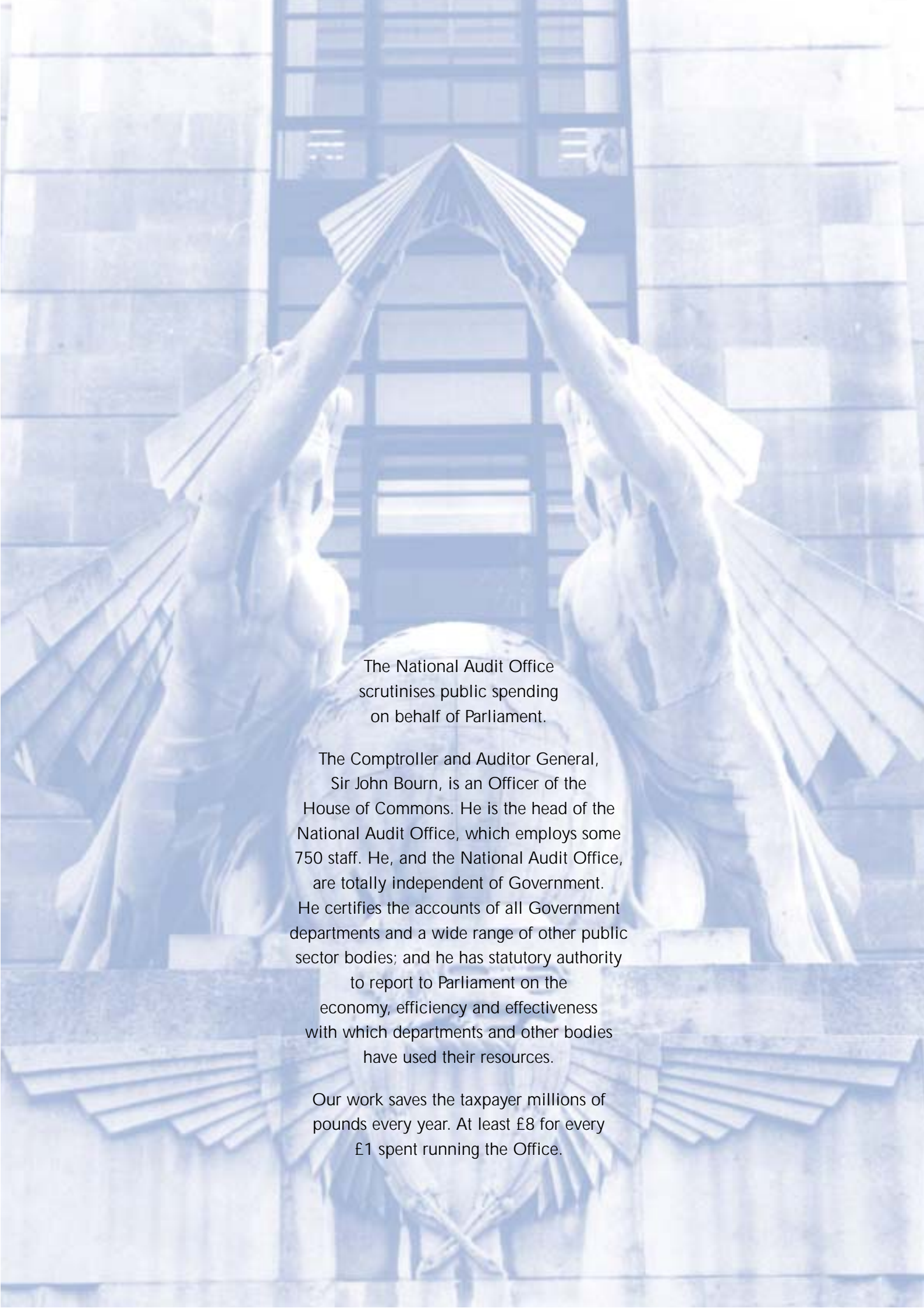


Office for National Statistics  
**Outsourcing the 2001 Census**

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL  
HC 1211 Session 2001-2002: 18 October 2002





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Office for National Statistics  
Outsourcing the 2001 Census



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HC 1211 Session 2001-2002: 18 October 2002

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This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act.

*John Bourn* National Audit Office  
Comptroller and Auditor General 11 October 2002

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# executive summary

## Background

- 1 On 29 April 2001 a Census was conducted in all parts of the United Kingdom. The information collected in the Census will provide population statistics and projections which are used in national planning, including the allocation of resources to health and local authorities. The Office for National Statistics (the Office) is responsible for the Census in England and Wales.
- 2 The 2001 Census was a large and labour intensive exercise. The Office employed a field force of around 73,000 temporary staff, at a budgeted cost of £54.1 million to deliver over 24 million Census forms in the three weeks prior to Census day. Most of this field force worked on the Census for fewer than 12 weeks.
- 3 Under arrangements agreed with the Royal Mail, Census forms were posted back to Census field staff in pre-paid envelopes. The Office for National Statistics estimated that the post back arrangements allowed it to reduce the overall size of the Census field force by some 42,000, compared with the 115,000 staff employed in the 1991 Census. Apart from the savings arising from a smaller field force, the Office believed that the post back would allow them to target their enumeration effort in those areas, such as inner-London, which were hard to count.
- 4 The post back arrangements were more successful than the Office's forecast. They expected 70 per cent of the forms to be returned through the post but actually received 88 per cent. Under the Office's costing model this increase should have yielded savings of some £5.5 million in the cost of field staff. In practice, however, actual pay costs of £59.9 million were some £5.8 million more than the budget.
- 5 The Office outsourced the administration of field staff payroll to an external contractor, ADP Chessington (Chessington), who were appointed in 1998. The Office's Census Division, with the help of professional advisors, were responsible for the procurement of Chessington and the management of the contract. In June 2001, The National Audit Office, while carrying out our audit of the Office's Resource Account for the year to 31 March 2001, became aware that significant problems were being experienced in processing Census pay and that these had resulted in delays in making payments to around 23,000 Census staff (30 per cent of the field force) together with higher than expected levels of error<sup>1</sup>. This caused significant inconvenience and financial hardship for a large proportion of the Census field force and these problems were only resolved as a result of the Office for National Statistics' intervention.
- 6 This Report examines the Office for National Statistics' arrangements for the outsourcing of 2001 Census services in England and Wales and, in particular, the arrangements for the administration of field staff pay. It also considers the arrangements for the administration of the post back of Census forms and the reasons behind the overspending of the Census payroll budget.

<sup>1</sup> *Certificate and Report on the Office for National Statistics' 2000-01 Resource Account (HC 171 2001-02).*

## Our main findings

### Planning and Delivery of the 2001 Census.

- 7 The Office for National Statistics, together with the Census Offices in Scotland and Northern Ireland, used advances in scanning, image recognition and coding technology to automate the processing of 2001 Census data. A separate coverage survey, completed shortly after Census day, has allowed the Office to estimate and adjust the results for individuals missed in the main Census.
- 8 The Office expect the 2001 Census to meet its objective to deliver good quality population data in accordance with their timetable. They estimate that the overall response rate will reach 98 per cent of households, compared with 97.8 per cent in 1991. While the collection and subsequent processing of Census returns have encountered delays, the Office delivered the first Census outputs for population estimates on 30 September 2002, close to schedule. The Census statistics for the standard spending assessment for local authority grants are expected as planned in March 2003.
- 9 The Office expect that the Census in England and Wales will be delivered within the overall budget of £207 million agreed with HM Treasury in 1998, subject to the settlement of outstanding claims from contractors.
- 10 The Treasury Select Committee has already conducted an inquiry into the 2001 Census in England and Wales<sup>2</sup>. Among a number of issues raised the Committee have emphasised the need to evaluate the alternatives to a full Census in the future and for robust evidence on costs and benefits to justify the expenditure involved in undertaking the Census. The Government's response to the Committee's findings<sup>3</sup> accepted the recommendations. The Office intend to prepare a General Report on the 2001 Census, including an evaluation of its planning and implementation, together with a separate report on data quality to be published alongside the Census data.

### The Outsourcing of Census services

- 11 The Office for National Statistics sought to achieve value for money on the 2001 Census by outsourcing a number of services, including the data capture and coding of completed forms, telephone helplines, printing, delivery and secure collection of Census forms, and the administration of field staff pay. For the first time, the public were also asked to post their forms back. In total outsourced services accounted for £69.1 million in England and Wales, some 33 per cent of the Census budget. An additional £7.7 million was paid to Royal Mail to cover the cost of post-back services.
- 12 The Census Director was responsible for the procurement of Census services. He established a procurement unit within Census Division and recruited external advisors to assist in the procurement and contract management process. The Census Director also chaired a Steering Committee which oversaw the process to identify and consider the procurement options for the Census and, in particular, those for the processing of Census data. He chaired two further committees which were established to manage the Census service contracts, including a Steering Committee to oversee the processing services and a Contract Management Board to oversee all other Census contracts.
- 13 In delivering their strategy for outsourcing Census services, the Office for National Statistics and the other Census Offices established that existing scanning technology was capable of dealing with the complexity and size of



<sup>2</sup> *House of Commons Treasury Committee First Report 2001-02 HC 310, The 2001 Census in England and Wales.*

<sup>3</sup> *House of Commons Treasury Committee Ninth Special Report 2001-02 HC 852, Government Response to the Committee's First Report: The 2001 Census in England and Wales.*

the Census. They also established that the field of potential suppliers of scanning services was sufficiently large to ensure competition. All other contracts for Census services, with the exception of those for professional advice and for the Royal Mail to collect and deliver forms, were subject to competitive tender. Under the terms of the Post Office Act it was not possible for the Office to have a formal contract with the Royal Mail regarding the post back of Census forms and a service level agreement was put in place.

- 14 The appointment of external procurement advisors was not subject to competition and was not in accordance with the Office's and public procurement procedures. The Census Director initially employed Vogue Consultants (UK) Limited (Vogue) to prepare a report on the procurement options for Census processing. The Census Director subsequently retained them on a non-competitive basis, to advise the Census Division on the procurement and management of the contracted out services. An internal audit review in May 1999 found that the initial contract with Vogue for the preparation of the report on procurement options exceeded the Census Director's delegated authority of £20,000. The review also found that the contract for advice on the procurement and management of outsourced services, and for which the contractor had at that time received £485,000 in fees and expenses, did not meet the Office's standard terms and conditions. The Census Director was subsequently disciplined for his role in the appointment of Vogue.

- 15 In the light of findings of the review of the Census Director's role in the appointment of external advisors, the Office for National Statistics took a number of actions including reviewing:

- Vogue's performance as external advisors. The Office concluded that the risk of dispensing with Vogue's service outweighed the risks of retaining them. The Office, therefore, negotiated a new contract with Vogue based on the Agency's standard terms and conditions. In total Vogue were paid £1million for their work;
- the Census Director's role in the appointment of Bird & Bird as legal advisors to the Census. This found that although Bird & Bird had been appointed on a non-competitive basis, there had been no breaches in internal guidance or public procurement regulations, and that rates included in the contract were consistent with those available to other Government departments under the firm's framework agreement with the Central Computer and Telecommunications Agency (now part of OGC.buyingsolutions);
- all contracts let by Census Division. This review found that appropriate procurement procedures had been followed and concluded that the contracts for Census services represented an acceptable risk to the Office.

The Office also withdrew all procurement delegations from Census Division and appointed a Census Business Manager to strengthen financial arrangements in the Division.

- 16 The Office for National Statistics encountered particular difficulties in outsourcing the contract for field staff pay. Only three potential contractors provided outline proposals and indicative bids. The Office subsequently eliminated one of these bidders from the competition following checks on financial viability. The Office paid this bidder £22,000 in compensation for wasted effort.
- 17 Despite offering different solutions, the two remaining bids were closely rated on all aspects of evaluation apart from price. Chessington, the successful bidder, proposed the development of a Census payroll system based on its existing systems, while Capita proposed to design a Census payroll system from scratch. The difference in price arose because Chessington significantly





reduced their final bid from £1.9 million to £1.02 million based on estimates of the level of pay queries together with a re-assessment of the time needed to develop the system. Capita informed us that it was unlikely that they would have revised their bid in the light of the Office's estimates of likely pay queries. Chessington found that the payroll system took longer to develop than planned and that the higher than expected levels of error had a significant impact on Chessington's ability to deliver Census payroll services.

- 18** The Office developed a risk management framework specifically for the Census and the outsourced services. They were also able to establish effective contingency arrangements in partnership with contractors when faced with the problems in maintaining an effective Census helpline and in working with the processing contractor, Lockheed Martin, to establish a rectification plan to address the initial delays in processing. The Office's risk management strategies were less effective in other areas, most notably in the administration of field staff pay where lack of flexibility in the contract management arrangements meant that problems in the implementation of systems were not addressed as they arose.

### The post back of Census forms

- 19** Overall the post back was a success. The national post back rate achieved was 88 per cent representing around 21 million forms for England and Wales. Despite the actual response rate being well in excess of expectations, the Office encountered a number of difficulties in monitoring the progress of the post back and in managing the subsequent follow up of outstanding replies. The higher volume of forms posted back contributed to backlogs in the sorting and checking of returns in some Census Districts. In a number of Districts the Office's staff were re-deployed to carry out the secondary sorting of the returns posted back instead of the Royal Mail. Variations in the pattern of posting between Districts also made it difficult for the Office to assess the outcome of the post back in some areas. These problems were compounded by weaknesses in the Office's field information systems, which prevented management from establishing a clear view of District Managers' progress in the collection and checking of responses received through the post back.
- 20** The timing of the Census Coverage Survey due to be carried out in June 2001 was essential to the overall success of the Census. It was therefore important for the Office to complete all Census follow up activities by the end of May. By 9 May around 55 per cent of the forms given out had been returned in most Census Districts, consistent with the overall percentage response rate of 70 per cent forecast. The Office were nevertheless aware that delays in the recovery of forms could adversely affect the results of the Census Coverage Survey. They, therefore, instructed District Managers in most areas to deploy field staff to chase missing forms from 9 May as planned. Due to the weaknesses in their own information, the Office authorised District Managers to take local decisions on paying field staff for additional work at piecework rates set by the Office's Census Division.
- 21** In approving additional field staff work the Office accepted that additional field staff costs would be incurred but they believed, however, that savings in field staff costs in those districts where the response rate exceeded expectations would offset the extra costs in those Districts where additional work was approved by local managers. In the event, the total cost of follow up work, including the additional work approved by local managers, was £10.3 million. However, the lack of reliable management information from the field meant the Office had no way of assessing whether the level of additional resource committed to the collection of outstanding forms was necessary. The total amounts paid to field staff by the Office reached £59.9 million, against a budget of £54.1 million representing an overspend of £5.8 million. Based on the Office's costing model, the 88 per cent post back rate achieved nationally compared to the 70 per cent anticipated, should have yielded savings of around £5.5 million.



