

# Data Quality

Kent County Council

Audit 2007/08

November 2008

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## **Status of our reports**

The Statement of Responsibilities of Auditors and Audited Bodies issued by the Audit Commission explains the respective responsibilities of auditors and of the audited body. Reports prepared by appointed auditors are addressed to non-executive directors/members or officers. They are prepared for the sole use of the audited body. Auditors accept no responsibility to:

- any director/member or officer in their individual capacity; or
  - any third party.
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# Introduction

- 1 The purpose of this report is to summarise the findings from our work on data quality for 2007/08.
- 2 Auditors' work on data quality and performance information supports the Commission's reliance on performance indicators (PI) in its service assessments for comprehensive performance assessment (CPA).
- 3 Our work on data quality is complemented by the Audit Commission's paper, 'Improving information to support decision making: standards for better quality data'. This paper sets out standards, for adoption on a voluntary basis, to support improvement in data quality. The expected impact of the Audit Commission's work on data quality is that it will drive improvement in the quality of local government performance information, leading to greater confidence in the supporting data on which performance assessments are based.

## Scope of our work

- 4 We have followed the Audit Commission's three-stage approach to the review of data quality as set out in Table 1.

**Table 1 Data quality approach**

|                |   |
|----------------|---|
| <b>Stage 1</b> | <p><b>Management arrangements</b></p> <p>A review using key lines of enquiry (KLOE) to determine whether proper corporate management arrangements for data quality are in place, and whether these are being applied in practice. The findings contribute to the auditor's conclusion under the Code of Audit Practice on the Council's arrangements to secure value for money (the VFM conclusion).</p>  |
| <b>Stage 2</b> | <p><b>Analytical review</b></p> <p>An analytical review of 2007/08 BVPI and non-BVPI data and selection of a sample for testing based on risk assessment.</p>   |
| <b>Stage 3</b> | <p><b>Data quality spot checks</b></p> <p>In-depth review of a sample of <b>2007/08</b> PIs all of which come from a list of specified BVPIs and non-BVPIs used in CPA, to determine whether arrangements to secure data quality are delivering accurate, timely and accessible information in practice. For 2007/08 PI spot checks, the Audit Commission specified that it is compulsory to review two housing benefits PIs at all single tier and district councils as a minimum.</p> |

- 5 As this is the third year of applying this approach to data quality, we tailored our work to focus on the key changes and actions taken to address previously identified weaknesses and recommendations.

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### Summary conclusions

#### Stage 1 – Management arrangements

- 6 The Council's overall management arrangements for ensuring data quality are consistently above minimum requirements.
- 7 There is a good balance between corporate oversight and delegation to services, where the responsibility rests for the accuracy of data quality, including in sensitive areas like child protection. There is now a data quality policy that has encoded good practice in the organisation, as well as an effective network of data quality champions who are responsible for each directorate's delivery of the corporate policy. Training is effective, and this includes corporate modules in general training but also bespoke training if a weakness has been detected in operational procedures. Performance management systems are effective and include examples of intervention to standardise data used across different agencies. On the other hand, the involvement of councillors in data quality is limited, with no mention of their role in the data quality policy and data quality training for councillors only planned at this stage. That restricts the data quality policy and procedures being fully embedded within the organisation. There is also the need to ensure that the profile of data quality is raised by including an update on the success of data quality system spot-checks as a regular report to councillors.

#### Stage 2 – Analytical review

- 8 Our analytical review work at Stage 2 identified that the PI values reviewed either fell within expected ranges or were substantiated by evidence.

#### Stage 3 – Data quality spot checks

- 9 Our review and spot checks of BV82b (Composting performance) and BV165 (Pedestrian crossings: disabled people) found that they were both fairly stated.

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# Detailed findings

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## Management arrangements (Stage 1)

**10** Overall, the Council's corporate arrangements for data quality are consistently above minimum requirements.

### Governance and leadership

**11** A data quality policy now exists with good leadership at officer level shown, though there is no explicit role for councillors. A data quality policy has now been created that encodes the good practice that existed in the organisation on the handling of data and responsibilities of the corporate centre and directorates for the use and improvement of data. Councillor involvement in data quality is generally lacking, although some lead members have a role in data quality for their specific areas of responsibility. Training of councillors in data quality is at an early stage.

**12** There is an appropriate balance between corporate oversight and directorate responsibility for data quality. The corporate centre provides the data quality policy and framework and guidance on the information systems for the organisation and the directorates fully engage on delivering outcomes that match the corporate direction. There is also clear support at top management and councillor level for strong performance management and this strengthens commonality of a very large council to manage its business.

