

# Assessment of compliance with the Code of Practice for Official Statistics

## Statistics on the Scottish Safety Camera Programme

*(produced by the Scottish Government)*

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### **About the UK Statistics Authority**

The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:

1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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# **Assessment of compliance with the Code of Practice for Official Statistics**

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## ASSESSMENT AND DESIGNATION

The *Statistics and Registration Service Act 2007* gives the UK Statistics Authority a statutory power to assess sets of statistics against the *Code of Practice for Official Statistics*. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the *Code* requires statistics to be produced to a level of accuracy that meets users' needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, reports may point to such questions if the Authority believes that further research would be desirable.

Assessment reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment reports also describe aspects of the ways in which the producer addresses the 'sound methods and assured quality' principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to "seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews".

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code's* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

- i. factual evidence and assurances by senior statisticians in the producer body;
- ii. the views of users who we contact, or who contact us, and;
- iii. our own review activity.

Should further information come to light subsequently which changes the Authority's analysis, it may withdraw the Assessment report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice*.

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# 1 Summary of findings

## 1.1 Introduction

1.1.1 This is one of a series of reports<sup>1</sup> prepared under the provisions of the *Statistics and Registration Service Act 2007*<sup>2</sup>. The Act allows an appropriate authority<sup>3</sup> to request an assessment of official statistics against the *Code of Practice for Official Statistics*<sup>4</sup> in order for them to gain National Statistics status. This report is in response to such a request. The report covers the set of statistics reported in *Key Scottish Safety Camera Programme Statistics*<sup>5</sup> (KSSCPS), produced by the Scottish Government. The Scottish Safety Camera Programme<sup>6</sup> (SSCP) has compiled KSSCPS for the Scottish Government since 2009 (see paragraph 2.1).

1.1.2 This report was prepared by the Authority's Assessment team, and approved by the Assessment Committee on behalf of the Board of the Statistics Authority, based on the advice of the Head of Assessment.

## 1.2 Decision concerning designation as National Statistics

1.2.1 The Statistics Authority judges that KSSCPS does not sufficiently comply with the *Code of Practice for Official Statistics* to be designated as National Statistics and that substantial further work is required for them to be fully compliant with the *Code*. The Authority notes that the Scottish Government commissioned an independent methodological review<sup>7</sup> (see paragraph 1.3.2), which addressed some of the requirements made in this Assessment report. Once the Scottish Government has implemented the enhancements listed in section 1.5 and reported them to the Authority by November 2013 the Authority will review the designation of the statistics published in KSSCPS.

1.2.2 The Scottish Government has informed the Assessment team that it has started to implement the Requirements listed in section 1.5. The Statistics Authority welcomes this.

## 1.3 Summary of strengths and weaknesses

1.3.1 SSCP's user consultation is limited to the data analysts within the Safety Camera Partnerships<sup>8</sup> and the Safety Camera Partnership managers. SSCP notifies ScotStat<sup>9</sup> members of the publication of the statistics but does not systematically engage with this group of users. The SSCP statistics team has

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<sup>1</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

<sup>2</sup> [http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga\\_20070018\\_en.pdf](http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf)

<sup>3</sup> Subsection 12(7) of the Act defines 'appropriate authority' as Ministers of the Crown, Scottish Ministers, Welsh Ministers, Northern Ireland departments or the National Statistician

<sup>4</sup> <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

<sup>5</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/SafeCam>

<sup>6</sup> <http://www.scottishsafetycameras.com/Home.aspx>

<sup>7</sup> The report was produced by Professor Mike Maher <http://www.transportscotland.gov.uk/strategy-and-research/publications-and-consultations/statistical-evidence-scottish-road-safety>

<sup>8</sup> For example: <http://www.centralsafetycameras.co.uk/> and <http://www.lbsafetycameras.co.uk/>

<sup>9</sup> <http://www.scotland.gov.uk/Topics/Statistics/scotstat>

corresponded with some other users but has not formally consulted users outside of the Camera Partnerships, local authorities and the Scottish Government.

