



National Audit Office

## Measuring Up

### **How good are the Government's data systems for monitoring performance against Public Service Agreements?**

PSA 20: 'Increase long term housing supply and affordability'

A review of the data systems underpinning the Public Service Agreement led by the Department for Communities and Local Government under the Comprehensive Spending Review 2007

# REPORT BY THE NATIONAL AUDIT OFFICE

## Validation of the data systems for the PSA 20, Spending Review Period 2008-11

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## Executive Summary

### Introduction

1. This report summarises the results of our examination of the data systems used by the Government in 2008 to monitor and report on progress against PSA 20.

### The PSA and the Departments

2. PSAs are at the centre of Government's performance measurement system. They are usually three year agreements, set during the spending review process and negotiated between Departments and the Treasury. They set the objectives for the priority areas of Government's work.
3. This PSA is led by the Department for Communities and Local Government, with data provided by the Office of National Statistics (ONS) and a range of other sources. Each PSA has a Senior Responsible Officer who is responsible for maintaining a sound system of control across Departmental boundaries that supports the achievement of the PSA. The underlying data systems are an important element in this framework of control.
4. The most recent public statement provided by the Department on progress against this PSA was in the 2008 Autumn Performance Report.

### The purpose and scope of this review

5. The Government invited the Comptroller and Auditor General to validate the data systems used by Government to monitor and report its performance. During the period August to November 2008, the National Audit Office (NAO) carried out an examination of the data systems for all the indicators used to report performance against this PSA. This involved a detailed review of the processes and controls governing:
  - The match between the indicators selected to measure performance and the PSA. The indicators should address all key elements of performance referred to in the PSA;
  - The match between indicators and their data systems. The data system should produce data that allow the Department to accurately measure the relevant element of performance;
  - For each indicator, the selection, collection, processing and analysis of data. Control procedures should mitigate all known significant risks to data reliability. In addition, system processes and controls should be adequately documented to support consistent application over time; and
  - The reporting of results. Outturn data should be presented fairly for all key aspects of performance referred to in the target. Any significant limitations should be disclosed and the implications for interpreting progress explained.

6. Our conclusions are summarised in the form of traffic lights (see figure 1). The ratings are based on the extent to which Departments have:
  - (i) put in place and operated internal controls over the data systems that are effective and proportionate to the risks involved; and
  - (ii) explained clearly any limitations in the quality of its data systems to Parliament and the public.
7. The remaining sections of this report provide an overview of the results of our assessment, followed by a brief description of the findings and conclusions for each individual data system. Our assessment does not provide a conclusion on the accuracy of the outturn figures included in the Department's public performance statements. This is because the existence of sound data systems reduces but does not eliminate the possibility of error in reported data.

**Figure 1: Key to traffic light ratings**

Rating	Meaning ...
<b>GREEN (Fit for purpose)</b>	The data system is fit for the purpose of measuring and reporting performance against the indicator.
<b>GREEN (Disclosure)</b>	The data system is appropriate for the indicator and the Department has explained fully the implications of limitations that cannot be cost-effectively controlled.
<b>AMBER (Systems)</b>	Broadly appropriate, but needs strengthening to ensure that remaining risks are adequately controlled.
<b>AMBER (Disclosure)</b>	Broadly appropriate, but includes limitations that cannot be cost-effectively controlled; the Department should explain the implications of these.
<b>RED (Systems)</b>	The data system does not permit reliable measurement and reporting of performance against the indicator.
<b>RED (Not established)</b>	The Department has not yet put in place a system to measure performance against the indicator.

### Overview

8. The aim of this PSA is to increase long term housing supply and affordability. This PSA is supported by six indicators. There is a named officer within the Department responsible for each of these indicators. This officer is supported by a lead analyst. Performance against the indicators is monitored monthly within the Department as part of its internal PSA performance reporting.
9. For this PSA, we have concluded that the indicators selected to measure progress are consistent with the scope of the PSA and afford a reasonable view of progress.

