2008; Shaw 2015). An assertion that is not supported by this and other research which finds no concrete relationship (see Freidrich, 1980; McCluskey & Terrill, 2005; McCluskey, Terrill & Paoline, 2005). From the disclosures made by the sample population, a Taser was used on only two persons of ethnic minority, one of whom was brandishing a knife during the encounter. Whilst this may appear to be a somewhat unremarkable finding, the fact that Westshire Constabulary serves a relatively low proportion of ethnic minority residents, should not be overlooked. Neither should the fact that the initial Taser training standards do very little to proactively counter what is relatively well publicised societal risk.

Officer characteristics
Gender
Paoline & Terrill (2004); Mccluskey & Terrill (2005); Mccluskey et al. (2005); Paoline & Terrill (2007); Terrill & Mastrofski (2002); and Terrill et al. (2008) all report that an officer’s decision to resort to
force is not affected by gender. A stance which is clearly contrary to the position of this research, which did not disclose a single Taser firing or instance of red-dot compliance by female officers.

Whilst the limited number of female participants cannot be overlooked, the evidence accrued from this qualitative study, strongly suggests that male officers are more likely to use a CED than their female counterparts. A position supported by Garner et al. (2002).

P14 suggests that low Taser use figures could be attributable to the greater preparedness of females to engage a subject in Tactical communication, or the predominantly male based target population, being unwilling to resist or assault a female officer.

“Communication skills always comes first. Always talk. And I think being a girl sometimes, maybe that’s why I haven’t used my Taser yet. Because, I will always go for the talk and if a man sees a female, most of the time, they are not quite as violent . . .” (P14)

An intriguing conceptual explanation and a potential avenue for further research.

**Encounter Characteristics**

**Suspect use of a weapon**

In the majority of Taser uses disclosed by the research sample, the subject was in possession of a potentially lethal weapon such as a knife or metal bar. The use of a weapon is a statistically significant predictor of force according to Terrill (2007); McCluskey et al. (2005) and Paoline & Terrill (2007). Findings which are supported by this research. STO’s are highly likely to use Taser when a weapon of any description, but in particular a knife or bladed article is produced or otherwise involved in the encounter. STO’s unanimously feel under these circumstances that the use of a CED is a justified, proportionate and necessary means of resolving the encounter.

“But if someone’s got a knife on them, a hammer, a sledge hammer, a baseball bat, and they’ve not dropped it, that’s when you go: “Okay, you’ve made your choice, game on!” (P4)

“If the person had a weapon, and they weren’t dropping it, then you know, Taser would be coming out. (P15)
“If somebody has got a weapon, then I would be using it . . .” (P6)

“I think if there is a weapon involved, I am more likely, to go for the Taser, but every situation is going to be different . . .” (P15)

Suspect resisting arrest or otherwise confrontational

Garner et al. (1996); Kavanagh (1997); McCluskey & Terrill (2005); McCluskey et al. (2005); Paoline & Terrill (2007); Terrill et al. (2003) and Terrill et al. (2008) all confirm that a suspect who is resisting arrest, is more likely to experience force. Whilst officers may elect to use some degree of force on a purely resistant subject, they will seldom resort to a CED.

“If the person is just being aggressive, and hasn’t got a weapon then I probably wouldn’t necessarily draw Taser.” (P15)

However, if the level of resistance escalates to a more serious level or if there are other aggravating factors present during the encounter then Taser use will become more likely. For example, on each occasion that Taser was fired by the sample population and in the majority of cases where one was used, the subject was either violently resisting arrest or in the act of assaulting the attending or other officer(s), often with a weapon.

The preceding chapter has provided a qualitative overview of CED use by a small number of STOs employed by Westshire Constabulary. Whilst the results are not necessarily generalisable countrywide the examples of operational use indicate that CEDs are usually applied within the parameters of training guidelines, predominantly when a knife or other weapon is involved in the encounter or when officers are facing serious aggravated resistance. For the most part, the device appears to be operationally effective, however this is not always the case and caution against complacency is needed. In addition, untrained officers who may be unaware of the capability of CEDs have the potential to increase the risk of serious injury to all parties involved in a coercive encounter. This presents a case to suggest that untrained officers should be given a practical input on how to comport themselves during a CED led encounter.

CED recipients will generally be male. If a suspect is confrontational, intoxicated or in possession of a weapon, the likelihood of use increases dramatically. Male officers are more likely to use Taser than
females. Perhaps because female officers have better communication skills? Or, maybe because male subjects are more likely to comply with, and less likely to assault a female? This research found no evidence of disproportionate Taser use on vulnerable population groups, but general under-representation within the force area should not be overlooked. More research focusing on domestic violence as a standalone encounter characteristic would also be interesting, as there certainly appears to be a connection between this force correlate and an increased likelihood of Taser application. The following chapter will address the operational use of NDM, the position of CEDs within the force hierarchy and the protection of vulnerable citizens.
Chapter ten

Decision making and the protection of vulnerable population groups

The following chapter focuses on use of the NDM in the training and operational environment. The COP has directed that officers should use the NDM to elect and justify every decision they make, including the use of force. This position has effectively negated the requirement for officially recognised force continua. The following chapter will explore whether this is a sound and logical advancement. Chapter ten also addresses the position of CED’s within the force hierarchy and in-so-doing, evidences a concerning variation in operational opinion. This current chapter closes by critically assessing the extent to which CED training standards proactively protect society’s most vulnerable and “at risk” citizens from unethical or over-exposure to CEDs.

The National Decision Model

As part of the interview process, officers were asked about their decision making strategy for the use or non-use of a CED during a potentially coercive encounter. Similar questions were asked of STO’s who had used the device in operational circumstances. It is perhaps unsurprising that the sample population commonly cited use of the NDM, in combination with relevant legislation (often referred to as use of force powers or similar) as their primary guidance tools.

“. . . they [the instructors] want to make sure that you are . . . using the National Decision Model, and make sure that you can rationalise that, and explain it, because after every scenario, you may not have used [Taser], you may have decided to use something else, like just talking or pushing them back, or, whatever it is that you decide to do. So they want you to explain how you have used the NDM, with the use of force legislation, and why you would use Taser.” (P7)

“Well it’s always . . . the National Decision Model isn’t it, that’s what it was all about.” (P3)

“Massively using the NDM” (P6)

“You are using . . . your use of force powers, your National Decision Model.” (P9)
From these reflections, it appears that STO’s are aware and have at least a basic understanding of the NDM. However, they do not appear to be using this tool in its entirety to fortify the election of a CED as a force measure. Rather they appear to be using a rudimentary personal risk assessment in combination with a level of pre-existing tacit knowledge.

“You want to get the situation ended with as quickly as possible, without anyone getting hurt, so yeah you go through your NDM, in your mind . . . is Taser going to be the first thing that comes to mind or . . . am I going to go for spray first? Is that going to be a better situation? I think, I think if there is a weapon involved, I am more likely, to go for the Taser, but every situation is going to be different. Am I going to get the shot on? What clothing are they wearing? Has he got a massive puffer jacket on? There is no point in getting, getting the Taser out because it’s not going to get through the jacket, am I going to be better with, baton and spray?” (P14)

“It’s a threat assessment, on what, what that person is doing, so the surroundings, what, you know . . . I suppose in theory yeah you are, maybe not in the right order but you do go through the National Decision Making Model, because I am thinking, what’s this person got? . . . How can I take him down? Do I need to Taser? If I do Taser, what’s the risk with that, or if I hit him, what’s the risk with that? And then you sort of, you play it out like that. So I suppose inadvertently, it’s a natural cycle that you do the National Decision Making Model. It’s good like that. It is quite simple isn’t it? It’s, a box and it’s easy.” (P11)

In the light of these observations, it is important to reaffirm that the NDM is a cyclical, multi-stage model of reflective practice. Intrinsic to this model are a number of facets which are clearly overlooked by officers, including, but not restricted to, the initial formulation of a viable working strategy, effective contingency planning, consideration of the Code of Ethics and a process of critical reflection after the fact. None of which were specifically cited by the sample population as factors relevant to their force decisions.

