Review of Taser Cam

Testing and Evaluation

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Project Team

The project team was led by Superintendent Donna Sturgess and included:

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- Mrs Judy Crouch
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- Ms Zoe Gunn, Senior Research Officer, Ethical Standards Command

The project team wish to acknowledge those people who provided assistance and contributed to the review:

- All trial participants from North Coast Region (NCR), South Eastern Region (SER), Southern Region (SR) and Northern Region (NR)
- Operational Skills and Tactics (OST)
- Radio and Electronics Section (RES)
- Ethical Standards Command (ESC) – Review and Evaluation Unit
- Armoury
- Taser Review Steering Committee
- Photographics Section
- New South Wales Police Force (NSWPol) Assistant Commissioner Alan Clarke, chief Superintendent Steve Cullen, Inspector Peter Hansen.
- Victoria Police Force (VicPol) Superintendent Michael Williams
- Western Australia Police force (WAPol) Inspector Steven Bradley
Executive Summary

Between October 2009 and March 2011 the Queensland Police Service (QPS) conducted a trial of Taser Cam. The trial was initiated as a direct result of recommendations arising from the joint QPS/CMC Review of Taser Policy, Training and Monitoring and Review Practices report (the Taser Report), specifically Recommendation 24 which states:

*That QPS examine Taser Cam or other recording device in a discreet location.*

The Taser Review Implementation Group (TRIG) conducted the Taser Cam review. The testing, evaluation and review of Taser Cam is based on the following:

1) Comparison of Handling Trial;
2) Queensland Police Service Academy (QPSA) Testing;
3) Forensic examination of Taser Cam;
4) Operational Trial including focus groups with trial participants;
5) Review of New South Wales Police (NSWPol) Taser Cam program; and
6) Body Worn Video (BWV) review.

To ensure the review methodology was robust and objective, Ethical Standards Command’s Review and Evaluation Unit assisted in the development, delivery and analysis of questionnaires, focus group schedules and the evaluation plan. The Taser Cam review and evaluation report is categorised into seven chapters.

Chapter One explores the differences between the two variations of Taser X26; firstly with XDPM fitted and then with Taser Cam fitted. This section also includes images of how the spare cartridge is carried in the grip of each device in accordance with QPS policy.

Chapter Two reports on the results and findings of the comparison of handling trial that took place at QPSA in December 2009. The test procedure adopted for the handling trial was modelled on the trial carried out by the UK Home Office SDB (UK) in 2008 (Appendix XXX). The evaluation consisted of a series of tests comparing the handling of the X26 with a Taser Cam fitted versus the X26 with an XDPM fitted. The trial involved police officers hand firing two cartridges from the two different devices in five different scenario exercises followed by the answering of a questionnaire. The aim of the trial was to assess and measure any differences in the performance and handling characteristics that may be introduced by the Taser Cam.

Chapter Three details the QPSA testing and evaluation trials. This section includes the trial tests that were adopted and details the exercises that were carried out by the participating officers. This section includes observations and test results from the trial.

Chapter Four describes the evaluation methodology including the results from an assessment of the audio and video characteristics of Taser Cam carried out by QPS Electronic Recording Section (ERS) Analysis Team. This reviews the Taser Cam unit in more detail and explains the features of the unit.

Chapter Five examines the operational trial including the four Taser Cam deployments, results from focus groups, and State-wide results from the participating officers. This section closes with some observations and conclusions drawn from the trials and recommendations.
Chapter Six reviews the NSWPol Taser Cam program. This chapter examines the existing Information Technology (IT) components employed by NSWPol to manage and store Taser Cam data (Waiting on NSW report), and includes an overview of how NSWPol Taser safes are configured and discussion of implications for the QPS Taser safes. This chapter also examines some of the risks and issues experienced by NSWPol, in particular the high levels of breakages experienced with Taser Cam.

Chapter Seven outlines the ‘proof of concept trial’ of Body Worn Video (BWV) including discussion of the footage recorded of the single Taser deployment during the trial.

Key Findings

- We found an excellent commitment by QPS participants to trial the Taser Cam and BWV.
- There are currently 1240 operational Tasers.
- 20 Taser Cams were trialled in 4 districts.
- 10 BWV Units were trialled in 2 districts.
- There were four Taser Cam deployments in the 12 month period.
- There was one Taser deployment captured on BWV during the trial period.
- Taser Cam failed several of the ‘organisational fit’ testings.
- Taser Cam failed several of the Electronic Testing components.
- Taser Cam was widely criticised by operational police due the size of the weapon.
- BWV is regularly worn by numerous QPS officers.
- BWV has a wider application of recording QPS use of Force application.

Recommendations

The recommendations are intended to ensure the QPS operational equipment is aligned with the ‘best practice” and addressing areas for consideration by the QPS.

Recommendation 1

That the QPS do not consider the purchase of Taser Cam as a way of recording Taser Deployments.

Recommendation 2

That the QPS examine the feasibility of introducing and supporting Body Worn Video as a way of recording the application of all Use of Force options by the QPS.
1 Purpose

This document will provide a summary of the testing and evaluation of Taser Cam carried out by the Queensland Police Service.

1.1 Background

In January 2008 the Minister for Police, Corrective Services and Sport, committed the government to making ‘Tasers’ available to operational police. (Note: Taser is a brand name for a conducted energy weapon [CEW]).

On 15 June 2009, the Minister for Police, Corrective Services and Emergency Services and the Commissioner of Police announced that a review of Taser training and operational policy was to be conducted jointly by the Crime and Misconduct Commission (CMC) and the Queensland Police Service (QPS). The review was initiated in direct response to a death proximal to a Taser deployment in Brandon, North Queensland on 12 June 2009.

In July 2009 the resultant joint CMC/QPS report (Review of Taser Policy, Training and Monitoring and Review Practices) (the Taser Report) was released, delivering 27 recommendations. Of specific relevance to this report was Recommendation 24, which states “that QPS examine Taser Cam or other recording device in a discreet location”.

1.1.1 Marketplace Review

A review of the known marketplace was conducted by the QPS Taser Review Implementation Group (TRIG) during September 2009. This comprehensive market scan included:

- Internet research;
- Consultation with other police jurisdictions; and
- Review of previous tenders.

The marketplace review identified three devices considered appropriate for trial in fulfilment of Recommendation 24. These devices were:

- Taser Cam;
- Vievu - Body Worn Video; and
- Muvi – Body Worn Video.

QPS purchased 20 Taser Cams and 10 units of each type of Body Worn Video (including peripherals) to undertake testing and evaluation.

1.1.2 Taser Cam

In September 2006 TASER International launched and demonstrated their Taser Cam product (Figure 1). The Taser Cam is a rechargeable attachment that can be inserted into the grip (Figure 2) of the Taser X26 in place of the Digital Power Magazine (DPM) or eXtended Digital Power Magazine (XDPM) as shown in Figure 4. The Taser Cam incorporates a monochrome camera and microphone. The camera has an infrared light source to support the camera in low light conditions.

The Taser Cam does not change any of the normal functions of the Taser X26 and is an optional accessory that fits into the grip of a Taser X26. Taser Cam has a built-in front-facing camera to
record video and a microphone to record audio. The Taser Cam will only start recording when the safety is switched off (e.g. when the Taser is armed). There is a 1.5 second delay from when the safety is disengaged to when any recording begins. Taser Cam is rechargeable requiring a 240v charge and supplies all the power to the X26.

*TASER International* have indicated that no further research and development will be directed towards the Taser Cam device as they have recently developed AXON (Head Cam) that is linked directly into Evidence.com; a Taser developed and managed storage and management database for digital data.

![Figure 1 – Taser Cam Unit](image1)

![Figure 2 –Taser Cam showing how it attaches to the Taser X26](image2)

![Figure 3 – Taser X26](image3)
1.1.3 Dimensions of X26 v Taser Cam

Twenty Taser Cams were purchased for the QPS testing and evaluation process, at a cost of $700AU per unit. The approved Australian distributor for all Taser products, including the Taser Cam, is Breon Enterprises, based in Melbourne, Victoria.

The Manufacturer specifications outline that Taser Cam offers the following performance capabilities:

- Records approximately 1.5hrs of audio and MPEG 4 video;
- Records in complete darkness using an infrared illuminator;
- Rechargeable power supply compatible with all X26 ECDs;
- Central Information Display (CID), which provides a warning if the camera lens is blocked;
- Storage bay for spare Taser cartridge; and
- The test and evaluation unit comes complete with USB download cable, download software, and wall charger.
2 Testing and Evaluation

2.1 Project Plan

A project plan was developed to examine, test and evaluate the Taser Cam. The project plan was approved by the Taser Review Steering Committee.

2.1.1 Key evaluation phases and criteria

The project plan identified key phases and evaluation criteria, which included:

- Comparison of Handling;
- QPSA testing;
- RES – technology;
- Operational Trial and focus groups; and
- Body Worn Video ‘proof of concept’ trial and focus groups.

2.2 Comparison of handling trial

In December 2009, 10 Queensland police officers drawn from Operations Support Command (OSC), Human Resources Division (HRD), North Coast Region (NCR), Metropolitan South Region (MSR) and South Eastern Region (SER) were selected to perform a number of comparative tests of the Taser X26 and the Taser Cam weapons.

The comparative tests were designed to allow comparison between the handling qualities of the Taser X26 with a Taser Cam attachment and the handling qualities of the Taser X26 with an XDPM attachment. The testing was based upon the review of the UK Home Office trial (Appendix X).

2.2.1 Officer demographics

Of the 10 officers who performed the comparative tests, six were male and four female. In terms of substantive rank, three of the 10 officers were constables, four were senior constables and the remaining three officers were sergeants.

Each officer performed two firings of both the Taser X26 and the Taser Cam in relation to five different sequences. In total, 200 tests were performed (i.e. 10 officers x 2 Taser weapons x 2 cartridges per Taser weapon x five sequences). All of the officers completed five different scenario exercises, which were specifically designed to assess handling of the devices. Following the scenario based exercises each officer completed a questionnaire.

Each sequence differed in relation to the position of the officer (i.e. standing versus supine position), the speed at which the second cartridge was to be reloaded (i.e. in own time versus at speed) or the lighting/visibility conditions (i.e. low light/reduced lighting conditions or partial target visible from within a doorway). All tests were conducted from a cross-draw holster with a static target at a distance of 2.5 metres. The scenario based exercises included various situations including firing the Taser at stationary targets (both upright and prone), firing over or around a barricade and firing in low light conditions (Appendix X). The results from these exercises show no significant differences between the two Taser attachments for both strike location and miss rate.

The Taser Cam’s video capabilities were not assessed during the handling trial.
2.2.2 Test Results – Battery power loss

Following each trial sequence, which involved two firings of the Taser X26 and two of the Taser Cam, the loss of battery power was calculated for each weapon. In 18 of the 50 sequences involving the Taser X26 weapons, no battery power was lost. In relation to the Taser Cam weapon sequences, no battery power loss was observed in 19 of the 50 sequences (Figure 8).

![Battery power loss chart]

Figure 8 Battery power loss – Taser X26 versus Taser Cam

No differences were observed between the two weapon types in terms of battery power loss.

2.2.3 Test Results - Probe contact hit/miss rate

Of the 200 test firings, both probes made contact with the target in 94 per cent of cases (\(n=189\)). Of the 11 instances in which one probe failed to make contact with the target, seven involved the Taser X26 weapon and four involved the Taser Cam weapon (Figure 9).

![Probe contact hits and misses chart]

Figure 9 Probe contact hits and misses – Taser X26 versus Taser Cam

No significant differences were observed between the two weapons in relation to this test.

The 11 firings in which one probe failed to make contact with the target involved eight officers, three of whom experienced two misses with the same type of weapon (Figure 10).
No particular officer was involved in a disproportionate number of the probe misses during the testing. The highest number of probe misses occurred during completion of sequence 4 testing (i.e. partial target visible, ‘barricade’ from doorway), followed by sequence 1 testing (i.e. reloading second cartridge in own time) (Figure 11).

Although the numbers are too small to draw firm conclusions in relation to the accuracy of the Taser X26 and Taser Cam weapons, it is possible that a higher number of misses occurred during sequence 1 testing as it was the first testing exercise to be completed.

### 2.2.4 Test Results - Probe spread

After each of the 200 firings, the distance or spread between the two probes was calculated in centimetres, with the optimal spread of the probes totalling between 33 and 40cm. Of the 189 firings in which both probes made contact with the target, only 57 (28%) fell within the optimal spread; 32 of the 93 (34%) tests from the Taser X26 weapon were within the optimal range compared with 25 of the 96 (26%) tests from the Taser Cam weapon. Across the 93 firings from the Taser X26 in which both probes made contact with the target, the average distance between the two probes was 30.97cm, and the median distance was 30cm. Across the 96 firings from the Taser Cam in which both probes made contact with the target, the average distance between the two probes was slightly less at 30.57cm, and the median distance was 30cm (Figure 12).
2.2.5 Test Results - Probe strike location

After each test, the locations on which the two probe barbs connected to the target were recorded on a target outline. For the purposes of analysis, four zones were identified on the target; above the belt line (drawn under the number 8); on the belt line; below the belt line; and the groin (on the number 11) (Figure 13).