## The problems with field staff pay

- 22 The contract to administer payroll services to Census field staff did not run smoothly. Implementation of the service was late due to difficulties in agreeing the precise requirements of the service and issues raised by acceptance testing. The Office for National Statistics continued to have concerns over the functionality of the system and problems were encountered in processing the first stage payments to Census District Managers. To avoid any further delays, the Office made these payments directly. Independent reviewers appointed by the Office indicated that the problems experienced were due to errors in completing forms by field staff, the operation of exception limits for large payments, poor quality of data keying and poor calibration of the imaging equipment.
- 23 Despite attempts to fix them, the problems in the processing of Census pay continued up to and beyond Census day. In addition to the initial problems Chessington also noted significantly higher than expected levels of invalid data in forms input to the pay systems and calculated the rejection rate to be around 46 per cent, over three times the rate they had expected. Whilst most field staff were paid on time and in full some 23,000 staff (30 per cent) experienced payment delays of at least two weeks. Of these 5,650 staff suffered delays of over four weeks and received additional compensation from the Office.
- 24 The controls established between the Office and the contractor to safeguard against overpayment of field staff also failed to operate as intended. Claims triggering pre-determined exception limits were flagged for investigation by the Office's staff who had to examine the exceptions before the closure of the weekly pay runs and, where necessary, stop the claim before the payment was issued. The volume of claims over the exception limits exceeded the Office's expectations and they could not investigate the details of these claims fast enough to prevent the contractor making erroneous payments. The Office have since identified overpayments to 2,700 staff totalling nearly £498,000 and are in the process of making recoveries.
- 25 Over 12,000 field staff queried with the Office the accuracy and completeness of the payments they had received. The Office established a database at short-notice and recruited 50 temporary staff to investigate these queries, which were finally resolved by the end of October 2001, four months after they should have made final stage payments to the majority of the field force.
- 26 At the Office's request, KPMG their internal auditors, reviewed the preparations for the staff payroll system in September 1999 and again in January 2000. KPMG noted that there was a risk, given the likely volume of exceptions on expense claims during the live Census, that the Office might not have sufficient resources to investigate all cases. Notwithstanding these concerns and the actions taken by the Office, the volume of claims exceeding the system limits contributed significantly to the problems encountered.
- 27 The Office considered legal action against Chessington based on its failure to meet its contractual obligations. Following legal advice from Bird & Bird, the Office considered that they were equally at risk of a claim for damages from Chessington, on the grounds that they had failed to meet their obligations under the contract. In particular, the error rate of input forms submitted to Chessington was significantly in excess of the 2.5 per cent specified in the contract. It was therefore concluded that the contracts should be closed with the final payment being made in full and final settlement of any claims.



# Recommendations

- 28 The experience of the outsourcing of the 2001 Census, and the particular problems encountered in the appointment of external advisors and in the operation of the Census payroll, raises the importance of the oversight and management of outsourced services particularly where that responsibility is devolved to a project team. It is essential that those in charge of such projects discharge their responsibilities properly; ensuring that procurement activities are managed in accordance with public sector standards; that strong internal controls are maintained; and that there is effective scrutiny of project managers.
- 29 The joint National Audit Office and Office of Government Commerce guidance on 'Getting Value for Money from Procurement' provides an accessible guide to the key principles that need to be followed in ensuring that value for money is being achieved from procurement. It also suggests some of the questions that need to be considered in assessing good practice in procurement. These key principles and questions apply to the outsourcing of the Census, and the Office for National Statistics may wish to have regard to this guidance in satisfying itself that any future procurement of services meet all aspects of good practice.
- 30 With regard to the Office's experience during the 2001 Census, we make the following recommendations for the outsourcing of services for any future Census:
- i The Office should ensure that those in charge of the Census understand their responsibilities and manage all devolved procurement activities, including the appointment of professional advisors, in accordance with the Office's procurement procedures. Senior managers must also ensure that appropriate monitoring and reporting procedures are in place to provide sufficient oversight of the conduct and outcome of procurement exercises, including value for money (paragraphs 12 and 14);
  - ii The Census is a large undertaking and its delivery depends on the successful co-ordination of a wide range of services. In outsourcing Census services the Office should ensure that the procurement strategies and contract management arrangements are effectively co-ordinated, between contractors and between those aspects of the Census, such as the field service, which are administered directly by the Office (paragraph 18);
  - iii As the experience of 2001 shows, the Office had to contend with a number of uncertainties in the delivery of the Census such as forecasting the volume of helpline calls, the rate and pattern of post back for Census forms, and the level of rejections in form processing. These uncertainties can present increased risk where Census services are outsourced. In planning any future Census, the Office should ensure that key assumptions underpinning contract terms and service performance are rigorously assessed (paragraphs 19, 22 and 27);
  - iv The Office should also ensure that all key Census services and supporting systems, including the Office's arrangements for co-ordinating those services and managing performance, are fully tested at the Census Dress Rehearsal stage (paragraphs 20 and 21);
  - v While the overall response rate achieved through the post back exceeded expectations, the Office's monitoring of its progress and subsequent follow up was less effective. If the post back is to be retained for future Censuses, the Office should develop a more accurate model for forecasting the volume of returned forms and the pattern of returns between Census Districts (paragraph 19);
  - vi The Office should also look to develop a robust field information system to provide the Office with up to date data on the progress of the post back and allow them to make better informed decisions on the deployment of field staff in the follow up of outstanding returns (paragraphs 19, 20 and 21);
  - vii The Office should also consider whether the timetable for the post back and any subsequent coverage survey allows sufficient time for the results of the post back to be collected before work begins to chase outstanding forms (paragraph 20);
  - viii In the light of the problems encountered with the Census payroll, the Office should ensure that the payroll service specification is agreed with the contractor before development work begins and, in common with other systems used in the Census, that this is fully tested at the Dress Rehearsal stage (paragraph 22);
  - ix The dispersed nature of the Census, the dependence on temporary staff, and the requirement for District and Area Managers to exercise the primary control over the authorisation and submission of payroll data to the payroll contractor presented additional risks for the Office. These risks crystallised in the difficulties encountered in the processing of payroll forms and the absence of effective controls over the £10.3 million paid in respect of piecework for follow up of outstanding forms. In considering their plans for a future Census, the Office should review the adequacy of controls over piecework approved in the field. To safeguard against the high incidence of errors and form rejections experienced in 2001, the Office should consider how the training of field staff might assist in the reduction of payroll errors and how validation checks should apply (paragraphs 22 and 23).

# Part 1

## Preparing for the 2001 Census in England and Wales

### Introduction

- 1.1 On 29 April 2001 a Census was conducted in all parts of the United Kingdom. To conduct the 2001 Census the Office for National Statistics ("the Office") employed a field force in England and Wales of around 73,000 temporary staff to deliver over 24 million Census forms to households in the three weeks prior to Census day. Most worked on the Census for fewer than 12 weeks.
- 1.2 Under arrangements agreed with the Royal Mail, Census forms were posted back to Census field staff in pre-paid envelopes. The Office for National Statistics estimated that the post back arrangements allowed it to reduce the overall size of the Census field force by some 42,000, compared with the 115,000 staff employed in the 1991 Census. Apart from the savings arising from a smaller field force, the Office believed that the post back would allow them to target their enumeration effort in those areas, such as inner-London, which were hard to count.
- 1.3 The post back arrangements were more successful than forecast; 88 per cent of forms were returned to the Office through the post against the 70 per cent expected. Under the Office's costing model the higher than expected national post back rate might have yielded savings of some £5.5 million to the Office. In practice however, actual payroll costs for the Census were £59.9 million, some £5.8 million more than budgeted.
- 1.4 With the help of professional advisors, the Office outsourced the administration of field staff pay, appointing a contractor, ADP Chessington (Chessington), in 1998 to design and operate the Census payroll system. In December 2000, the Office began to encounter difficulties in making accurate payments to field staff in accordance with their planned timetable. These problems continued throughout the period for paying field staff and were not fully resolved until October 2001.
- 1.5 Around 23,000 staff (30 per cent of the field force) suffered delays to their payments and the Office paid compensation of either £50 or £75 to the 5,650 worst affected where the delay exceeded a month. In all some 12,000 staff queried the accuracy of the payments they received. By recruiting additional staff at its site in Titchfield the Office was able to investigate and resolve the vast majority of these queries by the end of October 2001.
- 1.6 In June 2001, while carrying out the audit of the Office's Resource Account for the year to 31 March 2001, the National Audit Office became aware that significant problems were being experienced in processing Census pay. These problems had resulted in delays in making payments to Census staff and higher than expected levels of error<sup>4</sup>. This caused significant inconvenience and financial hardship for a large proportion of the Census field force and these problems were only resolved following intervention by the Office for National Statistics.
- 1.7 This Report examines the Office for National Statistics' arrangements for the outsourcing of 2001 Census services in England and Wales and, in particular, the arrangements for the administration of field staff pay. It also considers the Office's arrangements for the administration of the post back of Census forms and the reasons behind the overspending of the Census payroll budget.

### The aim of the Office for National Statistics

- 1.8 The Office for National Statistics was established on 1 April 1996 by the amalgamation of the Office for Population Censuses and Surveys, and the Central Statistics Office. The aim of the Office for National Statistics, set out in the Office's Service Delivery Agreement with HM Treasury, is to provide high quality statistics and registration services. Its objectives are set out in **Figure 1**. The Chief Executive of the Office is the National Statistician and Registrar General for England and Wales. As Accounting Officer, he is responsible for the proper and effective use of resources provided to the Office and for meeting its performance targets.

## 1 Objectives of the Office for National Studies

- To provide high quality statistics.
- To provide Parliament, central and local government, public, business and the research community with excellent access to high quality statistical data sources.
- To conduct a good value for money Census of Population within the budget provided.
- To provide efficient and accurate registration service of key life events.
- To make a measurably improved contribution to European and other international statistics in timing, funding awarded and harmonisation.

*Source: 2000 Spending Review: Office for National Statistics Delivery Agreement, October 2000.*

1.9 The Office for National Statistics employs about 3,800 staff in London, Newport (Gwent), Runcorn, Southport and Titchfield in Hampshire. A further 1,200 field staff are employed working on social surveys. The Office's management structure in relation to the 2001 Census is shown in Appendix 1. The Office's net resource outturn in 2001-02 was £205.5 million and included £88.8 million in relation to the 2001 Census. Of this, £51.0 million was spent on temporary staff employed to undertake Census field operations. In 2000-01 a further £8.9 million was incurred on these operations bringing the total expenditure on Census payroll to £59.9 million.

### The Census in England and Wales

- 1.10 A Census has been carried out in Great Britain every 10 years since 1801 with the exception of 1941. Since 1951, Northern Ireland Censuses have been carried out in the same year as Censuses in the rest of the United Kingdom. Under the 1920 Census Act responsibility for conducting the 2001 Census in England and Wales rests with the Registrar General for England and Wales, and in Scotland and Northern Ireland with the appropriate Registrars General.
- 1.11 Following devolution responsibility for all aspects of the 2001 Census in Scotland and Northern Ireland was transferred to the Scottish Parliament and Northern Ireland Assembly.
- 1.12 The information collected from Censuses provides a nationwide source of data relating to the numbers and characteristics of the population produced on a consistent basis for small areas. Census information is used in national planning and forms the basis for the distribution of Government funding to local authorities and health authorities. It is also used to assess the effectiveness of policies in areas such as housing and regeneration, transport, racial discrimination and

disadvantage, and is used to produce measures of deprivation. Although central government is the primary customer for Census data, it is also widely used by local government, health authorities, the private sector, and researchers and analysts in many different fields.

1.13 The questions asked on the Census forms are discussed widely and those chosen relate to information that is considered to be most needed by users. These consultations were informed by five Census Advisory Groups in England and Wales, one for each customer sector - central government, local government, the health sector, academics, business and professional organisations. Public reaction to possible questions and styles of Census form was gauged through a field test in 1997 and a Census Dress Rehearsal in 1999. The 2001 Census included for the first time a question on religion.

## Planning the 2001 Census

### Preparation for the 2001 Census

- 1.14 Preparations for the 2001 Census began in the early 1990s with post-implementation reviews and user surveys carried out to identify lessons learned from the 1991 Census. In 1993 a policy evaluation and re-appraisal (PEAR) considered the need for future Censuses in view of the amount of data available from other sources. The conclusion was that only a Census could provide the information needed for planning service provision down to small areas.
- 1.15 Innovations in the areas of methodology, technology, administration and procurement have had a significant impact on the planning and conduct of the 2001 Census.

*Census outputs include adjustments to allow for under-represented groups*

- 1.16 The 1991 Census had also been criticised by users of the information for producing figures which some felt should be amended to take account of deficiencies caused by the count missing certain under-represented groups, typically old people and young, single men. It is estimated that the figures released for 1991 missed around one million people.
- 1.17 The Office for National Statistics therefore decided that the 2001 Census would be a 'one number' Census with levels of under-representation measured by a Census coverage survey, carried out in June 2001. The Census and Census coverage survey were integrated to achieve a single population and household count. The coverage survey in England and Wales included 300,000 households in 20,000 postcodes selected to form a representative sample.

## 2 Census Budget for England & Wales by Year (£ million)

1993 - 1998	1998 - 1999	1999 - 2000	2000 - 2001	2001 - 2002	2002 - 2003	2003 - 2004	2004 - 2005	2005 - 2006	Total 1993 - 2006
13.0	9.3	17.7	44.3	89.8	16.0	6.0	5.5	5.5	207.1

Source: *The Office for National Statistics 2001 Census of Population Business Case.*

*Advances in technology have provided the Office for National Statistics with the opportunity to deliver better quality Census outputs*

1.18 The technology available in 1991, together with time and cost constraints, determined that responses to certain questions were coded and analysed for only a 10 per cent sample of households and people living in communal establishments. User surveys, however, perceived this as offering insufficient reliability for small geographic areas to fully support resource allocations.

1.19 By 1997 technology advances in scanning, image recognition and automatic coding systems offered the prospect of being able to capture data and code 100 per cent of the data electronically in a more cost-effective and less labour intensive way.

*Post-back arrangements for the return of Census forms were introduced to reduce administrative costs*

1.20 The Office for National Statistics also envisaged that value for money gains would result by a move to householders posting back completed Census forms using a Royal Mail pre-paid envelope rather than collection of forms by field staff. This allowed the Office to reduce the overall size of the field force in England and Wales from 115,000 in 1991 to 73,000 in 2001 and to target its enumeration effort in areas hard to count such as inner-London.