Professional knowledge acquired by practitioners over a number of years can be a valuable asset, often resulting in effective situation resolution (Eraut, 1994; Polyani, 1962). However, there are drawbacks with this approach. Particularly, if officers become overly reliant on previous experiences and fail to make best use of the professional training and guidance they are given (Bacon et al.,
A risk that is manifested through this current research, specifically the premise that experienced police officers do not need to refer to decision making tools because conflict resolution is a fundamental part of their job and not something that requires individual or distinct consideration.

“Yeah [the NDM] is good, because it is all stuff we do naturally, or you should be doing naturally.” (P15)

“. . . forming a, a sort of spur of the moment decision based upon [The NDM]. You know? It . . . kind of comes naturally I think once you’ve been in the job a little while . . . you do it subconsciously, you subconsciously use that without really thinking about it too much.” (P3)

“I find with the NDM, I don’t sit back and go, right, I am going to go through each point, point by point. I find I work my way round that automatically.” (P6)

Furthering the constructive critique of the NDM as an effective decision making tool, officers consistently point to issues of pragmatic constraint when using a multi-stage model of reflective practice to formulate an effective response to a dynamically unfolding incident.

“I wouldn’t look at it, because, typically in my role on response, I am not going to have the chance to get my paperwork out and have a look at the NDM. I am going to do that naturally.” (P7)

“I think it’s just a fancy way of writing down what we do, because you do do it. It’s just a way of writing it down and validating it . . . it’s one of those things that, policing, or someone has made into a picture gram.” (P8)

It is apparent that the NDM is not being used to the fullness and extent intended by governing authorities. Particularly, when STO’s are at the point of contact with a subject during a coercive encounter. On a positive note, the NDM does appear to be well-used after the fact to assist officers with the retrospective justification of force. It is frequently used as a template for force recording purposes or as a structural guideline for the written formulation of official court documents.
“I can describe what I am doing quite confidently, but if I then want to know, actually, how is that fitting into which heading of the model then I need to have it sort of in front of me, to actually, yeah, to write a decent statement about it.” (P9)

“I just find, when it comes to writing statements, you can sort of peg [the NDM] in . . . .” (P6)

Whilst there does appear to be a place for the NDM in operational policing, the above evidence shows that it is not an effective, all-encompassing guidance tool and possible alternative measures should be explored. One such possibility is the immersive interactive training simulator Hydra / Minerva™ which uses unfolding scenarios to test the decision making and operational capability of emergency service practitioners (Hydra Foundation, 2016, para. 2).

The advantage of this technology is that it provides a mechanism whereby officers can use their natural reliance on professional judgement in a more constructive way. Officers are expected to participate in synthetic training scenarios, then reflect upon real-time performance in a relatively comfortable training environment. A more evidence-based process which appears preferable to the current overreliance on a paper-based reflective model such as the NDM.

In addition, Hydra / Minerva is more versatile than the current decision making provision. It is web-based, so can be used anywhere with web connectivity and can be linked regionally, nationally and even internationally. It is also cost effective because the Hydra Foundation is committed to providing this technology to police and fire services free of charge. At the time of writing, 21 UK police forces have adopted this technology primarily, to develop prospective senior officers in critical incident management strategies (Hydra Foundation, 2016a, para. 5); albeit its’ potential value to the CED training environment is also apparent.

**The continuum perspective**

The subjective interpretation of the position of CEDs within the force hierarchy was identified as an interesting theme during data analysis. Of particular significance is the evident disconnect and general lack of consensus between STOs. Because the COP has not ascribed to a force continuum the onus of CED use rests squarely with the individual officer who is answerable to the courts. A fact that is stressed during training.
“Well they made it pretty clear from the very start that there is no right and wrong answer. It is your decision, and you’re going to have to justify it. . . . Worst case scenario you’re in court for assaulting someone with a Taser. You’ve got to justify why you’ve done it. So they don’t say, ‘Oh right so you’ve got this scenario here, yes you can Taser someone . . . It is literally open to interpretation. So it’s good in some respects, but I wouldn’t want to be the one stood in the dock having to justify it, you know, thinking that I’d done it right.” (P3)

Whilst this unique approach offers a degree of organisational benefit whereby the officer is not rigidly constrained by a pre-set resolution and the relevant force can distance itself from an erroneous application of force, the lack of specific organisational guidance does leave individual practitioners both open and vulnerable to criticism. Criticism which will reflect vicariously on the relevant organisation if the officer is eventually charged or convicted of a criminal offence. This appears to render any organisational protectionist benefit arguably Pyrrhic in nature; particularly if the force application is a borderline case in terms of justification and reasonability.

The lack of official guidance has left officers confused as to where CEDs sit or should sit, within their armoury. This is manifested in both the training and operational environment where disparity reigns. For example, some STO’s are of the opinion that CEDs are a higher level use of force option:

“Getting a Taser out is way up there . . . with the use of force. It’s a big thing. Firing it. Using your Taser is a big deal, really big . . . and it’s going to have to be something really serious to use it.” (P9)

“I was never under any delusion that it was less than captor. It was clearly demonstrably a lot higher than captor.” (P5)

“I would personally say it would come above Captor . . .” (P15)

“Well everybody says it’s like one of the lower uses of force, but I still think it’s quite serious, but I think arresting someone is quite serious. I think some people are quite frivolous with things like that, I think using force is quite serious . . .” (P8)
“Taser now seems to have gone back up the use of force to, I suppose really now being just below the use of a firearm.” (P12)

Whereas other officers are of the opinion that CEDs should be positioned at the lower end of the force spectrum:

“It’s certainly, lower use of force than both spray and baton.” (P11)

“We have all carried a spray and a baton, but actually it’s not as much use of force as a baton.” (P7)

“It’s not particularly high . . . I would use Taser before baton and in some scenarios, I would use Taser before spray.” (P14)

“I think it’s, probably the lowest use of force, other than handcuffs that I have got on my belt.” (P6)

From these reflective observations, there exists a clear and evident disconnect in officers’ interpretation of exactly where CEDs lie, and indeed ought to lie, as a tactical option, and the flexible provisions allowed by the NDM, do little to clarify or help the situation.

The potential consequences of murkiness in this is key area are numerous and far reaching (Dymond & Rappert, 2014). Notwithstanding, the evident lack of organisational direction, the extant polarity in individual understanding could lead to inconsistency in operational use on national scale. As a result, some officers will elect to use the device in less or indeed more grave circumstances than others. More importantly, the decision will be guided, not by policy or recommended professional practice, rather a subjective interpretation of the position of CEDs within the force framework. Clearly not an ideal circumstance.

Unambiguous operational guidance from governing organisations such as the Home Office, COP or NPCC is urgently required (Amnesty International, 2016). In theory, this could be provided by the introduction of a nationally agreed use of force continuum displaying exactly where CEDs (as well as
other tactical options) sit within the force hierarchy. In order to select an appropriate position the empirical evidence could be considered.

For example, a growing consensus in the USA supports a minimum level of active resistance from the subject before a CED is used (Braidwood Commission, 2015; Millar, 2010; Thomas et al., 2011; QCMC, 2013). A position supported by Kleinig (2007); Oriola et al. (2012) and Sprague (2007) who all oppose the use of CED’s on any lower level.

Alternatively, and perhaps more in keeping with the consent-based policing a more conservative approach could be considered. For example, the position proposed by Jenkinson et al. (2006) recommends placement of CEDs at the higher end of the use of force spectrum, second only to use of lethal-force. An option which appears more appropriate given the presumption that CEDs are the weapon of choice if the subject is in possession of an offensive weapon.

