



Office for National Statistics

**Phase 1 Evaluation – 2005 Small Scale Testing
Pre-delivery household address check**

Table of Contents

1.	EXECUTIVE SUMMARY	4
2.	BACKGROUND.....	6
3.	INTRODUCTION	7
4.	METHODOLOGY	9
4.1.	TREATMENTS	10
4.2.	AREAS	11
4.3.	STAFF AND RECRUITMENT	12
4.4.	DESIGN SUMMARY.....	14
4.5.	INSTRUCTIONS, TRAINING, AND DEBRIEFING	15
4.6.	SUPPLIES AND EQUIPMENT	16
4.7.	MANAGEMENT	18
4.8.	QUALITY ASSURANCE	19
4.9.	DATA ENTRY.....	19
5.	RESULTS AND EVALUATION.....	21
5.1.	QUANTITATIVE RESULTS AND EVALUATION	21
5.1.1.	<i>Pre-Delivery Household Address Checking rates</i>	21
5.1.2.	<i>Pre-Delivery household address quality indicators</i>	23
5.1.3.	<i>Addresses not found</i>	27
5.1.4.	<i>Type of added addresses and type of pre-listed address</i>	28
5.1.5.	<i>Contact rates</i>	29
5.1.6.	<i>Controlled error rates</i>	32
5.1.7.	<i>Cost of operations</i>	35
5.2.	QUALITATIVE RESULTS AND EVALUATION	37
5.2.1.	<i>Treatments</i>	37
5.2.2.	<i>Area types</i>	39
5.2.3.	<i>Staff and Recruitment</i>	45
5.2.4.	<i>Instructions and training sessions</i>	46
5.2.5.	<i>Supplies and equipment</i>	47
5.2.6.	<i>Management</i>	49
5.2.7.	<i>Quality Assurance of fieldwork</i>	50
5.2.8.	<i>Data Entry</i>	52
6.	CONCLUSIONS AND RECOMMENDATIONS	53
6.1.	TREATMENTS	53
6.2.	AREAS	56
6.3.	STAFF AND RECRUITMENT	58
6.4.	INSTRUCTIONS, TRAINING AND DEBRIEFING.....	58
6.5.	SUPPLIES AND EQUIPMENT	59
6.6.	MANAGEMENT	61
6.7.	QUALITY ASSURANCE	62
6.8.	DATA ENTRY.....	62
7.	APPENDICES.....	64
	APPENDIX A.....	64
	APPENDIX B.....	76
8.	REFERENCES.....	78

1. Executive Summary

Fundamental to post-out methodology and a successful Census is a complete and accurate address frame. However, the Census will enumerate at the household level and it is therefore important to recognise that the Census requires a complete and accurate household address frame.

Therefore the 2005 Small Scale Test (SST) was designed to investigate the feasibility of performing a pre-delivery household address check. The testing consisted of two phases. The main aims of phase 1 were:

- To assess the effectiveness of performing a pre-delivery household address check in terms of quantity and quality; and
- To gain an understanding of the operational practicalities associated with a pre-delivery household address checking operation.

The main aim of phase 2 was to gather initial information on what happens to mail within the postal system which is not on the delivery point address list. Phase 1 is presented in this report whilst phase 2 is found in an accompanying paper (see references).

This report presents a short background and introduction to phase 1 of the SST, this is followed by a detailed outline of the methodology used. The evaluation falls into two sections, the first contains the quantitative findings and the second presents the qualitative information. The final section provides full conclusions and recommendations and these should be taken into the 2007 test.

Over a seven week period, June to August, over 50,000 households were checked by five field staff who were recruited from an employment agency. Three methods of performing a pre-delivery household address check were piloted. Each method was tested in nine national ward types, covering 14 wards in total within Hampshire. All field staff attended a training session and given a full set of instructions that differed according to the method they were using. Field staff were issued with maps displaying boundaries and Address-Listing books that contained known delivery point addresses sourced from the Postal Address File (PAF). Field staff updated this list according to their assigned method, the concept being to correct the list and provide an address for every household within their areas. The three methods trialled were:

- Treatment 1 (T1) – Field staff contact every address to confirm that the details are correct and to enquire about the presence of additional households. There would be three attempts to contact the residents. Any unlisted addresses are to be added to the book.
- Treatment 2 (T2) – Field staff contact every third address, confirm the details are correct and enquire about additional households. They would then ask the householder about the two neighbouring properties. Again, three attempts at contact could be made and unlisted addresses added.
- Treatment 3 (T3) – Field staff do not contact any householders, checking is visual only. Any unlisted addresses are to be added to the book. A record was to be made of any addresses that appeared to have additional households present.

Several quality measures were put into place. For example, one measure used a controlled error rate within the Address-Listing books to check field staff's weekly work. Another quality measure which followed the field work involved Census volunteers going out checking the employed field staff's changes to the Address-Listing books.

Overall, phase 1 of the 2005 SST was a success, especially considering the limited resources and time available to the SST team. The team consisted of four office staff working part-time on this work who: developed, trained, produced, piloted, managed, debriefed and evaluated the SST.

There are many conclusions and recommendations stemming from the phase 1 of the SST. The main findings relate to the recommended methodology for pre-delivery household address checking and these are summarised below.

During the SST some areas showed large differences in the amount of new household addresses that were added according to different treatments that were used, T1 found many more household addresses compared to T3. In other areas the differences were not as large. The areas where many addresses were found corresponded to areas where there were likely to be many definitional differences between the PAF and the household address list that Census requires. This led to these recommendations:

- Two checking methods should be used in the 2007 Census test. A contact intensive method in targeted areas (T1) where there are many definitional differences between the PAF and the Census required household address list and a contact by judgement method in the remaining majority of the country (variant of T3);
- A categorisation should be developed to specify where T1 and the variant of T3 should be used. This should highlight areas where there are likely to be definitional differences and therefore reduce the risk of under-coverage on the household address frame;
- Three attempts at contact should be made and this will be reviewed after the 2007 test.

The pre-delivery household address check is timetabled to start at least six months prior to the Census. There are concerns that some areas will change considerably in this period therefore increasing the risk of under-coverage. This led to the following recommendation:

- A pre-delivery household address check should be performed approximately six weeks before the date of the Census in areas that are likely to have changed dramatically since the first household address check. Again, a categorisation should be developed to specify where dramatic changes have or are likely to occur. This will reduce the risk of under-coverage on the household address frame.