**13** Monitoring of data quality is effective. There is corporate oversight of national and local performance indicators (PIs). Service data quality is the responsibility of those who produce the data and those who are involved with the detailed collection systems which produce the final service analyses that are reported within the Council. Directorates have their own Data Quality champions and teams. Internal audit play an important role in carrying out detailed re-calculations on a risk basis for various indicators. Data that is provided to the corporate centre has been through extensive data quality checks within directorates as well as by government departments which receive the detailed information such as on checks for vulnerable children. This gives assurance that data that is used for decision-making is accurate.

| Recommendations |  |
|-----------------|--|
| <b>R1</b>       | The role of all councillors should be specified in the data quality policy.                          |
| <b>R2</b>       | Councillors should have data quality training provided commensurate with their role in data quality. |

## Policies

- 14** Data quality policies and procedures are effective in securing the accuracy and appropriate use of data. Each information system has a nominated data quality champion who oversees the production of documentation, promotes the data policies and reports and reviews on compliance with the policy.
- 15** A formal policy on data quality was adopted in March 2008, consolidating existing practice into one document. The policy has areas of responsibility assigned for all managers and staff. Directorate risk registers also include items on data quality as appropriate and operational procedures and guidance notes are available in all directorates. The Council has not set any targets on data quality corporately other than to ensure all local PIs have specific definitions to standardise internal reporting. There have been a number of officer reviews on data quality though these reviews have not resulted in a series of reports to councillors. Specific, measurable, achievable, realistic and timed (SMART) objectives on specific data streams are the responsibilities of directorates for their own information needs. However, as already noted, there remains no member involvement in data quality and that is a weakness of the policy.
- 16** The data quality champion role is effective. The directorates have nominated data quality champions who are all already engaged in such work and all are trained for this role. There is a network of such champions across the organisation supported by an officer at the corporate centre who promotes the importance of the data quality policy. There are examples of intervention by the champions when monitoring has uncovered issues for resolution. This included a reluctance of some staff to pursue sensitive data on vulnerable people when that was necessary to confirm the appropriate next steps in care and education provision. Training was given in this instance and forms altered to emphasise compliance. As such, the role of data quality champion demonstrates a strong impact on data quality.

## Systems and processes

- 17** Systems and processes are effective in securing the quality of the data used by the Council.
- 18** Controls over performance information systems are subject to regular review by internal audit, the results of which are reported to the Governance and Audit Committee. There are also internal checks to validate data supplied, such as Highways checking on contractor claims for travel by verifying those claims through spot-check measuring the time claimed through the GPS system. On disaster recovery there are back-ups of systems for business for every part of the data. These include backup servers and application servers based in Canary Wharf with further servers backing up the data with a 15 minute delay, ensuring the minimal loss of data. The Information Services Group is the responsible group that manages the business continuity plans for the whole county infrastructure. This means that effective back-ups are in place to minimise any unexpected loss of data through system failure.

## Detailed findings

- 19** The Council seeks to ensure that data is accurate, including that shared with partners. Data received from other public bodies are in most cases part of national collection systems. These include recorded crime statistics, hospital episode statistics, and benefit claimant counts. These data sources are subject to their own verification procedures. In addition, the Council works with local partners such as the police to give advice about the information systems and checked on the assurance of the quality in data recorded. Data validation exercises are also carried out to identify and correct errors such as on ethnicity data supplied by schools. Data is also modelled by super output areas to check that pupil addresses are correct and this information is used extensively to assist in matters such as enrolment and service planning. While the Council has identified which bodies it shares information with and has some examples of working with partners on data quality standards, it has not set formal protocols and standards on data quality requirements from these bodies. This opens the possibility that some data from partners used by the Council is not accurate.

### Recommendation

- R3** That the Council at a strategic level formalises protocols and standards on data quality received from outside bodies to ensure that all data used by the Council is sound.

### People and skills

- 20** The Council ensures that staff skills in data quality are appropriate.
- 21** As already mentioned, data quality champions for each directorate have been chosen for their existing knowledge of data quality and have been trained in the sound use of systems and how to ensure that data used is correct. The data quality policy makes it clear that all staff involved in producing data/information whether defining, collating, recording, extracting, analysing or reporting - have a responsibility for quality. It also emphasises that staff should be aware of how any data they record or handle is used (and its relative value to the organisation) and how their role can impact upon quality. Each directorate also trains staff using data on data quality policies and practices and corporate generic data quality training is now in place. Standards on data quality are therefore clear to staff both corporately and in directorates and this ensures that understand their roles and responsibilities in relation to data quality. There is however no corporate overview of the effectiveness of the various levels of data quality training and so the organisation does not have a single understanding of any gaps needing to be filled.
- 22** Data quality champions take action to identifying and addressing potential data quality problems. For example, the training needs of staff using data are considered when a national or local PI is introduced or altered. Back-up training is given on the altered system, then the directorates run reports to pick up any errors found in operating the new system. This was used when the addition of questions on religion by front-line staff were added by social services. The standards team ran a session about putting in

that question then ran follow up reports to check on progress. This caused a necessary change in culture.

### Recommendation

**R4** The Council should report on the effectiveness of the various levels of data quality training provided so that it can assure itself that any data quality gaps in staff are being met.