Whichever option is chosen, the information must be fully transparent and made publicly available through open source means. It must be relayed as a core component of the training curriculum, and must leave prospective STO’s in no doubt as to the nationally agreed position of the device within the force hierarchy. To do so will add much needed clarity to a currently abstruse situation and will help to ensure uniformity and consistency in CED use. A development such as this would also be a further step towards New Public Management oriented policing whereby officers can be confident that the ultimate accountability for the consequences of CED use will rest with the organisation as opposed to the individual. Conversely, any negative consequence (provided the device was used ethically and in line with training) will be regarded as a learning rather than a blaming opportunity “. . . lessons from mistakes are fed back into future good practice, informing policy through learning. Learning from mistakes contributes to a portfolio of good practice incorporated into future policy implying that, henceforth operations premised on appropriate and validated standards will ensure greater public satisfaction.” (Squires & Kennison, 2010, p. 49)

**Vulnerable population groups**

The robustness of the protection measures afforded by CED training, to society’s most vulnerable citizens, emerged as an important sociological concern during the literature review. This was recently manifested in the UK, by a multi-agency recommendation for a public inquiry into the police use of CEDs, focusing on use of the device on ethnic minorities and those suffering with a mental
illness (Amnesty International, 2016). The following chapter makes a valuable contribution to this sensitive area by addressing the training standards as they relate to these specific concerns.

**Black and ethnic minority citizens**

Academics are concerned that CEDs are being used disproportionately on Black, Hispanic and other non-white citizens (Amnesty International, 2004; 2016, Cornege, 2011; Engel et al. (2002); Gau et al., 2010; Kleinig, 2007; Oriola, et al., 2012; Ryan, 2008; Shaw, 2015; Sprague, 2007). Certain researchers have suggested that this may be due to members of an ethnic minority being more likely to commit crime or resist arrest (Black & Reiss, 1967; Bratton & Knobler, 1998; MacDonald, 2010) whilst others suggest that this is attributable to police officers holding a pre-existing racial prejudice (Engel et al., 2002).

Despite compelling research, there is little evidence to suggest that the COP has taken proactive steps to mitigate the risk or perception of racial prejudice as it relates to CED use. In short, it appears that more could and should be done.

“I don’t remember it being discussed. I know there’s the perception that some ethnic minorities are targeted . . . or more force is used against them . . . but I don’t remember that . . . coming up at any time in training.” (P5)

Officers receive no input on the sensitive issue of race relations during classroom sessions, neither do they receive training on the implicit or counter-bias theorem. And, at no stage during Taser training, are prospective STOs deliberately faced with non-Caucasian stooges.

Question: “*Do they use stooges with an ethnic minority?*”

Answer: “*Not that I remember. Yeah, not that I remember at all anything like that, it was about their perception, so it was a mental health sort of thing, rather than an ethnicity sort of thing . . .* (P5)

As a result, officers could leave Taser training unaware of any unconscious biases they may hold and perhaps more importantly, untrained in the use of controlled responses to counter them. The sociological consequences of this omission are potentially very serious. If left unchecked, the
historically fractious relationship between law enforcement and non-white citizens could worsen (Gau et al., 2010; Oriola et al., 2012). There could be a further erosion of consent based policing and at worst, a complete breakdown of law and order such as that which occurred during the London Riots of 2011. A risk which would be particularly heightened in the immediate wake of a CED associated death.

A simple alteration to the course structure could pay dividends here. For example, room could be made for a short theoretical input on unconscious biases (including the implicit and counter-bias theorem), which if nothing else, would make officers consciously aware of the concept. Officers could also be coached on controlled responses which could allow them to overcome these biases (for successful examples of this see Devine, 1989; Monteith, Arthur & Flynn, 2010; Monteith et al., 2002).

These valuable sociological concepts should be tested theoretically as part of the written examination and practically during scenario based role-play exercises. Potential stooges could be selected because of their membership of an ethnic minority and unfolding scenarios could be used to test an officer’s judgement for example, by the stooge producing a mobile phone rather than a weapon or a weapon rather than an inanimate object. If the acquisition of suitable stooges was problematic for some police forces, technology such as Hydra / Minerva could be considered. This technology has been offered to police forces free of charge and it could conceivably be used to inform threat perception during CED training.

The purpose of this specialised training is not to spotlight prospective STO’s. Rather to make them aware of any unconscious biases they may have and crucially, to set mechanisms in place whereby officers can consciously overcome them. To do this would help protect vulnerable population groups from unethical exposure to CEDs and could potentially reduce the risk of officers being assaulted in the course of their duty by failing to act decisively when to do so would have been entirely justified.

In summary, there is clear and unambiguous empirical evidence which suggests that ethnic minority citizens are disproportionately represented by CED use statistics on a worldwide scale. Conversely, there exists a growing base of academic evidence which offers possible methods to help alleviate both the perception and operationalisation of this risk. Under the circumstances it would appear
politic for governing authorities to include such strategies as a fundamental element of initial CED training. This is certainly a key recommendation of this current research.

In the shadow of the above observations, this chapter will now explore the extent to which the CED training standards protect the mentally impaired, another vulnerable population group who are purportedly over-represented recipients of operational CED use (Oriola et al., 2012)

**The mentally vulnerable**

It has been suggested that the police service does not have adequate strategies in place to deal with people suffering with a mental illness. As a result, there is a perception (albeit unsupported by the admittedly limited body of empirical research) that more and more severe force is being used against them by police officers (Engel, 2015; Morabito & Socia, 2015). The theory-based stages of CED training provides little if any, input on the symptoms of common mental illnesses, but it is encouraging to note that mental health concerns do feature in certain scenarios.

Whilst, the suspicion or confirmation of a mental illness will not automatically render CEDs an unavailable tactical option, officers must show an early awareness of the possibility of such a condition and they are expected to adjust their force mindset accordingly. If it is thought that the officer has not identified the presence of a pre-existing mental illness (or other related vulnerability) then stooges will respond in a manner that is likely to have a marked and detrimental impact on the officer’s ability to resolve the situation clinically.

However, if a degree of sensitivity is shown during synthetic training, then this will invariably lead to effective situation resolution, without the need to resort to a CED. This is shown by P4’s response to scenario involving symptoms consistent with an Obsessive Compulsive disorder.

“[The scenario was] a gentleman . . . acting strangely by a bus stop . . . . He couldn’t fathom that the road was blocked . . . . So it was just a case of just talking to him on that one as well . . . . I just walked him up the road and said, ‘Right, come with me and we’ll walk up the road’, again I didn’t need to use my Taser on that one.” (P4)

The election of nothing more than light physical contact combined with tactical communication, is clearly a commendable police response given that the officer was taking part in a CED training
scenario. Not only, does P4 quickly recognise the possibility of a mental vulnerability but he also, shows due sensitivity in his interaction with the subject. This results in scenario resolution without the need for any level of force at all. In the operational context this would clearly be a highly desirable outcome.

Whilst the COP has clearly directed that officers should show due sensitivity when interacting with members of the public who appear to be suffering with a mental illness, there are still occasions where CED use may still be justified. For example, if the subject is in the act of causing harm to themselves with a knife or razor blade. Under these circumstances an STO’s may well recognise the symptoms of a mental disorder, but they are expected to prioritise the immediate safety of the subject, themselves or the general public, over the longer-term psychological risk of CED exposure.

“The chap on the bus self-harming had . . . mental health problems . . . but don’t let somebody get away with something or, hurt somebody because you are concerned about it . . . if you are dealing with a situation and you have to use the Taser to protect yourself or someone else, then do it . . .” (P6)

As ever, there is no prescriptive response to any given scenario. It is the prerogative of each individual officer to decide on an appropriate resolution to a coercive encounter. Some officers will still refrain from CED use even if the subject is self-harming with a knife.