There was low recognition of the controlled error rates during the SST which does call into question whether all new household addresses were found. Therefore it is recommended that:

- The implementation and use of controlled error rates are further investigated in the 2007 test as a formal quality control method.

The full conclusions and recommendations section provides additional detail about the findings above and other aspects of the pre-delivery household address check. This includes recommendations made for: area differences, workload sizes, contact times, field quality control and the practical operations – recruitment, instructions, training, Address-Listing books, supplies, debriefing and management.

Further analysis following the 2007 test will determine the approach for the 2009 Census Rehearsal and 2011 Census.

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Census Testing and Evaluation

2. Background

One of the proposed methods of delivering the 2011 Census questionnaire is through a postal service provider. It has not been determined whether this postal method will be used to deliver a questionnaire to every household in England and Wales or whether a combination of delivery methods will be used. This fundamental change to the enumeration methodology was proposed in the "Census Design Document" (The 2011 Census: A design for England and Wales) and is a move away from the tradition of employing a large field-force to deliver questionnaires by hand. There are several concerns regarding the use of post-out methodology.

A key risk of the post-out methodology is that the Census will be unable to deliver a Census Questionnaire to every household. Fundamental to a post-out methodology is the accuracy of an address frame but as the Census enumerates at the household level it is fundamental that the Census has an accurate household address frame. There is other work ongoing to evaluate different address register sources and ways of increasing the quality of the frame for enumeration. This address register work is outside the scope of the SST.

The Census division must ensure that the post-out methodology is not compromised by inadequate coverage or quality of an address register. One final check of accuracy would be to conduct our own field checks of addresses shortly before the Census, a pre-delivery household address check. The idea of post-out methodology combined with a pre-delivery household address check is new to the Census and can potentially be conducted nationwide.

3. Introduction

It is intended that all the sampled areas in the 2007 Test will be subject to pre-delivery household address checking. A programme of Small Scale Testing was devised to prepare for the 2007 Test and beyond.

There were two key aims of these tests:

- To assess the effectiveness of performing a pre-delivery household address check in terms of quantity and quality; and
- To gain an understanding of the operational practicalities associated with a pre-delivery household address checking operation.

In a seven week period during June and July 2005 three different methods of pre-delivery household address checking were tested in Hampshire. Five field staff were recruited and given an address list extracted from the Postal Address File (PAF) and a map of a defined area. Staff were asked to update the list in order to produce a list that included an address for every household. The basic concept was:

- confirming whether an address existed, and adding new addresses that were not listed and recording any that didn't exist;
- noting the address type (residential, non-residential, communal establishment, etc); and
- establishing whether there were one or more households living within an address.

Three treatment methods were selected to trial in the SST, all sampled in EDs.

- Treatment 1 (T1) – Field staff contact every address to confirm that the details are correct and to enquire about the presence of additional households. There would be three attempts to contact the residents. Any unlisted addresses are to be added to the book.
- Treatment 2 (T2) – Field staff contact every third address, confirm the details are correct and enquire about additional households. They would then ask the householder about the two neighbouring properties. Again three attempts at contact could be made and unlisted addresses added.
- Treatment 3 (T3) – Field staff do not contact any householders, checking is visual only. Any unlisted addresses are to be added to the book. A record was to be made of any addresses that appeared to have additional households present.

Any changes that had been made to the address list were quality assured by Census staff.

The data collected in the seven week period was then keyed by staff from the keying unit internal to ONS, as well as volunteers within 2011 Census. It was intended that the resulting final list should be a complete household address frame suitable to use as part of the post-out methodology.

The exercise was developed and performed by four ONS staff (none working full time on the project). A large amount of preparation was required. Preparation included, agency recruitment, instructions, training sessions, Address-Listing books, quality assurance (QA) methods, data entry systems and many smaller preparation tasks.

Table 3.1 shows the outline of a timetable for the entire operation:

Table 3.1 – Outline of SST timetable

Task	Dates
Development of treatment types, selection of areas and design	January 05 – May 05
Sign-Off	May 05
Introduction of T3	May 05
Preparations	April 05 – June 05
<ul style="list-style-type: none"> • Develop instructions & QA • Develop training & QA • Develop Address-Listing books, test & QA • Develop public leaflets, test & QA • Arrange Maps & test • Arrange supplies • Recruit Agency field staff 	
Conduct training	June 05
Fieldwork period	June 05 – August 05
Debriefing	July 05 – August 05
QA of fieldwork	August 05
Keying	July 05 – September 05
Phase 2	September 05
Analysis	September 05 – January 06

This report evaluates the phase 1 as a whole, assessing the effectiveness of the pre-delivery household address checking task based on cost, time and quality. Phase 2 is evaluated in a separate report (see references). The report will also document the operational practicalities associated with a pre-delivery household address check. All of this information will form a basis for recommendations for future operations.

4. Methodology

The following section outlines the methodology that was used during the 2005 SST.

Many different methods for performing a pre-delivery household address check were proposed with different aspects of a pre-delivery household address check discussed. Aspects included; whether or not field staff should or should not be given a list of addresses for a given area, and whether every address should be contacted or every third address, contact when necessary or no contact at all. It was decided that three different treatments would be tested.

The basic idea of the pre-delivery household address checking was for the field staff to identify every household within a defined area and provide each household with a postal address. This complete list would allow a Census questionnaire to be delivered to every known household. Common to all three treatments was the provision of an address list for each ED to use as a starting point. This address list was extracted from the Postal Address File (PAF) which is a list of all delivery points. The definition of a delivery point is "A delivery point is a single mailbox or other place at which mail is delivered". Therefore the PAF differs from the household-address list that is required for Census purposes. Census requires a list which uses the Census definition of a household which is; "one person living alone" or "a group of people, not necessarily related, living at the same address who either share a living room or at least one meal a day".

Essentially during the SST field staff were attempting to convert the PAF list to a Census household-address list, thus forming the Census frame for enumeration.

Expected type of additions and deletions

Due to the definition differences there were two types of list amendments: addresses and households that were expected to be added to a household-address list. The first type of address is a 'sub-dwelling unit' which is not separately listed on the PAF because it shares a single delivery point. A common example of this is where a larger dwelling has been split into several 'sub-dwelling units', self contained units either flats or bed sits with no provision of separate external delivery points. The second type of household that was likely to require adding to the household-address list is a household that is purely socially defined using the standard Census household definition (above). An example of this would be a landlord and a lodger who do not share the living room or share at least one meal a day.