*The Office for National Statistics outsourced certain Census functions with the aim of achieving greater value for money*

1.21 In 1994 a review was carried out by external consultants to assess the feasibility of outsourcing the whole Census. This review concluded that to ensure a high response rate the Census needed to be run from within Government. The consultants did, however, recommend outsourcing those elements of Census operations that did not fit into the normal activities of the Office for Population Censuses and Surveys (the predecessor to the Office for National Statistics) and where there were specialist and experienced contractors available. The Office

subsequently decided to contract out the electronic capture and coding of Census data, the printing of Census forms and other materials, delivery and secure collection of forms, telephone helplines and publicity.

1.22 The Office for National Statistics also considered outsourcing the entire field operation to deliver blank forms to households, to monitor the return of completed forms and to follow up outstanding forms. The Office concluded however that there were insufficient providers to deliver such a service and decided to outsource only the administration and remuneration elements of the field force.

### The business case for the 2001 Census

1.23 The Office for National Statistics prepared its business case for the UK Census as part of the 1998 Comprehensive Spending Review, identifying an overall budget for England and Wales of £227.3m over the period from 1993 to 2006. Following discussions with the Treasury this was reduced to £207.1m<sup>5</sup>. The breakdown of the budget for the period 1993-98 and subsequent years is given in [Figure 2](#).

1.24 The overall budget for the 2001 Census of £207.1 million is comprised of £84.0 million for outsourced services and advice, £54.1 million for the remuneration of the Census field force, and £69.0 million for in-house processing and analysis, planning and management and contingencies. The Office have estimated that allowing for the move to 100 per cent coding for all questions, and the increase in households between 1991 and 2001, the cost of the 2001 Census represented a 25 per cent efficiency gain over 1991. In addition to the use of imaging technology and automatic coding for the processing of completed Census forms, the business case anticipated that efficiency gains would also arise from the outsourcing of other administration services that were not part of the Office's mainstream activities.

1.25 The key milestones in the planning and delivery of the 2001 Census are shown in [Figure 3](#) overleaf.

<sup>5</sup> The total cost of the Census in the United Kingdom (England & Wales, Scotland and Northern Ireland) over the 13-year period 1993-2006 is £254 million.

### 3 Key milestones in the planning and delivery of the 2001 Census

1993	Census policy evaluation and re-appraisal
1994	Consultants report into need for future Censuses
1995	Planning for the 2001 Census begins
mid-1997	Census field test of the processing technology
October 1997	Procurement Prior Options Report prepared
October 1998	Business Case for 2001 Census prepared
November/December 1998	Contracts awarded for processing, field staff payroll, printing, delivery and secure collection
March 1999	Census proposals published in White Paper
First half of 1999	Census Dress Rehearsal
mid-2000	Recruitment of Area managers and District managers begins
January - March 2001	Recruitment of main field force
29 April 2001	Census Day
May 2001	Follow up work in districts to chase missing forms
May-June 2001	Census coverage survey undertaken
June 2001	Processing of forms begins
March 2002	Final delivery of data from processing contractor scheduled
August 2002	Release of population estimates
December 2002	Release of main national and local Census results
First half of 2003	Release of full Census results

Source: National Audit Office.

1.26 In 1999 the Office for National Statistics conducted a Dress Rehearsal to assess the style and scope of Census questions. The Dress Rehearsal was also used by the Office to test the proposed delivery and collection procedures, post back proposals, the coverage survey arrangements and the developing systems for electronic data capture and coding. The exercise covered 150,000 households throughout the UK chosen to include a cross-section of population and housing types. The date was chosen to allow sufficient time to develop solutions to any problems that arose and, if appropriate, amend the business case.

#### Legislative authority for the 2001 Census

1.27 The final proposals for the 2001 Census were set out in a White Paper (CM 4253) published in March 1999, and covered four broad aims to:

- ensure that the question content was appropriate to meet the demonstrated requirements of users;
- deliver products and services to meet legal obligations and users' needs within stated quality standards and to a pre-defined timetable;
- ensure that all aspects of the Census data collection operation and dissemination of results were acceptable to the public and complied with data protection law; and

- demonstrate that the Census represented value for money.

1.28 Censuses require the specific authority of Parliament under the Censuses Act 1920 which also sets out the specific matters on which questions can be asked. Regulations for the 2001 Census were laid in Parliament under section 3 of the Act in June 2000. Royal Assent was given in July 2000 to the Census (Amendment) Act 2000 which allowed the introduction of a non-mandatory question on religion. Censuses were held in all parts of the United Kingdom on Sunday 29 April 2001.

#### Delivery of the 2001 Census

##### The output targets for the 2001 Census

1.29 The Office for National Statistics service delivery agreement defines the key output targets for the 2001 Census (**Figure 4**). Processing involved the post back of around 30 million Census forms, electronic data capture and coding, and then adjustment of the Office's staff for the effects of under counting of certain population groups based on the results of the coverage survey. The first Census outputs were scheduled for publication in August 2002.

## 4 Census Output Targets

### Objective:

To conduct a good value for money Census of Population within the budget provided.

### Target:

- Conduct Census of Population on 29 April 2001.
- Conduct Census Coverage Survey by June 2001.
- Complete data capture and coding by March 2002.
- First results (for population estimates) available by August 2002.
- Make statistics required for Standard Spending Assessment Grant purposes available by March 2003.

### Delivery

ONS still expect to deliver the Census for England and Wales within the overall budget of £207 million subject to the settlement of outstanding claims from contractors.

Delivered on 29 April 2001.

Completed at 30 June 2001.

The delivery of the final data batches of coded data were made to the Office on 7 May.

The Office published the first population estimates on 30 September.

Likely to be achieved close to schedule.

*Source: 2000 Spending Review: The Office for National Statistics (ONS) Service Delivery Agreement, October 2000.*

## Treasury Committee inquiry into the 2001 Census

1.30 In March 2002 the Treasury Select Committee<sup>6</sup> published its report on its inquiry into the 2001 Census in England and Wales. This inquiry examined the need for a Census, as well as its preparation, conduct and results. The Committee found that :

- robust evidence to justify the expenditure involved in undertaking the Census was not available. It recommended that any future Census should be justified in cost-benefit terms. Before such a decision was taken, an evaluation should be undertaken of all alternatives to a full Census, such as relying on administrative records, conducting a rolling Census, reverting to a simple headcount, or doing without a Census.
- while proposals for the Census were tested extensively, it was clear that a question on income would have been found useful by many users of Census data. The Committee recommended, in the light of the response rate to the voluntary question on religion included for the first time in England and Wales, that further consideration should be given to the inclusion of such a question in any future Census.
- the preparations for the Census did not identify a number of matters that arose in practice, including the concerns over how Welsh identity was to be recorded on the Census form and how people with sight problems could take part in the Census

independently. The Committee also considered the problems with the return of Census forms by post and the operation of the Census helpline. It recommended that these matters should be reviewed before any future Census.

- in some areas the postal response rates to the Census were as low as 53 per cent compared to an average for England and Wales of 88 per cent. The Committee recommended that the Office for National Statistics review the balance of resources devoted to enumeration in the best performing areas and those devoted to the worst and consider what changes might be necessary to the Census in the light of response rates to individual questions. The Committee also noted that preliminary information suggested that the new data collection procedure may have had an adverse impact on question response rates and recommended that the Office evaluate whether returning forms by post rather than through enumerators had any impact on the response rate to particular questions.
- the first results from the 2001 Census were scheduled to be published in August 2002 with the main results scheduled for publication in the first half of 2003. The Committee recommended a review of the trade-off in cost-benefit terms of the Census results being available earlier for users and public resource planning against the additional cost of doing so. This work should take account of requirements of all data users, and not just the resource allocation round for local government.



1.31 In its response to the Committee's findings, the Government<sup>7</sup> accepted the Committee's recommendations noting in particular that:

- the case for any future Census should include a cost-benefit analysis of the options available;
- the Office for National Statistics should consult further on the inclusion of an income question in any future Census;
- preparation for any future Census will include a more formal role for the National Assembly for Wales;
- future arrangements with providers of any postal return service will address issues that may affect quality and speed of response;
- the performance of the telephone helpline will be reviewed as part of the evaluation of publicity and communications issues;
- the Office for National Statistics will carefully analyse patterns of differential non-response in the best and worst performing areas and also the impact of postal returns on the response rate for individual questions;
- the Office for National Statistics will wish for any future Census to review the balance between time of delivery and coherence of results and whether producing quicker but limited range results are preferable to the 2001 strategy.

1.32 The Office for National Statistics is undertaking its own evaluation of each stage of the process of planning and implementation of the 2001 Census which is scheduled for publication in a General Report on the Census in June 2003. The Office also intend to publish a separate report on data quality at the same time. The Statistics Commission, which was formed in June 2000 to advise on the quality assurance and priority-setting for National Statistics, intends to assess the outcome of the Office's evaluations and to offer advice to ensure that any lessons are fully learnt. The Commission may also decide in the light of the Office's reports to undertake independent studies of their own into the Census.

## Scope of the National Audit Office Examination

1.33 In June 2001, during the National Audit Office's examination of the Office for National Statistics' Resource Account for the year ended 31 March 2001<sup>8</sup>, we noted that significant problems were being

experienced in processing Census pay and that these had resulted in delays in making payments to Census staff together with higher than expected levels of error.

1.34 As part of our audit of the Office for National Statistics' Resource Account for the year to 31 March 2002, we examined the controls over payments made to field staff and reviewed a sample of field staff claims. The Comptroller and Auditor General qualified his opinion on the Offices' 2001-02 Resource Account<sup>9</sup> due to the lack of evidence available to verify payroll charges totalling £10.3 million for piecework carried out by field staff engaged on the 2001 Census. We found that the dispersed nature of the Census operations meant that tight control over piece rate payments was inherently difficult and depended on the judgements made by temporarily employed Census District and Area Managers. Under the arrangements operated by the Office, it was not possible to verify whether the payments to field staff were consistent with the hours actually worked or claimed to be worked.

1.35 This examination focuses on the Office for National Statistics arrangements for outsourcing for the 2001 Census (Part 2); their arrangements for monitoring the return of completed forms (Part 3) and their arrangements for the administration and remuneration of field staff (Part 4). In carrying out this examination we have, in particular, looked at the Office's:

- strategy for outsourcing the 2001 Census; their use and recruitment of professional advisors on Census outsourcing; and their arrangements for managing outsourced contracts;
- monitoring of the return of Census forms through the post back arrangements agreed with Royal Mail; their decision to deploy the field force on work to chase forms not posted back by householders and the impact of this decision on the overall cost of the Census; and
- recruitment of field staff; the development and implementation of the outsourced payroll service for field staff; and how the Office coped with the difficulties that emerged in paying field staff.

1.36 In preparing this report we have reviewed the papers held by the Office for National Statistics, and interviewed the Office's staff and contractors. We also reviewed internal audit reports produced by KPMG for the Office.

<sup>7</sup> House of Commons Treasury Select Committee Ninth Special Report 2001-02 HC 852, *Government Response to the Committee's First Report: The 2001 Census in England and Wales*.

<sup>8</sup> *Certificate and Report on the Office for National Statistics' 2000-01 Resource Account (HC 171 2001-02)*.

<sup>9</sup> *Certificate and Report on the Office for National Statistics' 2001-02 Resource Account (HC 1110 2001-02)*.

# Part 2

## Outsourcing the 2001 Census

- 2.1 The outsourcing of those aspects of Census operations which fell outside the Office for National Statistics' normal activities was a central feature of the Office's business case for innovation in the delivery of the 2001 Census and for securing value for money. This part of the report reviews the outsourcing of the 2001 Census, and in particular:
- the Office's strategy for and oversight of Census outsourcing and its use of procurement advisors;
  - the Office's arrangements for satisfying themselves that Census contracts met Agency standards; and
  - the challenges faced by the Office in managing outsourced Census services.

### The strategy for Census outsourcing

The Office for National Statistics outsourced £69 million of Census services for England and Wales

- 2.2 The overall value of Census services outsourced was £69.1 million representing 33 per cent of the £207.1 million budget. The major contracts are shown in **Figure 5**.
- 2.3 Under the terms of the Post Office Act it was not possible for the Office for National Statistics to have a formal contract with the Royal Mail. The Office and the two other Census Offices therefore drew up a service level agreement to record formally the standard of service that the Office expected to receive. This included turnaround times equivalent to those for second class inland mail for sorting and delivery to field staff of completed Census forms. The Office and its partners were required to pay Royal Mail handling charges, counting and reporting charges, freepost licence fees and second class postage costs. In total Royal Mail was paid £7.7 million for the costs of handling posted back Census forms and other services.

The Office for National Statistics' strategy for outsourcing:

#### (a) Processing Census forms

- 2.4 As noted in Part 1, the Office considered that to answer criticisms of the 1991 Census 100 per cent capture and coding of data entered on Census returns was necessary. The decision to pursue a solution involving electronic capture and coding using the latest imaging technology was central to this strategy. The Office's initial focus was therefore on outsourcing the processing of completed Census forms. The Office needed to satisfy itself that the scanning technology was viable and capable of dealing with the size and complexity of the Census and that the field of potential suppliers was sufficiently large to ensure competition.
- 2.5 Other countries, notably the United States, were already planning the use of imaging technology to support the capture of Census data. In 1997 the Office arranged a field test to assess whether the imaging technology available would meet its requirements. A Procurement Prior Options Report was prepared in November 1997, with assistance from professional advisors, to evaluate the options for procuring the solution. This recommended that an outsourcing approach to the electronic data capture and coding part of the Census would offer greater value for money over purchasing a system outright. The basis for this decision was that:
- the skills available within the Office were weak in the leading areas of technology and process re-engineering but strong in management, organisation, Census design and statistical analysis;
  - while certain parts of the information technology market were at the time reaching saturation point, the part of the market that the Office would be accessing had sufficient capacity available to ensure adequate competition.

## 5 Award of Census Contracts

This table shows the principal contracts awarded for Census Services, together with the main contract changes and the expected outturn.