“. . . there was one [scenario], it was all to do with mental health that was inside, and it was a chap and he . . . had a knife . . . and he . . . was cutting himself up. I didn’t Taser him, but everyone else did, and it should have been. I felt a little bit sorry for him . . . I . . . ended up just bundling him on the bed and getting the knife off of him, you know? You need to make your own decision don’t you?” (P14)

Although P14’s response to this scenario is commendable, it does pose officer safety concerns. It is at best inadvisable for an officer to physically engage with an emotionally disturbed male who is in the act of self-harm with a knife and it is patently dangerous for the encounter to result in a close-quarters altercation for control of the weapon. On reflection, P14 is arguably correct in her assertion that Taser use would have been a more appropriate tactical option under these circumstances.
Interestingly, P14’s decision not to use a CED could have been a manifestation of her counter-bias response. Specifically, an unwillingness to engage a mentally ill person with a CED for fear of the wider societal consequence (James, Vila & Dartha. 2013; James, Klinga & Vila, 2014; James, Vila & James, 2015). Alternatively, this response could be attributed to the decreased propensity of female police officers to use a CED (Garner et al., 2002). Whatever the reason, P14’s seemingly isolated and disparate response to this scenario is an undoubtedly interesting outcome from an analytical perspective!

On balance, the COP appears to have recognised the increased risk of CED application to the mentally vulnerable and it is encouraging to see that they are mitigating this concern to some extent during training. However, organisational focus appears predominantly attributed to instances of self-harm with a knife or razor blade, acts which are not necessarily, directly ascribable to a medically recognised mental illness. Rather, symptoms of a personality disorder or actions of a vulnerable individual in need of support. In these situations the presumption is clearly towards the use of a CED to defuse the situation because of the presence of a weapon during the encounter.

Perhaps more theory input could be included in the initial stages of training. Prospective STO’s could be introduced to certain distinct characteristics of common mental health illnesses which could be (and often are) mistaken for acts of aggression. High spectrum autism and epilepsy being distinct examples. These symptoms could be mimicked by stooges during the scenarios with the expectation that officers recognise these traits, and work to de-escalate the situation using tactical communication rather than force. The same principle could be applied to other situations where a weapon is involved, unless there are immediate safeguarding concerns.

The introduction of such measures would show due recognition of these social concerns by governing organisations, who could in turn, show demonstrable efforts to mitigate the incumbent risk. Conversely, by facilitating a slight alteration in initial approach, the number of overall CED deployments would naturally reduce. Undoubtedly, a desirable sociological outcome.

The preceding chapter has addressed operational decision making using the NDM and the position of CEDs within the use of force hierarchy. The outcomes indicate that whilst officers are, for the most part, aware of the NDM but they do not use this model effectively when electing and justifying the use of force, instead, they tend to rely on a basic risk assessment in combination with
professional judgement. There exists, a clear and evident disconnect in officer’s opinion of the position CEDs within their armory. Some believe that CEDs are a lower level force option and others rigidly oppose this position. The potential sociological consequences of this disparity were critically analysed and some suggestions for improvement were made. This chapter has also focused on the protection afforded to black and other ethnic minority citizens as well as citizens suffering with a mental illness or impairment. From the data available there appears to be little evidence to suggest that the standards of CED training have adequately mitigated the risk of pernicious exposure to ethnic minority citizens. Prospective STOs receive no input on unconscious or counter bias theorem and are not faced with ethnic minority subjects during simulation training. Whilst the mentally ill appear to be afforded a more enhanced level of protection, there is still room for improvement. The following chapter will conclude this research.
Chapter eleven

Conclusion

The following chapter concludes this thesis, firstly by discussing its limitations, the most significant of which is generalisability. Chapter eleven then uses the evidence provided by this research to offer a number of predictions and recommendations to the field. It concludes with a reflective summary.

Research limitations

Whilst this thesis has provided a unique contribution to knowledge by dissecting the content and delivery of initial CED training and exploring CED operationalisation from the first-hand perspective of current serving STO’s, it is unequivocally accepted that this current research is a localised and small scale study. Thus generalisability is an issue. Westshire Constabulary is only one of the 43 police forces in England and Wales and it is also one of the smallest. It is situated in a relatively affluent region of the country with comparatively low crime rates and levels of ethnic diversity. The sample population represents only a tiny proportion of the country’s STO’s, so their viewpoints are not necessarily representative nationwide. Similar could be said of the content and delivery of the initial training course, the makeup of which may differ from force to force. The research itself was conducted over a limited time period by a single researcher who is employed by Westshire Constabulary and outranked all the research participants. Although every effort was made to avoid any potential conflict of interest, the position and seniority of the researcher could have had an adverse impact on the data disclosed (Bartunek & Louis, 1996; Weatheritt, 1986)

Future direction

As a direct result of this current research, a number of potential future paths the Taser phenomenon may take can be identified. Firstly, the issue of wider availability, where there appears to be a sense of inevitability. It is likely that CEDs will eventually become routinely available to all uniformed front-line officers. On balance, it would perhaps be politic for initial officer training to incorporate safe use of CEDs, so that all probationary officers naturally commence their service in possession of the device.

A position such as this would be akin to recent developments in New Zealand which is one of few institutions who, like the UK, do not routinely furnish their officers with firearms. On 31st July 2015,
the head of the New Zealand Police Service, Commissioner Mike Bush announced that CEDs would be issued to all front line officers (Hunt, 2015). It is possible, if not likely, that this situation will eventually be mirrored in the UK. At present, there does not appear to be a legitimate business case for, or current move toward, total armament. Incidentally, several commentators have pointed to the heightened terror threat as justification for increased availability (e.g. Dodd, 2015). This is an inappropriate position. CEDs are not an effective tool to combat terrorism and should not be viewed as such. Counter terrorism resolution requires distance and lethal capability. Neither of which are offered by a CED.

Whilst there would likely be a degree of resistance to such a development (most notably from Human Rights protection groups such as Amnesty International) it would be broadly supported by governing organisations such as the Home Office, the COP and the NPCC. It would also be strongly supported by the Police Federation and would have the backing of the wider public (Morton, 2010; Police Federation, 2017). Barriers to this technological development in the UK would be bureaucracy, time and most importantly, cost. Routinely arming even just front-line officers would be an incredibly expensive endeavor which could be delayed in the short and longer term by ongoing austerity measures (Police Federation, 2017b).

Regardless of when, and indeed if, CEDs become widely available, the number of officers carrying them is likely to increase. This could lead to an increase in the number of recorded firings and other associated uses. This increase will be tracked by the Home Office and disclosed in open source forums. A small increase in CED use is not necessarily a societal problem, provided the devices are used ethically and in accordance with policy and training guidelines. With increased CED availability, there is also likely to be a general decrease in rates of officer and subject injury during forceful encounters. Unfortunately, these statistics will be more difficult to quantify because they are not routinely disclosed at regular intervals by the wider police service. It is the responsibility of the academic community to assist here and the implementation of a national use of force database which can be readily accessed is of paramount importance (Dymond, as cited by Amnesty International, 2016).

Secondly, and on a less positive note, it is possible that there will be an increase in the number of CED associated deaths which is often a by-product of more widespread availability and use. This could pose a serious risk to society, particularly if the victim is black, suffering with poor mental
health or otherwise vulnerable. In order to prevent adverse consequences, relevant governing organisations must take positive measures to prevent such events and crucially, they must be seen to be taking such measures.

The doctrine of policing by consent using the least intrusive methods of law enforcement should be maintained as (albeit subject to gradual erosion) this altruistic principle remains a coveted hallmark of our liberal and pluralistic society. The starting mantra for the police service must be that “... in a police operation the only acceptable casualty rate is zero” (Greenwood, 1979, p. 59). A CED should not be used unless it is absolutely necessary in order to achieve a legitimate police objective. Officers found to be using such devices wantonly or unethically should be identified and disciplined accordingly.

Conversely, if a CED is used in legitimate circumstances and the worst case scenario occurs, New Public Management theory dictates that ultimate accountability should rest with the organisation and not the individual officer. Regardless of outcome, a robust review of the incident must take place and any opportunity for learning and future improvement must be seized “... learning lessons and making instrumental changes is par for the course in the New Public Management arena.” (Squires & Kennison, 2011, p. 51)

The ethos of New Public Management theory is crucial when it comes to the police use of CEDs because associated deaths invariably receive a heightened level of media attention, which focuses heavily on the device itself as opposed to other situational or organisational characteristics relevant to the encounter. After all, if a death occurs as a result of a police pursuit, media attention seldom, if ever, focuses on the make or model of the police vehicle involved. Likewise the Heckler & Koch G36\(^{21}\) never receives public backlash for causing death following a police shooting. Why then do media headlines and concomitant public scrutiny invariably focus on the brand of CED? A fascinating anomaly of the Taser phenomenon but one that governing organisations must remain continually mindful of.