- 1.3.2 The methods used to produce the statistics are unsophisticated and do not take into account issues such as regression to the mean<sup>10</sup> (RTM) or sources of measurement error. The report does not discuss non-sampling errors or any limitations to how the statistics can be used. The Scottish Government commissioned an independent review<sup>11</sup> of the methods used to produce these statistics; the review's findings agreed with the Authority's assessment that improvements are needed.
- 1.3.3 KSSCPS does not provide any contextual information such as the number of road accidents or casualties across Scotland, time series or the development of other safety measures which could impact upon the numbers and types of road traffic incidents (RTIs).
- 1.3.4 The weaknesses detailed in the preceding paragraphs, together with the inclusion of the SSCP logo on the report, give the impression that the production and presentation of the statistics is not impartial.

## 1.4 Detailed recommendations

- 1.4.1 The Assessment team identified some areas where it felt that the Scottish Government could strengthen its compliance with the *Code*. Those which the Assessment team considers essential to enable designation as National Statistics are listed in section 1.5. Other suggestions, which would improve the statistics and the service provided to users but which are not formally required for their designation, are listed at annex 1.

## 1.5 Requirements for designation as National Statistics

<b>Requirement 1</b>	Take steps to develop a greater understanding of the use made of the statistics, publish the relevant information and assumptions and use them to better support the use of the statistics (para 3.3).
<b>Requirement 2</b>	Replace the SSCP objectives with impartially stated targets and remove the SSCP's logo from the report (para 3.4).
<b>Requirement 3</b>	Provide a clear statement of the extent of revisions in the report and include a link to the revisions policy (para 3.5).

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<sup>10</sup> <http://ije.oxfordjournals.org/content/34/1/215.full>

<sup>11</sup> See footnote 7

<b>Requirement 4</b>	Provide clear guidance to the policy team within Transport Scotland emphasising the independence of the statistical production process (para 3.7).
<b>Requirement 5</b>	Work with SSCP and the Safety Camera Partnerships to ensure that statements issued alongside the statistics quote appropriate evidence to support claims relating to the role of safety cameras in reducing road traffic incidents (para 3.8).
<b>Requirement 6</b>	Publish better methodological information, including explanations of why particular methods are used, and metadata (para 3.9).
<b>Requirement 7</b>	Publish plans to develop methods to take account of RTM and any potential sources of measurement error and ensure users are informed well in advance of the publication of the statistics based on the new methods (para 3.10).
<b>Requirement 8</b>	Publish information about the quality of the statistics including the main sources of bias and non-sampling errors (para 3.11).
<b>Requirement 9</b>	Provide definitions of types of accidents and casualty categories within the report and include links to other similar statistics published across the UK (para 3.12).
<b>Requirement 10</b>	Publish information about the strengths and limitations of the Safety Camera statistics in relation to particular uses (para 3.17).
<b>Requirement 11</b>	Improve the commentary in the report so that it aids user interpretation of the statistics (para 3.18).



## 2 Subject of the assessment

- 2.1 The Scottish Safety Camera Programme (SSCP) was formed in 2002 with partners including the Scottish Government, police forces and local authorities to 'change driver behaviour ensuring that motorists are aware of the dangers of excessive and inappropriate speeds'<sup>12</sup>. This followed a UK pilot in 2000 which allowed highway authorities and police forces to recover their costs from revenue from fines<sup>13</sup>. The eight Safety Camera Partnerships in the Programme<sup>14</sup> deploy speed and red light cameras across Scotland. SSCP's programme office was originally based in the Scottish Government Justice Department, but was moved to Transport Scotland in 2012. Governance arrangements for the SSCP statistics team are currently under review: at present the statistician responsible for producing these statistics is based in a Transport Scotland policy team but also reports to the Scottish Government's Chief Statistician.
- 2.2 *KSSCPS* is an annual publication which presents information about accident and casualty numbers at safety camera sites, speeds recorded, the number of people caught exceeding the speed limit or driving through red traffic lights at camera sites, and public perceptions of safety cameras.
- 2.3 The mode of funding for the SSCP was changed in 2007. The Programme was originally self-funded through the receipt of penalty notice fees (hypothecation). However, this level of funding was insufficient, so Scottish Government grant funding was introduced in 2007 to replace hypothecation. The statistics team told the Assessment team that this influenced a change in the nature of Partnership activity: cameras were strategically relocated away from known speeding areas that yielded higher incomes, and towards traffic black spots with high accident rates.
- 2.4 These statistics are produced using two main sources of data. Police officers record accident and casualty data on the STATS19 form and provide these to the individual area Partnerships. The Partnerships complete validation checks on the data, then submit them to the SSCP via their web-based database. Speed survey data are collected directly by the Partnerships and are submitted to the SSCP database to be combined with the accident data. In addition, public perceptions data were collected as part of the Scottish Crime and Justice Survey<sup>15</sup>, which has now been discontinued; *KSSCPS* will no longer include public perceptions statistics.
- 2.5 Following some criticism of these statistics, and during the course of this Assessment, the Scottish Government commissioned a review of the publication and the methods used to produce the statistics. The review was conducted by Professor Mike Maher of the Institute of Transport Studies, University of Leeds, and the report<sup>16</sup> of the review was published during June