Aside from these definition differences it was thought likely to be some addresses that are not on the PAF, these could include unexplainable omissions, change in dwelling name or new property developments.

Conversely, it was expected that the PAF would contain addresses that are not required on the household-address list. One example is where there is a delivery point address has been converted into several sub-dwelling units and the containing delivery point is redundant for the purpose of the household-address list. Aside from this definitional difference it was thought likely that there would be some redundant addresses which should not be on the PAF nor the household-address list.

4.1. Treatments

This section explains the different approach that each treatment took in identifying definition differences between the PAF and the required household-address list as well as the simple omissions from the PAF. Each method is explained along with the pre-conceived pros and cons.

Treatment 1 (T1): A list of all the expected addresses in a defined area was created using the PAF. The field staff were asked to check that every address existed and to add new addresses that were not on the list. The field staff were asked to call at every address they found to confirm they had the address recorded correctly and to establish whether there were any additional sub-dwelling units and/or households. If they could not make contact at the first attempt then a maximum of two further attempts were required. The hours of work for T1 were based on commonly accepted research which shows that the best days and times to make contact. The hours of work for T1 staff was from 3pm till 8pm Monday to Friday and 10am till 4pm on a Saturday.

Advantages:

- Provides the most comprehensive household-address list (allows detection of hidden sub-dwelling units and hidden households);
- Method easy to understand and implement.

Disadvantages:

- Time consuming and most costly;
- Large public burden (maximum three minutes)

Treatment 2 (T2): A list of all the expected addresses in a defined area was created using the PAF. The field staff were asked to check that each address existed and to add new addresses that were not on the list. The difference between T2 and T1 is that field staff were asked to call at every third address rather than at every address. At the addresses they make contact at they are asked to confirm the address details and those of neighbouring addresses and whether there are sub-dwelling units and/or households at the address. They then enquired in about the neighbouring properties in a similar way. Again, if they could not make contact with the contact address at the first attempt then a maximum of two further attempts were required. A similar approach was used in the USA in a 'Block canvassing' operation before their Census in 2001. The hours of work for T2 staff were identical to the hours of work for T1 staff.

Advantages:

- Provides a reasonably comprehensive household-address list (should allow most hidden sub-dwelling units and hidden households to be identified);
- Quicker than T1 as less contact will need to be made.

Disadvantages:

- Time consuming and costly;
- Information about neighbours may not be of highest quality;
- Respondents unwilling to provide information about neighbours;
- Large public burden (maximum five minutes)

Treatment 3 (T3): A list of all the expected addresses in a defined area was created using the PAF. The field staff were asked to check that each pre-listed address existed and to add new addresses that were not on the list. There were likely to be occasions when field staff saw indications of a potential sub-dwelling unit or an additional household but were not confident enough to record an extra address, e.g. two set of dustbins outside a house. In these cases the

ideal solution would have been to resolve the matter by contacting the address, but as T3 was carried out in the same areas as T1 and T2 this would have increased the burden on the public. If this situation arose the instructions explained that the field staff should indicate likely multiple occupancy against the address in question and add a short note to explain the indication. The hours of work for T3 staff differed from the hours of work for T1 and T2 staff because no contact was involved. T3 staff worked from 9am till 5pm Monday to Friday.

Advantages:

- Quickest and cheapest treatment;
- No burden on the public.

Disadvantages:

- Does not provide a comprehensive household-address list (unlikely to be able to identify wholly hidden sub-dwellings and hidden households).

It was important to have the ability to compare treatments against each other. In most cases T1, T2 and T3 were performed in a number of area types. This allows a comparison of some performance measures for each area.

During the SST T1 and T2 were never performed in the same area in order to avoid over-burdening the public with repeated requests for the same information. As T3 involved no contact with the public it was performed in areas where T1 and T2 had been performed. This allows a direct comparison for areas that were visited by the contact T1 and T2 with the non-contact method T3.

4.2. Areas

It was crucial that the fieldwork was conducted in a broad range of area types. By choosing different area types Census are able to estimate times, costs, and quality by area, as well as the associated practical issues. For operational practicalities the fieldwork was conducted solely within South Hampshire. Practicalities included agency recruitment, cost and training of field staff, replenishing field staff supplies and general field staff management. As the test was not attempting to come to a statistical view on the accuracy of the PAF, a sample representative of England and Wales was not necessary.

The 'National Statistics 2001 Area Classification' categorizes each ward as one of 9 'supergroup' types using information about the socio-economic characteristics of a particular ward (see reference section). Eight out of these nine 'supergroups' are found in Hampshire, however, number 6 'Multicultural Metropolitan', cannot. Local knowledge suggested that Bevios Valley in central Southampton was a good proxy for this super group. This impression was confirmed as the characteristics of Bevios Valley were similar to the profile of a Multicultural Metropolitan area. The classification was used at ward level because it was initially thought that this would be the level at which Census would choose whether or not a pre-delivery household address check is necessary.

Fourteen wards were chosen using the NS 2001 Classification. Table 4.2.1 shows the nine supergroups with the associated fourteen wards.

Table 4.2.1 – Supergroup category with chosen wards.

Supergroup (number and title)	Name of Ward
1 – Industrial Hinterlands	Bedhampton
1 – Industrial Hinterlands	Portchester East
2 – Traditional Manufacturing	Warren Park
2 – Traditional Manufacturing	Leesland
3 – Built up	Town
4 – Prospering Metropolitan	St Judes
5 – Student Communities	Swaythling
6 – Multicultural Metropolitan	Bevois
7 – Suburbs and Small Towns	Bursledon & Old Netley
7 – Suburbs and Small Towns	Fareham North
8 – Coastal and Countryside	Emsworth
8 – Coastal and Countryside	Lee West
9 – Accessible Countryside	Compton & Otterbourne
9 – Accessible Countryside	Owslebury & Curdrige

The 2001 Census Enumeration Districts (ED) were used as a workload geography for the Census Enumerators. Each ED contained approximately 200 households on average but this could vary dramatically. During the SST the ED geography was used to structure the work of the address checking field staff. Address-Listing books and Maps were produced for each ED. Each field staff member was given a set of Address-Listing books and maps for their ward. The number of addresses contained in their set of books was intentionally more than they could achieve in a given time period. This would avoid any constraining effect which should result in better estimates of future workloads.