Ideally the first probe should attach above the target’s belt line with the second attaching below the belt line, avoiding the groin region. This situation occurred in 38 of the Taser X26 tests and 42 of the Taser Cam tests (Figure 13). The second most common scenario of probe strike locations involved one probe attaching above the belt line with the second probe attaching in the groin region.

Figure 13 Target outline
2.2.6 Test Results - Tester observations

After each test, any observations made by the tester in relation to the officers’ performance were recorded on the relevant testing form. In total, 15 tester observations were recorded.

Six themes emerged from the 15 tester observations:

- Placement of the officer’s non-preferred hand;
- Use of double-handed grip on the weapon;
- Stability of the officers’ hands;
- Whether there was obstruction of the Taser Cam’s camera;
- Length of time between firing of the weapon; and
- Re-engagement of the weapon’s safety.

Three of these six themes concern officer muscle memory which will be addressed through greater familiarisation with the Taser weapons over time.

2.2.7 Test Results - User observations

Any observations made by the user/officer in relation to their use of the Taser weapons were recorded on the relevant testing form after completion of each test. In total, 47 user observations were recorded, of which 25 indicated that there were no differences between the two weapon types.

Similar to the tester observations discussed above, five themes emerged from the user observations:

- Differences in using the Taser weapons with a single-handed grip compared to the Glock with a double-handed grip;

Figure 14 Probe strike locations – Taser X26 versus Taser Cam

Separated by sequence type, the greatest number of optimal probe strike location tests (i.e. one probe above the belt line and the other below the belt line) were recorded in relation to Sequence 4 and Sequence 2. The least number of optimal probe strike location tests were recorded in relation to Sequence 3. The greatest number of tests involving at least one probe strike to the groin region was recorded in relation to Sequence 3; this result is to be expected as officers fired the weapons from a supine position in Sequence 3 (i.e. from below the target).
Perceived benefits of the extra length/longer grip of the Taser Cam over the Taser X26 due to the camera and second cartridge;

- Difficulties using the holster/un-holstering the weapon;
- Placement of the officer’s non-preferred hand; and
- Ability and confidence manipulating the safety.

All comments specifically related to the Taser Cam weapon are included in Appendix X.

2.3 User Survey

In early March 2010, Queensland police officers who had performed the comparative tests of the Taser X26 and the Taser Cam weapons in December 2009 were sent a questionnaire modelled on a UK Home Office survey instrument concerning the handling of the Taser Cam weapon. In addition, officers from North Coast Region (NCR) and South Eastern Region (SER) who had been trained in the use of the Taser Cam prior to the start of a six-month trial of the weapons in the two regions were sent a copy of the questionnaire. In total, seven of the 10 officers who had participated in the comparative testing completed and returned the questionnaire. Questionnaires were also received from 12 officers who were participating in the six-month Taser Cam trial operating in NCR and SER. Results from the 19 questionnaires are presented below.

2.3.1 Officer demographics

Of the 19 officers who completed and returned questionnaires, 16 (84%) were male and three (16%) female.

2.3.2 Results – Weapon accuracy

The accuracy of the Taser Cam and its ability to be used effectively against a moving target or to target an individual within a group of persons was addressed through four survey questions. Seventeen (89%) of the 19 respondents either agreed or strongly agreed that the Taser Cam is accurate, with 13 (68%) respondents agreeing or strongly agreeing that the weapon can be used accurately without the use of the laser sights. A similar percentage of respondents (n=12; 63%) agreed or strongly agreed that the weapon could target an individual within a group. However, responses to the fourth question relating to the weapon’s accuracy were somewhat less positive, with almost half of the respondents disagreeing or strongly disagreeing that the Taser Cam could be used effectively against a moving target.

2.3.3 Results - Ease of use

The appropriateness of the Taser Cam for use by all operational officers and the ease with which the weapon can be operated, loaded and unloaded was explored through four survey questions. Responses to the question concerning the appropriateness of the weapon varied markedly, with just over half of the respondents (n=10; 53%) agreeing or strongly agreeing that the Taser Cam is appropriate for use in all officer roles. Conversely, just over two-fifths (n=8; 42%) of respondents disagreed or strongly disagreed that the Taser Cam is appropriate for use in all officer roles. Separated by respondent group no differences were observed between the responses of the more senior officers from the Taser Cam trial Regions (i.e. NCR and SER) and those of the officers who participated in the comparison testing.
2.3.4 Results - Safety

Three questions were posed concerning the perceived safety of the weapon, the likelihood of unintentional discharge, and its appropriateness for use in confined spaces. The overwhelming majority (95%) of officers agreed or strongly agreed that the weapon is safe to use without the risk of electric shock to the officer, with three-quarters of respondents (74%) agreeing or strongly agreeing that it is not easy to unintentionally discharge the weapon. Sixteen of the 19 officers (84%) agreed or strongly agreed that the weapon could be used in confined spaces.

2.3.5 Results - Officer confidence and handling

Officers were asked to consider how confident they felt handling and using the weapon, whether the camera attachment on the Taser Cam improves the weapon’s handling, and whether the weapon’s fit in the hand contributes to the maintenance of a firm grip aiding retention in the event of a struggle. Almost all respondents (95%) indicated that they felt confident in handling and using the Taser Cam following completion of the testing exercises. Similarly, 84 per cent of the 19 officers agreed or strongly agreed that the Taser Cam fits well in the hand so it can be gripped firmly to facilitated retention in the event of a struggle. One officer indicated that the Taser Cam “felt more secure and stable even with single-handed grip required”.

Interestingly, almost three-fifths of respondents disagreed or strongly disagreed that the camera attachment improves the handling of the weapon. This question elicited the least positive response of any question on the survey, which was similarly reflected in responses to the question regarding officers’ preference for the Taser Cam or the Taser X26 weapon. Eight of the 14 officers who provided a response to this question indicated that they preferred the Taser X26 device to the Taser Cam, with one officer stating that “the camera made it too long and got in the way of magazines for the Glock”. Other reasons provided by officers in support of their preference for the Taser X26 over the Taser Cam included:

- aversion to single-handed firing of the weapon, contrary to QPS training for use of the Glock and Taser X26s;
- a suggestion that body-mounted cameras would be more cost effective than Taser Cams and would capture all incidents in which use of force accoutrements, not just Tasers, are deployed; and
- the likelihood of damage to Taser cartridges and cameras due to the length of the weapon.
3 Test Exercises

This chapter describes the organisation of the testing including the scenario exercises undertaken. It also describes the methods used to measure and record the performance of the Taser X26 fitted with the two attachments.

On XXXX (date) QPS held a trial day to assess the operational fit of the Taser X26 fitted with an XDPM in comparison with a Taser X26 fitted with Taser Cam. Participating officers took part in several tests followed by the completion of a questionnaire to establish their views on the two attachments fitted to Taser X26.

Before the start of the trial all recruits were given a basic training session on the safe handling of Taser X26 and the safe loading, firing and unloading of a live air cartridge by Senior Instructors of Operational Skills and Tactics (OST).

Seven exercises were developed to test the devices against the evaluation criteria:

1. Physical Inspection Exercise
2. Fitting Exercise
3. Manipulation Exercise
4. Accountability (Data Download) Exercise
5. Obstacle Course Exercise
6. Vehicle Exercise
7. Water Exercise

Where practicable the testing exercises were recorded by QPS Photographics Section.

3.1 Test indicators

Test indicators were developed for each exercise. These indicators were developed from the technical specifications utilised in the original (2008) CEW Invitation to Offer (ITO) and the 2010 CEW Comparison testing Indicators were used to rate the device performance for each test. Devices were rated as follows:

NOT ACCEPTABLE  ACCEPTABLE

As a minimum standard, tests results were either ‘acceptable’ or ‘not acceptable’. For some tests a higher standard of performance – ‘optimal’ was also identified. Applicable indicators for each test are presented in this report.
3.2 Tests

3.2.1 Physical Inspection Exercise

The Taser X26 with XDPM and Taser with Taser Cam were weighed on a set of scales. Weights were recorded for the device only (with cartridges), and device and holster (with cartridges).

Weight of Taser (un-holstered)

Taser X26 with XDPM un-holstered weighed 342gms
Taser X26 with Taser Cam un-holstered weighed 395gms

Weight of Taser (holstered)

Taser X26 with XDPM holstered weighed 522gms
Taser X26 with Taser Cam holstered weighed 573gms

Height of Taser (holstered)

Taser X26 with XDPM inside holster measured 14.5cm
Taser X26 with Taser Cam inside holster measured 16.5cm

Lower Grip length of Taser (holstered)

Taser X26 with XDMP width 5cm
Taser X26 with Taser Cam width 9cm

3.2.2 Fitting Exercise

Officers were required to fit and remove the device holster/s to their QPS utility belt to determine whether the device can be carried in ‘cross-draw’ mode and whether it can be fitted without difficulty or the use of tools/equipment.

Indicators:

\[\begin{array}{c|c|c}
\text{Location (cross-draw carry)} & \text{NOT ACCEPTABLE} & \text{ACCEPTABLE} \\
\hline
\end{array}\]

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### Result:

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<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACCEPTABLE</td>
<td>ACCEPTABLE</td>
</tr>
</tbody>
</table>

**Fitting on belt**

Holsters were to be fitted to the belt without difficulty. The Taser Cam was bulky and the visual impact of Taser X26 with Taser Cam was very prominent and bulky.

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

### 3.2.3 Observer and Subject Officer Comments

A summary of all Observer and Subject Officer comments and observations is included as Appendix X.

### 3.2.4 Manipulation Exercise

Officers were required to fit the holster and weapon in the appropriate position. Using the dominant hand on the handle of the weapon, and facing the wearer, the testing officer aggressively pulled and pushed the weapon for 20 seconds in an attempt to dislodge the weapon from the holster and/or the holster from the belt.

**Indicators:**

<table>
<thead>
<tr>
<th></th>
<th>NOT ACCEPTABLE</th>
<th>ACCEPTABLE</th>
</tr>
</thead>
</table>

**Manipulation**

On two separate occasions at the conclusion of the manipulation test, the Taser X26 with Taser Cam was observed to be going through the ‘boot up sequence’. This indicated that on two separate occasions, at some time during the 20 second struggle the Taser Cam and the Taser had become separated.
Result:

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

3.2.5 Observer and Subject Officer Comments

A summary of all Observer and Subject Officer comments and observations is included as Appendix X.

3.2.6 Accountability Test

The Taser Cam is designed to be downloaded to a database hosted on an external website, Evidence.com (a parallel organisation to TASER International), via an application called Evidence Sync. The Taser Cam software is freely available to be downloaded via the TASER International website.

However, the Taser Cam software is not compatible with the existing QPS computer system. Taser Cam cannot be downloaded to a PC or to a server/location on the QPS Intranet. After extensive consultation and efforts by Operations Support Command Computer Support and Electronic Recording Section (ERS), it was concluded that the software could only be downloaded to a stand-alone computer. Accordingly, the software was downloaded onto a stand alone computer at ERS.

As a result, officers who deployed Taser Cam were required to travel to ERS in Brisbane to download the footage. Taser Cam footage was securely stored on the QPS forensic database.

The Taser X26 was not downloaded for the purpose of the Accountability Test. The Taser X26 has been used by the QPS since 2008, and since routine data downloading was mandated as a risk/compliance management process in November 2009, over 1,350 downloads have been conducted. The data recording capabilities of the Taser X26 are broadly accepted.

Indicators:

<table>
<thead>
<tr>
<th>NOT ACCEPTABLE</th>
<th>ACCEPTABLE</th>
</tr>
</thead>
</table>

Data Download Software Test

Result:

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>
3.2.7 Obstacle Course Exercise

Officers were required to fit the holster and weapon in the appropriate position and complete the QPS Academy Obstacle Course. Officers were then required to hold the Taser in their preferred master hand and complete the QPS Academy Obstacle Course.

Indicators:

- **In Holster – Locking mechanism**

  Result:

  - **Taser X26**: ACCEPTABLE
  - **Taser Cam**: ACCEPTABLE

- **In Holster – Weapon integrity**

  The Taser Cam was knocked several times by several officers during the completion of the obstacle course. The cartridge and camera were knocked and/or caught on the 1200m fence.

  Result:

  - **Taser X26**: ACCEPTABLE
  - **Taser Cam**: NOT ACCEPTABLE

- **In Holster – Comfort**

  Several officers reported the Taser Cam felt like it was going to fall out of the holster.

  Result:
Hand held – Weapon integrity

The Taser Cam was repeatedly knocked as testing officers climbed over the 1200mm timber fence on the obstacle course.

Result:

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

Hand held – Comfort

Result:

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>ACCEPTABLE</td>
</tr>
</tbody>
</table>

3.2.8 Observer and Subject Officer Comments

A summary of all Observer and Subject Officer comments and observations is included at Appendix A.

3.2.9 Vehicle Exercise

Six recruits equipped with full accoutrements were required to wear each weapon in the supplied holster and enter and exit a QPS patrol vehicle. Officers conducted this test in the driver’s position and front passenger’s position.

Indicators:

| NOT ACCEPTABLE | ACCEPTABLE |
Driver’s Side – Seatbelt lock security

The Taser Cam was entangled in the seatbelt upon entry and hindered officers’ exit of the vehicle.