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<sup>12</sup> <http://www.scottishsafetycameras.com/The-Programme.aspx>

<sup>13</sup> The UK pilot followed the recommendations of: Hooke A, Knox J and Portas D (1996) – Cost Benefit Analysis of Traffic Light & Speed Cameras, Police Research Series Paper 20, Home Office at <http://www.nationalarchives.gov.uk/ERORecords/HO/421/2/P2/PRGPUBS/PRG20BF.PDF>

<sup>14</sup> The Partnerships are: Strathclyde, Central Scotland, Dumfries & Galloway, Tayside, North East, Fife, Lothian & Borders and Northern

<sup>15</sup> <http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/crime-and-justice-survey>

<sup>16</sup> See footnote 7

2013. The findings of this review are discussed further in section 3 of this report.

- 2.6 The statistics reported in *KSSCPS* are used to provide information to road safety policy teams in Transport Scotland, informing the development of policy and education programmes. The statistics are also used to inform public debate about road safety.
- 2.7 The statistics team told us that it costs around £5,000 to produce *KSSCPS* each year.

### 3 Assessment findings

#### Principle 1: Meeting user needs

**The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.**

- 3.1 The statistics team's primary user engagement is with the Safety Camera Partnerships through data analyst meetings and Safety Camera Partnership manager meetings. The data analyst meetings are held quarterly and the Safety Camera Partnership managers meet every six weeks. The statistics team consulted Safety Camera Partnership data analysts and communications officers on the initial publication format and have the opportunity to discuss and suggest changes annually. ScotStat members receive a notification of the publication of the statistics each year but there is no evidence of further engagement.
- 3.2 The Scottish Government has received correspondence from some anti-speed camera campaigners detailing their concerns with the statistics. The Scottish Government has replied to this correspondence but it does not seem to have taken the opportunity to engage actively with this community to consider and address their concerns strategically. Neither does there appear to have been any formal engagement or consultation with the wider user (or potential) community. As a result the team has little understanding of how users outside the Scottish Government and the Safety Camera Partnerships use the statistics, and how the statistics could be improved to meet their needs.
- 3.3 As part of the designation as National Statistics the Scottish Government should take steps to develop a greater understanding of the use made of the statistics, publish the relevant information and assumptions and use them to better support the use of the statistics<sup>17</sup> (Requirement 1). As part of documenting the use of these statistics, we suggest that the Scottish Government refer to the types of use put forward in the Monitoring Brief: *The Use Made of Official Statistics*<sup>18</sup>. We also suggest that the Scottish Government publish the minutes and relevant papers of the Safety Camera Partnerships data analyst meetings.

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<sup>17</sup> In relation to Principle 1, Practices 1, 2 and 5 of the *Code of Practice*

<sup>18</sup> <http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/monitoring-brief-6-2010---the-use-made-of-official-statistics.pdf>

## Principle 2: Impartiality and objectivity

**Official statistics, and information about statistical processes, should be managed impartially and objectively.**

- 3.4 The first paragraphs of *KSSCPS* detail the objectives of the SSCP and the SSCP's logo is shown alongside that of the Scottish Government on the cover of *KSSCPS*. The SSCP is a programme to implement a policy, rather than an organisation and it is not clear whether those responsible for implementing the policy itself or the Scottish Government is responsible for the statistics. A key use of the statistics is to measure the SSCP's progress against its stated objectives; however, the way that these objectives are described in the report, together with the use of the logo, risks giving the impression that the statistics are not presented impartially. Furthermore, while the objectives listed are accurately stated they are not listed in their entirety and do not mention the actual 2020 targets<sup>19</sup>. As part of the designation as National Statistics, the Scottish Government should replace the SSCP objectives with impartially stated targets and remove the SSCP's logo from the report<sup>20</sup> (Requirement 2).
- 3.5 The statistics team told us that any substantial changes to the methods used to produce the statistics would be pre-announced to users. The statistics team also told us that it follows the Scottish Government's revisions policy<sup>21</sup> although this is not referred to within *KSSCPS*. Revisions to the statistics are explained in *KSSCPS* but only the new statistics are provided; it is difficult to understand the impact of the revisions as no time series are presented. As part of the designation as National Statistics, the Scottish Government should provide a clear statement of the extent of revisions in the report and include a link to the revisions policy<sup>22</sup> (Requirement 3).