10. Figure 2 summarises our assessment of the data systems.

**Figure 2: Summary of assessments for indicator data systems**

No	Indicator	Rating
1	Number of net additional homes provided.	AMBER Systems
2	Affordability: the ratio of lower quartile house prices to lower quartile earnings.	GREEN Fit for purpose
3	Number of affordable homes delivered.	AMBER Systems
4	Number of households in temporary accommodation.	GREEN Fit for purpose
5	Average energy efficiency rating for new homes.	RED Not established
6	Local planning authorities to have adopted the necessary Development Plan Documents, in accordance with their Local Development Schemes, to bring forward developable land for housing in line with Planning Policy Statement 3.	AMBER Systems

11. The Department has worked to integrate the indicators within this PSA into its operational and performance management activities, for instance by integrating them into its business plan and performance reports.

12. The Department has formal mechanisms for identifying and assessing areas of risk and reporting these to the Board. The Department's risk management processes include consideration of issues related to PSAs.

13. The Department has satisfactory processes and controls in place designed to ensure the effective operation of business critical IT systems, including those used to collect, analyse and present performance information in respect of the Department's PSAs.

14. Issues of data quality are considered on many levels within the Department. The Department has an Evidence Strategy Group, chaired by the Director General Finance and Corporate Services, which is responsible for the Department's overall strategy on data quality.
15. The Director General Finance and Corporate Services has Board level responsibility for data quality. The Head of Profession for Statistics has day to day responsibility for data quality issues, with direct access and accountability to the Accounting Officer as required.
16. Directors General and Programme Boards are responsible for risk management on individual PSA indicators, and data quality risks will normally be managed at this level. However, data quality risks can be escalated either to the Departmental Board risk register for discussion, or to the Head of Profession for Statistics and the Director General Finance and Corporate Services, if required.
17. Other Directors General are responsible for data quality in their respective areas of activity and take a proactive role in promoting high quality performance information, for example through the review of indicator definitions and involvement in the design of data systems. Furthermore, members of staff receive training within this area appropriate to their roles, with regular reviews of their performance management needs.
18. The Department undertakes internal monitoring and analysis in respect of its performance against its PSAs and the underlying indicators, including the preparation of detailed monthly reports setting out progress in key areas of activity, current performance against the relevant indicators, significant risks to performance and further action to be taken in order to mitigate the risks identified and to further the achievement of the Department's objectives. Furthermore, the Department reports performance against its PSAs to the Board on a monthly basis.
19. Full performance is reported biannually in the Autumn Performance Report and Departmental Annual Report. The Department envisages that it will move to quarterly reporting, in line with other central government departments, once it is satisfied that its performance management and reporting arrangements – which have recently been revised to incorporate the new PSAs and DSOs as well as the underlying indicators – have been embedded fully across all areas of the Department.
20. Our main conclusions on the Department's overall arrangements with respect to the PSA and the indicators that it encompasses are as follows.
  - The Department's governance arrangements in respect of its PSAs are generally satisfactory. The responsibilities for PSA indicators and data quality have been clearly assigned and the Department has processes in place to monitor and report performance against those indicators. Sufficient regard is given to data quality in respect of PSA indicators.

- From our review of the Department's performance indicators we note that, while some of these have quantitative targets attached, a significant proportion have no specific targets other than a general requirement for improvement against a baseline figure, as set out in the relevant Delivery Agreements and accompanying Measurement Annexes. Without clear targets in respect of individual indicators, and therefore a robust understanding of what and how much needs to be done in each area of activity, it will be difficult for the Department to prioritise its activities and allocate its resources effectively.
- The Department has agreed measurement annexes for all of its PSA indicators, setting out the definition of the indicator and the data sources to be used. It does not in all cases, however, have detailed written procedure notes in place, explaining how each indicator is to be calculated and how any outliers or missing data are to be addressed. While the Department's current procedures are robust, the fact that they are not all recorded formally may make it difficult for the Department to ensure the comparability of data over time, particularly if responsibility for the calculation of performance against a given indicator is passed to a different member of staff.

