DATA QUALITY

STRATEGY

Revised October 2008

Epping Forest District Council

CONTENTS

1. INTRODUCTION

1.1 The Council recognises the importance of good quality data. Consistent, accurate, timely and comprehensive information is vital to facilitate the Council's decision-making process and to deliver better quality services to our customers.

1.2 The purpose of this strategy is to set out the Council's approach to improving data quality. We recognise the increasing importance placed upon data as a tool for assessing our performance, and achieving our aims and targets. We also recognise the important role that the Audit Commission has in terms of performance monitoring as a way of establishing compliance with external requirements and challenging current practice. This strategy seeks to achieve a co-ordinated approach to ensure consistently high standards are achieved both within and across services with respect to data quality. The outcomes expected from the adoption of this strategy are that Council data will be accurate and verifiable and that all staff will know the part they play in this process.

2. STRATEGY STATEMENT – THE PRINCIPLES OF GOOD DATA QUALITY

2.1 The Council will seek to ensure that the following principles are adhered to and that staff understand and act on them:

- understanding and awareness: that all staff recognise the need for high standards of data quality and their individual roles in achieving this;

- understanding data definitions: that all appropriate staff are aware of the precise definition of data collected, be this nationally or locally determined, and that clear definitions support the data used by the Council;

- data input: that only authorised staff have responsibilities for data input, that the input of data takes place on a timely and regular basis, and that there are appropriate controls to achieve this;

- data verification: that there are corporate verification processes in place which are adhered to by all staff involved in the data collection process, and that these procedures are appropriately located within services close to the point of input;

- systems: these must be suitable for their purpose, staff must have the appropriate training and expertise to use them, and they must be regularly reviewed on a risk assessment basis;

- output of data: the data used by the Council must be extracted in a way that ensures there is a clear data trail, data is regularly extracted and communicated in a timely manner; and;

- presentation: that data is presented in a way which is easy to understand, is accurate and can lead to the drawing of conclusions, both for internal use, external inspectorates and customers.

3. MEMBER LEVEL RESPONSIBILITIES

(a) Executive Functions

3.1 The Cabinet is responsible for the Council's overall approach to data quality in its role in the setting of policy and strategy.

3.2	The Finance and Performance Management Cabinet Committee is responsible for receiving reports from the Audit Commission and Internal Audit Unit with respect to data quality. The Committee is responsible for considering risk management issues, and for corporate performance management.

3.3	Individual Portfolio Holders are responsible for the data quality issues within their portfolios, and for ensuring that directorates have appropriate data quality processes in place.

## (b)	Scrutiny Functions

3.4	The Finance and Performance Management Scrutiny Panel is responsible for scrutinising data quality. It is also responsible for reports and information about data quality issues within services. Through the Overview and Scrutiny Committee, the Finance and Performance Management Scrutiny Panel reports to the Cabinet on these matters.

## 4.	OFFICER LEVEL RESPONSIBILITIES

## (a)	Corporate Executive Forum

4.1	The Corporate Executive Forum (CEF) has oversight of all data quality issues at officer level in the Council. As part of this process it will receive regular reports on data quality and associated performance issues, and will challenge the accuracy/veracity of this. It is also responsible for agreeing improvement plans for data quality matters which do not require member approval.

## (b)	Deputy Chief Executive

4.2	This post holder has overall responsibility for data quality issues at officer level.

## (c)	Directors (General Responsibilities)

4.3	Directors have full responsibility for the quality of data within their individual services, and must appoint appropriate officers to discharge data quality functions, as necessary.

4.4	Directors are also responsible on a quarterly and annual basis, for the completion and submission of a Key Performance Indicator (KPI) Improvement Plan for each KPI within their directorate, and for ensuring that the plan is submitted in good time to be reviewed by CEF.