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<sup>19</sup> <http://www.transportscotland.gov.uk/road/safety/road-safety-objectives>

<sup>20</sup> In relation to Principle 2, Practice 2 of the *Code of Practice*

<sup>21</sup> <http://www.scotland.gov.uk/Topics/Statistics/About/CPsonRevisionsCorrections>

<sup>22</sup> In relation to Principle 2, Practice 6 of the *Code of Practice*

### Principle 3: Integrity

**At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.**

- 3.6 The Authority received a complaint in January 2013 about the quality of the statistics and their presentation in *KSSCPS*. The complainant was concerned that the report gave the impression that safety cameras were solely responsible for the reduction in RTIs across Scotland.
- 3.7 As noted in paragraph 2.1, the SSCP was originally based within the Justice Department of the Scottish Government but has recently moved to Transport Scotland. As part of this move the responsible statistician is now located within a policy team. While this is not unusual, it does require careful management to ensure that there is no opportunity, or perception of opportunity, for the policy team to influence inappropriately the production of the statistics. As part of the designation as National Statistics the Scottish Government should provide clear guidance to the policy team within Transport Scotland emphasising the independence of the statistical production process<sup>23</sup> (Requirement 4). In meeting this requirement, we suggest that the Scottish Government publish the guidance emphasising the independence of the statistical production process.
- 3.8 *KSSCPS* is published on the SSCP's website shortly after the Scottish Government publishes it on its website. The Scottish Government provides briefings to the media with the input of the statistics teams as appropriate. The individual Safety Camera Partnerships also brief<sup>24</sup> the media separately and the statistics team checks the briefing to ensure that the statistics have been quoted accurately. However, the language used in the Safety Camera Partnership briefings could be interpreted as conveying that the cameras are solely responsible for the reduction in RTIs. The SSCP's website provides a link to the statistics under the heading 'Cameras save lives'; this claim is not consistent with the statistics presented in *KSSCPS* and is potentially misleading. The statistics team told us that the SSCP's website is being redeveloped and linked to Transport Scotland's website. There is a risk that the briefings from the Safety Camera Partnerships and the presentation of material on the SSCP's website could undermine public confidence in the statistics. As part of the designation as National Statistics, the Scottish Government should work with SSCP and the Safety Camera Partnerships to ensure that statements issued alongside the statistics quote appropriate evidence to support claims relating to the role of safety cameras in reducing road traffic incidents<sup>25</sup> (Requirement 5).

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<sup>23</sup> In relation to Principle 3, Practices 2 and 3 of the *Code of Practice*

<sup>24</sup> [http://www.lbsafetycameras.co.uk/index.php/news\\_and\\_events/article/safety\\_cameras\\_continue\\_to\\_educate\\_fatalities/](http://www.lbsafetycameras.co.uk/index.php/news_and_events/article/safety_cameras_continue_to_educate_fatalities/)

<sup>25</sup> In relation to Principle 3, Practice 3, Protocol 2, Practice 9 and Protocol 3, Practice 4 of the *Code of Practice*