Result:

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

Driver’s Side – Seatbelt obstruction

The Taser Cam was entangled in the seatbelt upon entry and hindered officers' exit of the vehicle.

Result:

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

Driver’s Side – Comfort

Result:

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

Passenger’s Side – Seatbelt lock security

The Taser Cam was entangled in the seatbelt upon entry and hindered officers’ exit of the vehicle.

Result:
Passenger’s Side – Seatbelt obstruction

The Taser Cam was entangled in the seatbelt upon entry and hindered officers’ exit of the vehicle.

Result:

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

Passenger’s Side – Comfort

Result:

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

3.2.10 Observer and Subject Officer Comments

A summary of all Observer and Subject Officer comments and observations is included as Appendix A.

3.2.11 Water Exercise

Each device was sprayed with a fine water mist from a distance of 40cm and then wiped down. The device was then fired to test if it still worked.

Indicators:

| NOT ACCEPTABLE | ACCEPTABLE |
Result:

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>ACCEPTABLE</td>
</tr>
</tbody>
</table>
3.3 Conclusion

3.3.1 Summary of Test Results

Physical Inspection Exercise
The Taser with Taser Cam is heavier, longer and wider than the Taser X26, which influenced the following ‘not acceptable’ results.

Fitting Exercise

Fitting on belt

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
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</table>

Manipulation Exercise

Manipulation

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
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<tbody>
<tr>
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</table>

Accountability Exercise

Data Download Software Test

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
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<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

Obstacle Course Exercise

In Holster – Weapon Integrity

<table>
<thead>
<tr>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>
Hand held – Weapon Integrity

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td></td>
<td>NOT ACCEPTABLE</td>
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</tbody>
</table>

Vehicle Exercise

Driver’s Side – Seatbelt lock security

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td></td>
<td>NOT ACCEPTABLE</td>
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</tbody>
</table>

Driver’s Side – Seatbelt obstruction

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

Driver’s Side – Comfort

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td></td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>

Passenger’s Side – Seatbelt lock security

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td></td>
<td>NOT ACCEPTABLE</td>
</tr>
</tbody>
</table>
Passenger’s Side – Seatbelt obstruction

<table>
<thead>
<tr>
<th></th>
<th>Taser X26</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
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</tbody>
</table>

Passenger’s Side – Comfort

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<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPTABLE</td>
<td>NOT ACCEPTABLE</td>
<td></td>
</tr>
</tbody>
</table>
4 Forensic Evaluation of Taser Cam

For the purposes of evaluation, a Taser X26 with Taser Cam attachment was made available. Subsequent tests were conducted for video evaluation (i.e. resolution, field of view, lighting condition responses, EMI interference, etc) as well as for audio evaluations (i.e. frequency response, polar sensitivity pattern, EMI interference, etc). Further field tests were performed by request, under the supervision of TRIG. These included tests involving role playing for audio level comparison purposes.

Taser Cam Software Version 2.4 was supplied for downloading from the Taser Cam, and for evaluative purposes. This was installed and evaluated on a stand-alone PC within the Research and Development Lab at ERS.

The Taser X26 “Taser Cam” module was evaluated through:
- the acquisition of test footage;
- tests made on a supplied unit; and
- the submitted documentation.

The Taser Cam was technically evaluated and compared against standard audio/video criteria, as well as against the manufacturer’s specifications, and in the light of evidentiary requirements.

4.1 Evaluation against Technical Specifications

Evaluation against the technical specifications supplied by TASER International provides an opportunity to confirm their stated claims for quality purposes. To this end, the document “Taser Cam Specification, V2, Release date 2/10/2009” is referenced.

The Taser Cam Specification sheet provides very little in regard to technical specifications of the AV recording qualities. The majority of items discussed are model numbers, features, and physical characteristics. The limited technical specifications are summarised below in Table 1.

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
<th>Evaluation Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>QVGA – 320 x 240</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Chrominance</td>
<td>Black and White</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Frame Rate</td>
<td>10 fps</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Compression</td>
<td>MPEG-4 Video/Audio.</td>
<td>Video is correct, but audio is μ-law/logarithmic PCM uncompressed</td>
</tr>
</tbody>
</table>

Of the few technical specifications stated, the only inconsistency found was that of the audio format specification. The specification sheet lumps the video with the audio, stating the format as “MPEG-4 Video/Audio Compression”, whereas the actual audio recording format is more correctly “μ-law Pulse Code Modulation (PCM), 8kHz uncompressed, Mono, 8bit, at 64kbps”. 
4.1.1 Summary

The technical specifications supplied by TASER International provide very little information. These basic specifications (i.e. resolution, frame rate, format, and chrominance) are essentially all confirmed, with the exception of the audio format. The Taser Cam Specification lumps audio in with the video format, and is not accurate in identifying it as an uncompressed 8kHz, 8 bit, μ-law, PCM format. As an uncompressed format, this is a desirable specification, not advertised by TASER International. No other issues contradicting the supplied technical specifications were found.

4.2 Evaluation against Evidentiary Standards

The admissibility of digital video recordings is governed by the same rules that apply to photographs and video tapes.

The admissibility of video evidence depends upon its relevance to the issue at trial, its accuracy in truly representing the facts, its fairness and absence of any intention to mislead, and its verification on oath by a witness capable of doing so (R. v Creemer and Cormier [1968]).

An important aspect of video evidence is that it must be a true and accurate reproduction of any relevant facts and facts in issue. In relation to this, factors that technically affect the evidence’s accuracy include stability of frame rate, distortion of the image, and random or convoluted changes to the video or audio properties.

The following observations are made concerning the quality of the system from an evidentiary standards perspective.

4.2.1 Frame Rate

The observed frame rate of the AVI capture is stable and smooth at 10 fps, however the ASF export is not smooth. The conversion process duplicates every second frame, giving the viewer an erroneous temporal experience of the event. Further, the resultant ASF rate of 15fps is greater than half of the PAL TV standard of 25fps, and as such, conversion to PAL 25fps may result in further jerky vision. The AVI capture is considered significantly better for viewing this footage.

4.2.2 Motion Blur

A considerable amount of motion blur is experienced especially in low light conditions. This reduction of clarity opens opportunities for speculation as to the vision contents. Motion blur was not assessed for brightly lit environments.

4.2.3 Video CODEC Artifacting

Distortions to the recorded image due to losses incurred in the file compression can lead to a lack of clarity in the image. The AVI CODEC artifacting is assessed as being of good quality, however the ASF format introduces further artifacting due to the additional encoding. This extra degradation is not necessary, and should be avoided by attempting to view the AVI versions in preference.

4.2.4 Audio Quality

The audio quality of the AVI file suffers a small amount of aliasing, and distorts when acoustic signals greater than 75dBA are recorded. The aliasing is acceptable; however the 75dBA distortion point is significantly lower than would be expected.
There still remain some concerns over the μ-law encoding and DC offset issue, however the general ability to record quiet audio scenes does appear good. No major CODEC artifacting is noticed, as the CODEC is essentially uncompressed.

The frequency response of 4 kHz is sufficient for good intelligibility.

4.2.5 Response to Lighting Conditions

The Taser Cam is evaluated as taking up to 2 seconds to re-adjust from one extreme of lighting condition to another. It is an acceptable value, as quicker changes would result in the image constantly changing brightness rather than “evening out” the luminance values.

4.2.6 Uneven Exposure in the IR and Torch-Lit Conditions

The use of an average metering for exposure calculation has resulted in a few problems that would have been improved by a centre weighted metering system. The use of torch light causes severe over-exposure of the image, effectively converting facial features into a white circle, whilst conversely backlit subjects appear silhouetted as the camera attempts to close down the exposure. In both cases, the target is poorly recorded.

4.2.7 Summary

A number of problems are identified that impact on the Taser Cam’s suitability for purpose:

1. In the ASF format, the frame rate is not indicative of the scene, with motion being incorrectly represented.
2. In low light situations, the motion blur is excessive and will not accurately record detail.
3. The audio quality in the ASF format is distorted (through aliasing), and contains frequency components not present at the scene.
4. The IR illumination does not evenly light the scene, and subsequently only creates correct exposure for part of the image.
5. Additional illumination of night scenes by torch light is found to be detrimental to correct exposure of the scene.

The suitability of the Taser Cam for evidence relies on the influence the above factors have on a particular recording, and the extent to which they affect its evidential value.

4.2.8 QPS Draft Electronic Recording of Evidence Manual 2011

The ERS section of the QPS has drafted policy specifically in relation to Personal Recording Devices (PRDs). This has arisen through the presentation of audio and video interviews of less than optimal quality that are requested to be enhanced for prosecution and/or court purposes.

The draft policy 2.2.1 – specifications guidelines is as follows:

POLICY

It is recognised that PRDs are used for a variety of purposes. The quality of a PRD is dependent upon the individual components in the recording chain, which includes the capture, storage and output stages.
The following specification guidelines should be considered prior to approval and operational use of a PRD:

- The PRD unit should be capable of recording in a format, or being converted to a format, compatible with QPS and other government department replay systems. Where format conversion is necessary, it must be capable of being performed on regional computer equipment without the need for ongoing technical support. Recommended recording formats include:
  a) Video (digital) – WMV, DVD, and QPS compatible MP4 and AVI formats
  b) Video (analogue) – VHS
  c) Audio (digital) – MP3, CDA or WMA formats
  d) Audio (analogue) – Micro / Compact cassette
- The image resolution for PRDs with video capability should be a minimum of 640 x 480 pixels.
- The unit should be capable of recording audio in stereo mode and have a minimum quality setting of 128kbps and sample rate of 22 KHz.
- To simplify downloads, the unit should be capable of connecting with other devices via a digital link (i.e.: USB / IEEE1394 (firewire/iLink)).
- Operation of the device through button control is preferable to an LCD menu. Operationally, LCD screen menu operation can be difficult to operate through clothing or in low light situations compared with record and stop buttons.
- For audio only PRDs, the unit should have a recording capacity equivalent to the maximum likely recording time for one shift at the highest possible quality (including stereo). For all other PRDs the recording capacity should reflect the operational context for which the device is to be used.
- Prior to approval for QPS use testing should be carried out to ensure the suitability of the unit for the intended purpose.

It is important to note that State-wide consultation is currently being sought on some of the above specifications however, based on this proposed policy and the Taser Cam specifications as tested by ERS, the Taser Cam fails to comply.

4.3 Summary

The Taser Cam module records audio and video in a comparatively low quality format. The video resolution and frame rates are low, it does not record in colour, and suffers from motion blur in low light conditions.

The Taser Cam’s built in Infra Red (IR) illumination causes a “hot spot”, over-exposing the centre of the image at close proximity, and resulting in poor overall exposure of the video image. Exposure compensation appears consistent with an averaged weighted metering rather than a centre weighted metering, resulting in poor backlight compensation, and over-exposure in torchlight (spot) illumination.

Although uncompressed, the audio format is of a low resolution (8 bit), and some major problems regarding aliasing and distortion were discovered, restricting its usefulness. Any encountered audio over 75dBA distorts, and the dynamic range is not managed by any in-built AGC features. Its frequency response excessively coloured (not flat), giving a relatively muffled response, and the
unit suffers from susceptibility to handling noise. Aliasing is experienced subtly in the AVI format, but becomes gross when exported to ASF format.

The manufacturer’s specifications are extremely limited concerning the audio and video capabilities of the recorder. Of these specifications, only the audio format component is erroneous, but largely through a lack of specificity.

When vision is exported from the Taser Cam software, it is re-encoded into an ASF format. It is unclear why this transcoding is performed, but as a result of this re-encoding, a number of major problems were identified. The transcoded ASF files contain significant audio aliasing distortion, the video frame rate is altered and becomes non-linear, and the extra CODEC artifacting softens the image, reducing details. The original AVI files are significantly better in quality, and would represent better evidence than the ASF files.

As an audio/video recording device, the Taser Cam suffers inherent technical issues, and as a result should not primarily be relied upon to accurately record conversation and/or video occurrences. If the primary purpose of the Taser Cam device is to accurately record audio/video events, technically superior equipment exists to perform these functions.
5 Operational Taser Cam Trial Focus Groups

At the conclusion of the first six-months of the QPS Taser Cam trial, focus groups were conducted in Caboolture (27 June 2010) and Logan (28 June 2010) Districts with Taser Cam trained officers. A further focus group was conducted in Ipswich District on 1 December 2010. The focus group schedules were developed by the Review and Evaluation Unit of Ethical Standards Command, and the focus groups were jointly facilitated by members of the Review and Evaluation Unit and TRIG.

In total, 16 officers participated in the three focus groups; five in Caboolture, four in Logan and seven in Ipswich. All 16 officers were male, and a range of ranks was represented (see Table 2).

Table 2 Rank of officers participating in Taser Cam focus groups (n=16)

<table>
<thead>
<tr>
<th>Rank</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constable</td>
<td>6</td>
</tr>
<tr>
<td>Senior Constable</td>
<td>3</td>
</tr>
<tr>
<td>Sergeant</td>
<td>5</td>
</tr>
<tr>
<td>Senior Sergeant</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
</tr>
</tbody>
</table>

The officer responsible for the single Taser Cam deployment during the trial period prior to 28 June 2010 participated in the Logan focus group, adding operational experience with the weapon to the discussion.