## (d)	Directors (Specific Individual Responsibilities)

4.5	Certain Directors have specific individual responsibilities:

- the Director of Finance and ICT as Chief Financial Officer has responsibility for data quality with respect to the Council's financial regulations, systems and processes;
- the Director of Finance and ICT is responsible for the security policy for the authority's ICT function, the proper use of e-mail and internet data, and for data protection issues;

- the Director Of Corporate Support Services is the Council's Monitoring Officer and has responsibilities for making available executive decisions and for the provision of advice on matters such as financial proprietary, probity and the budget framework. The Assistant to the Chief Executive is Deputy Monitoring Officer;
- the Assistant to the Chief Executive is responsible for Freedom of Information Act data quality issues; and
- the Chief Internal Auditor is responsible for the delivery of an annual Audit Plan within which issues of data quality will feature strongly as appropriate.

(e)   Data Inputters in Individual Services

4.6   These staff are responsible for ensuring that the data they input into systems is accurate and is inputted on a timely basis.

4.7   The Council uses a corporate performance management system called the TEN Performance Manager. TEN enables the Council to monitor and report performance against the National Indicator set that it is obliged to report against, as well as those Local Performance Indicators that it has chosen to adopt as additional performance measures.

4.8   Data for the TEN Performance Indicators must be entered into the TEN Performance Management System in accordance with the timetable laid down in section 6 (b) of this strategy, **Data Quality Procedures for Collecting and Managing PI Information.** All data must be verifiable in the audit process.

(f)   All Staff

4.9   All staff are responsible for ensuring that they understand the Council's data quality strategy and objectives so far as these apply to their role.   They are responsible for understanding the importance of accurate and verifiable data and the part that they may play in the Council's data quality processes.   Responsibilities should be set out in Job Descriptions and be discussed in annual Performance and Development Reviews where appropriate.

5.   KEY ELEMENTS IN THE DELIVERY OF THE DATA QUALITY STRATEGY

(a)   Maintenance and Improvement of Data Quality Systems

5.1   Responsibility for maintaining a robust control environment for information systems lies within Directorates.

Each system should have a named officer responsible for data quality issues.   The responsible officer is required to ensure that:

- users are adequately trained, where appropriate, by having a formal training programme which is periodically evaluated and adapted to respond to changing needs;
- there is security of access/amendment
- periodic tests of the integrity of data are undertaken;
- information management and support is available to users;
- system upgrades are made where necessary;
- the system meets managers' information needs;
- feedback from users is acted upon;

- the system can produce adequate audit trails;
- actions recommended by system reviews (e.g. by the external auditors) are implemented;
- a set of written procedures (user guide) exists for the purpose of entering and extracting data; and
- a business continuity plan for the system exists to protect vital records and data.

5.3   There should also be a named substitute officer who can deputise in the data quality lead's absence by (at least) maintaining the day-to-day functionality of the system. It is also essential that written procedures are designed so that another officer can carry out the procedures essential to providing data if the officer who normally performs these duties is absent.

5.4   There will sometimes be systems where work has to be undertaken to rectify gaps in the control environment. To identify these systems there needs to be an evaluation of information systems used in the Council to produce data. Individual services are responsible for this function, including the undertaking of risk assessments of systems, where required.

There are a number of conditions that might lead to a system being considered high risk and every system needs to be considered against these factors. 'High risk' conditions will include

- a high volume of data/transactions
- technically complex data definition/guidance
- problems identified in previous years;
- inexperienced staff involved in data processing/production;
- a system being used to produce new data; and
- known gaps in the control environment

5.6   The purpose of undertaking a risk assessment is to target limited resources at the areas that require most attention.

5.7   Where high-risk systems have been identified for attention, the following steps will need to be taken:

- analysis of the control environment;
- identification of gaps;
- design of additional controls and procedures to address gaps;
- preparation of an action plan; and
- monitoring the implementation of the action plan

5.8   The integrity and accuracy of the reports output by the TEN system should be reviewed annually and any anomalies fully investigated. As part of this review, consideration should also be given to the accuracy, relevance and clarity of all other data elements within the TEN system. These would include:

- details of indicators, targets and definitions
- corporate statements such as the Council's vision statement and its strategic aims
- organisational details, lines of responsibility and performance indicator personnel

(b)   Procedures for Verifying Data – Guidance

5.9   Data requirements should be designed along the principle of 'getting it right first time' in order to avoid waste in the form of time and money spent on cleansing data, interfacing

between different information systems, matching and consolidating data from multiple databases and maintaining outdated systems.