## Principle 4: Sound methods and assured quality

**Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.**

- 3.9 The methods used to produce the statistics are quite simplistic. The latest three-year average of accidents and casualties is compared with a three-year average baseline, with changes between the two periods presented as a percentage decrease. This basic method is described in the report but there is no explanation why this method was chosen. Similarly, the offences statistics in *KSSCPS* are presented with cumulative proportions<sup>26</sup> without any explanation of why this form of presentation was chosen. As part of the designation as National Statistics, the Scottish Government should publish better methodological information, including explanations of why particular methods are used, and metadata<sup>27</sup> (Requirement 6).
- 3.10 The safety cameras are located at sites with unusually high levels of RTIs; over time the data are subject to a statistical phenomenon known as regression to the mean (RTM) which ‘can make natural variation in repeated data look like real change’<sup>28</sup>. Measurement errors may also arise when comparing fixed and mobile camera sites, as by their nature, mobile cameras are not in place all day, every day, as the fixed cameras are. The statistics team told us that the methods were discussed at length with the data analyst group and that they wanted to provide a less technical report than *The national safety camera programme; Four-year evaluation report*<sup>29</sup>. The statistics team did not consult the wider user community to find out whether the proposed methods would meet their needs. A number of users responding to this assessment noted that without adjustments for RTM and any non-sampling errors the statistics could be misleading, and so be used inappropriately. The Scottish Government recently commissioned and published an independent review which reflects the findings of the Assessment team in identifying that the methods for producing and presenting these statistics need to be improved to take account of RTM, and the general trend in road accidents. The Assessment team welcomes this development. As part of the designation as National Statistics, the Scottish Government should publish plans to develop methods to take account of RTM and any potential sources of measurement error, and ensure that users are informed well in advance of the publication of statistics based on new methods<sup>30</sup> (Requirement 7).
- 3.11 *KSSCPS* does not provide any measurement of quality or discussion of how non-sampling errors may affect the statistics and the ways that they can reliably be used. Some safety cameras were already in use before being incorporated into the Programme and over time the selection criteria for safety camera sites

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<sup>26</sup> Conditional Offer of a Fixed Penalty Notices issued as a proportion of Notices of Intended Prosecution issued; and Fixed Penalty Notices Paid as a proportion of Fixed Penalty Notices issued

<sup>27</sup> In relation to Principle 4, Practice 1 of the *Code of Practice*

<sup>28</sup> <http://ije.oxfordjournals.org/content/34/1/215.full>

<sup>29</sup> [http://webarchive.nationalarchives.gov.uk/20090104005813/http://www.dft.gov.uk/pgr/roadsafety/spe-edmanagement/nscp/nscp/coll\\_thenationalsafetycameraprogr/ationalsafetycameraprogr4598.pdf](http://webarchive.nationalarchives.gov.uk/20090104005813/http://www.dft.gov.uk/pgr/roadsafety/spe-edmanagement/nscp/nscp/coll_thenationalsafetycameraprogr/ationalsafetycameraprogr4598.pdf)

<sup>30</sup> In relation to Principle 4, Practices 1 and 2 and Principle 2, Practice 4 of the *Code of Practice*

have become narrower. Both of these factors could have some impact upon the statistics. As part of the designation as National Statistics, the Scottish Government should publish information about the quality of the statistics including the main sources of bias and non-sampling errors<sup>31</sup> (Requirement 8).

- 3.12 The statistics are presented by type of RTI and type of casualty; for example fatal or serious accidents and killed or seriously injured casualties. The statistics team told us these are standard classifications used throughout the UK but the report does not provide any definitions of these classifications. Furthermore, links to similar or related statistics across the UK, *The national safety camera programme; Four-year evaluation report*, or to the Scottish Government's *Key Reported Road Casualty Statistics*<sup>32</sup> are not provided. As part of the designation as National Statistics, the Scottish Government should provide definitions of types of accidents and casualty categories within the report and include links to other similar statistics published across the UK<sup>33</sup> (Requirement 9).

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<sup>31</sup> In relation to Principle 4, Practice 2 of the *Code of Practice*

<sup>32</sup> <http://www.transportscotland.gov.uk/analysis/statistics/publications/key-reported-road-casualty-statistics-previous-editions>

<sup>33</sup> In relation to Principle 4, Practice 6 of the *Code of Practice*

## **Principle 5: Confidentiality**

**Private information about individual persons (including bodies corporate) compiled in the production of official statistics is confidential, and should be used for statistical purposes only.**

- 3.13 The Scottish Government has assured us that it takes all necessary steps to protect the confidentiality of the data it collects. This includes the Safety Camera Partnerships removing all personal identifiers from the data before they are submitted and using a secure web-based database that only the Safety Camera Partnerships and statistics team can access.



## Principle 6: Proportionate burden

**The cost burden on data suppliers should not be excessive and should be assessed relative to the benefits arising from the use of the statistics.**

3.14 The Safety Camera Partnerships are required by the Scottish Government (under the provisions of receiving the grants) to collect data on the number and types of RTIs and casualties as well as average speed data for each camera site. The police record each RTI on the STATS19 form and provide these to the individual Safety Camera Partnerships. These data are then submitted to the SSCP via the web-based database to produce the statistics. Some data suppliers who responded to the Assessment told us the process is quite onerous and inefficient. The statistics team told us that it is considering using the STATS19 data collected by Transport Scotland directly to ease the burden on the Safety Camera Partnerships. The statistics team told us that it is aware of the weaknesses in the STATS19 data, which have been documented in previous Assessment reports<sup>34</sup> and a Monitoring Brief<sup>35</sup>. We suggest that the Scottish Government publish its evaluation of the STATS19 data and its potential for reducing supplier burden.