Finally, it is highly likely (perhaps inevitable), that the Taser X26 will soon be replaced by the Taser X2 which has been tested by SACMILL (2017) and approved by the Home Office (Police Federation

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\(^{21}\) The Heckler & Koch G36 is the primary weapon routinely carried by AFOs in the UK. The G36 is a semi-automatic long barreled weapon which fires 5.56mm ammunition.
The X2 has a higher maximum power output, a separate laser sight for top and bottom probe, a 25 foot maximum operating distance (as opposed to the 21 feet offered by the X26) and a warning signal when the 5 second cycle is approaching completion. Crucially, the X2 allows arcing with the cartridges attached and gives the operator the option of an immediate second shot in the event of a miss. Under these circumstances, the top and bottom probe of either cartridge can evoke NMI, provided the spread is sufficient (SACMILL, 2017). The Taser X2 will likely be trialed initially by AFOs before it is pushed out to non-specialist officers.

The police service are obliged to explore new technologies (Neyroud & Disley, 2008; NPCC, 2016) and it is right that a potential upgrade to the Taser X26 has been explored. This advancement does however hold wider implications for the police service. For instance, the initial training course will need to be altered to accommodate the change as the two devices vary in specification. The Taser classification and procedure for drive-stun application are two areas which will need to be altered. Current STOs will also require additional training and may have to fight against muscle memory to become familiar with the new device. This makes unintended or negligent discharge an increased risk factor which will need to be closely monitored moving forwards (SACMILL, 2017).

Notwithstanding the true operational value of the Taser X2, it is a little disappointing that due consideration does not appear to have been afforded to other possible alternatives. The PhaZZer Enforcer™ for example, is a new CED concept which offers portable battery charging (which the X2 does not) as well as a range of additional less-lethal options such as a pepper ball, pepper powder, paint and a rubber extenuating energy projectile. All of which can all be fired from the device in addition to a standard probe deployment.22 The PhaZZer Enforcer is reportedly a complete less-lethal weapons system which offers considerable value for money and significant operational benefit. This particular model was tested by SACMIL and CAST but ultimately discounted (SACMILL, 2017). It would be interesting to assess the rationale for this decision, as it appears at first glance to be questionable.

Suggested implementations

In the light of this research there is at least an arguable case to suggest that officers who have attended and passed the initial training course are in a strong position to safely carry and operate

22 A comprehensive demonstration of the various characteristics and technical specifications of the PhaZZer Enforcer CED is freely available on open source forums such as UTube.
CEDs. There also appears to be sufficient capacity to increase the number of STOs in line with government and NPCC recommendations. However, there is caveat to this presumption. Improvements to the curriculum are needed and should be implemented as quickly as possible. CED training urgently requires more emphasis on the protection of vulnerable population groups, particularly black and minority-ethnic citizens. There should be an input on the potentially disastrous consequences which could befall a single instance of poor judgement in this sensitive area. Officers should be informed of the unconscious, implicit and counter-bias theories and should be provided with mechanisms whereby they can overcome these mindsets using controlled responses. Their comprehension in this area should be subsequently scrutinised through the use of scenario based role play exercises.

In making this representation, it is accepted that the training schedule is tight. Space for such an input could be made by completion of the written examination prior to course attendance, through an e-learning package or similar. To do so would not detract from the quality or robustness of the initial course because the written test is apparently somewhat of a formality and the content is comprehensively covered during CED training. In theory, little would be lost by this approach but there could be much to gain by the inclusion of these additional components.

In the spirit of complete openness and transparency, Authorised Professional Practice should be updated to reflect this development. The NPCC should add this information to their online Taser Question and Answer section, or otherwise publish it in open source forums. This will maintain complete public transparency in police CED use.

Clarification on the exact position of CEDs within the use of force hierarchy is urgently required. The NDM does provide an organisational safety net but for the individual officer confusion abounds. This manifests in an evident disconnect in officer’s interpretations of where CEDs lie and ought to lie as a tactical option. A national use of force continuum should be formulated and introduced by a governing organisation with strategic oversight of this area (such as the COP or NPCC). The continuum need not replace the NDM, rather be used alongside it. Officers should be in no doubt as to the official position of CEDs within the force hierarchy, but should also remain confident that the NDM provides a mechanism facilitating use of the device at any stage of a forceful encounter, if this action is justified proportionate and necessary in the circumstances.
The COP should explore other decision making aids which are technologically superior to the NDM. The Hydra Minerva system is one such example. This software has been offered free of charge to police services, so is a financially sound option. It is also pragmatic, given that unfolding encounters are recorded, and can be visually reflected upon after the fact.

Operationally, STO’s could be better informed about the limitations of the device and made aware of the factors that will increase the likelihood of CED use, such as the presence of a weapon, the use of aggressive resistance or the fact that officers are attending a domestic dispute. Officers could also be provided with better follow up support after they have fired the device. There is a tendency for the organisation (and by consequence the officer) to normalise traumatic incidents and not expect any physical or psychological aftercare. A referral to an occupational health service should be automatically offered to an STO after a CED is fired. This should be followed by regular, auditable supervisory contact to ensure longer term mental and physical well-being.

Avenues for further research

The Taser phenomenon is a dynamic entity. This research was incepted and materialised by academic request. It stands by nature unique and in isolation, but it is also a benchmark, a platform for future research; prime for both national and international comparison. In this vein, it would be fascinating to set the results of this research into context with other municipal police forces in the UK, particularly the larger ones. This would test the true extent of nationalisation in CED training and delivery. Qualitative data from the COP could also be used to chart organisational policy, as it relates to core training requirements and further research could explore any variances (or consistency) in how these standards are initially interpreted and subsequently delivered at force level.

From an international perspective, it would be useful to compare UK training with the shorter programs offered by certain overseas jurisdictions such as the 1 day courses offered in the USA. It would also be beneficial to compare UK based training with the courses offered by more analogous policing environments such as Canada, Australia and New Zealand. By doing so, the true strength of UK training would be reliably ascertained.

This research is a snapshot in time and the Taser movement is developing swiftly. The X26 is likely to be soon replaced by the X2. This will have a marked effect on Taser-related policing. Likewise more,
if not all, response officers will eventually carry one. Again, there encumbers wider political and sociological implications, to which academics should maintain pace through timely research. Finally, the general use of force literature could be further enriched with CED-specific academia. For example, this research highlighted a strong relationship between CED use and the investigation of domestic abuse. An encounter correlate not widely researched, but testable for statistical significance as a force predictor in its own right and a topic certainly worthy of further exploration.

**Conclusion**

The primary aim of this research was to examine the content and sufficiency of CED training and operationalisation from the first hand perspective of 15 current accredited STOs employed by a single police organisation. Thus filling an academically cited gap in knowledge and providing both a benchmark and a platform for future comparative research. This thesis has comprehensively fulfilled this mandate and in-so-doing has provided an original contribution to knowledge. Through the exploration of secondary research questions, this current study has also disclosed a series of somewhat intriguing results. Most notably, an alarming variance in officers’ interpretation of CEDs as a use of force option and the deficiency in provision for the protection of the most vulnerable members of society. In-line with the research objectives, it is hoped and anticipated that the results and recommendations embodied in this research will be valued as evidence-based and used as a tool to facilitate prompt organisational improvement on a local as well as national scale.

The operationalisation chapter has identified a number of strong connections between CED use and the existing scientific data on the use of force. Of note is the increased likelihood of exposure if a suspect is intoxicated, violent or in possession of a weapon. Likewise, if the STO is male or if the encounter involves domestic violence.