4.3. Staff and Recruitment

In the 2001 Census approximately 70,000 enumerators were recruited directly by Team Managers. There were some problems regarding pay of the enumerators and so a change in employment strategy was proposed for the 2011 Census. The recruitment of field staff will be outsourced to employment agencies for the 2007 Census Test so it was decided to take this agency option for the SST, using the already established Her Majesties Prison Service (HMPS) standard contract. The HMPS contract applies mainly to recruitment of office staff but in the absence of an equivalent standard contract for field staff its use was recommended by ONS Procurement.

As address checking is a new activity for the Census there is no historical data to analyse for the number of staff required to carry out the exercise. Therefore an aim of the SST was to scope the number of addresses that could be checked for each of the different treatments and for each area type. For the validity of the SST it was considered important that the calibre of staff employed for the exercise be equivalent to those likely to be employed for the 2007 Test and 2011 Census and not overly experienced or knowledgeable about the Census. It was agreed that the agency would interview and select staff on behalf of ONS.

An initial meeting was held on 5th May 2005 with the Adecco Agency, Fareham Branch. The requirements of the jobs were outlined and Adecco agreed to circulate the details to their staff

pool and ascertain initial reactions and responses. As staff would be working alone Adecco asked that consideration be given to staff security, especially in country areas.

A further meeting was held on 16th May by which time the following items had been agreed:

- Adecco to pay staff wages and expenses directly.
- Staff to complete worksheets and mileage/telephone claim forms on a Friday; to be checked by Data Collection and faxed to Adecco by noon on Monday.
- Adecco to send weekly invoices for each person.
- 3 contact staff (T1 and T2 methods) to be employed for 6 weeks from 13th June to 23rd July.
- 2 visual check staff (T3 method) for 4 weeks from 4th July to 29th July.
- Pay rates for contact staff £8.50 per hour and for visual check £7.50 per hour.
- All staff to be paid £7.50 per hour for training.
- The rates paid to Adecco include hourly rate, national insurance and holiday entitlement. £8.50 hourly rate was charged at £11.87 and £7.50 rate at £10.47.
- Staff to be age 18+
- Staff need own transport, mileage to be paid at the standard ONS rate of 40p a mile from a base of ONS Office, less travel to work mileage.
- Car insurance business usage cover essential for the work
- Car parking to be reimbursed against receipts.
- Staff to have mobile phones; Adecco agreed this was reasonable as mobile phone ownership is now almost universal. Calls to be reimbursed at 20p a call. Calls to be kept short by ONS returning call.
- Staff to sign confidentiality agreements
- Adecco to perform normal agency staff security checks
- Dress code smart/casual
- A list of names supplied to ONS 5 days prior to start of work in order to notify Newport helpline.
- Photo Identification (ID) to be supplied to ONS 5 days before start of work for incorporating into ID card
- Car registration to be supplied to ONS 5 days before start for notification to Hampshire Police
- Working hours agreed:
 - T1 and T2 - 3-8pm Monday to Friday, 10-4pm Saturday.
 - T3 - Visual check 9-5pm Monday to Friday
- Follow up meeting arranged between ONS and Adecco after one week of field work.

Staff employed for a Census are required to sign security agreements under the prevailing Census Act. As the SST is outside the scope of any Act ONS HR Department were consulted who agreed that signing of the Official Secrets Act would suffice for address checkers.

For previous Censuses field staff completed an ONS Health and Character declaration form, references only being taken up for senior staff posts. In 2002 the Criminal Records Bureau (CRB) was set up to enable checks to be made into criminal backgrounds. Adecco were able to make the checks with CRB on behalf of ONS but at a cost and taking around 4 weeks. After consultation with the Census Field Force Development Team it was thought that it was unlikely that CRB checks will be undertaken for 2007 Test, so it was agreed that Adecco's usual staff background and security checks would suffice.

Adecco were concerned that the hours for contact checkers, especially the evening work, would deter applicants and suggested job sharing as an option. This was rejected, as there were reservations over the slower build up of expertise at the job. In the event there were sufficient applicants for the 5 posts at the advertised hours.

Adecco accompanied staff to the ONS offices on their first morning to make introductions and ensure time sheets were supplied.

4.4. Design Summary

With the area, treatments and field staff finalised a design for the test was produced. Table 4.4.1 below shows the final design that was used in the SST.

Table 4.4.1 – Overall design and workload allocation

Colour Key	Red = Staff 1, Pink = Staff 2, Blue = Staff 3, Green= Staff 4, Black = Staff 5, Bold = ONS HQ
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Supergroup and Test Ward Area	Total addresses in ward	Estimated listed addresses by treatment			Approx address Total	Workload allocation			
		T1	T2	T3		Staff T1	T2	T3	Week
1- Industrial Hinterlands									
Bedhampton	3,591	2,000		2,000+	4,000	S1		S4	W1, W4
Portchester East	4,645		2,000				S3		W3
2- Traditional Manufacturing									
Warren Park	2,494	2,000		2,000+	4,000	S1		S4	W2, W5
Leesland	2,710		2,000				S2		W5
3- Built up areas									
Town	2,136	2,000		2000+	2,000	S3		S5	W2, W5
4- Prospering Metropolitan									
St Judes (½)	2,798	2,000		2,000+	4,000	S2		S4	W2, W7
St Judes (½)	2,799		2,000				S3		W4
5- Student Communities									
Swaythling	4,864		2,000	2000+	2,000		S2	S5	W4, W7
6- Multicultural Metropolitan*									
Bevois (½)	2,621	1,000				S2		S5	W3-1 st , W6
Bevois (½)	2,622		1,000	2,000+	2,000		S1	S5	W3-2 nd , W6
7- Suburbs & Small Towns									
Bursledon & Old Netley	2,995	2,000		2,000+	4,000	S3		S5	W1, W4
Fareham North	2,827		2,000				S1		W5
8- Coastal & Countryside									
Emsworth	4,131	2,000		2,000+	3,830	S2		S4	W1, W6
Lee West	1,830		1,830				S1		W4
9- Accessible Countryside									
Compton & Otterbourne	1,460	1,460		1460+	2,735	S1		HQ	W3, w5/w6
Owslebury & Curdridge	1,375		1,375				S3		W5
Total	45,898	14,460	14,205	17,460+	28,665				

* Proxy - Bevois actually classified as student communities (supergroup 5).