5.1 Results from the focus groups

5.1.1 Carriage of the Taser Cam and the Taser X26 during the trial period

The majority of officers who participated in the focus groups indicated that they carry a Taser Cam on each shift. However, in certain divisions where multiple officers are Taser Cam trained, the number of weapons available and the number of Taser Cam trained officers working at any one time occasionally results in Taser Cam trained officers carrying Taser X26 weapons. Of the Taser Cam trained officers who have carried a Taser X26 weapon at any stage since completing the Taser Cam training, none have deployed the Taser X26 during the trial period.

5.1.2 Storage of the Taser Cam

The officers present at the focus groups discussed the different storage capacities that exist in different divisions, which are impacting upon the manner in which Taser Cams are stored. As certain divisions have dedicated Taser-only safes or safes with individually lockable boxes, officers are able to store the Taser Cam with the camera attached. It was revealed that some officers are concerned about damaging the camera unit when trying to fit the Taser Cam with the camera attachment into the compartments of existing gun safes (i.e. compartments designed for Glocks with shorter handles and grips).

In relation to Tasers generally, in an attempt to minimise potential for damage to the weapons some officers have begun storing the Taser unit inside a Taser holster in an effort to protect the weapon. Whilst this issue does not concern Taser Cams uniquely, it illustrates that officers are mindful of avoiding damage to the weapons.
5.1.3 Charging the Taser Cam battery

The overwhelming majority of officers present at the focus groups indicated that as they had not discharged a Taser Cam weapon, they were unable to comment as to whether the Taser Cam battery is depleted at a faster rate than the eXtended Digital Power Magazine (XDPM) battery in a Taser X26. Some officers in the Ipswich focus group indicated that they had noticed that the procedure of conducting a spark test and recording the date, time and officer details drains the battery in a Taser Cam faster than would be anticipated with the Taser X26.

The single officer who had deployed a Taser Cam during the trial prior to the focus group indicated that from his recollection, discharge of the Taser Cam caused the battery to drain more rapidly than he would have expected to have seen with a Taser X26 following discharge. However, given that there had been only one Taser Cam discharge during the trial period prior to the focus groups, it is not possible to reliably conclude that the Taser Cam loses battery power faster than the Taser X26.

As the charge time required for the camera attachment battery is approximately 12-hours, some officers in the focus groups indicated that divisions in which one Taser Cam is shared among several officers would occasionally find themselves in a position where no divisional crew was armed with a Taser Cam.

5.1.4 Loading and unloading cartridges or attaching the camera to the Taser Cam

No issues were raised by any of the officers present at the focus groups in relation to loading or unloading cartridges from the Taser Cam weapon. Officers were asked to consider whether they had encountered any difficulties in attaching the camera to the Taser X26, with no problems identified (see Figures 2, 6 and 7).

5.1.5 Wearing the Taser Cam

Focus group participants were asked several questions in relation to their experiences wearing the Taser Cam, generally concerning differences between the Taser X26 and the Taser Cam due to the additional length of the camera attachment.

Additional bulk of the Taser Cam versus the Taser X26

The majority of officers who participated in the focus groups indicated that the Taser Cam weapon was more bulky than the Taser X26 due to the camera attachment, with some reporting that this repeatedly caused them to knock the camera with their elbows. A small number of officers reported that during physical struggles with offenders, they found that their elbows were ‘getting pinned’ between the Taser Cam camera and their ribs, causing considerable discomfort and potential for injury.

Additional length of the Taser Cam versus the Taser X26 – uniform issues

Officers were asked to consider whether the additional length of the Taser Cam was creating any difficulties in relation to particular items of clothing, such as reflectorised vests or ballistics vests. One officer from the Caboolture focus group reported that he has opted to wear the woollen jumper rather than the leather jacket as he found the jacket was catching on the additional cartridge, and the jumper was easier to tuck behind the Taser Cam to avoid this issue. Additionally, a few officers from Ipswich reported that they had caught the Taser Cam on their reflectorised traffic vest.
Officers in the Logan focus group suggested that Taser Cam trained officers are each wearing the weapon on a slightly different angle, which is in part determined by their experiences catching the weapon on items of clothing and other items. At the Ipswich focus group, some officers indicated that to avoid catching the Taser Cam on clothing and other items, they are wearing the weapon on an angle in the holster that is interfering with their OC Spray canister and extra Glock magazine.

Additional length of the Taser Cam versus the Taser X26 – vehicle seatbelt issues

All 16 officers who participated in the Caboolture, Logan and Ipswich focus groups indicated that the additional length of the Taser Cam has created issues when getting both into and out of the drivers’ and passengers’ seat positions. The extra length of the Taser Cam created by the addition of the camera is causing the following issues:

- the Taser Cam grip, camera and extra cartridge is catching on the seatbelt in both the driver and passenger positions;
- when the Taser Cam is worn on the same side as the seatbelt fastens, the extra length means that officers need to fasten the seatbelt either under the weapon or across the weapon. In both situations officers reported ‘slowing down consciously’ as they are aware of fastening the seatbelt securely. As raised by one officer in the Logan focus group, ‘Workplace Health and Safety issues [would arise] if the belt isn’t on properly and they are in a traffic crash’; and
- when releasing the seatbelt, some officers reported being conscious of taking their time so as not to damage the Taser Cam by hitting the camera attachment or the extra cartridge with the metal fastener of the seatbelt.

Officers from the Ipswich focus group indicated that the likelihood of the Taser Cam getting caught in the seatbelt is dependent on the vehicle, stating that the sport-seats in some vehicles ‘pushes everything on your belt’. Further, some Ipswich Taser Cam officers reported that although they had initially been aware of releasing the seatbelt more carefully when wearing a Taser Cam, they have adapted to releasing the belt in a particular way to avoid catching it on the Taser Cam and suggested that through muscle memory ‘eventually you’ll just do it’ in a way that is suitable to make allowances for the extra length of the weapon due to the camera attachment.

One officer from Logan District who had been unable to attend the focus group submitted the following comment regarding problems caused by the additional length of the Taser Cam:

I was wearing the Taser camera one night at the Beenleigh railway station and during a foot chase, as the Taser and camera is longer than normal, the whole Taser and holster caught on handle bars of a public train seat and (the Taser and holster) tore off my uniform.

I did not realise what it was at first as I kept chasing and arrested the fleeing felon, however as I walked back the Taser was found on a chair on the train.

Thought you might be interested as with the camera it is about two inches further off your body than the normal one (Taser X26).

In summary, the extra length of the Taser Cam creates a number of issues in relation to uniforms, seatbelts, health and safety and risk management that are not of concern with the Taser X26 due to its shorter grip. All officers from the Caboolture and Logan focus groups agreed that the Taser Cam is more cumbersome than the Taser X26 due to the extra length of the camera attachment, however some disagreement was revealed in the Ipswich focus group at which most officers
indicated that the Taser Cam is more cumbersome to wear because of the extra length whilst other officers stated that the Taser X26 is just as likely to get caught on items of clothing and seatbelts.

5.1.6 **Holstering the Taser Cam**

With the exception of the issue raised previously in relation to the Taser Cam and holster being pulled from an officer’s accoutrement belt, no issues were raised by any of the officers in any of the focus groups with respect to holsters. It was generally agreed that the holsters used by the Taser Cam trained officers were ‘sturdy and well-made’, and no concerns were voiced in relation to retention of the longer and bulkier Taser Cam in the holster.

Some discussion occurred in the Ipswich focus group regarding officers’ preferences between the U-Clip holster and the non-U-Clip holster, with officers generally indicating that they prefer the non-U-Clip holster as they don’t need to tape the clip down to be sure it will stay secure, in turn maintaining the holster on the accoutrement belt.

A brief discussion occurred in the Logan focus group in relation to where and how either Taser Cams or Taser X26s would be situated and holstered on any future General Accoutrement Vest (GAV), with officers requesting that broad consultation be undertaken with operational officers before any prototype GAV was created for trial. Similarly, officers in the Ipswich focus group reported a preference for a vest which has ballistic properties, such as that worn by New South Wales Police.

5.1.7 **Handling the Taser Cam**

A number of issues were raised by officers in the focus groups in relation to single versus double-handed draw. Officers in the Caboolture and Ipswich focus groups reported that as Taser requalification is conducted with a Taser X26 using a double-handed draw, this is contrary to the style taught for use with the Taser Cam (i.e. single-handed draw so as not to cover the camera lens). As not all Taser instructors are Taser Cam instructors, many officers trained to carry the Taser Cam are undertaking requalification using a non-preferred draw style. This poses an issue for officers’ requalification as ‘drawing is everything’.

Similarly, officers from the Ipswich focus group commented that as the Glock grip requires two hands, in a situation of extreme stress, the effects of muscle memory could result in reversion to the learned firearm grip, thereby obscuring the Taser Cam’s camera lens. However, officers in the Logan focus group commented that the use of a single-handed draw does not support a high-thumbed grip, which could possibly affect officers’ confidence in handling the Taser Cam.

Focus group participants were asked to consider whether the addition of the camera attachment affected the handling of the weapon, with all agreeing that it did not. Although Taser Cam officers are employing a single-handed draw to prevent their non-preferred hand from obscuring the camera, one officer commented that even if the camera lens was covered, the Taser Cam would still discharge, and would record audio but not video footage of a deployment.

5.1.8 **Modification of behaviour**

**Subjects’ behaviour and the Taser X26**

All officers present at the three focus groups vehemently agreed that the Taser X26 has affected subject/offender behaviour, with one officer from Logan suggesting that the Taser has a significant impact on offender behaviour in terms of de-escalation of aggression displayed towards police. In relation to aggressive subjects, the officer further stated that ‘unless they’re really motivated, they’ll...
back down’ once realising that an officer is armed with a Taser. This impression was supported by another Logan focus group participant who stated that aggressive subjects ‘back off a lot quicker when they see the Taser’ and that when they realise an officer is armed with a Taser ‘you can see the look on their face change’.

Several officers commented that not only has offender behaviour changed, but that the high visibility and conspicuousness of the bright yellow Taser is creating a level of public interest in the weapon. Officers reported that members of the general public were curious about the weapon, and that ‘kids as young as 12 know what it is’ and ask to see the Taser as they are ‘fascinated’ by it. Capitalising on the visibility of the Taser through the Queensland Police now have Tasers posters displayed in stations across the State is seen as an effective way to ‘take maximum advantage of PR’ and to further distinguish the Taser from the Glock in the general public’s mind.

Distinguishing the Taser from the Glock was a theme raised repeatedly in the Logan focus group, with officers reporting that offenders are more responsive to the Taser than the Glock as they ‘know you won’t shoot them, but know you’ll use the Taser’. It was suggested that ‘word of mouth gets around’ not only about officers’ willingness to deploy the Taser and to discharge the weapon, but also about the level of pain associated with being tasered.

The visual effect created by the Taser was also reported in the Caboolture focus group, with one officer estimating that prior to the availability of the Taser, he ‘had to go hands on at least once a week’ with aggressive and non-compliant offenders and since carrying the Taser has ‘gone hands on once in a year and a half’. Due to this de-escalating effect, in one officer’s opinion the Taser is ‘one of the best (Use of Force options) I’ve ever carried in my life’.

Subjects’ behaviour and the Taser Cam

None of the officers in any of the focus groups believed that subjects/offenders were able to distinguish a Taser X26 from a Taser Cam, and general consensus of opinion was that whether it be a Taser Cam or a Taser X26, the effect of the Taser is the same; in the words of one officer from the Caboolture focus group ‘everyone knows a red dot is not a good thing’ and the effect of the laser sight is as powerful regardless of the camera attachment.

In terms of whether the Taser Cam’s recording capabilities are influencing offender behaviour, officers considered that subjects/offenders are generally unaware that Queensland Police carry two different Taser weapons, one of which is able to record audio and video footage. More generally, however, Taser Cam officers in the Logan and Ipswich District focus groups suggested that ‘cameras don’t change their attitude’, with the majority reporting that they wear visible personal recording devices (i.e. pen-cameras, lapel-cameras) and have not witnessed any impact on offender behaviour as a result of the cameras.

Officers’ behaviour and the Taser Cam

Officers participating in both the Caboolture and Logan District focus groups indicated that the Taser Cam’s capacity to record audio and video footage was affecting their behaviour insofar as they were more cautious to conduct loading and unloading procedures ‘to the letter’ at the start and end of each shift. Further, one officer revealed that he tries to conduct loading and unloading procedures when he is alone in the equipment room so as to avoid recording audio of other officers, particularly to avoid capturing officers who may be swearing.

Several of the officers in the focus groups indicated that when carrying a Taser Cam, they remind other police with whom they are working that it is capable of recording not only video but also audio footage, so to be aware of their language when the safety has been disengaged. However,
participants in the Logan and Ipswich District focus groups suggested that most officers ‘make the assumption that you’re being recorded’, with an estimated 50 per cent of officers in Logan District and an estimated 25 per cent of officers in Ipswich District carrying body-worn personal recording devices (i.e. pen cameras).