21. Where these findings have implications for individual indicators, we explore them in the next section of this report.

22. We recommend that:

- where indicators do not already have quantitative targets attached to them, the Department should determine appropriate targets that are specific, measurable, achievable, relevant and timebound.
- the Department develops for each indicator formal procedure notes setting out how the indicator is to be calculated and reported, so that this can be undertaken consistently over time and by different individual members of staff.

23. In response, the Department is already working to address our recommendations.

### **Assessment of indicator set**

24. In undertaking the validation we reviewed the documentation associated with the PSA and considered whether the indicators selected to measure progress are consistent with the scope of this PSA.

25. We conclude that the indicators selected afford a reasonable view of progress.

## Findings and conclusions for individual data systems

26. The following sections summarise the results of the NAO's examination of each data system.

### Indicator 1

#### Number of net additional homes provided

##### Conclusion: AMBER (Systems)

27. We have concluded that the data system underlying this indicator is broadly appropriate, but needs strengthening to ensure that remaining risks are adequately controlled.
28. There is a data system in place for collecting and aggregating the number of net additional homes provided. However, the Department's arrangements for the treatment of these data – including the procedures for dealing with statistical outliers and imputing missing data – are not recorded formally. As a result, there is a risk that data could be handled differently across regions and over time.

##### Characteristics of the data system

29. This indicator is a National Statistic. It is compiled using data from the joint CLG/Regional Assemblies annual housing supply return and from the annual housing flows return, which are completed by individual local authorities.
30. The housing supply return is used in six regions across England. Data from the remaining three regions is collected via the housing flows return. This inconsistency in data collection is for historical reasons and, although inefficient, does not impact on the robustness of the data system.
31. The housing supply return is collated by Regional Assemblies before being submitted to CLG. Data for the housing flows return are submitted direct to the Department. The data from these returns are used by the Department to calculate the overall net additional homes provided.

##### Findings

32. The Department's published measurement annex for this indicator defines 'net additions' as new builds, less demolitions, plus any gains or losses through conversions. The Department has also included within this net additions figure an adjustment for changes of use, i.e. where a residential property has become non-residential, or vice versa. However, as the category of 'changes of use' is referred to explicitly in statistical releases issued by the Department, it would help to avoid any potential confusion if this category of property were included specifically in the definition of the indicator.



33. There are clear processes in place for the collection of data from Regional Assemblies and local authorities using the housing supply return or housing flows return. We note, however, that there are no formal written procedures in place for the former in respect of the imputation of missing data (for example, where these data have not been provided to the Regional Assemblies by individual local authorities) and the editing of data (for example, where data appears anomalous and may require investigation and amendment). Consequently, there is a risk that data could be processed inconsistently across regions and over time.
34. We note also that, although the Department has worked with the Regional Assemblies in the operation of the housing supply return since 2004/05, it has not sought to verify the quality controls operated by the Regional Assemblies. An agreed policy on revising reported data later found to be inaccurate is the only formal arrangement in place in respect of data quality.

## **Indicator 2**

### **Affordability: the ratio of lower quartile house prices to lower quartile earnings**

#### **Conclusion: GREEN (Fit for purpose)**

35. We have concluded that the data system underlying this indicator is fit for the purpose of measuring and reporting performance against the indicator.
36. The data system in place to calculate performance against this indicator requires some in-house data processing, which is well-controlled. However, the Department has yet to document a formal assessment of risks to the integrity of the data system.

#### **Characteristics of the data system**

37. This indicator is calculated on the basis of earnings information from the annual survey of hours and earnings (ASHE) compiled by the Office for National Statistics (ONS), and house price information supplied by HM Land Registry. ASHE is a National Statistic.
38. The calculation of the indicator is undertaken by the Department, which determines performance against the indicator at an aggregate level for England.