Service	Contractor	Initial Contract Value £000 A	Contract changes £000 B	Expected Outturn £000 A + B
Processing and printing scannable forms (*)	Lockheed Martin	46,503	1,878 (printing additional forms for households)	
Option to upgrade computer storage capacity and to archive images of Census forms (*)	Lockheed Martin	5,883		54,264
Printing of materials	Central Office of Information	1,980		4,335
Option to print publicity materials and increase original quantities	Central Office of Information	2,355		
Advertising (**)	M&C Saatchi	3,679	408 (to address emerging communication needs, including increased advertising in Wales, and increased national advertising to encourage people to post back Census forms)	4,087
Distribution and secure collection	TNT	2,018	605 (additional distribution arising from Foot & Mouth and logistical difficulties in field staff collecting posted back forms in London)	2,623
Census Helpline (including Dress Rehearsal)	Cable & Wireless	1,676	713 (new lines and overtime costs as a result of underestimating the volume of calls)	2,389
Field staff payroll	ADP Chessington	1,013	372 (costs of recovering advances, additional processing and reporting)	1,385
<b>Total Outsourcing</b>		<b>65,107</b>	<b>3,976</b>	<b>69,083</b>

(\*) Contract value covers England and Wales only and represents 89 per cent of the total contract amount. Of the other 11 per cent, 8 per cent related to Scotland and 3 per cent to Northern Ireland.

(\*\*) The tendering of the contract to provide advertising services for the Census was run by the Central Office of Information on behalf of the Office for National Statistics.

External advice on outsourcing cost £1.4 million. Other consultancy costs covering technical support, support for field staff recruitment and promotional matters totalled £1.1 million.

Source: *The Office for National Statistics List of Census Contracts awarded/NAO.*

2.6 The three Census Offices (The Office for National Statistics, General Register Office for Scotland and Northern Ireland Statistics and Research Agency) recognised the potential for securing better value for money by letting a contract to cover the processing of all Census forms across the UK. The Open Options Procurement Steering Committee was formed in February 1998 to manage the award of the contract for all three Census Offices.

2.7 Market research suggested that only six or seven firms world-wide would have the skills to carry out processing work. Following a tendering exercise three firms were short-listed. All were based in the USA and had carried out similar work in the 2000 US Census. Evaluation of the competing bids showed that all could deliver the requirements and the contract was let in December 1998 to Lockheed Martin on the basis of best value for money. Following the award of the contract the Open

Options Procurement Steering Committee was re-constituted in February 1999 as the Processing Service Contract Steering Committee to manage the contract.

### (b) Other services

2.8 In addition to data capture and coding, the 1994 report by external consultants had recommended other areas that might be suitable for outsourcing. In 1991 the printing and delivery of Census forms was handled by Her Majesty's Stationery Office, while the payroll had been processed in-house. In its 1998 business case, the Office stated that it intended to pursue outsourcing to enhance the value for money provided by the 2001 Census for the provision of the following services:

- Administration of pay for the field force;
- Printing of Census forms and other supplies;

- Delivery of forms to Census Districts, and the secure collection and transportation of completed forms to the processing facility.

2.9 For the other outsourcing contracts the services, the solutions and the market of available suppliers were more easily defined. The Office considered that competitive tendering would deliver value for money. The major contracts were let in November and December 1998.

2.10 In practice however, The Office for National Statistics found that the number of interested suppliers for the field staff payroll contract was small with only two short-listed firms offering different solutions. The Office subsequently encountered difficulties in agreeing the payroll service requirements and in making payments to field staff. The arrangements for the award of the Census payroll are outlined in [Case Study 1](#). The problems in implementing the Census payroll service are reviewed in Part 4.

## The use of professional advisors

2.11 The Office for National Statistics recognised that in order to properly manage the risks to the delivery of the 2001 Census it needed good quality procurement and legal advice and that these skills were not available in-house. Professional advisors were therefore employed to:

- raise market awareness of Census outsourcing opportunities and generate competition with a view to securing value for money;
- advise on the content and suitability of competing bids;
- draft contract clauses to allow the management of performance;
- liaise with bidders to ensure they fully understood the Office's requirements and that their proposals were properly costed;
- develop a framework to manage contractor performance including the establishment of risk registers and the assignment of risk to named individuals;
- advise on the management of events as they arose.

## Case Study 1: The Office for National Statistics encountered a number of problems in outsourcing the Census payroll contract

### Only three companies submitted indicative bids

The advert for the UK Census payroll was published in the Official Journal of the European Commission on 27 January 1998. The Office received ten contract notice questionnaires from potential bidders, and three potential suppliers provided outline proposals and indicative bids by the deadline of 8 May. The three bidders and the indicative prices quoted were: M P Systems £616,000, Capita £1,476,000 and ADP Chessington £1,903,000.

### MP Systems were subsequently excluded

MP Systems provided the software for administering field staff payroll during the 1991 Census and the 1997 Census Test. Their indicative quote for the 2001 Census was based on a joint venture with the Office's Finance Branch. The Office decided not to proceed with this but MP Systems continued with their bid by securing the services of an alternative partner, although they did not increase their initial quote.

In August 1998, following a second financial evaluation and further legal advice, the Office determined that MP Systems did not meet the required criteria for the payroll contract and could not take any further part in the procurement. The Office invited them to withdraw their bid. The Office accepted that they should have advised MP Systems much earlier that they had failed the financial evaluation and so paid them £22,000 compensation in June 1999 for wasted effort.

### Chessington's indicative bid was revised to reflect the expected level of error in data supplied by field staff

The Office supplied information on the level of pay queries experienced in the 1991 Census to all bidders as part of pre-contract negotiations. Chessington reduced its indicative price to £1.02 million to reflect a shorter development period than originally allowed for in the indicative bid and a lower level of pay queries. Capita chose not to revise their bid and they informed us that it was unlikely that they would have reduced their bid based on the pay queries information supplied by the Office.

## Case Study 1: The Office for National Statistics encountered a number of problems in outsourcing the Census payroll contract (*continued*)

### The Office for National Statistics awarded the contract to Chessington on the basis of price

External advisors from Vogue Consultants (UK) assisted the Office in developing a model to evaluate the best and final offers received from the two remaining bidders - Chessington and Capita. There were major differences in methodology between the two bids but the evaluation rated Chessington's proposal as marginally better than the Capita alternative.

ONS awarded the contract to Chessington on 11 December 1998 on the basis that their best and final offer of £1.02 million was the cheaper of the two bids.

2.12 In October 1997 the Census Director commissioned a senior consultant of Vogue Consultants (UK) Limited ("Vogue") to produce the Procurement Prior Options Report. Vogue were selected through a single tender. Vogue's principal consultant had expertise in procuring information technology systems and had worked with the Census Director at the Information Technology Services Agency of the Department for Social Security in 1994. Following the Procurement Prior Options exercise and following presentations to the Office's Chief Executive, Vogue were employed as the Office's advisors on Census outsourcing procurement. The Office also appointed Bird & Bird as legal advisors for the Census.

2.13 Between October 1997 and July 2002 Vogue were paid £1.0 million for their work on the Census, with £900,000 relating specifically to the Census in England and Wales. Bird & Bird were paid a total of £674,000 with £540,000 being attributable to the Census in England and Wales. Other consultancy costs, covering technical support, support for field staff recruitment, and promotional matters totalled £1.1 million. In total consultancy costs on the Census were £2,540,000, which represents 3.7 per cent of the £69.1 million total value of Census services outsourced (Figure 5).

### ONS' oversight of contract implementation

2.14 The Office for National Statistics considered that their central procurement unit, based in Newport, did not have the detailed knowledge of information technology necessary to manage the outsourced Census processing services. The Census Division therefore established its own procurement unit under the leadership of the Census Director.

2.15 Under devolved procurement arrangements, the Office gave the Census Procurement Unit authority to undertake procurements with a value not exceeding £20,000 with all contracts subject to the Office's standard terms and conditions. In February 1999 the Office together with the Census Offices for Scotland and Northern Ireland also established a Contracts Management Board to oversee the award and management of Census contracts. The contract administering field staff pay also covered all three Census Offices and, in September 1999 following the Census Dress Rehearsal, a Contracts (Payroll) Steering Committee was established to co-ordinate the requirements of the three Offices and manage the development of the services by the contractor. Appendix 2 shows the membership and terms of reference of these client-contractor committees, including the Processing Service Contract Steering Committee established in February 1999.

- 2.16 Following devolution, responsibility for contracts in relation to Scotland was assumed by the Scottish Census Programme Board established by the Registrar General for Scotland, although the General Register Office for Scotland continued to represent Scottish interests via the committees indicated in Appendix 2.
- 2.17 The Office for National Statistics central procurement unit also continued to monitor Census procurement activity. In December 1998 the Office's Head of Information Technology Procurement carried out an independent review of Census Division's devolved purchasing arrangements. This review raised a number of concerns about the Division's management of the contract with Vogue. The Office's Finance Director therefore instructed their internal auditors, KPMG, to investigate the arrangements regarding the appointment of Vogue. KPMG's investigation found that the Census Director had failed to follow the Office's internal policies on the appointment of Vogue. As a result the Census Director was disciplined for his role in the appointment of Vogue although he remained in post. The main findings of the KPMG review and the disciplinary action against the Census Director are summarised in [Case Study 2](#).

## The Office for National Statistics' review of the Census outsourcing arrangements

- 2.18 Following the internal reviews of the arrangements for appointing external advisors to Census procurement, the Office for National Statistics took a number of actions:
- **The Office reviewed Vogue's performance as advisors and imposed standard contract terms.** The Office assessed Vogue's performance as advisors on the Census procurement as excellent. Vogue also had a high degree of familiarity with the Census contracts, particularly with regard to the processing contract which had a value over £50 million. The Office's Director of Social Statistics considered that the risks of dispensing with Vogue outweighed the risks of retaining them and, with the agreement of the Principal Finance Officer, negotiated a new contract with Vogue imposing the Agency's standard terms and conditions. The revised contract was signed in August 2000 with an effective date of January 2000.

## Case Study 2: The Office for National Statistics' appointment of external advisors failed to take proper account of the need for regularity and propriety

### Internal Audit were asked to investigate the appointment of Vogue as external advisors

In October 1997 the Census Director commissioned a senior consultant of Vogue Consultants (UK) Limited ("Vogue") to produce the Procurement Prior Options Report. Vogue were selected through a single tender. Vogue's principal consultant had expertise in procuring information technology systems and had worked with the Census Director at the Information Technology Services Agency of the Department for Social Security in 1994. Vogue were paid £26,500 for this work and were subsequently retained to provide advice to the Office for National Statistics on Census procurement.

In December 1988 a periodic audit of Census Division's devolved purchasing system by the Head of Information Technology Procurement led him to raise concerns with the Finance Director about the Division's management of the contract with Vogue. The Finance Director instructed the internal auditors, KPMG, to investigate the arrangements regarding the appointment of Vogue. In their report of May 1999, KPMG noted that:

- following completion of the Report on the Open Options Procurement, the Office allowed Vogue to carry out further work between December 1997 and February 1998, without any written contract. The Office paid Vogue £34,000 for this work;
- the contract agreed with Vogue in March 1998 did not use the Office's standard terms and conditions, nor did it specify a maximum contract value or a termination date. In the period up to May 1999, the Office paid Vogue £485,000 in fees and expenses under this contract;
- the Office did not advertise the procurement of services in the Official Journal of the European Communities (OJEC) nor did they publish details of the award.

## Case Study 2: The Office for National Statistics' appointment of external advisors failed to take proper account of the need for regularity and propriety (*continued*)

### The Office for National Statistics' Census Director was disciplined for his role in the appointment of advisors

KPMG's report, and subsequent investigations led by the Office for National Statistics' Director of Corporate Services, led to disciplinary action being taken against the Office's Census Director, in June 1999 for serious misconduct for his role in the appointment of advisors. The Office found that, in focussing on the Census project in a single-minded way, the need for propriety and regularity in appointing external advisors to support the Census Open Options Procurement process had been neglected. The Census Director had failed to seek authoritative advice internally or to observe the Office's own guidance and had, as a result, placed the Office at risk. The Office nevertheless accepted that the actions of the Census Director were motivated by the best interest of the Census and its success. The Office also acknowledged that the Open Options Procurement process was successful and that there was no evidence that personal gain had motivated these arrangements.

### The Census Director remained in post

The Office allowed the Census Director to remain in post but issued a warning letter about his future conduct. The Office also reduced his pay award in 1999 from around 8 per cent to 3.95 per cent of his salary. He retained chairmanship of the Contract Management Board and the Processing Service Contract Steering Committee. With effect from January 2000 the Census Director was awarded an additional allowance of 8 per cent of his salary until 31 December 2001 in recognition of his heavy workload. He subsequently resigned from the civil service in April 2002.

- **The Office reviewed the appointment of other advisors.** The Office were concerned that breaches of internal guidance by its own staff may have occurred with the employment of Bird & Bird. They therefore carried out an internal review of the appointment which included independent advice from the Office of the Solicitor for the Departments of Health and Social Security. The Office's review concluded that no formal procurement process was required for legal services. Moreover, the rates quoted in the contract were the same as available to Government Departments under Bird & Bird's framework agreement with the Central Computer and Telecommunications Agency (now a part of OGC.buying solutions). As a result, Bird & Bird were retained as legal advisors on the Census.
- **The Office reviewed all Census contracts let by the Census Division.** In December 1999 the Finance Director asked the Head of Procurement to review all Census service and consultancy contracts let without Central Procurement Unit involvement. The only contract not included in this review was the Lockheed Martin contract, which was considered to have already had sufficient scrutiny from outside Census Division as a result of the extensive involvement of senior management (including the Finance Director himself) in the tendering process and the subsequent exercise to obtain HM Treasury expenditure approval for the letting of the contract. The value of the contracts reviewed ranged from £9,000 to £4.2 million and covered services ranging from IT consultancy, through payroll to printing and forms distribution. The review found that while procedures differed between the Census Procurement Unit and the Central Procurement Unit all of the existing contracts appeared to represent an acceptable contractual risk to the Office.
- **Census Division procurement delegations were withdrawn.** The special procurement delegations to Census Division were withdrawn early in 2000 after which the Census Procurement Unit reported directly to the Head of Procurement. The role of the Census Business Manager was enhanced to provide a focus for financial management in the Division. She was to support the Census Director in his delegated budgetary responsibilities, and to be a primary source of liaison and information exchange with the Office's Finance Director and the Finance Policy and Planning Group. This latter group provided a discussion and decision making forum on a range of financial matters.

## Challenges in the delivery of outsourced services on the Census

### The Office for National Statistics established a robust risk management framework

2.19 The Office for National Statistics established a Census risk management programme to deal specifically with the risks arising from the 2001 Census in England & Wales. The objectives of this programme were to ensure that adequate processes and controls were in place, properly designed, documented and communicated and to ensure that:

- appropriate forms of risk registers were maintained and updated;
- appropriate communication channels were established between the central risk manager, project teams and to inform senior management of issues in a timely manner;
- procedures were in place to capture internal and external risks, and the interdependencies between projects.