5.10   Nevertheless, in complex systems, even where there are strong controls over input, errors can creep in. Where it is needed, a verification procedure should exist close to the point of data input. The frequency of verification checks will need to be aligned with the frequency of data reporting.

5.11   The simplest verification system might be a review of recent data against expectations, or a reconciliation of systems-produced data with manual input records. Depending on the complexity of the system, it might be necessary to undertake more thorough verification tasks, such as:

- data cleansing, e.g. to remove duplicate records or to fill in missing information;
- sample checks to eliminate reoccurrence of a specific error, e.g. checking one key field of data against documentation, for a sample of cases;
- test run of report output, to check the integrity of the query being used to extract data; and
- spot checks, e.g. on external contractor information

5.12   Particular attention needs to be paid to data provided by external sources. For example a number of PIs are calculated using information provided by contractors and the Council must work alongside contractors to ensure that such data is accurate.

5.13   When entering into contracts with service providers it is essential that, wherever relevant, there is a requirement to provide timely and accurate data, and that the Council are clear with the contractor about their responsibilities for data quality and how the authority will check the information they provide.

5.14   It might not always be possible to alter existing contracts so that contractors are fully committed to providing an agreed quantity of quality data. In this case, the data must be treated as high-risk and thought must be given to establishing a system of checks and measures to ensure that we are confident about the accuracy of this data. When carrying out checks on such information it is important that this is documented and signed off by the relevant officer.

5.15   Some important data – for example, road safety and crime statistics – is provided directly to the Council by external agencies. The initial priority of this strategy is to address shortcomings in information provided directly by and to us, but where concerns exist about the integrity of externally provided information, the Council's intention is to work with other agencies constructively wherever possible to provide assurance and rectify any problems identified.

(c)   Inputting of Data

5.16   There must be adequate controls over the input of data. Systems produced figures are only as good as the data input into that system in the first place. The aim should be 100% accuracy 100% of the time. It is important that officers have clear guidelines and procedures for using systems and are adequately trained to ensure that information is being entered consistently and correctly.

5.17   A key requirement is that data should be entered on an ongoing basis, not saved up to be entered in a block at the end of a period. This reduces the error rate and the need for complex verification procedures.

5.18   Controls should also be in place to avoid double-counting. These should be designed according to the nature of the system, in particular where more than one person inputs data. A likely control will be an absolutely clear division of responsibility setting out who is responsible for what data entry.

5.19   The system must also record all relevant information. Individual systems need to be evaluated to determine whether additional controls are necessary. An additional control would be necessary if there is any way, theoretically, that a relevant case could exist without being captured by the current system.

(d)   Data Output

5.20   Data must be produced to the timetable laid down in section 6 (b) of this strategy, **Data Quality Procedures for Collecting and Managing PI Information**, which allows for management action and review. Services must ensure that processes exist to obtain data output in good time to allow input into the TEN system and the Summary Control Forms to be completed in accordance with the timetable laid down in section 6 (b) **Data Quality Procedures for Collecting and Managing PI Information**, without compromising data quality.

5.21   It is important that data is subject to scrutiny and to challenge before being passed up the line for management / member action. This can be undertaken at several stages in the process. The most likely instances will be a verification check on output reports as part of a service level review of data.

(e)   Presentation of Data

5.22   When information is presented for management review, action or audit an officer must carry out an independent review of working papers to confirm that the data definition has been followed, the calculations are correct and the data is supported by a full audit trail.

5.23   The Summary Control Forms submitted to the Performance Improvement Unit (PIU), in respect of PI data, must include an accurate and exact indication as to where the supporting data for all calculations was derived from and where it is held. This allows the accuracy and veracity of each PI calculation to be verified and audited as necessary.

6.   PERFORMANCE INDICATOR DATA QUALITY

6.1   The principles of the data quality strategy set out in Section 4 apply fully to the collection of Performance Indicator (PI) data.