There were many issues which affected the overall design and these are listed below:

- T1 and T2 were not applied in the same areas;
- The same field staff used T1 and T2 but they were not aware that they would use T2 until part way through their period of employment.
- An initial comparison of supergroup areas had shown that supergroups 3 and 5 had similar properties in terms of perceived address checking characteristics and so they were treated as one area type;
- Visual check was applied in same areas as T1 and T2 and so could not be performed at the same time.

This was the final design that was agreed shortly before the field work began. This design was a reworked version of an earlier version created before the late inclusion of T3. The T3 column shows the number of addresses that were expected to be covered using this method.

4.5. Instructions, training, and debriefing

The instructions for the field staff were primarily based on the 2001 Census enumerators instructions as many aspects of their jobs overlapped. The instructions included sections on using maps, completing their Address-Listing books, the definitions they would apply, expected scenarios, health and safety, and expenses. Separate sets of instructions were tailored for each method T1, T2 and T3. The instructions were thoroughly quality assured.

Before delivery to field staff a pilot run through of the material was held for ONS staff who had volunteered to assist with the test. Their feedback proved to be invaluable in refining the presentations. An exercise in recording address book details uncovered an anomaly in the instructions and it was possible to rectify this before presenting to the agency staff. It was also extremely useful for the ONS team, not being professional trainers, to have the run through to gain confidence. Another informal training session for ONS staff assisting with the test was held in early June and after that any additional people had the task explained to them individually.

The training material was initially designed for the T1, 'contact all' treatment. The training material for the visual checkers, T3, was a simplified version of T1, there being no need for doorstep routines or role play exercises. Adecco passed a copy of the instructions to the two new staff the week before work started and they were paid for one hours reading time. The training session followed the same schedule as T1 but with just 30 minutes for reading the instructions it was shortened to 2.5 hours. Both staff grasped the nature of the task quickly but this could be either due to pre-reading or them being quick learners/intelligent people.

The agency staff training sessions were held on the morning of the first day of work and were also an opportunity for them to meet the ONS people who would be supporting their work, either by phone or visiting them in the field. At the end of the session staff were issued with their address books, equipment and maps for the first week as well as a supply of claim forms (personal and injury/assault), mileage forms, Health and Safety and observational booklets.

A half-day training session was set-up for the field staff which was designed to introduce them to the task they were to be carrying out. The training sessions were delivered by the four main ONS contacts who produced the material for their individual topics. A Power Point presentation took them through every area of their job. This included:

- introduction to the Census and explanation of the task;
- reading time for the instruction book (1 hour);
- maps and areas;

- Address-Listing book (exercise in how to complete in conjunction with maps);
- household definition exercise;
- doorstep routine role play (for T1 and T2 staff only);
- practical issues (mileage, distribution of new maps and books etc);
- health and safety (time given to read booklet);
- debriefing (for last day of work);
- observation booklets; and
- questions.

The training session was conducted from 9am to 12.30pm the staff then left to take a break. When they started their duties at 3pm an ONS member of staff accompanied each member of field-staff for their first hour or two of work. This was planned to help the field staff settle into the job and to give the SST team the opportunity to correct any mistakes staff may have been making.

At the end of the fieldwork all our field staff gathered for separate debriefing session dependant on which treatment they used – one for the T1 and T2 staff and a separate session for T3 staff. This provided SST team with the opportunity to gather information from the perspective of our field staff. The observation booklets were used as a format for the debriefing session and the main points that our staff made were recorded on a flipchart. The session was also recorded onto cassette so that no point was overlooked and so ONS staff could engage in discussion rather than note take.

4.6. Supplies and equipment

Field staff were issued with equipment on their training day and returned it to ONS at the debriefing session. Items were:

Maps – Maps were supplied in colour on 3 scales:

- Large scale map of Hampshire showing the road network and highlighting the SST wards.
- Ward maps showing ED boundaries and codes, road names, features and buildings for staff to plan their work. Ward boundaries were for 2003 statutory wards.
- ED maps showing road names, features and individual buildings for staff to plan their route around the ED. ED boundaries were as created in 2000 for 2001 Census.

Large scale and ward maps were printed by ONS Geography. Data Collection team was granted access to the 2001 Census ED map data base for printing of A4 and A3 size maps on a local colour printer. The large area EDs that were scaled for A0, A1 and A2 size paper were printed by ONS Geography on a plotter.

While it was possible to reuse some of the smaller size maps during the test most of the large scale ED maps needed reprinting.

Staff were issued with maps on a weekly basis relevant to the wards and EDs they were scheduled to check that week.

Address-Listing books – It was initially planned that Personal Digital Assistant's (PDA's) would be used to collect the data during Phase 1. Discussions were held regarding the use of PDA's but it was concluded that they could not be used during the SST.

Each Address-Listing book contained all the pre-listed addresses for a whole ED on landscape A4 pages, 8 addresses to a page for T1 and T2, 10 to a page for T3 (because dates and times

were not necessary). Books were spiral bound with an acetate sheet over the front page and a stiff card backing to make writing easier. The front cover of each book listed:

- Book order
- Ward name
- ED code
- Field staff name
- Start/End date & time (T3 only)

Within each Address-Listing book the pre-listed addresses were sorted firstly alphabetically according to street name and within every street the number of each address was ordered numerically. Named properties were alphabetically listed after all numbers in a street had been listed. During the electronic construction of the Address-Listing books the controlled error rates were introduced, see section 4.8 for further details. All entries were numbered and 50 empty slots were left after the printed addresses for adding found addresses. Address lists by ED were compiled and the books printed in the office, the binding and finishing was done in ONS Reprographics.

T1 and T2 staff were issued with all the books for their scheduled ward each week. T3 checkers were supplied with new wards as required.

Bag – Black canvas zipped bags with handles and shoulder straps. Bags were printed with a white ONS logo; side pockets were useful for carrying leaflets. Bags were designed for use by interviewing field staff and loaned by Social Survey Division.

Personal Alarm & Torch – A personal security alarm, operated by pulling out the carrying strap. The alarm also had a built in torch. Alarms had been issued during the 2001 Census and 4 were retrieved from the Christchurch store, a 5th was purchased locally.