In relation to whether the Taser Cam’s recording capabilities influence officers’ behaviour when dealing with the general public, none of the 16 officers who participated in the focus groups reported consciously altering their behaviour, language or demeanour when carrying a Taser Cam. However, it should be noted that officers may be unconsciously altering their language or demeanour, but that this is unable to be gauged from the low number of Taser Cam deployments to date.

Officers present at the Caboolture District focus group were supportive of the Taser Cam’s capacity to capture footage of an incident that could be used to ‘remove that drama you’re going to have later on’ if a complaint is lodged in relation to an incident in which a Taser was deployed. However, as noted by one officer in the Ipswich focus group, ‘what’s the point’ of the Taser Cam if none of the precursor actions of police or offenders are recorded as the device only begins to record once the safety is disengaged. Whilst it was acknowledged that the Taser Cam provides a method of capturing some of ‘the wider picture’ or ‘context’ of an incident, most officers in the focus groups felt that better methods were available which did not require the disengagement of a weapon’s safety trigger to initiate the recording process.

5.2 Summary

Key issues raised through focus groups conducted in late June 2010 with nine Taser Cam officers from Caboolture and Logan Districts, and a focus group conducted in early December 2010 with seven officers from Ipswich District include:

- every officer in the three focus groups reported that the additional length of the Taser Cam compared to the Taser X26 was causing or had caused them to become entangled in seatbelts whilst exiting vehicles from both the drivers’ and passengers’ seats;
- due to the extra length of the Taser Cam versus the Taser X26, some officers reported having to fasten seatbelts either underneath the Taser Cam or over the top of the weapon, neither of which options are considered adequately secure in the event of a traffic crash;
- as reported by one officer in Logan District, the additional length of the Taser Cam results in the weapon protruding a further two inches from an officers' body, which doubtless contributed to the incident in which a Taser Cam was ripped from the officer’s accoutrement belt after catching in a train seat handle;
- some officers reported sustaining injuries as their elbows have been pinned between the camera attachment of the Taser Cam and their ribs during struggles with offenders;
- although Taser Cam officers were initially trained to employ a single-handed draw with the Taser Cam to avoid obscuring the camera lens, they are required to requalify using a double-handed draw as not all Taser instructors are Taser Cam instructors;
- all 16 focus group participants agreed that the highly visible, yellow Taser is significantly impacting upon the behaviour of offenders, specifically in terms of de-escalating displays of aggression, confrontation and non-compliance with police instructions;
- none of the officers in any of the focus groups reported that the Taser Cam was producing any effect on the behaviour of offenders other than that already seen in response to the Taser X26. When asked, officers stated that in their experience, the general public is not aware that the QPS is trialling a Taser weapon with audio and video recording capabilities;
• a small number of officers reported that they were more conscientious when conducting loading and unloading procedures with a Taser Cam due to the fact that their actions were being recorded;

• most officers indicated that they informed other police with whom they were working that they were carrying a Taser Cam, and to therefore be more circumspect in terms of the language used when the Taser Cam's safety was disengaged;

• it was estimated that 50 per cent of officers within Logan District and 25 per cent of officers in Ipswich District are currently using body-worn recording devices such as pen-cameras, and Taser Cam officers within these Districts suggested that most police are either already recording their interactions with the public, or expect that they are being recorded by another officer's device; and

• all officers who participated in the Caboolture, Logan and Ipswich District focus groups questioned whether officer and offender actions prior to, during and post Taser-related incidents could be more effectively recorded using alternative methods which do not require the presentation and arming of a weapon to initiate the recording process.
6 Taser Cam Officers Survey

In April 2011 a survey was developed by the Review and Evaluation Unit, Ethical Standards Command for distribution to all officers trained to carry and use a Taser Cam in the four trial sites \((n=52)\) and officers issued with a Body Worn Video device in the two trial sites \((n=20)\). Invitations to complete the survey were sent via email to 72 officers; of these four were unable to be contacted regarding the survey due to inboxes being full or officers being on leave for a period that extended beyond the survey’s end date. A further three officers contacted the researcher via email to indicate that they had either not attended the Taser Cam training due to illness, or had not been issued with a Body Worn Video Device. This reduced the survey population size to 65. As detailed in Table 3, of the 65 officers who received at least one email regarding the survey, 31 completed the survey; a response rate of 48 per cent was therefore achieved.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Taser Cam</th>
<th>Body Worn Video</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constable</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Senior Constable</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Sergeant</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Senior Sergeant</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23</td>
<td>8</td>
</tr>
</tbody>
</table>

Of the 23 Taser Cam trained officers who completed the survey, approximately one-third \((n=7; 30\%)\) were from South Eastern Region with a further one-third \((n=7; 30\%)\) from Southern Region (Table 4).

<table>
<thead>
<tr>
<th>Region</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Eastern</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>Southern</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>Northern</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>North Coast</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>

6.1 Results from the Taser Cam officers survey

6.1.1 Carriage and use of the Taser Cam and the Taser X26 during the trial period

Three of the 23 Taser Cam trained officers who responded to the survey have deployed the Taser Cam during the trial period, only one of which involved discharge of the device. None of the 23 officers have deployed a Taser X26 without the camera attachment since being trained to carry the Taser Cam.
6.1.2 Cumbersomeness of the Taser Cam

Taser Cam trained officers were asked to consider whether the extra length of the Taser Cam, due to the camera attachment, has made the weapon more cumbersome to wear than the normal Taser X26. Eighteen of the 23 officers (78%) agreed with this statement, and of these between 78 and 100 per cent agreed with each of the following four questions:

- Does the extra length of the Taser Cam cause you to catch the weapon of items of uniform (i.e. leather jacket, woollen jumper, high-visibility traffic vest or ballistics vest)? (100% agreement);
- Does the extra length of the Taser Cam cause you to catch or hook the weapon on the seat belt when exiting a police vehicle? (100% agreement);
- Does the extra length of the Taser Cam cause you to knock either the camera attachment or the extra cartridge with the seat belt’s metal clasp when securing the seat belt? (83% agreement); and
- Does the extra length of the Taser Cam cause you to knock either the camera attachment or the extra cartridge with the seat belt’s metal clasp when releasing the seat belt? (78% agreement).

6.1.3 Handling of the Taser Cam

Ten of the 23 Taser Cam trained officers who responded to the survey agreed that the addition of the camera attachment has affected how they handle the Taser Cam. Of the 10 officers, between 70 and 100 per cent agreed with each of the following three questions:

- Has the addition of the camera attachment made you more conscious of your grip when holding a Taser Cam compared to a Taser X26? (100% agreement);
- Has the addition of the camera attachment made you more conscious of where your hands are placed on the Taser Cam in relation to the camera’s lens? (90% agreement); and
- Has the addition of the camera attachment made you more conscious of the angle at which you are holding the Taser Cam, so as to capture meaningful footage of an incident? (70% agreement).

Three of the 23 officers made additional comments in relation to the handling of the Taser Cam, addressing issues of training and holstersing. Specifically, officers suggested that:

- the Taser Cam needs a shoulder holster;
- training needs to be adapted to allow for one handed use; and
- training with this weapon will have a skills effect with the handling of the Glock, particularly as officers go through step 2 out to step 4.

6.1.4 Additional video and audio recording devices worn by Taser Cam trained officers

Taser Cam trained officers were asked to indicate whether they carried or wore any type of video or audio recording device other than the Taser Cam during the trial period. Almost four-fifths (n=18; 78%) of survey respondents indicated that they carried at least one additional video or audio recording device, most commonly a digital voice recorder (n=15) or a body worn video camera (n=8). Five of the Taser Cam officers who responded to the survey indicated that they did not carry any video or audio recording device other than the Taser Cam during the trial period.
Additionally, survey respondents were asked to indicate whether they had worked with other officers during the trial period that had carried or worn any type of video or audio recording device. The majority (n=20; 87%) of survey respondents indicated that they had worked with officers that were carrying or wearing some type of video or audio recording device, most commonly a digital voice recorder (n=18) or a body worn video camera (n=12). Three of the Taser Cam officers who responded to the survey indicated that they had not worked with other officers that carried or wore any video or audio recording device during the trial period.

Those officers who indicated that they carried or wore at least one type of video or audio recording device other than the Taser Cam during the trial period were asked to indicate what types of incidents or occurrences they generally recorded using the recording devices. Officers were able to select multiple response options for this question. Most commonly, officers indicated that they record general policing tasks, traffic related incidents, domestic violence calls for service and incidents involving persons known to police (Table 5). Of the 10 incident types listed, the least frequently recorded by officers who responded to the survey was incidents being recorded by other persons (e.g. use of mobile phone technology).

Table 5 Types of incidents or occurrences recorded by Taser Cam officers using audio or video recording devices (n=18)

<table>
<thead>
<tr>
<th>Incidents or occurrences recorded using video or audio recording devices</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>General policing tasks</td>
<td>15</td>
</tr>
<tr>
<td>Traffic related incidents (e.g. RBTs. TINs)</td>
<td>15</td>
</tr>
<tr>
<td>Domestic violence calls for service</td>
<td>13</td>
</tr>
<tr>
<td>Incidents involving persons known to police</td>
<td>12</td>
</tr>
<tr>
<td>Incidents involving use of force</td>
<td>10</td>
</tr>
<tr>
<td>Incidents involving juveniles</td>
<td>10</td>
</tr>
<tr>
<td>Incidents involving persons affected by alcohol or drugs</td>
<td>10</td>
</tr>
<tr>
<td>Incidents involving persons from identified groups (e.g. mental health patients, ethnic groups)</td>
<td>9</td>
</tr>
<tr>
<td>Shifts worked as a single-officer patrol</td>
<td>9</td>
</tr>
<tr>
<td>Incidents being recorded by other persons (e.g. use of mobile phone technology)</td>
<td>4</td>
</tr>
</tbody>
</table>

Officers were asked to elucidate why they chose to record particular incidents over others, and to identify those factors which informed their decision-making. Twelve of the 18 officers entered a response in relation to this question, with the three most common reasons identified as:

- to collect evidence for court proceedings (n=7; 41%);
- to record footage in case of false or vexatious complaints made against police (n=4; 23%); and
- to record the demeanour of offenders (n=2; 12%).

Three officers indicated that they record most or all incidents involving the general public, with one officer reporting:

> as a general rule I record all interactions between myself and the public… I record these interactions in order to discount unfounded complaints, and [to] assist my recall for future evidence in court. Magistrates have commented within my District that they...
will only accept conversation that is recorded electronically (i.e. not signed notebook Q & A).

The use of video and audio footage in a courtroom environment is a recurring issue that is of obvious relevance to the Taser Cam and Body Worn Video trial.

### 6.1.5 Decision to activate and de-activate a video or audio recording device

Officers who indicated that they had carried at least one type of video or audio recording device other than the Taser Cam during the trial period were asked to consider at what stage of an incident they generally decided to activate the device. Officers were provided with five response options including an ‘other’ free text option, and were able to select multiple responses. Most commonly, officers indicated that they decided to activate the video or audio recording device on arrival at the job address, before exiting the police vehicle ($n=16; 89\%$) or when they determine that they may need to use one or more Use of Force options ($n=10; 56\%$).

Similarly, officers were asked to consider at what stage of an incident they generally decided to de-activate the video or audio recording device. Again, five response options were provided, including an ‘other’ free text option and officers were able to select multiple responses. Most commonly, officers indicated that they de-activate video or audio recording devices once they have returned to the police vehicle and have logged off from the job ($n=10; 56\%$) or after the offender has been lodged at the watchhouse ($n=8; 44\%$).

### 6.1.6 Use of footage recorded by officers using video or audio recording devices during the Taser Cam trial

Two of the 18 Taser Cam trained officers who indicated that they had carried at least one type of video or audio recording device during the trial period reported that they have not yet used any footage recorded using these devices. Most of the remaining 16 officers indicated that they have used footage recorded using video and audio recording devices during the Taser Cam trial period to use in the court/prosecutions process ($n=15; 94\%$) whilst four-fifths ($n=13; 81\%$) reported using footage to assist in the timely resolution of vexatious complaints.

### 6.1.7 Future use of video or audio recording devices by Taser Cam trained officers

Officers who completed the survey were asked to indicate whether they would either continue to use video and audio recording devices other than the Taser Cam after the conclusion of the trial, or if they were not currently using video or audio recording devices, would begin to use video and audio recording devices after the trial. Results indicate that the overwhelming majority ($n=17; 94\%$) of the 18 officers who are currently using video and audio recording devices will continue to use them following conclusion of the Taser Cam trial.

Thirteen of the 17 officers who indicated that they would continue to use video and audio recording devices post-trial provided further responses to illustrate why they had made this decision. In general, officers indicated that they would continue to use video and audio recording devices:

- to collect evidence for court proceedings ($n=12$); and
- to record footage in case of false or vexatious complaints made against police ($n=8$).

Specific comments submitted by officers include:
I believe that unfounded complaints against police are increasing and these devices assist in resolving these matters. Furthermore, courts are becoming more reliant on this type of evidence

Police are not judged on their word anymore

To cover myself in the event that a false complaint is made against me and for evidentiary purposes when making arrests

Of the five Taser Cam trained officers who are not currently using video and audio recording devices, one (20%) intends to begin wearing or carrying some type of video or audio recording device and two (40%) are unsure. One of the two officers who indicated that they did not intend to begin wearing video or audio recording devices stated that they were due to retire in six-months, with the second officer offering no further explanation for their decision.