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<sup>34</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-4---road-casualty-statistics--27-july-2009.pdf> and <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-61---statistics-on-transport-in-scotland.pdf>

<sup>35</sup> <http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/monitoring-brief-1-2011---proposals-to-improve-the-reporting-of-road-casualties.pdf>

## Principle 7: Resources

**The resources made available for statistical activities should be sufficient to meet the requirements of this Code and should be used efficiently and effectively.**

- 3.15 The statistics team assured us that it had adequate resources to meet the standards of the *Code of Practice*.
- 3.16 The statistics team told us that it has access to all the relevant training and support provided by the Scottish Government for continuous professional development.

## Principle 8: Frankness and accessibility

**Official statistics, accompanied by full and frank commentary, should be readily accessible to all users.**

- 3.17 *KSSCPS* contains a brief outline of the methods used to compile the statistics but does not provide information about the quality of the statistics and contains only one example<sup>36</sup> of any limitations of the statistics. The baseline period against which changes are measured varies between cameras. This makes the long-term context difficult to understand, particularly as no time series data are presented. The introduction states that consistent baseline data are not available, but does not provide sufficient detail about the implications of this inconsistency for user interpretation (see para A2.4). The report does not present any discussion of the RTM effect, or of other road safety measures, which may have contributed to the decrease in RTIs shown by the statistics; the natural inference from the report is that the cameras are the sole reason for the reduction in RTIs and fatalities at the sites (see para A2.11). As part of the designation as National Statistics, the Scottish Government should publish information about the strengths and limitations of these statistics in relation to particular uses<sup>37</sup> (Requirement 10).
- 3.18 The commentary in the report simply compares the latest three-year average with the baseline three-year average and only explains what is presented in the tables without further analysis. The report does not present any time series to help users understand the trends over time, or breakdown of RTIs by rural and urban roads, or any graphs. The small number of camera sites and changes in their composition could also cause fluctuations in the statistics. There is no contextual information to show users how these statistics fit into the wider picture of RTIs across Scotland (see para A2.11). The introduction provides a brief description of the statistics, but there are some phrases which could be misleading to users, for example 'before and after enforcement'. The fluctuations in the offences statistics between 2001-02 and 2006-07 are explained in footnotes but the large decrease from 2007-08 is not commented upon. The statistics team told us that this decrease may have been a result of the change in funding for speed cameras from hypothecation to grants; this is an important change that further commentary would help users to understand. As part of the designation as National Statistics, the Scottish Government should improve the commentary in the report so that it aids user interpretation of the statistics<sup>38</sup> (Requirement 11). We suggest that in meeting this requirement the Scottish Government should consider the points detailed in annex 2.
- 3.19 The Scottish Government publishes the tables from *KSSCPS* in Excel format. The Scottish Government also publishes the raw data from each camera site as an Excel file.

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<sup>36</sup> Page 5 of the 2012 release 'comparisons of findings for different speed limits are unlikely to yield significant results...comparison between fixed and mobile sites is not appropriate for anything other than 30-mph sites.'

<sup>37</sup> In relation to Principle 8, Practice 1 of the *Code of Practice*

<sup>38</sup> In relation to Principle 8, Practice 2 of the *Code of Practice*

## **Protocol 1: User engagement**

**Effective user engagement is fundamental both to trust in statistics and securing maximum public value. This Protocol draws together the relevant practices set out elsewhere in the Code and expands on the requirements in relation to consultation.**

3.20 The requirements for this Protocol are covered elsewhere in this report.

## Protocol 2: Release practices

**Statistical reports should be released into the public domain in an orderly manner that promotes public confidence and gives equal access to all, subject to relevant legislation.**

- 3.21 The Scottish Government publishes<sup>39</sup> a forthcoming publications calendar; however, when the assessment started, *KSSCPS* was not listed. The statistics team told us that the report has not been listed because the review (see paragraph 1.3.2) may result in substantial changes which could delay publication. During the course of the Assessment, and following the completion of the independent review, *KSSCPS* was added to the Scottish Government calendar of forthcoming publications.
- 3.22 The Scottish Government publishes *KSSCPS* at 9.30am and the SSCP publishes it shortly afterwards. The pre-release access list is not excessive but it is not published by the Scottish Government. We suggest that the Scottish Government publish records of those who have pre-release access to the statistics in their final form.