In conclusion and considering the data gathered in the course of this current research, it appears evident that CED training is currently robust in construction and delivery but certain improvements to the curriculum can and should (if not must) be made. The Taser phenomenon is an area of high liability for the police service. Research has shown that when CEDs are used, deaths can occur and this risk inevitably increases when CEDs are made more available and used more often. Governing organisations have considered the evidence-base and appear to have made the decision that the operational benefit CEDs bring to law enforcement outweighs the risk they pose to society. This is why overall numbers are increasing. It is the prerogative of each individual or organisation to decide
whether this position is socially acceptable and to voice their opinion accordingly. It is also the responsibility of governing organisations to pay heed to pertinent objections and if it is found that they are not doing everything in their power to mitigate risk, then they should be challenged.

This research presents a rebuttable business case for the continued use of CEDs in the UK. A position primarily attributable to the exigent standards of robust training which furnish officers with the core skills they need to handle such devices safely. However this standpoint is caveated with the need for certain changes to the current training curriculum, which must be attended to as a priority.

Clarity on the position of CEDs within the force hierarchy is needed, as officers are confused. Alternative decision making processes should be investigated, as the NDM is not all-encompassing. And, most importantly, vulnerable population groups should be better protected. By taking positive steps, in the light of evidence-based research, governing bodies may not be able to prevent occasional improper use, or isolated instances of CED associated death. But, they can justify retention and proliferation of such devices by showing a clear desire to continually identify, address and mitigate societal risk wherever humanly possible. A regime of incessant and ongoing affirmative action may help prevent outbreaks of serious public disorder, and will help to galvanise the consensus of public antipathy towards continued safe operationalisation of CEDs moving forward. Clearly a desirable and ultimately achievable sociological, cultural and political outcome.
References


**Cited cases**


Appendices

Appendix A – Initial survey 1: ‘Tactical Options’

What is your gender?
Answered: 67  Skipped: 0

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<th>Answer Choices</th>
<th>Responses</th>
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<td>Female</td>
<td>26.87%</td>
<td>18</td>
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<td>Male</td>
<td>73.13%</td>
<td>49</td>
</tr>
<tr>
<td>Other (please specify)</td>
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<td>0</td>
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<td>Total</td>
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What is your age?

Answered: 67  Skipped: 0

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<td>21-29</td>
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<tr>
<td>30-39</td>
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<tr>
<td>40-49</td>
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<td>50-59</td>
<td>1.49%</td>
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<tr>
<td>60 or older</td>
<td>0.00%</td>
</tr>
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<td><strong>Total</strong></td>
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What is your current length of service as a warranted police officer?

Answered: 67    Skipped: 0

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<th>Answer Choices</th>
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<td>0 - 2 years</td>
<td>5.97%</td>
</tr>
<tr>
<td>2 - 5 years</td>
<td>1.49%</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>58.21%</td>
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<tr>
<td>10 - 20 years</td>
<td>28.36%</td>
</tr>
<tr>
<td>20 - 35 years</td>
<td>5.97%</td>
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Total: 67
Are you a police Sergeant or Inspector?

Answered: 67  Skipped: 0

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<tr>
<th>Answer Choices</th>
<th>Responses</th>
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<td>Yes</td>
<td>28.36%</td>
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<tr>
<td>No</td>
<td>71.64%</td>
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<td>Total</td>
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Which of the following items of personal protective equipment (PPE) are you currently authorised to carry operationally?

Answered: 67  Skipped: 0

<table>
<thead>
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<tr>
<td>Baton</td>
<td>100.00%</td>
</tr>
<tr>
<td>Incapacitant Spray (i.e. Captor / CS)</td>
<td>100.00%</td>
</tr>
<tr>
<td>Taser</td>
<td>16.42%</td>
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<tr>
<td>Firearm (i.e. Glock 17, G3, MP5)</td>
<td>1.48%</td>
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Total Respondents: 67
Do you think ALL police officers should be issued with a Taser for permanent operational carriage?

Answered: 67    Skipped: 0

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<td>Yes</td>
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<td>No</td>
<td>11.94%</td>
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<td>Unsure</td>
<td>13.43%</td>
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Do you think YOU should be trained to use a police firearm as an operational contingency?

Answered: 66  Skipped: 1

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<td>54.55%</td>
<td>36</td>
</tr>
<tr>
<td>No</td>
<td>34.85%</td>
<td>23</td>
</tr>
<tr>
<td>Unsure</td>
<td>10.61%</td>
<td>7</td>
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Total          | 66        |   |
Do you think YOU should be issued with a police firearm for permanent operational carriage?

Answered: 67  Skipped: 0

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<td>29.88%</td>
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<td>No</td>
<td>55.22%</td>
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<td>Unsure</td>
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Total 67
Do you think ALL warranted police officers should carry a police firearm as standard PPE?

Answered: 67  Skipped: 0

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<tr>
<td>Yes</td>
<td>25.37%</td>
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<tr>
<td>No</td>
<td>61.19%</td>
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<tr>
<td>Unsure</td>
<td>13.43%</td>
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<td>Total</td>
<td>67</td>
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What is the likelihood that you would consider leaving the police service if operational carriage of a police firearm became mandatory for all police officers?

Answered: 66   Skipped: 1

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<td>I would DEFINITELY consider leaving the police service</td>
<td>1.52% 1</td>
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<td>It is HIGHLY LIKELY that I would consider leaving the police service</td>
<td>6.06% 4</td>
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<tr>
<td>It is LIKELY that I would consider leaving the police service</td>
<td>7.58% 5</td>
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<tr>
<td>It is UNLIKELY that I would consider leaving the police service</td>
<td>28.78% 19</td>
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<td>It is HIGHLY UNLIKELY that I would consider leaving the police service</td>
<td>16.67% 11</td>
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<tr>
<td>I would DEFINITELY NOT consider leaving the police service</td>
<td>39.39% 26</td>
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<td>Total</td>
<td>66</td>
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Appendix B – Initial survey 2: “Red-Dotted!”

How do you identify?

Answered: 91  Skipped: 0

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<td>Male</td>
<td>80.22%</td>
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<td>Female</td>
<td>19.78%</td>
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<td>0.00%</td>
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<td>Total</td>
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What is your current length of service to the nearest year?

Answered: 90  Skipped: 1

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<td>0.00%</td>
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<tr>
<td>2-4 years</td>
<td>4.44%</td>
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<td>4-6 years</td>
<td>1.11%</td>
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<tr>
<td>6-8 years</td>
<td>22.22%</td>
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<td>8-10 years</td>
<td>33.33%</td>
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<td>10 years plus</td>
<td>38.89%</td>
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How long have you been an STO?

Answered: 91  Skipped: 0

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<td>6-12 months</td>
<td>14.29%</td>
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<tr>
<td>12-18 months</td>
<td>10.99%</td>
</tr>
<tr>
<td>18-24 months</td>
<td>10.99%</td>
</tr>
<tr>
<td>24 months plus</td>
<td>62.75%</td>
</tr>
</tbody>
</table>

Total 91
Which statement best describes your experience of Taser training?

Answered: 91  Skipped: 0

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The Taser training course was the most challenging course I have ever done in the police</td>
<td>25.27% 23</td>
</tr>
<tr>
<td>- Taser training course was more challenging than I expected</td>
<td>60.44% 55</td>
</tr>
<tr>
<td>- I did not find the Taser training course particularly challenging</td>
<td>12.09% 11</td>
</tr>
<tr>
<td>- I found the Taser training course easy</td>
<td>2.20% 2</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
</tr>
</tbody>
</table>
Have you ever 'Used' (i.e. drawn, pointed, red dotted or arced) Taser operationally?

Answered: 91   Skipped: 0

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>76.92%</td>
</tr>
<tr>
<td>No</td>
<td>23.08%</td>
</tr>
</tbody>
</table>

Total 91
### Was the 'Use' effective?

Answered: 77  Skipped: 14

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
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<tbody>
<tr>
<td>Yes</td>
<td>80.52%</td>
</tr>
<tr>
<td>No</td>
<td>9.09%</td>
</tr>
<tr>
<td>I have had both effective and ineffective Taser deployments</td>
<td>10.39%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>
Have you ever 'Discharged' / 'Fired' (i.e. Drive Stun or Full Probe Deployment) Taser operationally?