6.1.8 Comments in relation to the Taser Cam device

Survey respondents were offered an opportunity to make any further comments in relation to the Taser Cam weapon issued to them for trial. In total seven officers submitted further comments, all of which revealed officers’ preference for an alternative device, such as body worn video, which could be used to record video and audio footage of use of force incidents. Selected comments included:

The Taser Cam was pointless; it only activated when it was armed and missed all the events leading up to the deployment of the Taser

I believe the Taser Cam would have been more effective if the method of operation was adapted to allow for the device to be switched on as soon as it is drawn, thereby capturing all information

Taser Cam is expensive and cumbersome and isn’t operationally effective. The increased costs associated with the purchase, maintenance and servicing of Taser Cam is further impacted by the increased need to replace damaged cartridges that sustain damage when wearing a Taser Cam. In the first year of wearing a Taser, I only damaged the blast doors on one cartridge. When wearing the Taser Cam during the trial period, I damaged four blast doors. Furthermore, whilst I haven’t used my Taser Cam in an operational setting or against a person, I don’t believe that it is beneficial as it only captures the deployment of probes, and doesn’t capture the whole scenario or events taking place in the lead up to the Taser use of force implementation. In terms of evidence gathering, a body worn camera or even digital voice recorder would be more beneficial as it would record the whole event including the lead up to the use of force. I believe that the cost of a body worn video device would be of greater use and more benefit to the Service as it will capture a larger amount of information, doesn’t require specialist training and auditing, and the information gathered can be used without the deployment or engagement of a use of force option

The Taser Cam is an ineffective tool due to the fact it only records whilst the weapon is activated. The footage provides no context to the presentation and gives a version of events that can be open to interpretation by unskilled commentators. The fact that users are unable to VIEW the footage BEFORE preparing a SIGEV, Taser Usage Report, or the BOE makes the subsequent presentation of the footage potentially difficult due to the slight variations between recollections of the event and the actual event as it is recorded. These elements led to my decision to stop using the Taser
Cam approximately three months ago… Although I applaud the initiation of these trials, the Service is around 3 years behind what is currently regarded as general practice by the vast majority of urban First Response Police. Unlike when I was first sworn in, it is rare for an incident not to be recorded and, rather than being scorned upon, most officers now rely on them.

6.2 Summary

Twenty-three Taser Cam trained officers responded to a survey distributed in April 2011 regarding use of and issues identified in relation to the Taser Cam device. Due to the additional cumbersomeness of the Taser Cam’s camera attachment, at least 78 per cent of the 18 officers who agreed that the weapon is more cumbersome than the Taser X26 indicated that the weapon catches on their uniform, catches or hooks on the seatbelt when exiting a police vehicle, and knocks against the seatbelt’s metal clasp when either securing or releasing the seat belt. Further, at least 70 per cent of the 10 officers who agreed that the camera attachment has affected how they handle the TaserCam indicated that they are more conscious of their grip when using a Taser Cam compared to a Taser X26, more conscious of where they place their hands in relation to the camera lens, and the angle at which they deploy the weapon so to capture meaningful footage.

The majority (n=18; 78%) of survey respondents indicated that they carried at least one additional video or audio recording device during the Taser Cam trial period, most commonly a digital voice recorder (n=15) or a body worn video camera (n=8). In addition, the majority (n=20; 87%) of survey respondents indicated that they had worked with officers that were carrying or wearing some type of video or audio recording device, most commonly a digital voice recorder (n=18) or a body worn video camera (n=12).

Officers most commonly indicated that they use video and audio recording devices other than the Taser Cam to record general policing tasks, traffic related incidents, domestic violence calls for service and incidents involving persons known to police. In general, officers reported that they make a conscious decision to record these types of incidents to collect evidence for court proceedings, to record footage in case of false or vexatious complaints made against police, and to record the demeanour of offenders.

In terms of when officers decide to activate and de-activate video or audio recording devices, in general survey respondents indicated that they activate recording devices on arrival at the job address, before exiting the police vehicle or when they determine that they may need to use one or more Use of Force options. Officers indicated that they de-activate video or audio recording devices once they have returned to the police vehicle and have logged off from the job or after the offender has been lodged at the watchhouse.

The overwhelming majority of Taser Cam trained officers who are currently using video and audio recording devices will continue to use them following conclusion of the trial, with most Taser Cam trained officers surveyed indicating a clear preference for an alternative device to the Taser Cam, such as body worn video, which could be used to record video and audio footage of all use of force incidents, not just those which involve deployment of a Taser.
7 New South Wales Police Evaluation

In January 2011, New South Wales Police (NSWPol) afforded the QPS insight into the daily operation and management of their Taser Cam program. A number of observations and comparisons have been made in relation the New South Wales experience with the weapon, and the applicability of their experience to the Queensland context.

7.1 NSWPol management and storage of data

NSWPol have developed an integrated data management system to manage and store their Taser Cam data. There is an ability to download a Taser Cam at every police station across the State. A parallel network with stand alone computer terminal exist in each station in NSW. A master Terminal has been created to send, receive and store Taser Cam files. This framework and computer system has been specifically designed and installed to ensure security and integrity of the data downloaded.

The NSWPol Taser Cam Business Case remains 'Cabinet in Confidence' however the development and implementation of a specific infrastructure to manage and store Taser Cam data have been at a considerable cost. The development and implementation this framework was funded by the NSW Government.

7.2 Taser Cam Logistics

NSWPol currently have over 1,200 Taser Cams assigned to operational staff. This quantity was purchased to ensure a ratio of 1 Taser per vehicle (i.e. 1 Taser per 2 officers). NSWPol have Taser Cam purpose built safes to house and recharge the Taser Cams.

7.2.1 NSWPol Taser Safes

NSWPol commenced their Taser roll-out with Taser Cams, and have therefore had purpose built safes manufactured to accommodate the Taser Cam. Each Taser Cam requires a 240v charge. Each Taser Cam safe has a docking station available to charge 12 Taser Cams per shelf (Figure 15).

Figure 15 NSWPol Taser safe with 240v Charge
7.2.2 QPS Taser Storage Safe

The QPS currently have 140 Taser safes located throughout the State. These safes were specifically designed to accommodate between 20 to 32 Tasers in an individually locked receptacle (Figure 16).

![Figure 16 QPS Taser safe](image)

The current QPS supplier and manufacturer of the Taser safe, **Virginia Sheet Metals**, have provided preliminary costings to modify the QPS Taser safes to accommodate Taser Cams.

For metropolitan areas, initial estimates are $1,000 per safe, while regional and remote areas would also include travel costs. It is anticipated that the minimum spend to modify the 147 safes throughout Queensland would be in excess of $200,000.

The modification of the current QPS safes to accommodate Taser Cams reduces the storage capacity of each individual safe by approximately 8 Tasers per safe.

Therefore, the purchase of additional safes would be required to store Tasers throughout the State. This is estimated to cost an additional $50,000.

7.3 NSWPol Armoury experience

In the 2008/09 calendar year, NSWPol returned over 200 Taser Cams for repair/replacement to the Australian distributor.

In general, the majority of damage sustained to the Taser Cam is caused due to the position of weapon on the officers’ belt and the subsequent ‘catching’ on external items such as seatbelts, fences, hallways etc. As reported earlier in this report, similar issues have been reported by QPS officers who trialled the Taser Cam in Logan, Caboolture, Ipswich and Townsville Districts. However, NSWPol has found that the pressure expended when a Taser Cam catches on an external item results in the rear casing of the Taser X26 splitting, which has resulted in an additional 90 Taser X26s being returned for repair/replacement in New South Wales over the period.

[Insert picture of Broken Taser Cam – the figure numbers from here will need updating]
Based on the rate of NSWPol rates of damage to the Taser Cam and the Taser X26, it is not unreasonable for the QPS to expect similar rates of damage. On the aforementioned statistics this would equate to non-warranty maintenance and expense of $0.6M per year.
8 Body Worn Video

On 23 March 2010, the Taser Review Steering Committee endorsed an extension of the Taser Cam trial in the initial trial locations of Caboolture and Logan Districts, and an expansion of the trial to include Townsville and Ipswich Districts. The expansion of the trial included a concurrent trial of 10 Body Worn Video (BWV) units in Townsville and Toowoomba Districts.

All participants selected for the expanded Taser Cam and BWV trial were qualified Taser users.

The QPS views the trial of Taser Cam and BWV as an integral component of its commitment to addressing the recommendations of the joint QPS/CMC Taser Report.

Section 4 of Commissioner’s Circular 17/2007 (Introduction of digital electronic recording of interviews and evidence) provides specific instructions relating to hand held digital voice recording devices and BWV falls within these instructions.

The provisions of a project specific Standing Operating Procedure (SOP), whilst repeating some of the policy from the Commissioner’s Circular, condenses the Circular and further provides instructions regarding the issue of service BWV and confirms local procedures regarding the storage of recordings.

The BWV trial is a proof of concept trial only, examining the concept of BWV as an alternative to Taser Cam. The trial was never intended to identify a particular BWV device for use throughout the QPS.

8.1 BWV Trial parameters

Five BWV (brand – Muvi) were supplied to Townsville District for use during the concept trial, initially issued to officers in Townsville Division (Figure 17).

Figure 17 Veho MUVI BWV device

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Date last saved: 22/11/2012
Authors: Taser Review Implementation Group, Operations Support Command and Review and Evaluation Unit, Ethical Standards Command
Five BWV (brand – Vievu) were supplied to Toowoomba District for use during the concept trial, initially issued to officers in Toowoomba Station (Figure 18).

![Figure 18 Vievu BWV device](image)

8.2 BWV Software

Unlike the Taser Cam that requires an independent network and stand alone computers, the BWV utilised in this Trial was accompanied by software compatible with QPS systems. This created a simple process to download, send, receive and store data.

This however would be problematic for the QPS to supporting BWV as the security of information and data integrity must be a pre-requisite.

As outlined the trial of BWV was not choose a specific brand of BWV unit – moreover a ‘proof of concept’ trial to review the capability and organisational fit of BWV.

8.3 Taser Deployment captured on BWV

There was one Taser deployment captured on BWV. As a result of this incident a prominent anti-Taser spokesperson and ex state politician made a complaint about QPS “use of force”. As a result the complaint received initial interest from other media outlets.

Feedback from IIB that the BWV footage was of significant assistance in investigating, expediting and finalising the complaint.

Muscle memory

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Date last saved: 22/11/2012
Authors: Taser Review Implementation Group, Operations Support Command and Review and Evaluation Unit, Ethical Standards Command
Of note during the taser deployment capture on BWV was the video capture of the officers Taser which failed to deploy when he attempted to active it. At this time under stressful conditions, the officer reverted to ‘muscle memory’ training where he attempted to ‘tap and rack’ the device to resolve the issue.

This footage highlights the training implications and the direct correlation to the development of ‘muscle memory’. The Taser X26 with Taser Cam requires a change from a two handed grip (Glock and Taser X26) to a one handed grip (Taser Cam) to avert the Taser Cam lens being covered.

**Taser Cam v BWV Comparison of Technical specifications**

The table below compares some of the basic key technical specifications of the two BWV units with the Taser Cam.

<table>
<thead>
<tr>
<th></th>
<th>BWV Veho MUVI Pro</th>
<th>BWV - VieVU</th>
<th>Taser Cam</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Colour / B&amp;W</td>
<td>Colour</td>
<td>Colour</td>
<td>B&amp;W</td>
</tr>
<tr>
<td>2 Frame Rate</td>
<td>Min 25 fps</td>
<td>30 fps</td>
<td>10 fps</td>
</tr>
<tr>
<td>3 Pixel Resolution</td>
<td>640 x 480</td>
<td>640 x 480</td>
<td>320 x 240</td>
</tr>
<tr>
<td>4 Infra Red (illumination &amp; Recording)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>5 Approx Maximum Face Identification distance (AS 2806)</td>
<td>2.3m</td>
<td>1.8m</td>
<td>1.2m</td>
</tr>
<tr>
<td>6 Approx Maximum Face Recognition distance (AS 2806)</td>
<td>4.5m</td>
<td>3.5m</td>
<td>2.4m</td>
</tr>
<tr>
<td>7 Approx Maximum Number Plate recognition distance (AS 2806)</td>
<td>2.3m</td>
<td>1.8m</td>
<td>1.2m</td>
</tr>
</tbody>
</table>

**Summary**

Comparing the broad specifications of the Taser Cam with those of two BWV units currently under evaluation:

- The Taser Cam records in black and white only, whereas both BWV units record in Colour. (point 1 in table)
- The Taser only records 10 frames per second, whereas both BWV units record a minimum of 25 fps. (Standard TV is 25 fps). (Point 2 in table)
- The resolution of the Taser Cam is ¼ of that of both BWV units. (point 3 in table)
- As the Taser Cam is hand held, an increased amount of handling noise is heard on the audio track compared with the BWV.
- Taser Cam has to be no more than 1.2m from the person for successful Face Identification (as set out in AS 2806)

One feature present on the Taser Cam that is not on either of the BWV units is the ability to record Infra Red (IR), with built in IR illumination. This feature however is not ideally implemented, as testing has revealed the IR illumination creates a “hot spot” in the middle of the image.
9 Body Worn Video Trial Officers Survey

In April 2011 a survey was developed by the Review and Evaluation Unit, Ethical Standards Command for distribution to all officers trained to carry and use a Taser Cam in the four trial sites (n=52) and officers issued with a Body Worn Video (BWV) device in the two trial sites (n=20). As detailed in Table 3, 31 officers completed the survey of which eight (26%) had been issued with a BWV device for trial. Of the eight BWV officers who completed the survey, approximately two-thirds (n=5; 63%) were from Southern Region with the remaining one-third (n=3; 37%) from Northern Region (Table 6).