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<sup>39</sup> <http://www.scotland.gov.uk/Publications/2005/03/18798>

### **Protocol 3: The use of administrative sources for statistical purposes**

**Administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards.**

- 3.23 The data on RTIs from the STATS19 forms are provided to the Scottish Government through a purpose-built web-based database. Some data suppliers who responded to this assessment commented on the poor design of the database leading to inefficient and time-consuming manual data entry and the potential for human error. As noted in paragraph 3.14, the statistics team is investigating the possible use of STATS19 data provided to Transport Scotland to ease the burden on the data suppliers.
- 3.24 The STATS19 data source is listed on the Scottish Government's Statement of Administrative Sources<sup>40</sup>. The Statement lists the statistical outputs that the data source feeds into; *KSSCPS* was added as an output related to the STATS19 data during the course of this assessment.

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<sup>40</sup> <http://www.scotland.gov.uk/Topics/Statistics/About/StatementAdminSources>

## Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to the *Key Scottish Safety Camera Programme Statistics* produced by the Scottish Government, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

<b>Suggestion 1</b>	Refer to the types of use put forward in the Statistics Authority's Monitoring Brief, <i>The Use Made of Official Statistics</i> when documenting use (para 3.3).
<b>Suggestion 2</b>	Publish the minutes and relevant papers of the data analyst meetings on their website (para 3.3).
<b>Suggestion 3</b>	Publish guidance emphasising the independence of the statistical production process on the Scottish Government's website (para 3.7).
<b>Suggestion 4</b>	Publish the evaluation of the STATS19 data and its potential for reducing supplier burden (para 3.14).
<b>Suggestion 5</b>	Consider the points detailed in annex 2, in seeking to improve the statistical reports (para 3.18).
<b>Suggestion 6</b>	Publish records of those who have pre-release access to the statistics in their final form (para 3.22).

## Annex 2: Compliance with Standards for Statistical Reports

- A2.1 In November 2012, the Statistics Authority issued a statement on *Standards for Statistical Reports*<sup>41</sup>. While this is not part of the *Code of Practice for Official Statistics*, the Authority regards it as advice that will promote both understanding and compliance with the *Code*. In relation to the statistical reports associated with *KSSCPS*, this annex comments on compliance with the statement on standards.
- A2.2 In implementing any Requirements of this report (at paragraph 1.5) which relate to the content of statistical reports, we encourage the producer body to apply the standards as fully as possible.

### **Include an impartial narrative in plain English that draws out the main messages from the statistics**

- A2.3 The report is written in plain English and provides a contents page and summary of key points. The Assessment team considers that the presentation of the objectives of the SSCP in the introductory paragraph might lead some users to perceive the report as being politically driven, rather than impartial. The first bullet point in the summary of findings describes a reduction in RTIs at camera sites, which users could interpret as an endorsement of SSCP's policy. The third bullet point in the summary refers to a 16 per cent increase in the number of penalty notices issued from 2009-10 and a reduction of 21 per cent from 2007-08. These figures are not shown in the main body of the report.
- A2.4 The baseline period against which changes are measured varies between cameras. This makes the long-term context difficult to understand, particularly as no time series data are presented. The introduction states that consistent baseline data are not available, but does not provide sufficient detail about the implications of this inconsistency for user interpretation. The commentary describes general increases and decreases in RTIs at camera sites without providing further context on the total number of RTIs across Scotland. The report does not discuss wider safety measures being implemented across Scotland, or improvements in car safety, which may also have contributed to reduced fatalities: the natural inference from the report is that the cameras are the sole reason for the reduction in RTIs and fatalities at the sites. One user reported that the term 'safety camera' was also a misnomer as it implies a positive benefit of the cameras which is not proven by the statistics.
- A2.5 Tables are presented throughout the report, but no graphs or maps are provided to aid interpretation. The tables can also be difficult to interpret due to the changing baseline periods and varying camera numbers. Table 7 presents cumulative percentages over time, but it is not clear from the commentary what this series is intended to demonstrate. Key concepts presented in the tables, including killed and seriously injured (KSIs) and personal injury accidents (PIAs), are not explained.