Answered: 91  Skipped: 0

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>24.18%</td>
</tr>
<tr>
<td>No</td>
<td>75.82%</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
</tr>
</tbody>
</table>
## Was the discharge effective?

Answered: 45  Skipped: 48

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>37.78%</td>
</tr>
<tr>
<td>No</td>
<td>44.44%</td>
</tr>
<tr>
<td>I have had both effective and ineffective Taser discharges</td>
<td>17.78%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
</tr>
</tbody>
</table>

![Bar chart showing the distribution of responses to the question: Yes (37.78%), No (44.44%), I have had both effective and ineffective Taser discharges (17.78%) with a total of 45 responses.]
Which statement best describes your post deployment experience?

Answered: 91  Skipped: 0

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post incident Taser deployment procedures are very effective</td>
<td>25.27%</td>
</tr>
<tr>
<td>Post incident Taser deployment procedures are effective but could be improved</td>
<td>24.18%</td>
</tr>
<tr>
<td>Post incident Taser deployment procedures are not effective and need to be improved</td>
<td>11.09%</td>
</tr>
<tr>
<td>Post incident Taser deployment procedures are ineffective and need to be improved as a priority</td>
<td>22.00%</td>
</tr>
<tr>
<td>I have never deployed Taser operationally</td>
<td>47.25%</td>
</tr>
</tbody>
</table>

Total: 91
Appendix C - Interview schedule

Institute of Criminal Justice Studies
Head of Department: Dr Phil Clements
Tel: 02392 843926

Interview Schedule

Title of Project: ‘Red Dotted!’ A case study analysing how the national Taser training standards are received interpreted and operationalised by specially trained officers.

Name and Contact Details of Researcher: William Keating-Jones Email: UP751811@myport.ac.uk

Name and Contact Details of Supervisor: Paul Smith Email: paul1.smith@port.ac.uk

Introductory Questions:

Tell me about your police career to date
Describe your current role within the organisation including a brief summary of your skill set.
Tell me why you decided to apply to become an STO
Describe to me the process of applying to become a specially trained officer

How the Initial Taser course is received by officers

Tell me about day 1 of the Taser course

How many people were on the course?
Where was it held?
How many instructors?
What input were you given?
What were you taught?
What did you have to do / demonstrate?
What feedback were you given by instructors? Was this of use?
How did you feel during the day?
How did you feel at the end of the day?
Tell me about day 2 of the Taser course

What input were you given?
What were you taught?
What did you have to do / demonstrate?
What feedback were you given by instructors? Was this of use?
How did you feel during the day?
How did you feel at the end of the day?

Tell me about day 3 of the Taser course

What input were you given?
What were you taught?
What did you have to do / demonstrate?
What feedback were you given by instructors? Was this of use?
How did you feel during the day?
How did you feel at the end of the day?

Tell me about day 4 of the Taser course

What input were you given?
What were you taught?
What did you have to do / demonstrate?
What feedback were you given by instructors? Was this of use?
How did you feel during the day?
How did you feel at the end of the day?

Upon completion of the course:

Tell me about how you felt at the end of the course?
How effective was the training?
Did you feel confident carrying Taser operationally?
Explain how the Taser course compares to other police training courses you have undertaken?
What feedback were you given at the end of the course?
What would you change about the course?
Is there anything else you would like to add about the course, any more thoughts? Comments? Ways it could be changed or improved?

How the content of the Initial Taser course is interpreted by Officers

Tell me about your expectations of the course prior to starting?

Power point presentations
Tell me about the power point presentations you were given.

Tell me about the relevance of the presentations concerning the device, nomenclature operating systems etc. How does this information relate to you as an STO?

From the power point presentations what is your interpretation of when Taser can be used?

From the power point presentations what is your interpretation of when Taser can be used?

**Handling, live practice and the classification shoot**

Tell me about the safety and handling drills.

Tell me about the live weapon drills and practice you received prior to the classification shoot? Was this sufficient?

Tell me about the classification shoot.

What do you think of the classification requirements? How do they relate to you as an operational STO?

**Scenarios**

Tell me about the scenario based assessments. How many did you do?

What were you faced with?

What was your thought process?

How did you resolve the situation?

Did you apply the training you had received?

What feedback were you given?

On reflection would you have done anything different? If so Why?

Overall what was your interpretation of the content of the initial Taser course? What changes would you make?

**How the content of the Initial Taser course is operationalised by Officers**

Describe how your day to day role has changed since completing the STO course?

Tell me about a situation when you have used Taser

What were the circumstances? What did you do? Was this proscribed in the training? Was the deployment effective?

How did you feel after the fact? What support did you receive?

On reflection what would you have done differently?
Title of Project: ‘Red Dotted!’ A case study analysing how the national Taser training standards are received interpreted and operationalised by specially trained officers.

Name and Contact Details of Researcher: William Keating-Jones. Email: UP751811@myport.ac.uk
Name and Contact Details of Supervisor: Paul Smith. Email: paul1.smith@port.ac.uk

Thank you for volunteering to assist with this important research. You are being asked to participate in an interview which will be conducted at your place of work either shortly before or shortly after your rostered shift unless this is impracticable whereupon other arrangements will be made.

The purpose of my research is to gather information on the content of the Taser training course and to establish how this training is received, interpreted and applied operationally. In order to do this I will be conducting interviews with 15-20 STO’s. The interview will be approximately 30-60 minutes in length and will be audio recorded. It will also be transcribed verbatim so that the data can be fed into thematic analysis software.

The data you provide will be used as part of my thesis which will be submitted in partial fulfilment of the award of Doctor of Criminal Justice at the University of Portsmouth. Before you partake in the interview I am obliged to ask for your signed consent which must be fully informed. This is the purpose of this document.

Participation in the interview is entirely voluntary and anonymous. Your personal details will not be disclosed at any point. The interview discs and consent form with your personal details on it will be stored securely at all times until they are destroyed and unauthorised access will not be permitted. You are free to withdraw from the research at any point up until the thesis is submitted to the UOP.

The request to participate is being made by the researcher in his capacity as a student at the UOP. It is not being made as a police officer and is not a direction or an order.
The data you provide will be used for the purposes of this research project only and a summary of the results will be presented at an academic conference and may eventually be published. It will not be used for any future research. Sussex police will be provided with a summary of the research findings but as stated above your personal details will not be included in this. The data collected could be requested and looked at by regulatory authorities whose access to the data may identify you however your confidentiality will be respected.

During the interview I will ask questions about Taser training and deployments. You WILL NOT be asked and MUST NOT discuss any incident which is currently under investigation in ANY capacity, internal or external civil or criminal including any finalised cases still within relevant appeal periods.

If you are receiving treatment for PTSD or any other form of mental stress or feeling such symptoms you MUST NOT take part in the research. If such symptoms present during the interview the research will stop immediately.

If during the course of the interview ANY criminal or disciplinary offence which has not been reported is disclosed I will be duty bound to stop the interview and report the matter. Please do not participate if you intend to make such a disclosure.

If you have any further questions or queries please raise them now. If you do not please find overleaf the signed consent form which I respectfully request that you initial and sign where indicated prior to the interview commencing. You will be provided with a copy of both documents.

I would like to take this opportunity to thank you again for your participation in this research and I look forward to our interview.

Kind Regards,

William Keating-Jones.
Title of Project: ‘Red Dotted!’ A case study analysing how the national Taser training standards are received interpreted and operationalised by specially trained officers.

Name and Contact Details of Researcher: William Keating-Jones Email: UP751811@myport.ac.uk

Name and Contact Details of Supervisor: Paul Smith Email: paul1.smith@port.ac.uk

Ethics Committee Reference Number:

1. I confirm that I have read and understood the participant information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time prior to the research being submitted to the UOP without giving any reason. The request to participate is being made by the researcher in his capacity as a student at the University of Portsmouth not as a Police Officer. The request to participate is not a direction or an order.