#### **Findings**

39. Responsibility for the calculation of the indicator has been allocated to a named individual within the Department. The procedures undertaken to process the house price information – which provides the numerator for this indicator – and deal with outliers in the data are documented. Two analysts carry out the processes simultaneously and the results are compared and reviewed by a more senior

statistician. A checklist is signed at various stages to verify that controls over data processing have taken place.

40. Although the processes in place are robust, we note that the Department has yet to document a formal risk assessment in respect of its arrangements for data collection, processing and analysis. There is also no formally recorded review of the calculation of the final ratio, although this is a simple calculation.

### **Indicator 3**

#### **Number of affordable homes delivered**

##### **Conclusion: AMBER (Systems)**

41. We have concluded that the data system underlying this indicator is broadly appropriate, but needs strengthening to ensure that remaining risks are adequately controlled.
42. In assessing performance against this indicator, the Department collects data from a number of sources. At present there are limited quality assurance arrangements in place surrounding these data, and there is scope for these to be improved. This will help the Department to ensure that the performance information that it calculates from these data is robust, accurate and fit for purpose.

##### **Characteristics of the data system**

43. The indicator is a National Statistic. The calculation of this indicator draws on data from five sources, namely the Housing Corporation (84% of data comes via this route), English Partnerships (2%), the Housing Strategy Statistical Appendix (13%), P2 returns (0.6%) and Private Finance Initiative (PFI) returns (0.4%). The last three of these are provided by individual local authorities.
44. These data are then collated by the Department and used to calculate the number of affordable homes delivered.

##### **Findings**

45. There are clear processes in place for the collection of data for this indicator from the various data providers. We note, however, that formal written procedures are not in place for all of the data streams in respect of the editing of data (for example, where there are statistical outliers or potential inaccuracies in the data). Consequently, there is a risk that data could be processed inconsistently over time.
46. The Department requires local authorities submitting information to give an indication of the checks that they themselves have undertaken in respect of the data submitted. However the Department does not perform any of its own validation

procedures on the data. The verification of the local authority data is a key area for the Department to improve for this data system.

47. Furthermore, where the Department has designed controls to ensure the robust collection of data and calculation of performance information, it does not record the performance of these consistently. For example, although the Department asserts that data received from the Housing Corporation are subject to analytical review and reconciled to other relevant data, it does not record the results of these checks. It is not, therefore, possible to confirm that they have been carried out.
48. In December 2008, English Partnerships and the investment functions of the Housing Corporation were brought together to create the Homes and Communities Agency. The Department will need to re-assess the information that will flow from the revised organisation to ensure that its data requirements are met.

## **Indicator 4**

### **Number of households in temporary accommodation**

#### **Conclusion: GREEN (Fit for purpose)**

49. We have concluded that the data system underlying this indicator is fit for the purpose of measuring and reporting performance against the indicator.
50. The data used to calculate this indicator are collected directly from local authorities and are subject to a simple process of aggregation within the Department.

#### **Characteristics of the data system**

51. This indicator is compiled from data submitted to the Department quarterly by local authorities using the P1E return. The data are collected using the electronic interform system and are then aggregated and analysed within the Department to determine performance against the indicator.

#### **Findings**

52. The Department has robust arrangements in place to collect, process, analyse and report the data in respect of this indicator. Responsibility for the calculation of the indicator has been allocated clearly and the data received from local authorities are subject to validation and review before they are used within the Department. The Department's procedures for compiling the indicator are set out formally and distributed to relevant members of staff.

## **Indicator 5**

### **Average energy efficiency rating for new homes**

#### **Conclusion: RED (Not established)**

53. We have concluded that a data system to measure performance has yet to be fully established for this indicator.
54. While the Department has been working to develop an appropriate data system to calculate performance against this indicator, the data system has not yet been finalised. The data system is, however, in an advanced stage of development and should be finalised later in 2009.

#### **Characteristics of the data system**

55. The data set used to compile this indicator will be the energy performance certificates register, which will be established from individual energy performance certificates awarded in respect of individual residential properties.
56. The Department has commissioned an external partner to collate this energy performance information and to provide it to CLG, who will compile the register.