(a)   Responsibilities

- The Cabinet is responsible for the establishment of an annual set of key performance indicators, which reflect the Council's core business;
- Individual Portfolio Holders are responsible for data quality issues with respect to PIs in their services, and ensuring appropriate data quality processes are in place;
- The Finance and Performance Management Scrutiny Panel is responsible for the Scrutiny of PI data, including issues of data quality;
- The Corporate Executive Forum receives reports on at least an annual basis on performance indicator information, challenging this, and agreeing improvement plans for individual indicators;
- Directors are responsible for agreeing quarterly PI returns and end of year outturn figures within the PI verification framework;

- Responsible Officers for PIs in services must ensure, under the direction of the relevant Director, that all data relating to performance information is accurate, verifiable and is easily auditable. They are responsible for ensuring the timely completion on a quarterly basis of PI information for the Director;
- Data inputters in services are responsible to the Service PI responsible officer for ensuring data related to PIs is accurate, verifiable and implemented in a timely fashion; and
- The Deputy Chief Executive is responsible for the overall collection and presentation of PI data and for reporting these to Council Committees.

(b)   Data Quality Procedures for Collecting and Managing PI Information

6.2   Full details of the Council's requirements under its Data Quality Assurance Procedures are laid down in Appendix 1. These are to be fully adhered to in order to satisfy audit requirements for the collection of performance information in relation to PIs.

6.3   Directors and other responsible officers must follow the guidance laid down in Appendix 1 for PI data collection. This stipulates that a pro-forma (Summary Control Form), accompanied by a full audit trail, must be compiled for any PI presented on a quarterly basis (and for all PIs at year-end). This must include:

- A detailed calculation;
- System notes, where appropriate; and
- Documentation supporting any estimates, sampling, or any apportionments made.

6.4   In addition, the relevant officer must complete the appropriate 'fields' on the TEN system, including a comment on performance, any corrective action to be taken to improve performance, and a quarterly estimate as to whether the target will be met.

6.5   The timetable for collation of data and production of all PIU requirements is such that all data entries to the TEN system, all PI documentation and all PI Summary Control Forms should be completed and submitted to the PIU within 1 month of the quarter's end. Any missing returns will be notified to the relevant Director. A further reminder of still missing returns will be sent two weeks later together with an advice to the Director that outstanding data returns will not be included within the report to be made to the next meeting of the Finance and Performance Management Scrutiny Panel, and that they will be required to prepare a separate performance report to be considered by the panel, and account for performance against these outstanding indicators.

6.6   There may be occasions where the timings of Scrutiny Panel meetings is such that this timetable cannot be managed in time to report to the Scrutiny Panel. On such occasions, where reporting of the PI figures and completion of returns is required within a tighter timeframe, the PIU will advise Directors of the revised deadlines in advance.

6.7   On a quarterly basis the PIU will undertake an audit of the indicator data submitted to the TEN system, as well as a thorough audit of the PI Summary Control Forms submitted by each service. The PIU will collate all PI returns and documentation and log the submission rates and timeliness of submissions.

6.8   The PIU will examine the data submitted to the TEN system and investigate results which appear to deviate from expected returns. The PIU will also check to ensure that supporting comments against each indicator have been entered onto TEN by the responsible officer and/or Director.

6.9   The PIU will check to ensure all PI Summary Control Forms are received, signed by both the Completing Officer & the Director and are received within 1 month (or other defined deadline) of the quarter end.

6.10   The PIU will check the accuracy of the detailed calculations and verify the PI indicator outturn reported, as well as verifying that the nature and location of the supporting data and information has been identified on the Summary Control Form.

6.11   The PIU audit of the Summary Control Forms will use a traffic light system to highlight non-compliance and once this has been completed for the quarter, it will be circulated back to the Directors for feedback and review.

6.12   There are a number of Performance Indicators which are not KPIs, LPIs or NIs. These are mostly commonly indicators that form part of the Local Area Agreement but can also fall outside of the LAA e.g. percentage of private sector homes vacant for more than 6 months (HIP HSSA – Housing Strategy Statistical Appendix formerly known as Housing Investment Programme). Whilst these might fall outside of the PI reporting programme laid out above, wherever possible, the same principles of Data Quality & Quality Assurance should be applied to the production of any performance information and the reporting of performance outturns for these indicators.

(c)   Improvement Plans for KPIs

6.13   Each year, the Cabinet identifies PIs which it considers to be key to the business of the authority. The Corporate Executive Forum (CEF) requires Directors to produce Improvement Plans for these Key Performance Indicators (KPIs) as soon as possible after the adoption of the KPIs each year. Directors are responsible for monitoring performance, against these improvement plans.