ID Badge & Lanyard – Adecco supplied passport size photos of staff a week before they started work and these were incorporated into an ID card created by Census Questionnaire Design Section. The design incorporated the ONS logo and a return address if the card was lost. ID cards were laminated by ONS Reprographics. Lanyards were thick blue ribbon with 'National Statistics' printed in white and a plastic catch that came apart if caught or pulled. Lanyards were produced for use by interviewing staff and kindly given by Social Survey Division.

Clipboard & Pens – An A4 sized rigid clipboard was supplied to make it easier to write in the address books and to anchor pages. Black biros were supplied for writing in address books. Supplies sourced from the stationery cupboard.

Safety Guide, Instructions & Forms – The 'Staying Safe' guide to personal safety was distributed on the training day along with work instructions. Expense claim forms and an accident report form were also supplied.

Leaflets – The Thank You and explanatory leaflet was supplied to hand out to all households contacted by the staff. The A5 leaflet went through a formal QA. The layout was designed by Questionnaire Design Section and printed in ONS Reprographics. Extra copies were distributed to field staff as supplies ran low. The purpose of the leaflet was to gain the cooperation of the respondent, provide a 'Thank you' to the respondent and to provide a means to help gain cooperation or as means to help end the questioning and leave.

Mobile phone – Staff were expected to supply their own mobile phone and were reimbursed for calls made. ONS hired a mobile phone from Vodafone, on a short term contract, for dedicated use in staff support following ONS policy.

Observation Booklet – Staff were supplied with an observation booklet to record their experiences of the task during the fieldwork. Several headings were provided within the booklet. The headings corresponded to topics that would be discussed during the debriefing session.

Issue of supplies – Address-Listing books and maps for the first week were distributed at the training session on Monday and collected, along with the completed Adecco worksheets, on Friday. This pattern continued for the contact staff but as the visual checkers completed books at a faster rate they needed new supplies more frequently, usually collecting them from the office when moving on to a new ward.

4.7. Management

All field staff were recruited through the Adecco Agency in Fareham. Staff could raise any personal issues either directly with ONS or through Adecco.

A rota of ONS staff manned the office mobile telephone to provide cover during working times. Field staff used their mobiles for any work related queries, such as directions or procedures, and were called back to keep calls short.

The ONS Public Enquiry Telephone Unit in Newport were given details of the SST and their telephone and minicom contact numbers and opening hours were printed on the information leaflet handed out to the public. Any public enquiries on the test that they were unable to answer were passed on to Data Collection for response.

It is advisable when conducting a survey to notify the local police of any field activity. Hampshire Constabulary operate a central contact centre and disseminate the information to local police stations. The nature of the field operations, staff names and car registration numbers were passed to the contact centre and confirmed by fax. The centre issued a call reference number and the centre was telephoned or faxed with updates as they arose.

The address checking exercise for the 2011 Census will be managed by Field Managers who will have around 10 to 15 field staff. In order to emulate the conditions as closely as possible the intention was to operate a remote hands-off style of management when possible. After the training session ONS staff accompanied staff for their first few hours in the field to ensure they had understood the instructions and were completing the task correctly.

In week three of the field testing T1 staff were met by an ONS staff member on an individual basis and it was explained to them that they would start to use a different treatment, T2. Staff were not previously told that they would perform a different treatment part way through their employment in order to avoid any confounding/interaction effects.

A significant task was the management of ONS office volunteers. ONS staff were encouraged to experience the pre-delivery household address checking first hand. ONS staff also performed all the final QA work, see section 4.8 for further details.

4.8. Quality Assurance

Controlled error rate

With field staff working with relatively little contact it was important that there were in-built checks to verify that the field-staff were doing the work that they had been set and to assess the quality of the methods used. A relatively simple idea was to add and remove addresses from the pre-listed address books given to the field staff. The intention was that the SST team could then check whether the field staff were identifying these controlled errors.

This approach was adopted and roughly 2% of addresses were carefully deleted and 2% added. It was important that these addresses were added or removed sensitively so as not to raise suspicion from our field-staff; so in many cases the 4% combined error rate could not be met e.g. in areas with straightforward rows of addresses that had not changed for many years. This 4% error rate has no intentional statistical relevance, it was decided that this was a reasonable rate that does not jeopardise the integrity of the task i.e. unlikely to affect field-staff morale and does not affect the time (and therefore cost) it takes to perform the address listing task. A larger rate could have impacts on any estimates derived from the data.

Quality Assurance of change

In the final week of the SST the second QA measure was planned. This method quality assured the work of the field staff by performing a field re-check of areas. This was performed by ONS Census staff. For each of the 14 wards, this QA process consisted of:

- redoing one entire Enumeration District using T3 visual checking only. This was done without sight of the addresses found/not found by the initial checking. It was agreed that it was inappropriate to recheck using T1 or T2 as it would mean repeat contact with the public and possible inconvenience for them;
- checking addresses added to the address book but marked as found by the address checkers - to be sure they didn't exist;
- checking addresses deleted from the address books and not found – to be sure they didn't exist;
- checking all new addresses found by the address checkers to confirm they existed, were in the ED and were appropriately categorised;
- looking for all addresses not found by the address checkers; and
- checking addresses where the details recorded by the address checkers were unclear e.g. partially complete or no details recorded against the address

The objective was to come to a view about how well EDs had been address checked and to increase confidence in our address list for the second phase of the SST – posting out to addresses that were found to see if post was successfully delivered.

4.9. Data Entry

The keying of the data was the final stage of phase 1 of the SST. The data that the five field staff collected over the 7 weeks of fieldwork needed to be transferred to a household-address database for two reasons:

- so the results of phase 1 could be analysed (e.g. number of new households/addresses/changed found by each treatment per area); and
- to provide a list of addresses for post-out in phase 2.

An Excel spreadsheet for every ED was created which contained the pre-listed addresses and a set of columns which related to the address listing books they used. The spreadsheets also contained the addresses which formed the controlled error rates and a marker was placed beside these addresses.

Two data entry staff from ONS's internal data entry unit were seconded for several weeks to input the majority of the data. Census staff from project support and other volunteers also performed some data entry. Each member of staff was given guidance and instructions on how to enter the data into the spreadsheets using the coding frame provided.

5. Results and evaluation

This section has two main parts setting out the quantitative and qualitative results and evaluation.