2.20 In many respects this framework operated well. The Office were able to cope with events as they arose including the outbreak of Foot and Mouth disease in many parts of England and Wales, where because of movement restrictions Census forms were posted rather than being hand delivered.

2.21 The Census risk management programme also extended to outsourced services. The Office's external experts played a key role in helping them identify potential risks to the contracting-out of Census services and developing appropriate procurement strategies. This also involved ensuring that appropriate performance management mechanisms, including joint risk registers, were developed for all main contracts. These too have generally worked well and when faced with difficulties the Office have worked with the Census service providers to resolve potential problems.

2.22 In the case of Census helplines (described in [Case Study 3](#)) the Office and the contractor were faced with inherent difficulties in forecasting the levels of service required and the effect advertising would have on call volumes. In the case of processing Census forms the Office and the contractor had to deal with staff being unable to code data at the expected rate (described in [Case Study 4](#)). In both cases the flexibility built into the contracts by the Office allowed for appropriate recovery plans to be put in place, although at additional cost. These examples contrast with the challenges faced in paying the 73,000 field staff accurately and on time where recovery action was not so successful. These issues are reviewed in detail in Part 4.

## Case Study 3: Outsourcing challenges - Census helplines were overwhelmed

### The contract specified the expected call volumes

The contract for the provision of public helplines was awarded to Cable & Wireless based on an expected telephone call volume of 600,000 and between 35,000 and 56,000 electronic mail enquiries.

### Adjustments were made to the service to keep within the Office's budget

The initial quotes for the public helplines service all exceeded the Office for National Statistics' expectations. In order to remain within the budget the Office asked Cable & Wireless to modify elements of the proposed helpline service and to encourage the maximum possible use by callers of the automated voice response system, designed to provide answers to the most commonly asked questions. The Office agreed a revised cost of £1.9 million for this service.

Based on their experience with the 1999 Dress Rehearsal, the Office had expected that 75 per cent of callers would need to speak to an advisor, provided by Broadssystem Limited, and that 25 per cent of calls would be dealt with using the automated system. Cable & Wireless advised that this mix was in line with other client services.

### Public helplines were initially overwhelmed by the volume of calls

In the Office's view press and television coverage of the initial days of Census form distribution together with Census storylines in popular television soap operas raised public awareness to a degree they had not expected despite advice taken externally. This prompted over 2.6 million calls to the helplines, well in excess of their capability.

The huge increase in calls reached a peak on 23 April when 250,000 calls were received. On that day 53 per cent of callers heard only an engaged tone. However, the fact that the Office had redefined the service requirement following the contractor's initial bid exacerbated the problem. Electronic mail enquiries during April also exceeded the Office's forecast and it became impossible for the contractor to answer them within the specified 24 hour period.



### Case Study 3: Outsourcing challenges - Census helplines were overwhelmed *(continued)*

#### The contractor was able to introduce remedial measures within 48 hours

Despite the volume of calls to the helpline being well in excess of expectations Cable & Wireless were able to introduce within 24 hours 450 additional telephone lines together with additional advisors. A separate emergency helpline was also set up on 26 April specifically as a form request service for the Office. This line received over 76,000 calls.

### Increases in the cost of outsourced services

2.23 The Office for National Statistics have incurred additional costs in overcoming some of the difficulties encountered by contractors in delivery of Census services. The Office, however, remain confident that these can be absorbed within savings elsewhere in order to remain within the overall budget of £207 million agreed for the 2001 Census, subject to any compensation claims from contractors.

2.24 Following delivery of data, Lockheed Martin have sought compensation for additional costs incurred by them in delivering the contract, claiming that the additional work they undertook fell outside the contract specification. Specifically the areas challenged include:

- how the costs associated with volumes in excess of the indicative figures quoted in the contract should be treated;
- the incorrect filling and labelling of boxes of Census forms sent by field staff; and
- the late return of Census forms.

2.25 The Office for National Statistics has lodged counter claims against Lockheed Martin for costs arising from late delivery of some data, including additional computer hardware and staff resources to cope with the revised delivery schedule. These claims are currently under discussion between Lockheed Martin and the Office, the General Register Office for Scotland and the Northern Ireland Statistics and Research Agency.

## Conclusions

- 2.26 The Office for National Statistics established a sound strategy for outsourcing Census services. They also ensured sufficient competition to deliver value for money from those services. Contract negotiation and appropriate risk management arrangements were combined with the help of external advisors to ensure delivery of outsourced services to the required standard and close to timetable. This was achieved despite having to deal with a number of challenges, including changes in service requirements and inherent difficulties in forecasting service levels. Final costings, however, remain uncertain as a result of the compensation claims made by Lockheed Martin.
- 2.27 The Office chose not to outsource the whole of the Census but to outsource specific services to contractors who had the required skills and experience in those areas. There were, however, key dependencies between the outsourced services and those elements of the Census, such as the recruitment and deployment of the 73,000 strong field force, that were managed directly by the Office. In particular the arrangements for returning Census forms and the management of the field force were critical to ensuring a high response and to the performance of processing work by Lockheed Martin. Part 3 of this report examines the Office's arrangements for monitoring the return of completed forms. Part 4 examines the Office's arrangements for the administration and remuneration of field staff.

### Case Study 4: Outsourcing Challenges - Electronic data capture and coding of Census forms was initially slower than expected

#### Lockheed Martin were appointed as processing contractor by all three Census Offices

Lockheed Martin were appointed by the Office for National Statistics and the Census Offices in Scotland and Northern Ireland as contractor to process Census forms. The processing involved the imaging of Census forms and then the capture and coding of the data they contained from the electronic images. Completed Census forms were initially returned to District field staff where they were boxed and given identification codes before being collected by TNT and delivered to a secure warehouse in Wigan. Processing was carried out at ICL's Widnes site, where a purpose-built processing facility had been built.

#### The expected rate of processing could not be achieved initially

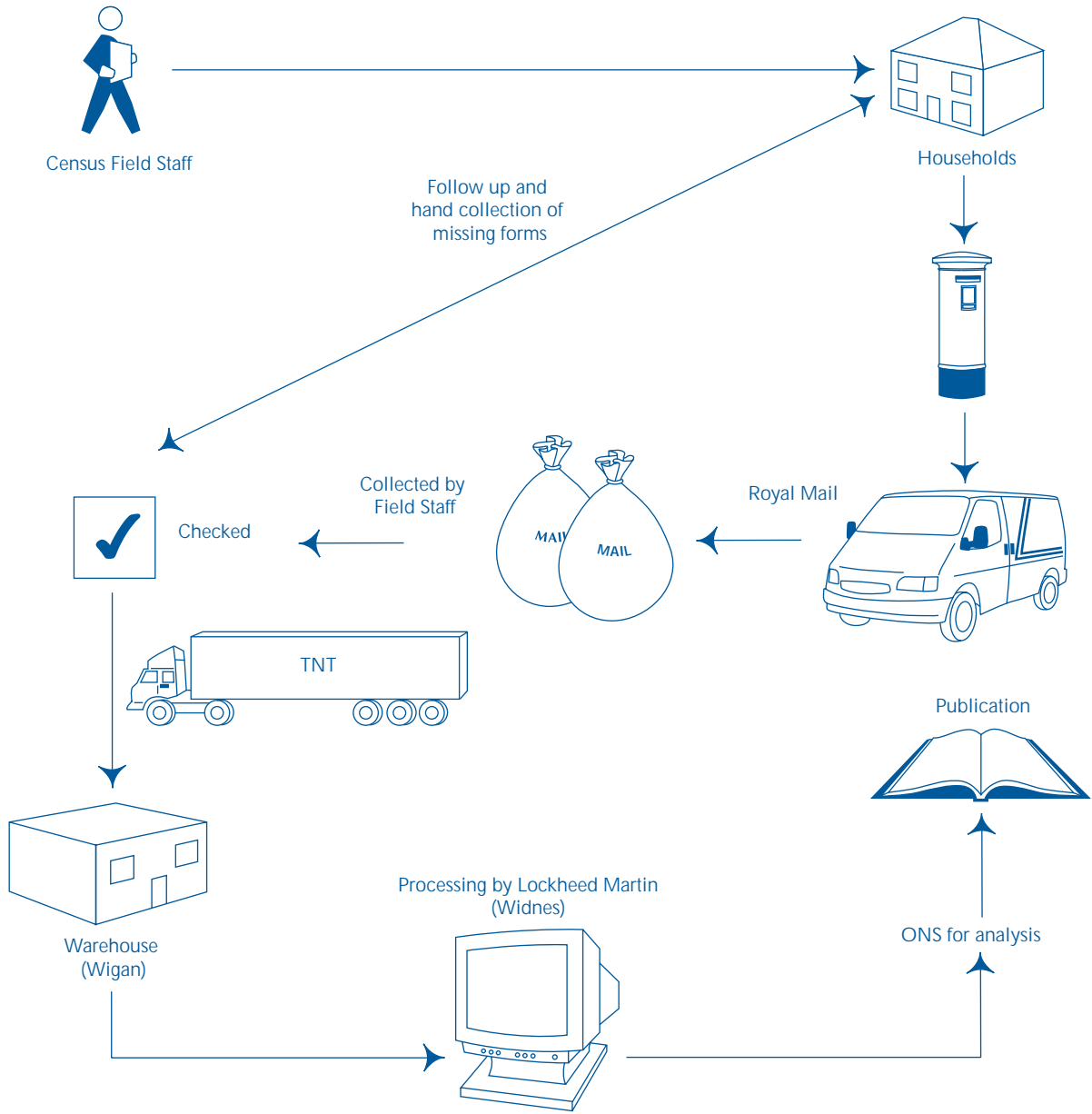
The Office for National Statistics' timetable for the processing work envisaged Lockheed Martin receiving forms by July 2001 and delivering the required outputs by Census Area beginning in August 2001 with the final deliveries being made in March 2002. By August 2001, however, it became clear that the expected rate of processing could not be achieved for two main reasons:

- locally recruited staff were unable to key coding data at the required rate; and
- technical issues in the speed of accessing stored data added to delays. In the United States, where the system had been used in 2000, processing was done in two stages, the first being simply a head-count. In the UK the processing was done in one stage and the pattern of data delivery was different from that in the USA. As a result the planned data storage structures proved to be slower than expected.

#### The contractor was able to develop and implement a rectification plan

The contractor took steps to resolve keying and data storage problems, but this delayed the initial transfer of data to the Office from 1 August to 20 September 2001 and subsequent deliveries were also late. A rectification plan, implemented in December 2001, resulted in faster data deliveries from Lockheed Martin, with the final deliveries being made on 7 May. This was five weeks later than the agreed 31 March 2002 deadline, delaying the Office's delivery of the first output from the Census from August to 30 September 2002.

6 Flow of Census Forms



Source: National Audit Office

# Part 3

## The Post back of Census forms

- 3.1 The number of completed Census forms returned by householders determined the response rate achieved and, therefore, the overall success of the Census. In 2001 the Office for National Statistics asked householders to post back completed forms using pre-paid envelopes rather than have field staff collect them as in the 1991 Census. The Office estimated that the post back arrangements would allow it to reduce the size of the field force to 73,000 from around the 115,000 used in the 1991 Census. Post back would also allow field staff to concentrate on chasing non-returned forms and thereby help to maximise the total volume of forms returned.
- 3.2 This part of the report reviews the arrangements put in place by the Office for the return of completed Census forms from householders, in particular:
- the Office's agreement with Royal Mail for the conduct of the post back;
  - the outcome of the post back; and
  - the causes of overspending on field staff pay.
- 3.4 The Office's timetable called for field staff to begin chasing missing forms on 9 May, ten days after Census Day. This follow up work was to be completed by the end of May in order not to adversely affect the results of the Census Coverage Survey due to be carried out in June 2001. The key therefore to the effective use of field staff on follow up work was the ability to quickly identify low response areas within Districts so as to prioritise work to chase missing returns.
- 3.5 In order to monitor the post back it was vital to have accurate and timely information on the volumes of forms being delivered to the Census field force. The Office's agreement with Royal Mail provided for daily figures on the volumes of post sorted by each Mail Centre for each Census District. The agreement required Royal Mail to provide the information by 10am the following morning but they were able to provide it by 5pm on the same day. In addition, the Office implemented, as part of the Cable & Wireless helpline contract, an automated system to collect information from District Managers. Using touch-tone telephone technology, District Managers were required to key in progress with the receipt and checking of posted back Census forms. The Office would use this information to identify areas where the response rate was low and assess the need to re-deploy field staff into those areas.

### The service level agreement with the Royal Mail

- 3.3 The Office for National Statistics established a service level agreement with Royal Mail to cover the collection of returned forms from post boxes, sorting by Census District using Royal Mail's network of 69 Mail Centres and delivery to a Royal Mail Delivery Office for collection by Census field staff. The target time for the delivery of Census forms was 3 working days, in accordance with the Royal Mail's normal second class postage service. In addition to sorting returned forms according to Census District, the agreement also required Royal Mail to perform a secondary sort of forms within each District according to the enumeration area. This secondary sort would assist field staff in quickly identifying areas with a low post back response and was based on a two digit code written on the envelope by field staff when forms were delivered to householders.

### The post back rate exceeded the expectations

- 3.6 The national post back rate achieved was 88 per cent representing around 21 million forms for England and Wales. This was significantly higher than the Office for National Statistics' expectations. Based on experience with post back arrangements in other countries, the Office believed that a postal response of around 70 per cent would be achieved - approximately 17 million forms.

3.7 Although the post back was a success, with the actual response rate being well in excess of their expectations, a number of difficulties were encountered in monitoring the progress of the post back and in management of the subsequent follow up of outstanding replies. In particular:

- the higher volume of forms posted back contributed to backlogs in the sorting and checking of returns in some Census Districts. In a number of Districts the Office's staff were re-deployed to carry out the secondary sorting of posted back returns instead of the Royal Mail;
- variations in the pattern of posting between Districts made it difficult for the Office to assess the outcome of the post back in some areas; and
- weaknesses in the Office's internal information systems prevented management from establishing a clear view of District Managers progress in the collection and checking of responses received through the post back.

These problems are considered in the following paragraphs.

### The volume of Census forms posted back contributed to backlogs

3.8 The 2001 Census was the first time a post back arrangement had been used for a UK Census; it was, therefore, difficult for the Office for National Statistics to establish precise forecasts of the volume and pattern of postal responses. Given these difficulties, the Office provided the Royal Mail with estimates of the ranges in the pattern of postal responses expected over the course of the Census. The Office informed the Royal Mail that they expected 10 to 15 per cent of forms to be posted back in the three weeks before Census Day, 40 to 60 per cent in the week immediately following Census Day, 15 to 20 per cent in the 10 days after that, and 10 to 15 per cent from 19-30 May. Royal Mail used these assumptions to plan their resourcing.