6.14   Performance reports for each of the KPIs will be submitted to CEF at the end of each quarter by the PIU, to enable corporate monitoring of the success of the individual KPI improvement plans.

7.   MONITORING AND REVIEW OF THE DATA QUALITY STRATEGY

7.1   Progress with the implementation of the data quality strategy will be monitored by the Corporate Executive Forum, in consultation with the PIU and Directors.

DATA QUALITY ACTION PLAN – NOVEMBER 2008

Action	How	Who	When
Complete full review of the Data Quality Strategy and establish an annual programme to review the strategy each year	Review Data Quality Strategy in line with observations of the Audit Commission Data Quality Audit for 2006/07.	PIU	October 2008 & annually thereafter
Incorporate reference to the Council's Data Quality Assurance Processes within the Data Quality Strategy	Include within the current review of the Data Quality Strategy and add to the strategy as an appendix	PIU	October 2008
Investigate the possibility of incorporating non KPI, LPI, or NI indicators into the TEN system to assist with reporting & to bring them under the Data Quality & Quality Assurance strategies.	Adapting the TEN system as possible to incorporate additional indicators	PIU	March 2009
Investigate the TEN system to establish the integrity and accuracy of all PI reporting tools.	Comparison of output TEN reports with raw data, Summary Control Forms and expected results.	PIU	Ongoing
Investigate the accuracy, relevance & clarity of all non-PI data, statements and information on the TEN system.	Investigation of all non-PI information available on the TEN system	PIU	Ongoing
Ensure that responsibility for data quality is part of job descriptions and the appraisal process.	Should already be the case but services will need to check and rectify any gaps	Directors	Ongoing
Ensure that, when making submissions on nationally reported PIs, the definition has been followed.	This will be achieved by a system of thorough review when completing quarterly returns	All PI responsible officers supported by PIU	Quarterly
Ensure that LPIs have specific definitions and counting rules where necessary	PIU to review existing definitions for all LPIs in conjunction with Directors	PIU / Directors	March 2009
Ensure that all relevant staff have an understanding of PI definitions calculated from data they input/analyse/extract	Training (where this is not already in place)	Directors	Ongoing
Investigate possibility of establishing e-learning courses for data responsible staff, incorporating Data Quality & Quality Assurance	Contact with IT staff & HR to examine possibilities. Design simple distance learning module.	PIU with Input from all services to ensure relevant	End March 2009
Ensure that data provided by external contractors meets requirements for reporting performance	Depending on individual circumstances this might be achieved by making provision in contracts or by direct action such as documented spot checks	Directors	Ongoing

Ensure that data controls are robust	Specific measures will depend on the system and will be the responsibility of the data quality lead for each system to address	Directors	~~March 2007~~ Ongoing
Ensure that all systems are identified and that there is a data quality lead for each system	Data gathering exercise	PIU	~~March 2007~~ Ongoing
Ensure that existing compilation/submission controls are implemented for every externally reported PI	Guidance already issued – implemented in 2006, supported by training	All PI compilers/reviewers supported by PIU	~~March 2007~~ Ongoing
Ensure that working paper requirements are met for all externally reported PIs	Guidance already issued – implemented in 2006, supported by training	All PI compilers/reviewers supported by PIU	~~March 2007~~ Ongoing

8. MATRIX OF DATA QUALITY RESPONSIBILITIES

All with responsibility for inputting/extracting information from systems	Managers with data quality responsibilities (including PI responsible officers)	Directors	PIU	Internal Audit
Knowledge of relevant data definitions and guidance Input accurate information Up-to-date record keeping (not entered in a block)	Maintain a robust control environment Identify and rectify gaps in control environment Training/guidance	Overall responsibility for the reliability of data Ensure that Job Descriptions reflect data quality responsibilities. Oversight of robustness of data systems.	Maintain list of systems and DQ actions for PI data Co-ordinate risk assessment of systems, liaising with IA and PI leads Checking that proposed improvements have been implemented for PI systems Communicating the commitment to DQ Reporting progress on DQ to CEF	Support improvement on individual systems Incorporate DQ issues in routine audit work