5.1. Quantitative results and evaluation

One of the key functions of the SST was to provide operational information, for example the amount of time it takes to perform the household address-checking. This information will help provide recommendations for the methods and workloads for future operations including the 2007 Test and possible further SST.

This section includes many tables some of which include data from fieldwork performed by ONS volunteers. The amount of data collected by volunteers is small in comparison to the amount collected by the agency field staff but it is included in the analysis where it is appropriate to do so. This is indicated in the table title.

5.1.1. Pre-Delivery Household Address Checking rates

Table 5.1.1.1 provides the number of household addresses covered by the three different treatments within the nine different supergroups, as well as an average for the number of household addresses covered in an hour.

There are two important points that must be considered when interpreting these figures:

- T3 involved no contact with householders and so only one sweep of a defined area was performed whereas T1 and T2 involved 3 sweeps of an area to improve contact rates;
- some addresses or households in T1 and T2 areas will not have been covered in sweep 2 or 3. Field staff would start 2nd and 3rd sweeps in a specific sequence outlined in the instructions and during training. This often meant that a full sweep could not be completed (e.g. at the end of the week).

Table 5.1.1.1 – T1, T2 and T3 – Number of household addresses checked per hour - includes fieldwork by ONS staff.

Supergroup	Total number of household addresses checked at least 1 sweep by treatment ¹ (Pre-listed + added household addresses)			Average household addresses per hour by treatment ³		
	T1 ²	T2 ²	T3	T1 ²	T2 ²	T3
1 - Industrial Hinterlands	738	548	5774	16.61	28.52	168.99
2 - Traditional Manufacturing	455	1320	4376	28.77	47.85	251.25
3 - Built-up areas	793		2745	32.84		194.91
4 - Prospering Metropolitan	745	2035	4742	26.47	36.21	190.31
5 - Student Communities		1007	3181		43.72	235.63
6 - Multicultural Metropolitan	638	923	5917	26.83	41.70	236.68
7 - Suburbs and Small Towns	564	896	5248	36.82	26.01	147.14
8 - Coastal and Countryside	973	503	6696	27.28	21.84	178.96
9 - Accessible Countryside	409	398	2205	14.02	17.60	61.68
Total	5315	7630	40884	Average 24.55	33.43	171.84

¹ Note: Varying amounts of time were spent in each area and therefore direct comparison of addresses covered is not advisable.

² Note: T1 and T2 involved up to 3 sweeps of the area in order to make contact at addresses/households where contact could not previously be made.

³ Note: Addresses/Households per hour calculated as total time spent performing each treatment divided by number of total number of addresses/households covered.

The left-hand side of table 5.1.1.1 shows the number of household addresses that were checked broken down by treatment type and supergroup type. Varying amounts of time were spent in each area and a direct comparison between the number of household addresses is not advisable. However, it is clear that many more household addresses were checked using T3 and this is confirmed in the right-hand side of the table.

The right-hand side of table 5.1.1.1 shows the checking rate for each treatment type. T3 provides the quickest household address-checking rate; T2 provides the next quickest rate, followed by T1. The respective averages for each of the three treatments are 24.6, 33.4 and 171.8 household addresses per hour. This means that T3 is approximately 7 times faster than T1 and 5 times faster than T2. However the analysis shows that T2 is slower than T1 in two supergroups 'Suburbs and Small Towns' and 'Coastal and Countryside'.

The household address checking rates varied dramatically according to the supergroup area. The one supergroup that stands out in terms of the speed of household address checking is supergroup 9 – 'Accessible Countryside'. In this area the average T3 checking rate is approximately 60 household addresses per hour, this is considerably slower than the T3 overall average of 172 household addresses per hour. This trend is also seen in T1 and T2 with rates of 14 and 17 household addresses per hour, below their respective averages. The slow rate is likely to be due to very low population density in these areas. Supergroups 2, 3, 4, 5, and 6 have higher than average household address checking rates for all three treatments. These supergroups form the majority of the urban areas including 'Traditional Manufacturing', 'Built-up Areas', 'Prospering Metropolitan', 'Student Communities', 'Multicultural Metropolitan', and 'Suburbs and Small Towns'. In these areas the population density is much higher and so the time it took to walk

between addresses was minimal. Section 5.2.3 provides details on the nature of each supergroup type.

T1 and T2 required the field staff to make a maximum of three attempts at contact. In comparison with table 5.1.1.1 (all three attempts at contact) Table 5.1.1.2 considers only the addresses covered in the first sweep for T1 and T2 and the time that it took to perform this sweep. This gives a more direct comparison between the methods.

Table 5.1.1.2 – T1, T2 and T3 – Number of household addresses checked per hour (1st sweep for T1 and T2) – includes fieldwork by ONS staff.

Supergroup	Total number of covered household addresses (In first sweep for t1 and t2).			Average household addresses per hour		
	T1	T2	T3	T1 ¹	T2 ¹	T3
1 - Industrial Hinterlands	738	548	5774	29.19	45.54	168.99
2 - Traditional Manufacturing	455	1320	4376	32.35	78.42	251.25
3 - Built-up areas	793		2745	47.39		194.91
4 - Prospering Metropolitan	745	2035	4742	46.47	65.43	190.31
5 - Student Communities		1007	3181		73.24	235.63
6 - Multicultural Metropolitan	638	923	5917	46.06	69.66	236.68
7 - Suburbs and Small Towns	564	896	5248	38.85	39.33	147.14
8 - Coastal and Countryside	973	503	6696	38.43	39.25	178.96
9 - Accessible Countryside	409	398	2205	18.95	25.22	61.68
Total	5315	7630	40884	Average 36.06	55.15	171.84

¹ Figures are based on the total number of addresses visited in the first sweep divided by the time it took to do this check. Assuming that all new households found were found in first sweep (an unlikely assumption but would not affect figures dramatically).

The results in table 5.1.1.2 are similar to the results in table 5.1.1.1. They still show that T3 is quicker than T1 and T2 but the differences are not as large. T3 is approximately only 3 times faster than T2 and 5 times faster than T1. The household address-checking rates have almost doubled in some areas for T1 and T2 when only the first sweep is considered.