3.9 As **Figure 7** shows, the postal response peaked in the five days following Census Day when the Royal Mail handled over 8 million forms in line with the Office's expectations. Variations in the rate of response in the week prior to Census Day, where the volume of forms returned had exceeded expectations had contributed to some minor delays in Royal Mail sorting offices. The Office's managers kept in close touch with their counterparts in Royal Mail, who by 4 May were estimating around 3 million items had been collected

but were waiting to be sorted. Based on the Office's forecast of a 70 per cent post back rate, Royal Mail believed that they would be able to clear these items within a few days.

3.10 Figure 7 shows the volumes of mail processed by Royal Mail each week between 9 April and 30 May 2001 compared to the Office for National Statistics' estimate of the post back. The estimate shown represents the upper and lower limits of weekly post back that would achieve a national return of 70 per cent. After 30 May Census forms collected by Royal Mail were sent direct to the Office for National Statistics' store. By August 2001 432,000 forms had been received by the store.

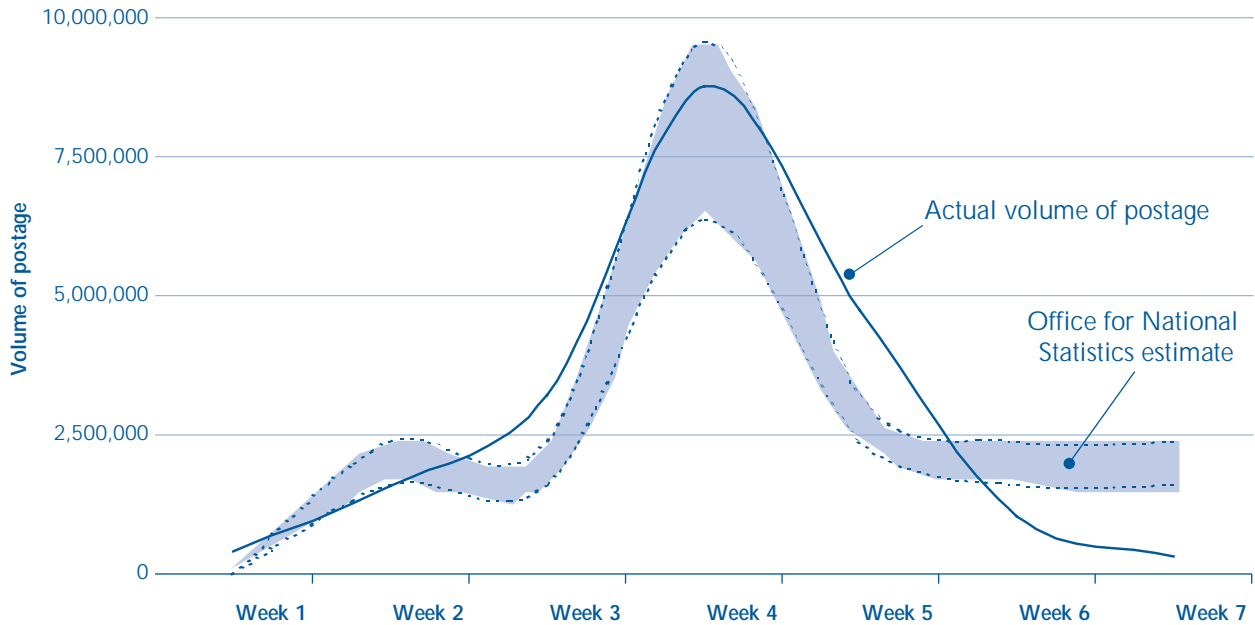
3.11 It was only later in the week of 7 to 14 May, when the volume of post back was significantly higher than projections, that the Office realised that the postal response rate would exceed their expectations. The additional mail posted during this period pushed the overall response rate to above 80 per cent and contributed to a backlog in some Mail Centres, delaying delivery further beyond the target delivery times to the Office's field staff. Royal Mail told us that their data showed that in most cases the delays were around one to two days. The Office told us that their own information from field staff suggested that in some Districts the delays were much longer and the deliveries of mail for collection were irregular.

### The Office for National Statistics diverted its own resources to assist in sorting Census forms

3.12 In some districts the Office for National Statistics diverted field staff to assist in sorting of Census returns. In the light of the higher than expected levels of post back, the Royal Mail concentrated their resources on sorting forms according to Census District. To speed up the delivery of forms to field staff, District Managers in 468 of the 2,017 Census Districts agreed to carry out the secondary sort by enumeration area themselves. In a number of other instances the Royal Mail were unable to carry out secondary sorting because Census field staff had failed to include the enumeration area code on the reply envelope.

## 7 Whilst the Office for National Statistics predicted the overall pattern of post back there were significant gaps at critical times

*Census day fell at the end of week 3*



*Source: National Audit Office*

### The pattern of posting varied between Districts

3.13 In addition to the increased volume of forms returned through the post back, there were significant variations in the pattern of post back from District to District. These variations, which are illustrated in **Figure 8** made it difficult for the Office for National Statistics to determine where and how to deploy field staff in the follow up. For example, North Bradford had received only around 50 per cent of Census forms back by 8 May but its returns peaked the following week, by the end of which it had received 100 per cent back. By contrast, in Districts such as West Birmingham, where the response rate had already reached 78 per cent by 8 May, a much lower level of post back in the following weeks resulted in a final response rate of only 83 per cent through post back.

3.14 Some of the variances between Districts may be due to the mail sorting delays experienced in some areas but it is not possible to isolate these elements from the different posting patterns adopted by households. The percentages are measured against the Royal Mail's expected total volume for each District based on the estimated number of households supplied by the Office. Clearly, prior to the Census exact figures do not exist. In some cases the number of forms returned exceeded Royal Mail's expectations. This may have resulted for a

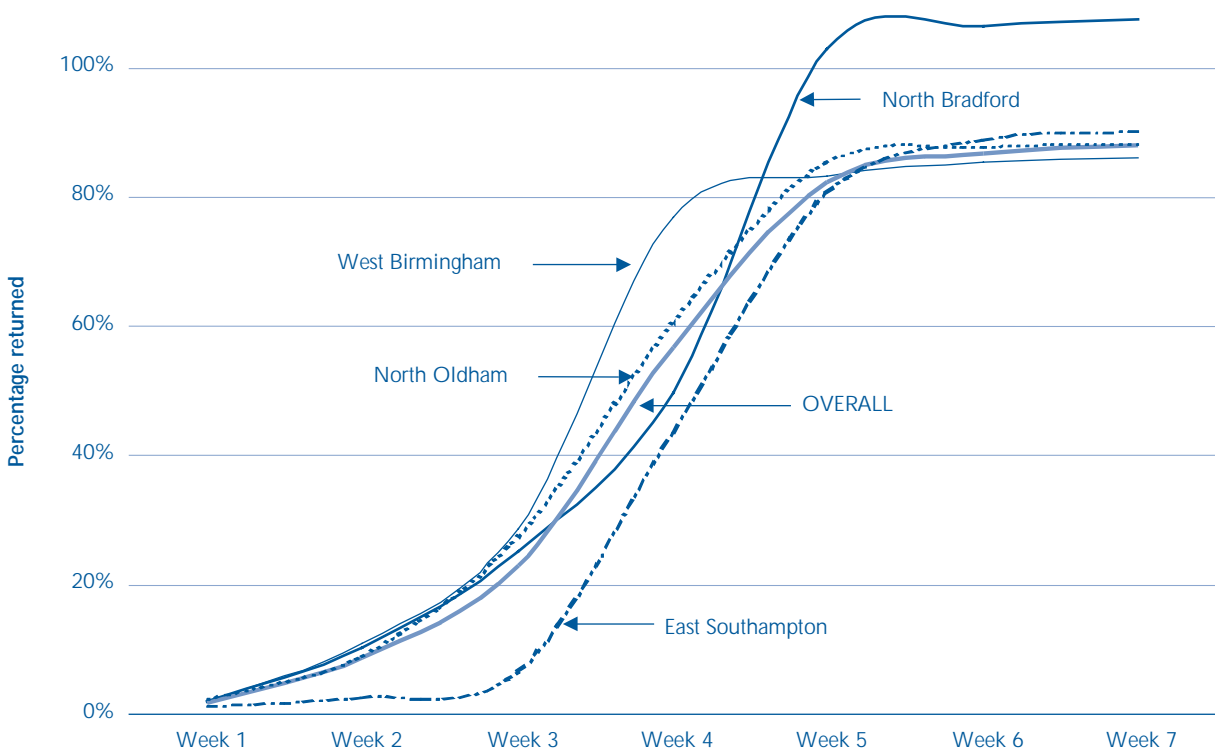
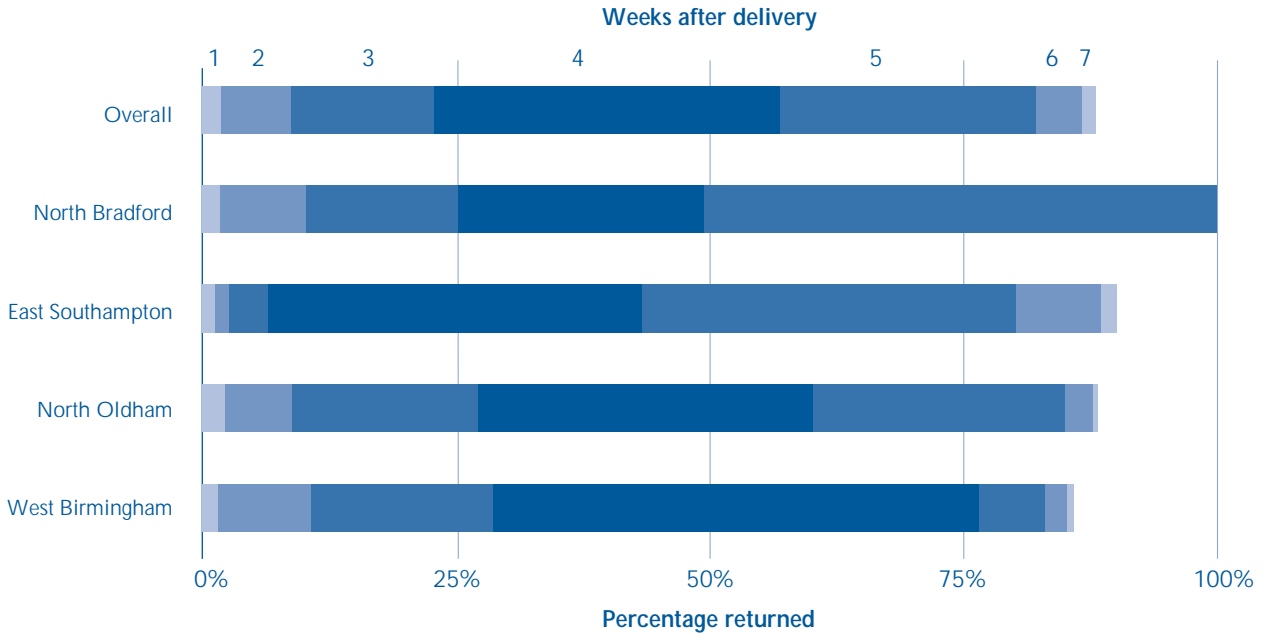
variety of reasons including actual numbers of households being higher than expectations, misdirected forms proper to neighbouring Districts or from additional forms despatched following requests by households to the Cable & Wireless helpline. It is not possible, however, to determine the impact within each District of each of the possible causes.

### Information from District Managers was inadequate

3.15 Although the Office for National Statistics were able to monitor the overall progress of the post back through the data supplied by Royal Mail they were not able to monitor in detail the progress made by District Managers in checking postal returns. The automated touch-tone telephone system to collect information from District Managers on the progress of follow up work proved difficult to use and District Managers were unable to file information during the crucial period when they were handling large volumes of posted back Census forms. As a consequence the Office's managers were denied necessary information during the Census follow-up with which to make decisions and direct activities in the field.

**8 The peak of post back varied by District as did the percentage returned**

*This figure is based on the Royal Mail's records of Census forms collected and available for collection by the Office for National Statistics' field staff. It illustrates the variation rate of post back response in four Districts compared with the overall rate of response achieved nationally*



Source: Royal Mail

## Other difficulties in the co-ordination of the post back

3.16 The Office for National Statistics had agreed with Royal Mail well in advance of Census Day the Delivery Offices to which mail for each Census District was to be delivered. Because of recruitment problems the Office had to appoint District Managers late in the day to a number of London Census Districts and in some cases the Districts were considerable distances from the Managers' homes. The distances involved and the difficulties of the journeys across London would have made the daily collection of mail by District Managers impractical. The Office contracted TNT at a cost of £90,000 to collect this mail and deliver it to its own depots in London for District Managers to collect.

## The Office chose to begin chasing missing Census forms on 9 May

3.17 The Office for National Statistics had scheduled the work to chase outstanding Census forms to begin on 9 May. The timing of the Census Coverage Survey due to be carried out in June 2001 was essential to the overall success of the Census. It was, therefore, important for the Office to complete all Census follow up activities by the end of May before the start of the Coverage Survey, to avoid confusion in the field and to safeguard against any adverse effect on the Survey results.

3.18 By 9 May around 55 per cent of the forms given out had been returned in most Census Districts, consistent with the overall percentage response rate of 70 per cent forecast. The Office for National Statistics were nevertheless aware, based on the information they were receiving daily from Royal Mail, that response rates in certain Districts were well below the overall national average. However, the absence of detailed information through its own field information system prevented the Office from establishing an accurate picture of District Managers' progress in the collection and checking of responses received through the post back.

3.19 Mindful that delays in the recovery of forms could adversely affect the results of the Census Coverage Survey, and believing that the overall response rate through post back would be around the 70 per cent level expected, the Office instructed District Managers in most areas to deploy field staff to chase missing forms from 9 May as planned. Due to the weaknesses in their own information, the Office authorised District Managers to take local decisions on paying field staff for additional work at piecework rates set by the Office's Census Division. In taking this decision, the Office accepted that in some Districts it would be difficult to distinguish between forms not returned at all and those merely held up in the backlogs and that some households would be visited unnecessarily. The Office

was nevertheless concerned to ensure that field staff were given sufficient time to follow up outstanding Census returns, which they believed would be around 30 per cent. It was only during the course of the following week that the Office realised that the actual levels of post back were significantly in excess of predictions and that the number of forms to be chased would be significantly lower than 30 per cent.