Table 6 Region of BWV officers who completed the survey (n=8)

<table>
<thead>
<tr>
<th>Region</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern</td>
<td>5</td>
<td>63</td>
</tr>
<tr>
<td>Northern</td>
<td>3</td>
<td>37</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

9.1 Results from the Body Worn Video officers survey

9.1.1 Carriage and use of the BWV during the trial period

Seven of the eight officers equipped with BWV who responded to the survey have used the device to record footage of incidents during the trial period. Survey respondents were asked to indicate what types of incidents or occurrences they generally recorded using the BWV device, and were able to select multiple response options for this question. Most commonly, officers indicated that they recorded incidents involving use of force, general policing tasks and domestic violence calls for service (Table 7).

Table 7 Types of incidents or occurrences recorded by BWV officers during the trial period (n=7)

<table>
<thead>
<tr>
<th>Incidents or occurrences recorded using BWV devices during trial period</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidents involving use of force</td>
<td>6</td>
</tr>
<tr>
<td>General policing tasks</td>
<td>5</td>
</tr>
<tr>
<td>Domestic violence calls for service</td>
<td>5</td>
</tr>
<tr>
<td>Incidents involving persons affected by alcohol or drugs</td>
<td>4</td>
</tr>
<tr>
<td>Shifts worked as a single–officer patrol</td>
<td>4</td>
</tr>
<tr>
<td>Incidents involving persons known to police</td>
<td>3</td>
</tr>
<tr>
<td>Traffic related incidents (e.g. RBTs, TINs)</td>
<td>3</td>
</tr>
<tr>
<td>Incidents involving juveniles</td>
<td>3</td>
</tr>
<tr>
<td>Incidents involving persons from identified groups (e.g. mental health patients, ethnic groups)</td>
<td>3</td>
</tr>
<tr>
<td>Incidents being recorded by other persons (e.g. use of mobile phone technology)</td>
<td>3</td>
</tr>
</tbody>
</table>

Officers were asked to elucidate why they chose to record particular incidents over others, and to identify those factors which informed their decision-making. Five of the seven officers entered a response in relation to this question, with the three most common reasons identified as:
• to collect evidence for court proceedings \( (n=5; 100\%) \);
• to record footage in case of false or vexatious complaints made against police \( (n=2; 40\%) \); and
• to record the demeanour of offenders \( (n=1; 20\%) \).

Interestingly, four of the five officers reported that they would record footage of incidents involving Use of Force in order 'to cover myself in case of use of force complaints' or to 'cover myself in case I have to justify use of force in the future'.

### 9.1.2 Decision to activate and de-activate the BWV device

Officers were asked to consider at what stage of an incident they generally decided to activate the BWV device. Respondents were provided with five response options including an ‘other’ free text option, and were able to select multiple responses. All officers indicated that they decided to activate the BWV device when they determine that they may need to use one or more Use of Force options \( (n=7; 100\%) \), which is likely due to the parameters of the Body Worn Video trial (i.e. to record incidents involving the use of force). Further, five of the seven officers \( (71\%) \) indicated that they decided to activate the BWV device on arrival at a job address, before exiting the police vehicle.

Similarly, officers were asked to consider at what stage of an incident they generally decided to de-activate the BWV device. Again, five response options were provided, including an ‘other’ free text option and officers were able to select multiple responses. Most commonly, officers indicated that they de-activate the BWV device after they have secured the offender/s in the rear of the police vehicle \( (n=4; 57\%) \).

### 9.1.3 Officer perceptions of the BWV devices

Survey respondents were asked to consider a number of statements regarding the particular BWV device issued to them for the trial period, and to indicate their level of agreement or disagreement with each of the statements on a scale from 1 (Strongly disagree) to 10 (Strongly agree) (Table 8).

<table>
<thead>
<tr>
<th>Table 8 Qualities of the Body Worn Video devices trialled ( (n=7) )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toowoomba</strong></td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>The BWV device I carried during the trial was user-friendly</td>
</tr>
<tr>
<td>The BWV device I carried during the trial was sufficiently sturdy for use in a policing environment</td>
</tr>
<tr>
<td>The BWV device I carried during the trial was sufficiently durable for use in a policing environment</td>
</tr>
<tr>
<td>The quality of video footage recorded by the device I was issued for the trial was appropriate for a law enforcement context</td>
</tr>
<tr>
<td>The quality of audio footage recorded by the device I was issued for the trial was appropriate for a law enforcement context</td>
</tr>
<tr>
<td>The battery life of the device I was issued for the trial was appropriate</td>
</tr>
<tr>
<td>The memory card capacity of the device I was issued for the trial was sufficient</td>
</tr>
</tbody>
</table>
In relation to each of the seven qualities investigated, the VIEWU device trialled in Toowoomba was rated more highly overall than the VehoMUUVI issued to officers in Townsville. Further comments made by officers in relation to the devices trialled included:

*Device was too difficult to activate in a sudden and high-stress situation and on a number of occasions the battery was dead after coming back to work after days off – Townsville*

*Audio poor. Camera too bulky to be worn. Does not secure to front of shirt well enough to stay during scuffles etc. – Toowoomba*

*There needs to be a better way to secure the BWV to the officers’ uniform so that it does not come off during a scuffle or a foot chase - Toowoomba*

### 9.1.4 Use of footage recorded by officers issued a BWV device

Two of the seven officers who indicated that they had recorded footage of incidents during the trial period using BWV reported that they have not yet used any of the footage. All five remaining officers indicated that they have used footage recorded using BWV during the trial period to assist in the timely resolution of vexatious complaints, whilst four officers have used footage recorded using BWV in the court/prosecutions process and four have used the BWV footage to encourage early guilty pleas, when appropriate.

### 9.1.5 Additional video and audio recording devices worn by officers issued with BWV

Officers were asked to indicate whether they carried or wore any type of video or audio recording device other than the BWV device issued to them for use during Taser Cam trial period. The majority \((n=6; 75\%)\) of survey respondents indicated that they carried a digital voice recorder in addition to the BWV device. The two remaining officers indicated that they did not carry any other video or audio recording device other than the BWV during the trial period.

Additionally, survey respondents were asked to indicate whether they had worked with other officers during the Taser Cam trial period that had carried or worn any type of video or audio recording device. The majority \((n=6; 75\%)\) of survey respondents indicated that they had worked with officers that were carrying or wearing some type of video or audio recording device, specifically a digital voice recorder \((n=5)\) or a body worn video camera \((n=4)\). Two of the officers issued with a BWV device who responded to the survey indicated that they were unsure whether they had worked with other officers during the Taser Cam trial period that carried or wore any video or audio recording device.

The six officers who indicated that they carried or wore at least one type of video or audio recording device other than the BWV device issued to them for the trial were asked to indicate what types of incidents or occurrences they generally recorded using the recording devices. Officers were able to select multiple response options for this question. Most commonly, officers indicated that they record incidents involving use of force, domestic violence calls for service and traffic related incidents (Table 9).
Table 9 Types of incidents or occurrences recorded by BWV officers using audio or video recording devices (n=6)

<table>
<thead>
<tr>
<th>Incidents or occurrences recorded using video or audio recording devices</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidents involving use of force</td>
<td>3</td>
</tr>
<tr>
<td>Domestic violence calls for service</td>
<td>3</td>
</tr>
<tr>
<td>Traffic related incidents (e.g. RBTs, TINs)</td>
<td>3</td>
</tr>
<tr>
<td>General policing tasks</td>
<td>2</td>
</tr>
<tr>
<td>Incidents involving persons known to police</td>
<td>2</td>
</tr>
<tr>
<td>Incidents involving persons affected by alcohol or drugs</td>
<td>2</td>
</tr>
<tr>
<td>Incidents involving juveniles</td>
<td>1</td>
</tr>
<tr>
<td>Incidents involving persons from identified groups (e.g. mental health patients, ethnic groups)</td>
<td>1</td>
</tr>
<tr>
<td>Shifts worked as a single–officer patrol</td>
<td>1</td>
</tr>
<tr>
<td>Incidents being recorded by other persons (e.g. use of mobile phone technology)</td>
<td>1</td>
</tr>
<tr>
<td>Other - Field interviews</td>
<td>1</td>
</tr>
</tbody>
</table>

As revealed through results presented in Tables 5 and 9, both Taser Cam trained officers and those issued with a BWV device for use during the trial indicated that they most frequently use personal video and audio recording devices to record:

- traffic related incidents (e.g. RBTs, TINs) (83% of Taser Cam officers and 50% of BWV officers);
- domestic violence calls for service (72% of Taser Cam officers and 50% of BWV officers);
- incidents involving use of force (55% of Taser Cam officers and 50% of BWV officers);
- general policing tasks (83% of Taser Cam officers and 33% of BWV officers);
- incidents involving persons known to police (67% of Taser Cam officers and 33% of BWV officers); and
- incidents involving persons affected by alcohol or drugs (55% of Taser Cam officers and 33% of BWV officers).

This range of incidents clearly extends beyond that which would be expected to be captured through deployment of the Taser Cam, and in some cases (i.e. traffic related incidents or general policing tasks) the anticipated likelihood that a Taser would be deployed is quite low. The use of personal video and audio recording devices to record a wide variety of interactions with the general public has been acknowledged by both Taser Cam and BWV trial officers, and likely provides a suitable method by which officers can record precursor evidence of behaviours and interactions in the case that a Use of Force option is employed.

9.1.6 Use of footage recorded by BWV officers using other video or audio recording devices during the Taser Cam trial

One of the six officers who indicated that they had carried at least one type of video or audio recording device during the Taser Cam trial period other than the Service-issued BWV device reported that they have not yet used any footage recorded using these devices. Of the remaining five officers, all indicated that they have used footage recorded using video and audio recording...
devices other than the BWV device during the Taser Cam trial period to use in the court/prosecutions process \((n=5; 100\%)\).

### 9.1.7 Future use of video or audio recording devices by officers issued with BWV

Officers who completed the survey were asked to indicate whether they would continue to use video and audio recording devices after the conclusion of the trial. The majority \((n=5; 83\%)\) of the six officers who indicated that they were carrying an additional type of video or audio recording device during the BWV trial period will continue to use some form of video or audio recording device post-trial. One officer indicated that due to experiences during the trial period with the device he was issued (i.e. VehoMUVI), in future he will carry a device that only records audio footage ‘due to longer battery life and memory’ capacity.

The officer who indicated that they did not intend to continue wearing video or audio recording devices post-trial stated that this decision was due to the fact that he had been transferred from the station trialling the BWV device. It is not clear whether this decision was reached because the officer does not perceive any value in the device, was unwilling to purchase a personal video or audio recording device, or whether it was due to some other reason/s. Of the two officers who indicated that they had not been wearing or using any additional video or audio recording device during the BWV trial period, one indicated an intention to begin wearing a video/audio recording device following conclusion of the trial.

Five of the six officers who indicated that they would wear/use video and audio recording devices post-trial provided further responses to illustrate why they had made this decision. In general, officers indicated that they would continue to use video and audio recording devices:

- to collect evidence for court proceedings \((n=3)\); and
- to record footage in case of false or vexatious complaints made against police \((n=3)\).

Specific comments submitted by officers include:

*Great tool for evidence and just all policing needs*

*Evidence production in court and the timely dismissal of vexatious complaints*

*General CYA and the courts’ reluctance to believe police*

*The BWV is a great tool and has many uses. It is easy to use and has no real disadvantages. As a Shift Supervisor with access to the recording database of my subordinates, I am able to monitor their work performance and identify any issues where further training may be required. Many offenders and suspects have changed their attitudes when advised that the camera was operating and become more compliant. I also believe it will decrease the amount of complaints against Police as both vexatious complainants and officers who may have not acted appropriately are aware that the incident is being recorded and can be viewed by supervisors at a later stage. Since the beginning of the trial I have only seen positives in relation to the cameras and their uses. The issues may later present in relation to information security. This can however be overcome through policies and procedures such as each device to be identifiable and issued to station units to be signed in and out with a Taser*
9.1.8 Comments in relation to the Body Worn Video devices

Survey respondents were offered an opportunity to make any further comments in relation to the BWV device issued to them for trial. Only one officer submitted further comments:

*I have no negative comments to make in relation to this trial. Any tool which assists Police to better perform their core functions can only be of benefit to individual officers and the QPS as an organisation*

9.2 Summary

Eight of the 20 officers (40%) issued with a Body Worn Video device for trial responded to a survey distributed in April 2011 regarding issues identified in relation to use of Body Worn Video in a policing context. Of these, seven officers have used the device to record footage of incidents during the trial period, most commonly incidents involving use of force, general policing tasks and domestic violence calls for service. In general, officers reported that they make a conscious decision to record these types of incidents in order to collect evidence for court proceedings, to record footage in case of false or vexatious complaints made against police, and to record the demeanour of offenders. Footage recorded using BWV devices during the trial period has been used to assist in the timely resolution of vexatious complaints, in the court/prosecutions process and to encourage early guilty pleas, when appropriate.