3. I understand that data collected during this study, could be requested and looked at by regulatory authorities. I give my permission for any authority, with a legal right of access, to view data which might identify me. Any promises of confidentiality provided by the researcher will be respected.
4. I understand that the results of this study may be published and / or presented at meetings or academic conferences, and a summary of the research findings may be provided to Sussex Police Service. I give permission for my anonymous data, which does not identify me, to be disseminated in this way.

5. I understand that this research may involve questions about Taser deployments and I must not discuss any incident which is currently under investigation in ANY capacity, internal or external civil or criminal including any finalised cases still within relevant appeal periods.

6. I am not currently receiving treatment for PTSD or any other form of mental stress.

7. I understand that if I disclose details of ANY criminal or disciplinary offence which has not been reported the researcher is duty bound to stop the interview and report the matter. I do not intend to make any such disclosures.

8. I understand that I must not disclose any personal details of instructors, colleagues, subjects or locations when discussing my role as an STO. I will discuss any training or operational incident in general non identifiable terms only.

9. I understand that the interview will be recorded in visual and audio form and that it will be transcribed verbatim for the purpose of data analysis.

10. I agree to take part in the above study.

Name of Participant: Date: Signature:

Name of Person taking Consent: Date: Signature:

Note: When completed, one copy to be given to the participant, one copy to be retained in the study file.
Appendix F – Confirmation of a favourable ethical opinion from UOP

University of Portsmouth
Institute of Criminal Justice Studies
Head of Department: Dr Phil Clements
Tel: 02392 843926

Ethics-fhss@port.ac.uk

21st April 2016

Dear William Keating-Jones

Study Title: ‘Red Dotted!’ A case study analysing how the national Taser training standards are received interpreted and operationalised by specially trained officers.

Ethics Committee reference: 15/16:26

Thank you for submitting your documents for ethical review. The Ethics Committee was content to grant a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, revised in the light of any conditions set, subject to the general conditions set out in the attached document.

There is no need to submit any further evidence to the Ethics Committee; the favourable opinion has been granted with the assumption of compliance.

Requirement: that data should be stored more securely and that participants should be clear that they can withdraw at any point without penalty.

The favourable opinion of the EC does not grant permission or approval to undertake the research.

Management permission or approval must be obtained from any host organisation, including University of Portsmouth, prior to the start of the study.

Documents reviewed:
The documents reviewed by The Faculty of Humanities and Social Sciences Ethics Committee.

Document Version Date
Application Form 2 07/04/2016
Participant Information Sheet 1 07/04/2016
Consent Form 1 07/04/2016
Invitation Letter 1 07/04/2016
Research Data Management Plan 1 07/04/2016
Survey Instrument
1
07/04/2016
Interview Questions / Topic List
1
07/04/2016
Questionnaire
1
07/04/2016
Other – Proposed Thesis Contents Page
1
07/04/2016
Other - Sussex Police Application to Conduct Research Form
1
07/04/2016
Other - Sussex Police Research Code of Conduct Form
1
07/04/2016
Statement of compliance
The Committee is constituted in accordance with the Governance Arrangements set out by the University of Portsmouth
After ethical review
Reporting and other requirements
The enclosed document acts as a reminder that research should be conducted with integrity and gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Notification of serious breaches of the protocol
- Progress reports
- Notifying the end of the study

Feedback

You are invited to give your view of the service that you have received from the Faculty Ethics Committee. If you wish to make your views known please contact the administrator ethics-fhss@port.ac.uk

Please quote this number on all correspondence – 15/16:26

Yours sincerely and wishing you every success in your research

***************

Chair
Dr Jane Winstone
Email: ethics-fhss@port.ac.uk

Enclosures:
“After ethical review – guidance for researchers”

Appendix 1

After ethical review – guidance for researchers

This document sets out important guidance for researchers with a favourable opinion from a University of Portsmouth Ethics Committee. Please read the guidance carefully. A failure to follow the guidance could lead to the committee reviewing and possibly revoking its opinion on the research.

It is assumed that the research will commence within 3 months of the date of the favourable ethical opinion or the start date stated in the application, whichever is the latest.

The research must not commence until the researcher has obtained any necessary management permissions or approvals – this is particularly pertinent in cases of research hosted by external organisations. The appropriate head of department should be aware of a member of staff’s research plans.

If it is proposed to extend the duration of the study beyond that stated in the application, the Ethics Committee must be informed.

If the research extends beyond a year then an annual progress report must be submitted to the Ethics Committee.
When the study has been completed the Ethics Committee must be notified.

Any proposed substantial amendments must be submitted to the Ethics Committee for review. A substantial amendment is any amendment to the terms of the application for ethical review, or to the protocol or other supporting documentation approved by the Committee that is likely to affect to a significant degree:

(a) the safety or physical or mental integrity of participants

(b) the scientific value of the study

(c) the conduct or management of the study.

A substantial amendment should not be implemented until a favourable ethical opinion has been given by the Committee.

Researchers are reminded of the University’s commitments as stated in the Concordat to Support Research Integrity viz:

- maintaining the highest standards of rigour and integrity in all aspects of research
- ensuring that research is conducted according to appropriate ethical, legal and professional frameworks, obligations and standards
- supporting a research environment that is underpinned by a culture of integrity and based on good governance, best practice and support for the development of researchers
- using transparent, robust and fair processes to deal with allegations of research misconduct should they arise
- working together to strengthen the integrity of research and to reviewing progress regularly and openly

In ensuring that it meets these commitments the University has adopted the UKRIO Code of Practice for Research. Any breach of this code may be considered as misconduct and may be investigated following the University Procedure for the Investigation of Allegations of Misconduct in Research.

Researchers are advised to use the UKRIO checklist as a simple guide to integrity.
Appendix G – Ethics Review Checklist (FORM UPR16)

**FORM UPR16**
Research Ethics Review Checklist

Please include this completed form as an appendix to your thesis (see the Postgraduate Research Student Handbook for more information)

<table>
<thead>
<tr>
<th>Postgraduate Research Student (PGRS) Information</th>
<th>Student ID:</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Keating-Jones</td>
<td>UPR751811</td>
</tr>
</tbody>
</table>

**Department:** ICJS  
**First Supervisor:** Dr. Paul Smith  
**Start Date:** October 2016  
**Study Mode and Route:** Part-time ☒  
**UKRIO Finished Research Checklist:**

a) Have all of your research and findings been reported accurately, honestly and within a reasonable time frame? YES ☒ NO ☐

b) Have all contributions to knowledge been acknowledged? YES ☒ NO ☐

c) Have you complied with all agreements relating to intellectual property, publication and authorship? YES ☒ NO ☐

d) Has your research data been retained in a secure and accessible form and will it remain so for the required duration? YES ☒ NO ☐

e) Does your research comply with all legal, ethical, and contractual requirements? YES ☒ NO ☐

**Title of Thesis:** "Red Dotted!" Taser training and operationalisation in the United Kingdom: An Empirical perspective

**Thesis Word Count:** 48,743 (excluding ancillary data)

If you are unsure about any of the following, please contact the local representative on your Faculty Ethics Committee for advice. Please note that it is your responsibility to follow the University’s Ethics Policy and any relevant University, academic or professional guidelines in the conduct of your study.

Although the Ethics Committee may have given your study a favourable opinion, the final responsibility for the ethical conduct of this work lies with the researcher(s).

**Signed (PGRS):**

William Keating-Jones  
Researcher

**Date:** 10/09/2017
Appendix H – Confirmation of permission to conduct research from Westshire Constabulary

Sussex Police
CDO – Prospero
Malling House
Church Lane
Lewes
BN7 2DZ

10TH AUGUST 2017

To whom it may concern,

I can confirm that authorisation of doctoral research with Sussex Police has been granted by Prospero (Sussex Police Knowledge Exchange department) and has agreed to allow William Keating Jones to conduct research with Sussex Police.

Signed

Hayley Pulman
Programme Officer | PROSPERO Sussex Police Knowledge Exchange
Corporate Development Department | Malling House | Sussex Police Headquarters | Church Lane | Lewes | BN7 2DZ
T: 01273 470101 x 545529