#### **Findings**

57. The Department has so far received data in respect of the three quarters from April to December 2008 and is using these data to determine how best to calculate and report the indicator.
58. The Department is also working to put in place appropriate mechanisms to ensure that the data used to calculate the indicator are sufficiently robust and that the indicator is compiled accurately and consistently. In addition, the external contractor collating the energy performance information is undertaking a data cleansing exercise and is due to provide the Department with a report on the checks undertaken.

## **Indicator 6**

### **Local planning authorities to have adopted the necessary Development Plan Documents, in accordance with their Local Development Schemes, to bring forward developable land for housing in line with Planning Policy Statement 3**

#### **Conclusion: AMBER (Systems)**

59. We have concluded that the data system underlying this indicator is broadly appropriate, but needs strengthening to ensure that remaining risks are adequately controlled.
60. There is a data system in place for calculating performance against this indicator. However, there are discrepancies in the specification of the indicator – as discussed below – that could potentially cause confusion over how performance is to be measured. Furthermore, the Department has limited arrangements in place to identify risks to data quality and to validate data received.

#### **Characteristics of the data system**

61. This indicator is compiled using data from individual local planning authorities, which are collected at a regional level by Government Offices and then submitted to CLG.
62. Performance against this indicator changes on an ongoing basis as individual local planning authorities work to adopt the relevant Development Plan Documents. Data are collected on an ongoing basis and are analysed monthly.
63. All local planning authorities have prepared a Local Development Scheme, in which they set out – amongst other things – the Development Plan Documents that will be adopted by the local planning authority and that will form part of the Local Development Framework.
64. Such documents are classed by the Department as ‘necessary’ if they are a core strategy document or if they relate to the delivery of more than 2,000 homes.
65. Consequently, each local planning authority plans to adopt a number of Development Plan Documents, in line with the timescales for adoption set out in their Local Development Schemes.

#### **Findings**

66. This data system is used to measure performance against both indicator 6 of PSA 20 and indicator 2 of CLG’s Departmental Strategic Objective (DSO) 5. However, we have identified a number of discrepancies between the specifications of these indicators.

67. Most significantly, the specification of the PSA refers to a target of 80% of all local planning authorities to have adopted the necessary Development Plan Documents. This means that the indicator is focused on the proportion of local planning authorities that have adopted all of the necessary Development Plan Documents.
68. The specification for the DSO indicator, however, refers to a target of 80% of all necessary Development Plan Documents to have been adopted. This indicator focuses, therefore, on the proportion of all necessary Development Plan Documents – across all local planning authorities – that have been adopted.
69. These measures are not the same because a local planning authority will have more than one Development Plan Document. The Department considers the latter definition to be the correct one, so – following discussions with HM Treasury – has reported performance on this basis for both the PSA and DSO indicators.
70. Furthermore, although the definition of ‘necessary’ Development Plan Documents is set out in the Department’s internal measurement annex for the DSO indicator, it is not included in the measurement annex for the PSA indicator.
71. The Department has identified these discrepancies and determined an appropriate way of calculating the indicator so as to ensure consistency and comparability of performance information. However, discrepancies between the two indicators should be addressed so as to avoid potential confusion in the future.
72. We note that the Department has not undertaken a risk assessment in respect of its arrangements for data collection, processing and analysis. It is not, therefore, able to ensure that all risks to these arrangements have been mitigated effectively.
73. Furthermore, while there are clear processes in place for the collection of data from local authorities via the Government Offices, there are no formal written procedures in place setting out how the indicator is to be calculated. Consequently, there is a risk that data could be processed inconsistently over time. We note also that the calculation of performance against the indicator is not subject to independent review within the Department, to ensure that it has been undertaken accurately.
74. The Department’s performance against this indicator has been published in the 2008 Autumn Performance Report. We note that when reporting performance the Department did not define a ‘necessary’ Development Plan Document, which is critical to the measurement of performance against this indicator, although the term is defined in the separate published measurement annex.