In relation to user-friendliness, sturdiness and durability, quality of audio and video footage, battery life and memory card capacity, the VIEWU device trialled in Toowoomba was rated more highly overall than the VehoMUVI issued to officers in Townsville. Whilst the BWV trial was intended as a proof of concept trial only, the results of this survey should be borne in mind if the Service intends to select a device for general issue to QPS officers.

The majority ($n=6; 75\%$) of BWV survey respondents indicated that they carried a digital voice recorder during the trial period in addition to the BWV device issued to them. Further, the majority ($n=6; 75\%$) of survey respondents indicated that they had worked with officers that were carrying or wearing some type of video or audio recording device, most commonly a digital voice recorder ($n=5$) or a body worn video camera ($n=4$).

Officers most commonly indicated that they use their personal video and audio recording devices to record incidents involving use of force, domestic violence calls for service and traffic related incidents.

In terms of when the BWV officers decided to activate and de-activate the device during the trial period, officers generally indicated that they activated the device when they determined that they may need to use one or more Use of Force options, or on arrival at a job address, before exiting the police vehicle. Most commonly, BWV trial officers indicated that they de-activated the device after they had secured the offender/s in the rear of the police vehicle.

Three-quarters of BWV officers who completed the survey indicated that they intend to use personal video and audio recording devices following conclusion of the trial, with most reporting that the benefits of video and audio recording devices can be derived from a range of policing incidents which involve the collection of evidence for production in court, and for use in the case of vexatious complaints against police to expedite the complaints management and investigation process.
10 Recording and Judging of incidents (i.e. Taser Cam, CCTV, BWV).

The impact of video recording of incidents and the subsequent interpretation of footage is an emerging issue not only for the QPS but for all Australian policing jurisdictions, and as such it requires some discussion.

10.1 Recording incidents

There were four Taser deployments captured on Taser Cam during the trial period, in addition to one Taser deployment and one OC Spray (Use of Force) captured on BWV.

When reviewing footage of Use of Force by the QPS there are a number of preferred areas/incidents that are captured. Whilst acknowledging that not all incidents are alike, the ability to record as many as possible are beneficial both to the offender, police, courts and the community. The optimal recording would capture the incident in its totality. The barriers to this may include timing (i.e. police arrive and engage Use of Force immediately, length of incident).

The XXX are outlined below.

- Tactical communication between police and offender
- Person
- Object
- Place

- Length of footage

10.2 Judging incidents

In the Queensland context, the courts have taken a significant role in the shaping of policy on this issue. The Queensland Supreme Court sitting in its appellant role heard that on the 21 July 2007, police officers in Brisbane City were called to a disturbance at a nightclub at about 2.55am. Christopher Ahovelo, and his brother, Teniso Ahovelo, were identified to police by witnesses as being involved in a disturbance. The police officers detained them "for a breach of the peace" under s.50 of the Police Powers and Responsibilities Act 2000.

After some 'aggressive behaviour' two officers sprayed Mr Ahovelo twice with capsicum spray which caused him to go down on one knee on the ground. As he was getting up, Officer A hit him three times in the leg with his baton. These strikes were in accordance with the training for the use of the baton (reference).

The matter was investigated by the Crime and Misconduct Commission and the officer was charged with assault. He was convicted in the local Magistrates Court and those three strikes were particularised as constituting the assault. The prosecution alleged that they were "excessive in the circumstances". The officer appealed the conviction to the District Court and the appeal was
allowed largely on the basis that the prosecution hadn't proved that officer didn't have access to the provisions of s.271 of the *Criminal Code 1899* which reads:

**s.271 Self-defence against unprovoked assault**

(1) When a person is unlawfully assaulted, and has not provoked the assault, it is lawful for the person to use such force to the assailant as is reasonably necessary to make effectual defence against the assault, if the force used is not intended, and is not such as is likely, to cause death or grievous bodily harm.

The officer argued that he was defending himself from a significantly larger person who was getting back up after the deployment of OC spray, which had not been effective. It should be noted that the defence only applies if the force used *is not likely to cause death or grievous bodily harm*. The District Court judge hearing the appeal found that the section was applicable, thereby agreeing that the three strikes were not likely or intended to rise to the level of grievous bodily harm or death.

The Crime and Misconduct Commission appealed the decision to the Supreme Court on a number of grounds, including that the three baton strikes on Mr Ahovelo could amount to force intended or likely to cause death or grievous bodily harm (*Whitelaw v O'Sullivan* [2010] QCA 366, p. 31).

The matter was decided on 21 December 2010 and the Supreme Court set aside the decision of the District Court for a range of reasons including that it was open to find that those three baton strikes could amount to grievous bodily harm.

This case highlights a number of issues. Firstly, that the judiciary are divided on what exactly would, or could, amount to reasonable force and whether baton strikes are indeed potentially lethal. It is also important to note that the Crime and Misconduct Commission take the view that baton strikes amount to force likely to cause death or grievous bodily harm.

Secondly, in that case the incident was caught on a number of closed circuit television (CCTV) cameras. The Magistrate carefully watched the incident and came to the conclusion that the officer had untruthfully represented the facts while the District Court judge watching the same footage in the appeal case came to the opposing conclusion (*Whitelaw v O'Sullivan* [2010] QCA 366, p. 6). The Supreme Court Justices on the last appeal took the view that the police officer in the matter “did not have the advantage of calmly and clinically observing the movements of the complainant and his companions as did a viewer of the video footage” (*Whitelaw v O'Sullivan* [2010] QCA 366, p. 6). This demonstrates the difficulty of objectively judging incidents where subjectivity becomes a crucial element of the case, and highlights the potential value of audio/video recordings of incidents involving use of force by police.
## 11 Summary of Issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Benefits</th>
<th>Barriers</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to footage</td>
<td>Senior Executive, ESC, M&amp;PAB accessible within 1hr of deployment within QLD</td>
<td>Requires extensive IT framework (Software, Cables, training for all stations and establishments)</td>
<td>NSWPol new IT system (View) including Taser Cam upload and storage function remains 'Cabinet in Confidence’</td>
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<tr>
<td></td>
<td>Increased accuracy of QPS response</td>
<td>TASER International software free and accessible via internet – potential security issue</td>
<td>NSWPol employ IT staff (On-Call 24/7) to manage Taser Cam footage</td>
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<tr>
<td></td>
<td>Accountability</td>
<td>Taser Software not compatible with QPS systems</td>
<td>Significant funding required</td>
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<tr>
<td></td>
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<td>Software requires modification to restrict access</td>
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<tr>
<td>IT system</td>
<td>Ability to downloaded Taser Cam at every station / establishment</td>
<td>Taser Software not compatible with QPS systems</td>
<td>QPS IT system not currently able to effectively manage and store data</td>
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<tr>
<td></td>
<td>Less down-time for operational police</td>
<td>Software requires modification to restrict access</td>
<td>Significant funding required</td>
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<tr>
<td>Footage</td>
<td>Audio and Video record of QPS Use of Force</td>
<td>Limited to one QPS use of force (i.e. Taser)</td>
<td>QPS-ERS review of Taser Cam critical of audio/video capability</td>
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<tr>
<td></td>
<td>Ensure Taser used in accordance with policy and guidelines</td>
<td>Vast disparity in footage captured:</td>
<td>• Poor quality</td>
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<td></td>
<td>Accountability and integrity of data</td>
<td>• Recording of some tactical communication then deployment</td>
<td>• Black and white footage, Myopic Infra Red/low light footage</td>
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<tr>
<td></td>
<td>Public confidence</td>
<td>• Deployment only (1.5 sec delay)</td>
<td>Substantial number of QPS officers wearing BWV – ability to record all Use of Force</td>
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<td></td>
<td>Used as training aid</td>
<td>• No footage (drive stun)</td>
<td>applications</td>
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<td>• No footage(lens covered by officer)</td>
<td>NSWPol: Officers using Taser Cam as recording/interviewing tool</td>
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<td>• Lengthy irrelevant footage (i.e. footage of pavement as Taser held by officers side)</td>
<td>WAPol: cited 1.5 sec delay in recording critical footage as reason for not supporting Taser Cam</td>
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<td></td>
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<td>Perceived injustice – no record of officer negotiation – only deployment and NMI</td>
<td>UK Home Office: cited 1.5 second delay in recording critical footage as reason for not supporting Taser Cam</td>
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<tr>
<td>Training</td>
<td>Taser Cam requires one handed grip (To ensure camera lens not covered)</td>
<td>Two handed grip is current QPS policy for Glock and Taser training</td>
<td>QPS policy silent on personal BWV</td>
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<td>Required to re-train 8,000 police</td>
<td>OST advice - Retraining</td>
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<td>New muscle memory training for one handed grip/contrasting to two handed grip</td>
<td>1 day transition for General users</td>
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<td>Rewrite training manuals, good</td>
<td>1 day for trainers</td>
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<td>½ day Taser Cam data download</td>
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<td>Extra cartridges</td>
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### Secure storage of Taser Cam Unit

<table>
<thead>
<tr>
<th>Practice guide</th>
<th>Required to create muscle memory for 1 handed grip (highlighted by BWV captured deployment)</th>
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<tbody>
<tr>
<td>NSWPol: policy 2 handed grip – resultant in Taser Cam coverage</td>
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<tr>
<td>WAPol: cited one handed grip required to record footage as reason for not supporting Taser Cam.</td>
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</table>

#### Significant funding required

<table>
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<tr>
<th>Secure storage of Taser Cam Unit</th>
<th>NSWPol: policy 2 handed grip – resultant in Taser Cam coverage</th>
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</thead>
<tbody>
<tr>
<td>QPS have approx 140 purpose built Taser Safes</td>
<td>NSWPol: policy 2 handed grip – resultant in Taser Cam coverage</td>
</tr>
<tr>
<td>Taser Cam requires 240volt charge</td>
<td>See attached photos</td>
</tr>
<tr>
<td>Explore the ability to Retro-fit 140 safes for 1,400 Tasers</td>
<td>Significant funding required</td>
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<tr>
<td>Additional Risk Management requirements and Electrical testing (WH&amp;S)</td>
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### Damage

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<tr>
<th>Taser Cam</th>
<th>Regular damage to Taser Cam due to shape, position and length of camera</th>
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<tbody>
<tr>
<td>Entangled in seatbelts, caught on fences/walls</td>
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<td>QPS trial – caught on train seat and ripped from utility belt</td>
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#### Significant funding required

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<tr>
<th>Damage</th>
<th>NSWPol: returned numerous Taser Cams 2010.</th>
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<tbody>
<tr>
<td>Damage to Taser Cam, has resulted to damage Taser X26 case</td>
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<tr>
<td>NSWPol returned numerous Tasers 2010. 3mth turn around to repair Tasers.</td>
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<tr>
<td>WAPol: cited extra length of Taser Cam as snag point as reason for not supporting Taser Cam</td>
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<td>Damage listed as non-warranty repairs increasing cost of implementation</td>
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### Community Confidence

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<tr>
<th>Accountability</th>
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<tr>
<td>Transparency</td>
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<td>Secure record of incident</td>
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#### Management of public perception difficult based on type of footage obtained from deployment

| Pre-deployment recorded showing violent behaviour –good public perception |
| Deployment only – vision of subject in pain (NMI) – poor public perception |
| No footage - Lens covered – |

#### Significant funding required

<table>
<thead>
<tr>
<th>Community Confidence</th>
<th>NSWPol have released one RTI application. They have cited unreasonable impost on resources to release all footage.</th>
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<tr>
<td>QPS – disclosure (590 CC)</td>
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<td>Copies must be provided to the defence.</td>
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<td>This may pose a media risk that only the less than optimal deployments shown to public –</td>
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<td>Allegations of intentional cover-up or inadequacy of officers – poor public perception</td>
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<tr>
<td><strong>Technology</strong></td>
<td>Ability to record one QPS Use of Force</td>
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<td><strong>Storage of</strong></td>
<td>All Taser Cam footage retained by QPS.</td>
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<tr>
<td><strong>digital Data</strong></td>
<td>QPS currently undertaking Digital Data storage project (ESC)</td>
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<td><strong>Finance</strong></td>
<td>QPS Taser budget funded 2010/11 and recurrent funding approved 2011/12 onwards</td>
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<td><strong>Security and</strong></td>
<td>QPS management of images</td>
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<td><strong>control of</strong></td>
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<td><strong>footage</strong></td>
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12 Recommendations

The recommendation of the Taser Review Implementation Group is as follows:

1. The QPS do not purchase Taser Cam.
2. The QPS consider a BWV trial.
13 Supporting Documents

Secured Documents

The following documents are held at the Taser Review Implementation Group:

- Project and Evaluation Plan;
- Summary of Tests;
- Testing Sheets;
- Subject interview/evaluation sheets; and
- Focus Group schedules and notes.

Attachments

Appendix A – Summary of Observer and Testing Officer comments and observations