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<sup>41</sup> <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-reports.html>



### **Include information about the context and likely uses of the statistics**

- A2.6 The report does not present any information about how the statistics are used, who uses them, or what decisions they inform.
- A2.7 The introduction provides a brief description of the statistics, but there are some phrases which could be misleading to users, for example 'before and after enforcement'. The presentation of the SSCP's objectives, together with the lack of contextual information about other road safety improvements or quality information about the statistics, implies endorsement of the policy and its effectiveness.

### **Include information about the strengths and limitations of the statistics in relation to their potential use**

- A2.8 The statistics are appropriately described as averages, but the report makes no attempt to discuss potential errors in either the administrative data (the police STATS19 data) or the survey data. For example, the report does not explain that the raw accident and speed camera data could include different interpretations of what constitutes a serious accident between reporting authorities. The report presents p-values with the survey estimates to indicate their statistical significance to users. However, there are no further quality measures presented in the report, and no discussion of RTM.
- A2.9 Footnotes are presented to describe special events that have affected the statistics, such as additional authorities joining the camera programme. However, this is not sufficiently comprehensive. For example, the report does not mention the change in funding method for the programme in 2007-08, from self-funding via penalty payments to grant funding from the Scottish Government, which (the Assessment team has been told) resulted in a clear drop in the number of penalty notices issued.
- A2.10 The statistics are presented as being provisional, but there is no explanation as to when they will be finalised. Annex C in the report provides some reclassification revisions that were made to the statistics, but only the corrected data are presented so users cannot determine the scale of corrections made.

### **Be professionally sound**

- A2.11 The trends presented in the report are not sufficiently contextualised. For example, there is no explanation of RTM: cameras are only sited at accident black spots, rather than at random. The small number of camera sites and changes in their composition could also cause fluctuations in the statistics. The report does not comment on the fact that the decrease in RTIs at camera sites is consistent with the wider trend in reduced accident rates across Scotland.

### **Include, or link to, appropriate metadata**

- A2.12 The report presents some methodological information.
- A2.13 Contact details for the responsible statistician and Scottish Government Chief Statistician are provided.

A2.14 The statistics are clearly labelled as relating to the calendar year 2011, but there is no explicit statement of the frequency of reporting or date of next release.

## Annex 3: Summary of assessment process and users' views

- A3.1 This assessment was conducted from March to June 2013.
- A3.2 The Assessment team – Rachel Beardsmore and Russell Whyte – agreed the scope of and timetable for this assessment with representatives of the Scottish Government in March. The Written Evidence for Assessment was provided on 12 April. The Assessment team subsequently met the Scottish Government during April to review compliance with the *Code of Practice*, taking account of the written evidence provided and other relevant sources of evidence.

### Summary of users contacted, and issues raised

- A3.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare Assessment reports.
- A3.4 The Assessment team received 13 responses from the user consultation. The respondents were grouped as follows:
- |                                       |   |
|---------------------------------------|---|
| Safety Camera Partnership managers    | 5 |
| Independent road safety users         | 3 |
| Police                                | 2 |
| Transport Scotland statistician       | 1 |
| Local authority accident investigator | 1 |
| Road safety officer                   | 1 |
- A3.5 The responses received were highly polarised. A number of users were very critical of the statistics and the report: the main concern noted by multiple users is that the statistics and the commentary significantly overstate the beneficial impact of cameras, implying that they are the sole factor in the reduction in accidents and deaths. These users felt that the reports misrepresent the situation since they makes no reference to other road and vehicle safety improvements and do not demonstrate a causal link between the use of cameras and the reduction in accidents. A common user criticism of the report was the lack of comparison with either long term or national trends which could demonstrate accident rates at sites without cameras. Some users noted that SSCP's method does not take account of RTM, or use a consistent baseline period, which could account for this to an extent.
- A3.6 By comparison, respondents from the Safety Camera Partnerships generally found the statistics easy to access and understand, with an appropriate level of detail on the number of offences and accidents. Data suppliers thought that guidance provided by SSCP was generally sufficient, but that the database for submission of data to SSCP was inefficient and time consuming for manual

entry. Two suppliers also reported that the database was not user friendly, and fraught with potential for human error when submitting results.

**Key documents/links provided**

Written Evidence for Assessment document