## The Office incurred additional costs in the follow up of outstanding responses

3.20 In approving additional field staff work the Office for National Statistics accepted that additional field staff costs would be incurred. By the middle of May however, the Office had sound evidence from Royal Mail data that the actual post back rate would significantly exceed their 70 per cent forecast and that in the majority of Census Districts this would result in lower levels of work required to chase missing forms. The Office believed that savings in field staff costs in those districts where the response rate exceeded expectations would offset the extra costs in those Districts, where additional work was approved by local managers.

3.21 The Office for National Statistics' costing model for Census field services assumed that for every one per cent increase in the post back rate against forecast, around £300,000 could be saved against the field staff budget. Based on this model, the 88 per cent post back rate achieved nationally compared to the 70 per cent anticipated, might have been expected to yield savings of around £5.5 million against the field staff budget of £54.1 million.

3.22 In the event, the total amounts paid to field staff by the Office reached £59.9 million, representing an overspend of £5.8 million. Payments for follow up work, including the work by Census field staff engaged in the sorting of Census returns and the additional follow up work approved by local managers, totalled £10.3 million.

3.23 The Office attribute £1.4 million of the overspending on field staff costs to dealing with restrictions resulting from Foot and Mouth disease. They attribute the remaining £4.4 million to the difficulties arising from the post back. However, due to the lack of reliable management information from the field, the Office's managers have no accurate means of assessing whether the level of additional resource committed to the collection of outstanding forms was necessary. The Office believes, however, that the overspending on pay costs can be offset by savings elsewhere in order to remain within the overall budget of £207 million agreed for the 2001 Census.



## Conclusions

3.24 Getting completed Census forms back was vital to the success of the 2001 Census. The Office for National Statistics chose for the first time a national post back arrangement to secure value for money and to allow field staff to concentrate on missing returns in order to increase the overall response rate. Overall the post back was a success, with the overall percentage of forms returned through the post being significantly in excess of the Office's expectations. However, the overall volume and pattern of responses, particularly two weeks after Census Day, presented the Office and the Royal Mail with a number of challenges and led to the Office deploying field staff in some Districts to assist in sorting of postal returns. While the Office knew that this would result in additional costs, the poor quality of their own information system with field managers meant they were unable to assess the level of additional resources actually needed. In the end field staff pay costs were overspent by £5.8 million with £4.4 million being due to these problems.

# Part 4

## The administration of field staff

- 4.1 The Office for National Statistics employed 73,000 temporary field staff in England and Wales to deliver Census forms, deal with householder queries, monitor the return of forms and pursue missing forms. The Office managed the recruitment and deployment of field staff in-house but outsourced the administration of the Census payroll. The Office and their contractor, ADP Chessington, encountered a number of problems in the specification and delivery of the Census payroll service. As a result payments to 23,000 field staff were delayed between two and three weeks; and over 12,000 staff queried inaccurate or incomplete payments. The Office paid compensation totalling £292,000 to the 5,650 worst affected staff; 2,800 staff received overpayments totalling £498,000.
- 4.2 This part of the report examines the Office for National Statistics' arrangements for managing and remunerating Census field staff. In particular, it examines:
- the recruitment and remuneration of Census field staff;
  - the problems in the delivery of the Census payroll system and internal audit's assessment of these arrangements;
  - the problems encountered when the payroll system went live and the Office's response to these problems;
  - the subsequent actions taken by the Office.
- 4.3 The Office for National Statistics found that a proportion of recruits had been employed on previous Censuses but the majority were new to the work. In some districts, particularly parts of London, Birmingham, Liverpool, Leeds, Manchester and Newcastle, recruiting sufficient enumeration staff proved very difficult, and recruitment continued well into April 2001. Resignations also added to the difficulties in recruitment, and meant a number of promotions to the Team Leader role took place close to Census Day. Some staff were asked to take on additional workloads to make up for a shortfall of staff.

### Field staff remuneration

- 4.4 The Office for National Statistics found that a proportion of recruits had been employed on previous Censuses but the majority were new to the work. In some districts, particularly parts of London, Birmingham, Liverpool, Leeds, Manchester and Newcastle, recruiting sufficient enumeration staff proved very difficult, and recruitment continued well into April 2001. Resignations also added to the difficulties in recruitment, and meant a number of promotions to the Team Leader role took place close to Census Day. Some staff were asked to take on additional workloads to make up for a shortfall of staff.
- 4.5 Payments to Census field staff were organised into five stages for District Managers, three for Team Leaders and two for Enumerators. The principal duties of Census field staff and the schedule for their remuneration by stage payment is outlined in [Figure 9](#). The Office planned that all field staff in the Enumerator and Team Leader grades would be scheduled to be paid in full on 15 and 22 June 2001 respectively and District Managers on 3 August 2001, providing that error free claims were received on time.
- 4.6 The Office paid field staff £49.6 million on the basis of fixed fees for performing specific activities, including initial training, the delivery of forms to households and the monitoring and follow-up of outstanding returns. Increases in work loads and additional follow-up work in excess of the assumptions built into the fixed fees were authorised by District Managers and paid at rates set by the Office. The extent of this work depended on the success of the postback arrangements and, therefore, the number of households that needed to be visited to collect outstanding forms. The Office paid £10.3 million for such work in final stage payments, including some payments for additional follow-up work approved by local managers.

### The recruitment of Census staff

- 4.3 The 2,017 Census Districts in England and Wales were arranged into 103 Census Areas. Area Managers and District Managers were recruited by the Office for National Statistics to commence work in the second half of 2000 on planning the Census at a local level and during the first quarter of 2001 to recruit staff in the Team Leader and Enumerator<sup>10</sup> grades. The number of staff for each district reflected the geography of the area and the non-standard workloads generated by hospitals, hostels and other residential institutions and the hard to count groups, including homeless people sleeping rough. Such staff were recruited for around 12 weeks.

<sup>10</sup> The Enumerator title was used in previous Censuses to denote the counter or checker of forms.

## 9 Census Field Staff Duties and Remuneration Structure

This table shows how the Office for National Statistics organised the Census field work by grade, the principal duties of each grade, and the typical number of staff employed in each District. It also shows the remuneration arrangements for each grade based on a schedule of stage payments at set rates.

Field Staff Grade	Stage and Duties	Scheduled Payment Date	National Rate*
<b>District Manager</b>  <i>Typical number per District: 1</i>	1 - Training and preparation	22 Dec 2000	£257.00
	2 - District check, recruitment of Team Leader	26 Jan 2001	£365.00
	3 - Training team leaders, supplies, delivery management	23 Mar 2001	£705.00
	4 - Post back management and follow up	18 May 2001	£860.00
	5 - Post enumeration, non-compliance work Additional duties	3 Aug 2001	£1,100.00 £8.56/hour
<b>Team Leader</b>  <i>Typical number per District: 3</i>	1 - Training and recruitment of enumerators	6 Apr 2001	£150.00
	2 - Training enumerators & delivery management	18 May 2001	£460.00
	3 - Post back management and follow up Additional Duties	22 Jun 2001	£576.00 £7.17/hour
<b>Enumerator</b>  <i>Typical number per District: 30</i>	1 - Training and delivery of Census forms	11 May 2001	£150.00
	2 - Delivery of Census forms and follow up	15 Jun 2001	£168.00
	Special enumeration work	15 Jun 2001	£45.00 + £5.55/hour
	Additional Delivery Allowance	15 Jun 2001	55p/address
	Follow up work	15 Jun 2001	£1.12/address
<b>Expenses</b>	District Managers	With each fee	Received or 25.5p/mile
	Team Leaders and Enumerators	With last payment	Received or 25.5p/mile

\*Higher fee rates were paid in London and other metropolitan areas.

The enumerator title was used in previous Censuses to denote the counter or checker of forms.

Source: The Office for National Statistics Census District Manager Training Pack.

### The problems in the development of the Census payroll service

The payroll system used for the 2001 Census was not tested during the 1999 Dress Rehearsal

4.7 The Office for National Statistics appointed ADP Chessington in December 1998 to design and operate a system for the administration of Census pay. The Census Dress Rehearsal in the summer of 1999, should have been a crucial test of the payroll system to be used in the 2001 Census. The Office and Chessington agreed however, that a year would be needed to develop the full Census payroll system and there was insufficient time to do this before the Dress Rehearsal. Chessington therefore resorted to using their standard software together with manual processing of claims and production of pay advices for Dress Rehearsal staff.

The Office for National Statistics internal auditors highlighted the weaknesses in the Census payroll arrangements in January 2000

4.8 In January 2000 the Office for National Statistics' internal auditors, KPMG, reported on their review of Census payroll controls during the 1999 Dress Rehearsal. Their report identified several key issues where action was required in order to ensure that field staff payments for the 2001 Census ran smoothly. In particular, they suggested and the Office accepted that:

- expense claim forms be amended to allow for easier review by the Office's staff where claims triggered the pre-set system exception limits in the pay system;
- Census Division should set up mechanisms to ensure that explanations for large claims were received systematically from field staff and their line managers. This would reduce the load on Census Division staff given that due to the likely volume of exceptions on expense claims that the Office might not have sufficient resources to investigate all cases;
- Census Area and District Managers should receive comprehensive training on the completion and checking of claim forms;

- they should clearly specify the circumstances in which forms should be returned by the contractor to field staff; and that the contractor and sub-contractors should have in place adequate data validation processes to identify problems on rejected forms before they were returned to field staff.

4.9 KPMG also noted that the Office for National Statistics had received few assurances from the payroll contractor to provide them with comfort over the degree to which preparations for the 2001 Census were in hand. As a result it was not possible to assess whether sufficient detailed planning had been carried out to deliver the tasks required under the contract to the timescale required, or whether the sub-contractor, LASON, was being properly managed.

### There were difficulties in agreeing service requirements

4.10 Chessington used their standard payroll system as the basis for developing the payroll system for the 2001 Census. This system needed significant software enhancement to build-in the detailed arrangements set out by the Office for National Statistics for grading and paying staff, expenses and piece rate work either on a volume basis or at an hourly rate. There were however, difficulties between the Office and the contractor in agreeing the scope and precise requirements of the systems and services to be developed. Twenty-seven change requests were raised to amend the initial system specification and introduce new requirements. As a consequence, and despite development work beginning in October 1999, the Office and Chessington did not finally agree the service specification of the Census payroll system until March 2000.

### Service implementation was late

4.11 The implementation plan called for the development of the payroll system to be completed by 17 July 2000, with testing of its readiness completed by 15 September 2000. Chessington believed that they achieved these deadlines, except for some enhancements requested by the Office in the procedures for dealing with resignation and replacement of field staff. The Office's view is that Chessington did not complete the system as required by 17 July and did not confirm completion of readiness testing until early October. During acceptance testing the Office raised over 160 incident reports where the operation was outside agreed service levels.

4.12 The system did not begin accepting live data until 13 November 2000. The Office for National Statistics certified Chessington on that date to proceed with the first payments, but with the limitation that testing must continue in tandem in order to bring the system to full operability for the remaining payments. While the additional testing led to some service improvements

Chessington were unable to satisfy the Office's Contract Management Board that an unqualified certificate should be issued for the remaining payments, because of the Board's concerns over the system's full functionality.

## The problems encountered when the payroll system went live and the Office's response

### The field staff pay system was unable to make District Managers' first stage payments

4.13 The system designed by Chessington used a sub-contractor, LASON (now Cendris) to capture images of payroll forms at its Glasgow site. Imaging was used to facilitate the keying of data into the payroll system and to allow the Office for National Statistics to receive electronic copies of payroll forms in order to investigate queries. The flow of documents through the pay system is shown in [Figure 10](#).

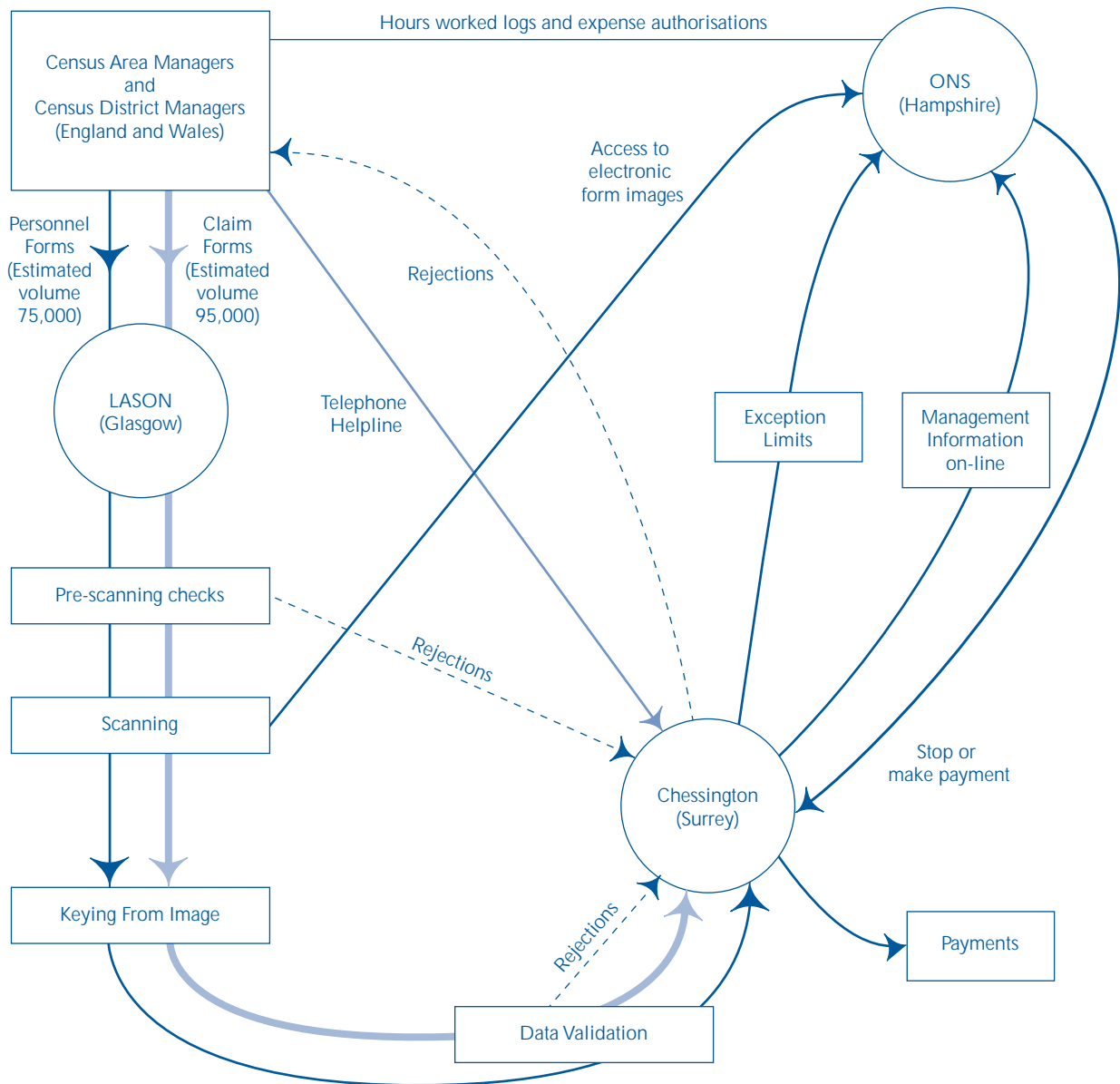
4.14 The keying was carried out by LASON in Glasgow and by its subsidiary, Precise Data Capture, operating in Mauritius. LASON staff carried out pre-preparation checks on forms received from Districts and rejected any that would fail to image properly or where bank details or personal data appeared to have been altered. Rejected forms were returned to Area Managers for re-submission. Chessington also reviewed the records keyed from the images to identify invalid and missing data.