Appendix 1: Data Quality Procedures in respect of the Collection of Performance Information for Key Performance Indicators, Local Performance Indicators & National Indicators

The following procedures must be fully adhered to in order to satisfy audit requirements for the collection of performance information in relation to Key Performance Indicators (KPIs), Local Performance Indicators (LPIs) & National Indicators (NIs):

1. Record Keeping

For each KPI, LPI & NI the officer responsible for reporting on the indicator must keep all supporting records used in calculating figures for each quarter and the year-end. Data must be appropriately annotated in order to highlight figures that are relied upon for calculations and, if the source of data is not clear from computer printouts etc. documents must be endorsed accordingly along with the date on which they were produced. All supporting papers for each indicator should be retained by the responsible officer in a designated file for analysis by the Audit Commission or Internal Audit, if required at the end of the year. In accordance with audit best practice, supporting papers for all KPIs, LPIs & NIs for the current year and two preceding years must be retained for a period of two years.

2. Calculation of Data

The responsible officer must keep a detailed record of the calculation of submitted figures, showing all supporting calculations used. For the avoidance of doubt, all mathematical calculations must be set out separately, where relevant showing how each calculation supports another. The responsible officer should also retain these calculations for subsequent audit. The usual quarterly Summary Control Form must be completed in respect of all KPIs, LPIs & NIs and returned to the Performance Improvement Unit in hard copy at the same time that quarterly returns are entered into the TEN system.

3. NI Definitions

Responsible officers must ensure that submitted figures for NIs have been calculated using the current and correct definition of each indicator, as issued by the Department of Communities & Local Government (DCLG), rather than using any local interpretation. If officers are in any doubt about definitions they should check with the Performance Improvement Unit, who will also automatically circulate details of revised, additional or deleted indicators immediately that these are issued by DCLG. Unless otherwise agreed, all LPIs will continue to be subject to the definition in force in the previous year, particularly where LPIs were formally NIs or Best Value Performance Indicators.

4. Cross-Checking of Performance Data

Another officer (not the person who carried out the calculations) must check the following in respect of all KPI, LPI & NI submissions:

- that the correct data and definition has been used to calculate the indicator
- that all supporting data is retained within the service area for analysis by the Audit Commission (this does not need to be submitted to the Performance Improvement Unit)
- that all mathematical calculations are correct and annotated as being such

5. Sign-Off

Service Directors (or a nominated Assistant Director) must formally sign-off each quarterly submission for every KPI, LPI & NI for which they are responsible, using the Summary Control Form. In so doing, they are confirming that all of the quality assurance procedures stated above are in place and have been fully adhered to. A separate Summary Control form

is required to be submitted at year-end, to reflect the out-turn calculation for each indicator. Incomplete Summary Control forms will be returned directly to the relevant director for completion.

6. Reporting Methodology

Quarterly performance information (and targets when requested at the beginning of each year) must be sent to the Performance Improvement Unit in the format requested, not in any other layout, style or presentation that reflects departmental arrangements. This will avoid misinterpretation and the possibility of errors occurring in the transcription of data.

7. TEN Performance Management System

Quarterly performance submissions to the TEN system must contain a full written comment / explanation for performance in relation to all KPIs, LPIs & NIs, particularly in respect of any changes in performance or where performance is not on target or is fluctuating as a result of, for example, seasonal variations. The comments should provide appropriate contextual or background information wherever possible. Recommendations for corrective action in relation to all under-performing indicators must also be provided.

8. Reporting Timescales

The timetable for submission of all performance information in relation to KPIs, LPIs & NIs is laid down in the Council's Data Quality Strategy and must be adhered to each quarter.

9. Overview & Scrutiny

Service Directors must ensure that they (or an appropriate officer) are present at the relevant Scrutiny Panel meeting to comment on and answer any questions in respect of the KPIs, LPIs & NIs for which they are responsible.

These Data Quality Assurance procedures are intended to ensure that the Council meets audit recommendations for the collection and monitoring of performance data. Please ensure that these procedures are communicated to all members of your staff that are responsible for the collation and reporting of KPI, LPI and NI information