### Data use and reporting

- 23** The Council's validation procedures ensure that data reported is accurate.
- 24** The Council has effective systems to match data for accuracy. These include Transactional Data Matching through an external company that is done to improve efficiency; a file is extracted, sent to company who match the profile against other lists for normative data and where it does not match, a report goes to care management teams to check and improve the data. Other systems like Collect point up anomalies in data on vulnerable people but the Council's intention is to be right first time in this sensitive area. There are random checks on data to clear errors and record assumptions. This reported and signed off at Director level. The 2008 Joint Area Review (JAR) commented that one of the strengths of the Council was its culture of performance management to keep the organisation on track. Another example of intervention was on issues to do with the proportion of youth offenders in education and employment showing people still on courses when they had in fact left. There were problems collecting data as it was reliant on several people to collect the data. Having identified the problem, the solution agreed was that education workers would list each month when programmes finished and the data was reflected on the appropriate databases, flagging when the person was expected to leave the programme. As a result, the latest quarterly reports show far fewer records where the earlier problem is still occurring.
- 25** The Council has learnt from earlier failures in data quality. For example, last year's failure in the library PI was found to be a lack of clarity on how long to hold paper records. While libraries collect paper records monthly for data to be entered into information systems, a check showed that some of these paper copies had been destroyed soon after data entry even though the procedures instructed staff to keep them for 3 years. Since then all libraries have received written instructions on how long to keep paperwork. The Council identified the issue during data quality spot-checks and should continue to carry out checks and report findings to members to ensure high quality data.

### Recommendation

**R5** Ensure that the profile of data quality is raised by reporting the results of spot-checks of data systems to councillors.

## Detailed findings

### Analytical review (Stage 2)

26 An analytical review of the following BVPIs and non-BVPIs was carried out. The findings, subject to the validation of a sample of PIs in stage 3 spot checks, are shown below.

**Table 2 Analytical review findings**

| 2007/08 Performance indicator                    | Assessment   | Comment  |
|--|--|--|
| BVPI 82a(i) - Recycling performance (%)          | Variance from 2006/07 and value within Audit Commission parameters |  |
| BVPI 82a(ii) - Recycling performance (tonnage)   | Variance from 2006/07 attributable to real performance improvement | Council invested in improving tonnage sent for recycling   |
| BVPI 82b(i) - Composting performance (%)         | Variance from 2006/07 and value within Audit Commission parameters |  |
| BVPI (82b(ii) - Composting performance (tonnage) | Variance from 2006/07 attributable to real performance improvement | Council invested in improving tonnage sent for composting  |
| BVPI 165 - Pedestrian crossings: disabled people | Variance from 2006/07 attributable to real performance decline     | Council surveyed all crossings in 2007/08 and found that a number did not meet minimum standards |
| Non-BVPI IPF - Cost per library visit            | Variance from 2006/07 and value within Audit Commission parameters |  |

27 All other PIs reviewed were found to be complete and within plausible and permissible values.

**Data quality spot checks (Stage 3)**

**28** A number of PIs were reviewed using a series of detailed spot checks and audit tests. Our findings are shown below.

**Table 3 Spot check findings**

| <b>Performance indicator</b> | <b>Assessment</b> | <b>Comment</b>   |
|------------------------------|-------------------|--|
| Environment - BV 82b(ii)     | Fairly stated     | The Council made available all the records to support the PI. A sample check confirmed that PI correctly calculated.   |
| Environment - BV 165         | Fairly stated     | The Council carried out a full review of the disabled pedestrian crossings in 2007/08 after the 'unfairly stated' conclusion in 2006/07. A sample check of the survey results confirmed that it had been accurately completed and the PI correctly calculated. |

## Appendix 1 – Action Plan

| Page no. | Recommendation  | Priority<br>1 = Low<br>2 = Med<br>3 = High | Responsibility         | Agreed | Comments   | Date           |
|----------|---|--|------------------------|--------|--|----------------|
| 5        | R1 The role of all councillors should be specified in the data quality policy.  | 1  | Richard Fitzgerald     | Yes    | Update to Policy                                   | June 2009      |
| 5        | R2 Councillors should have data quality training provided commensurate with their role in data quality.   | 1  | Data Quality Champions | Yes    | To be addressed through Policy Overview Committees | September 2009 |
| 7        | R3 That the Council at a strategic level formalises protocols and standards on data quality received from outside bodies to ensure that all data used by the Council is sound.            | 2  | Richard Fitzgerald     | Yes    | To be developed through the Kent Partnership       | September 2009 |
| 8        | R4 The Council should report on the effectiveness of the various levels of data quality training provided so that it can assure itself that any data quality gaps in staff are being met. | 1  | Data Quality Champions | Yes    | Review to be undertaken                            | September 2009 |
| 9        | R5 Ensure that the profile of data quality is raised by reporting the results of spot-checks of data systems to councillors.  | 2  | Data Quality Champions | Yes    | To be addressed through Policy Overview Committees | September 2009 |