4.15 On going live in November 2000 problems were immediately encountered with the processing of the first stage payments to District Managers. As a result of the problems, a large number of District Manager stage 1 claims due to be paid on 22 December 2000 had to be paid by the Office for National Statistics directly.

4.16 The Office appointed consultants from Cimtech to carry out an independent review of the data processing for District Managers. They identified a number of problems in operation of the payroll processing system including:

- errors in completion of forms which made them unscannable. To obtain an image of sufficient clarity the scanning technology required all payroll forms to be completed in black ink and all writing to be within the marked gridlines;
- larger than expected numbers of payments exceeding the pre-set exception limits;
- poor quality of keying errors by Precise Data Capture's Mauritius-based staff; and
- inconsistent imaging standards caused by poor bulb and scanner calibration.

10 Flow of Census Pay Forms



Source: ADP Chessington/NAO

4.17 Discussions took place between the Office for National Statistics, Chessington and its contractors during January and February 2001 to resolve these problems in time for the input of personnel records for the main bulk of the Census field force.

to LASON for processing. District Managers were also required to send logs of hours worked by their staff to the Office for National Statistics, to support the Department's own monitoring of claims.

Despite attempts to fix the problems delays occurred in setting up field staff pay records and in paying field staff

4.18 The arrangements for the Census payroll required Census District Managers to notify Chessington of the personal details and grade of the field staff they recruited and then to certify claims. All forms to set up payroll records as well as claims were to be sent directly

4.19 Despite the attempts by the Office and Chessington to fix the problems experienced with first stage payments to District Managers the same issues were encountered again in the processing of pay records for the enumerator and team leader grades. In addition, Chessington noted that in the payroll records passing LASON's pre-scanning checks there were significantly higher than expected levels of invalid data which had to be referred back to the Office's field managers. As a result of these high levels of data rejection and other processing problems delays were experienced in setting up pay records.

4.20 The high level of data rejection continued once field staff payment claims were received and resulted in payment delays of two or more weeks to some 23,000 team leaders and enumerators. The Office for National Statistics told us that the delays were exacerbated by the fact that Chessington failed in many cases to attach to rejected forms a proforma letter detailing the cause of the rejection, although Chessington told us that they had found no evidence that these omissions were widespread. Chessington were also contractually required to provide a telephone helpline for District Managers to resolve queries, but field staff reported to the Office that this was insufficiently resourced for the number of calls.

4.21 Data compiled by Chessington indicates that around 46 per cent of forms were rejected. This was significantly in excess of the rejection level of 15 per cent experienced during the Dress Rehearsal. While the Office for National Statistics accept that the errors in payroll data submitted to Chessington were in excess of the 2.5 per cent specified in the contract, they believe that the true error rate in forms submitted by field staff was around 10 per cent.

### The Office for National Statistics made advances to field staff that exceeded the payments subsequently due

4.22 To reduce the effects of the delayed payments the Office for National Statistics made advances to 9,000 staff through its own payment systems. Under a variation to the payroll contract, the Office paid Chessington an additional £63,800 to process the recovery of these advances against final payments. Just over £244,000 of advance payments were not recovered. In some instances this was because the amounts advanced by the Office exceeded the amounts due under the final payment.

4.23 Around 5,650 staff suffered delays of over four weeks in payment and the Office for National Statistics paid £50 in compensation to 5,200 Census staff who had not received their full payment by 13 July and £75 to 450 staff who had received no payment at all by 13 July. The total compensation paid was £294,000.

### The controls over field staff claims failed to operate as designed

4.24 The specification for payments to field staff included pre-set exception limits for claim values. The overall expense limits were £275<sup>11</sup> for enumerators, £535 for Team Leaders and £2,177 for District Managers. Claims triggering these limits were not rejected from the pay run but flagged for investigation by the Office for National Statistics. Chessington made the payment as keyed if they did not receive an explicit instruction from

the Office to stop the payment in advance of the weekly pay run.

4.25 Exception limits were reviewed throughout the Census operation. Following the processing of District Manager payments in December 2000 and January 2001, Chessington recognised that the exception limits would need to be raised to keep the volume of queries within manageable levels. In the absence of information on how budgeted costs compared to actual costs being incurred by field staff, the Office decided to retain the exception limit levels, although some adjustments were made subsequently to take account of changes in mileage rates and additional costs resulting from Foot and Mouth restrictions. As a consequence, the high volume of claims exceeding the limits continued and it was not possible for the Office's staff to investigate all of these in advance of the payment run as originally intended.

4.26 In total, overpayments were made to over 2,700 Census field staff totalling very nearly £498,000. In addition to the £244,000 of unrecovered advances referred to in paragraph 4.22, some £140,000 of overpayments arose from cases where claims were not adequately checked or incorrectly filled in, or where payments continued to be made to staff who were no longer working. A further £114,000 related to staff being paid twice for the same work. Chessington's failure to properly deduct advances from payments accounted for £120,000 of the overpayments.

4.27 The Office have been pursuing recovery action and so far around 30 per cent of the £498,000 has been recovered. Some recipients of overpayments have asked to repay by instalment and if outstanding payments under these arrangements are all received, it will increase recovery to nearly 39 per cent of the total. The Office has written off 38 per cent as unrecoverable other than at uneconomic cost, while the remaining 23 per cent continues to be pursued.

### Over 12,000 field staff queried late or inaccurate payments

4.28 Following the processing of stage 2 and 3 payments to Team Leaders and Enumerators, over 12,000 field staff (16 per cent) queried the accuracy and completeness of the payments they had received. Additionally the contractor logged over 9,000 queries from field staff (12 per cent), although many of these duplicate those received directly by the Office for National Statistics. Overall the number of staff who queried their pay was well in excess of the 10 per cent that Chessington had expected, based on information supplied by the Office on the results of the 1991 Census.

11 The limits quoted were applied to staff on national rate payments as shown in Figure 7. Higher limits were applied in London and other metropolitan areas.

4.29 At short notice the Office for National Statistics developed a database and drafted in staff to log the calls and to carry out the subsequent investigations with District Managers. The queries fell into a number of categories:

- late or non-payment;
- incorrect deduction of income tax and national insurance contributions;
- inaccuracies in early resignation cases;
- incorrect additional workload payments; and
- incorrect expense payments.

4.30 The prompt establishment of this database together with the Office for National Statistics' recruitment of temporary staff ensured that the vast majority of these queries were successfully resolved by the end of October 2001, although this was still four months after the Office's schedule for issuing final stage payments to team leaders and enumerators in June. The Office employed a temporary workforce of over 50 staff on this work for an average period of three months at a cost of £300,000.

## Actions taken by the Office as a result of the contract performance

4.31 The Office for National Statistics, together with their advisors, maintained regular contact with Chessington throughout the contract through service review meetings. The Contracts (Payroll) Steering Committee also met each month to discuss and agree the resolution of major issues that could not be resolved at the review meetings. These mechanisms, however, proved to be ineffective in dealing with all of the problems that arose within the payroll contract. As a consequence the Office believed that it incurred additional costs that were not originally expected in the scope of the contract, specifically:

- charges paid for services they and their legal advisors considered to have not been properly performed;
- additional staff costs;
- overpayments;
- compensation for inconvenience payments made to field staff.

4.32 The Office for National Statistics' legal advisors, Bird & Bird, were asked in June 2001 to consider the extent to which Chessington were in breach of the contract. In their report they noted that while there were clear instances where services were not properly performed, in a number of cases the reasons for non-compliance were due to the Office's failure to comply with their own contractual obligations or because they had contributed to the non-compliance. In particular, the actual error rate in input forms was significantly higher than the 2.5 per cent included in the contract and the level of queries from field staff also exceeded expectations. The Office were advised that this would have contributed significantly to Chessington's own costs.

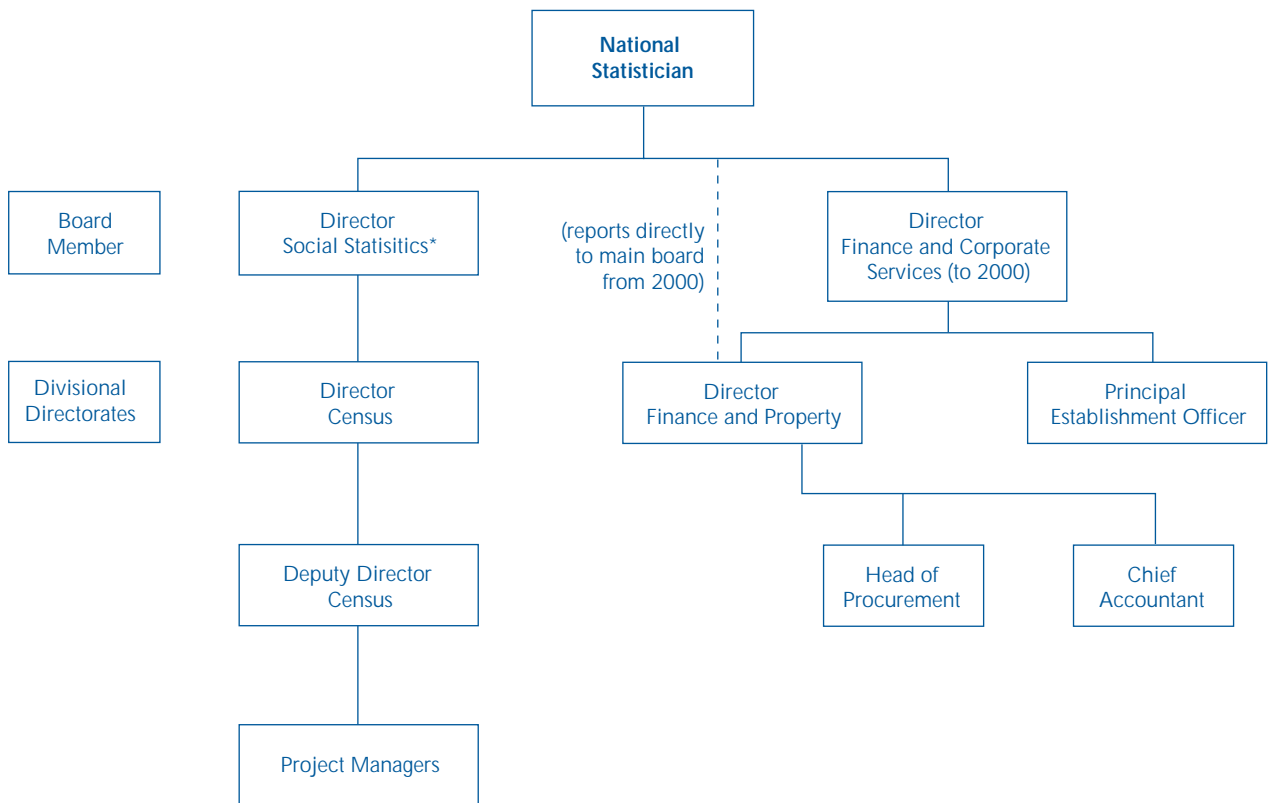
4.33 Following consideration of Bird & Bird's advice the Office for National Statistics' Finance Director recommended that the Office accept the contract as completed without either party claiming on the other. This was agreed at the Office's Board level in January 2002.

4.34 The Northern Ireland Statistics and Research Agency told us that they had a separate contract with Chessington and that the failures by Chessington and the error rate on the input of forms from Northern Ireland staff were lower than in England & Wales. As such the Agency felt a claim against Chessington was not warranted.

# Appendix 1

## Office for National Statistics Organisation Chart: Census 2001 Responsibilities

**A1** ONS Organisation Chart: Census 2001 Responsibilities as at April 2001



\* Director Census and Populations Group until August 1999.

Source: Office for National Statistics.



# Appendix 2

## Client-Contractor Committees

Committee	Membership	Role
Open Options Procurement Steering Committee (1997-1998)	Chair: Director Census and Populations Group ONS Chief Executive Representatives from the Office for National Statistics, General Register Office for Scotland, Northern Ireland Statistics and Research Agency Procurement advisors Legal advisors Independent member from Department of Social Security	Advice and direction to ensure the maximum benefit to the Census programme and to identify and minimise risk; Strategic direction to the project, consistent with the Office's overall business and technical direction; Ensuring that the project costing and the business case are consistent with HM Treasury guidelines and stand up to scrutiny; Guidance on the procurement and managerial processes.
Processing Service Contract Steering Committee (1999 onwards)	Chair: Census Director Representatives from the Office for National Statistics, General Register Office for Scotland, Northern Ireland Statistics and Research Agency Procurement advisors Legal advisors Contractor and sub-contractor representatives	Identifying and minimising risk in the Processing Service Contract; Advice and guidance on the management processes being implemented for the Service Contract; Discussion and resolution of Service Contract conflicts.
Contract Management Board	Chair: Census Director The Office for National Statistics Finance Director Representatives from the Office for National Statistics, General Register Office for Scotland, Northern Ireland Statistics and Research Agency Procurement advisors Legal Advisors	Directing the management of individual Service Contracts; Reviewing monthly progress reports for each Service Contract; Assessing, signing off each completed stage and approving progress to the next; Managing the financial aspects of each Service Contract; Delivering the Service Contracts in line with the Business Case approved by HM Treasury; Ensuring on-going compliance with applicable public procurement law requirements.
Contracts (Payroll) Steering Committee	Chair: Census Data Collection Project Manager (until December 1999); Census Deputy Director (from January 2000 to June 2001) Representatives from the Office for National Statistics, General Register Office for Scotland, Northern Ireland Statistics and Research Agency Procurement advisors Contractor representatives Legal advisors	Discussion and resolution of major issues that cannot be resolved at the regular Service Review Meetings.

Source: The Office for National Statistics Board/Committee minutes.