The patterns within supergroups are the similar as in table 5.1.1.1. 'Accessible Countryside' has the slowest household address-checking rate whilst 'Traditional Manufacturing', 'Built-up Areas', 'Prospering Metropolitan', 'Student Communities', 'Multicultural Metropolitan', and 'Suburbs and Small towns' have the fastest household address-checking rate.

Rates for the number of household addresses covered in each individual sweep of T1 and T2 can be found in Appendix A.1

5.1.2. Pre-Delivery household address quality indicators

In addition to assessing the address checking quantity one of the key aims of the SST was to assess the effectiveness of performing a pre-delivery address-check. One quality indicator is the proportion of new household addresses that each method found. This information can be used to compare the methods that were used to perform the pre-delivery household address check by analysing the number of addresses and households that each method used.

The added household addresses shown throughout this section are raw counts before they were quality assured so it is expected that a small proportion of these addresses may not be correct.

The household addresses were quality assured but because no contact was made during this quality assurance it is unlikely that socially defined households were ever checked. Section 4.8 and 5.2.7 gives further information on the QA process.

Table 5.1.2.1 below compares the number of household addresses that were added according to treatment type and supergroup. T1 and T2 were never performed in the same area in order to avoid extra burden on the public. T3 was performed in all areas and there is some overlap. This means that treatments are not strictly comparable, for example the 3 EDs that T1 visited may have had proportionally more new households and addresses than the 13 EDs that T3 visited thus creating a distorted view. These differences cannot be quantified. Similarly there may be an interviewer effect. Generally with T1 and T2 only one member of field staff will have visited a particular ward. If one member of field staff was, for example, not consistently recording new addresses then this would bias the results.

Table 5.1.2.1 – T1, T2 and T3 - No. of new household addresses (excluding controlled error rates and fieldwork by ONS staff)

Supergroup	Treatment type					
	T1 – Percent of new household addresses added* (actual number in brackets)		T2 - Percent of new household addresses added* (actual number in brackets)		T3 - Percent of new household addresses added* (actual number in brackets)	
1 - Industrial Hinterlands	0.81%	(6)	0.36%	(2)	0.81%	(47)
2 - Traditional Manufacturing	0.42%	(1)	0.08%	(1)	0.53%	(23)
3 - Built-up areas	0.14%	(1)			3.86%	(106)
4 - Prospering Metropolitan	14.63%	(109)	3.24%	(66)	2.66%	(126)
5 - Student Communities			3.57%	(36)	0.69%	(22)
6 - Multicultural Metropolitan	8.93%	(57)	1.41%	(13)	5.97%	(353)
7 - Suburbs and Small Towns			0.78%	(7)	1.98%	(104)
8 - Coastal and Countryside	0.14%	(1)	0.40%	(2)	0.78%	(52)
9 - Accessible Countryside	3.67%	(15)	2.76%	(11)	3.23%	(53)
Totals	4.53%	(190)	1.81%	(138)	2.16%	(870)

*Note: Does not include addresses that were subsequently found after being deleted as part of controlled error rate
 *Note: Percentage calculated as number of new household addresses divided by all household addresses.

Table 5.1.2.1 shows that T1 identified the highest proportion of new household addresses (4.53%), followed by T3 (2.16%) and then T2 (1.81%). In the majority of supergroups the T1 added rate is higher than the T2 and T3 rate. This provides an indication that T1 provides a higher quality household address checking method. It was expected that T2 would identify more addresses compared to T3.

The proportion of new household addresses added in the 'Built-up areas' supergroup varies between T1 and T3, 0.14% and 3.86% respectively. This is probably due to the difference in the specific EDs that each treatment visited. The proportion of new household addresses varies considerably between supergroups. Prospering metropolitan shows the very highest rate when using T1, with over 14.63% new household addresses being found although only 3.24% and 2.66% were found by T2 and T3 respectively. Multicultural metropolitan is another area where a high proportion of new household addresses were found with 8.93% using T1 and 5.97% using T3. Student communities showed a reasonably high proportion of new household addresses with 3.57% found with T2. Accessible countryside was the supergroup that had the next highest proportion of added household addresses with roughly 3% added by every treatment. No other supergroup demonstrated a high proportion of added household addresses.

There were many supergroups where very few household addresses were added. Three supergroups 'Industrial Hinterlands', 'Traditional Manufacturing', and 'Coastal and Countryside' had less than 1% of new household addresses for all three treatments.

Table 5.1.2.2 shows the total number of pre-listed addresses that T3 field staff marked as having signs of multiple occupancy e.g. more than 1 set of dustbins, multiple doorbells etc. They were asked to use this if they could not be sure whether there were additional households within the address or if they were sure there were additional households but were unsure of how many. The information was collected in order to give an indication of the proportion of addresses which could be contacted to verify using a 'contact by judgement' method.

Table 5.1.2.2 – T3 – Number of pre-listed addresses with signs of multiple occupancy.

Supergroup	Number of pre-listed addresses with signs of multiple occupancy	Percentage of total addresses
1 - Industrial Hinterlands	33	0.58%
2 - Traditional Manufacturing	2	0.09%
3 - Built-up areas	0	0.00%
4 - Prospering Metropolitan	57	1.23%
5 - Student Communities	4	0.13%
6 - Multicultural Metropolitan	41	0.74%
7 - Suburbs and Small Towns	3	0.06%
8 - Coastal and Countryside	37	0.56%
9 - Accessible Countryside	4	0.25%
Totals	181	0.48%

The number of pre-listed addresses that were marked as having signs of multiple occupancy varied dramatically according to the supergroup type. Given other results it was expected that supergroups 'Prospering Metropolitan' and 'Multicultural Metropolitan' would have many addresses with signs of multiple occupancy but other supergroups such as 'Industrial Hinterlands', and 'Coastal and Countryside' have high numbers of pre-listed addresses with signs of multiple occupancy, this was not expected. It was likely that the guidelines regarding classifying pre-listed addresses as having indications of multiple occupancy were interpreted differently by different field staff, this may account for some of the variation between supergroups. Secondly, although the unexpected areas may have signs of multiple occupancy some of these addresses may not necessarily have additional households if contact were made to verify each address.

The following two tables compare the number of household addresses that were added in the areas where two treatments were applied. This negates any effect due to differences in areas and volume but the analysis is based on a smaller sample. Table 5.1.2.3 compares T1 against T3 and table 5.1.2.4 compares T2 against T3 only in EDs where both treatments were applied. This analysis does not avoid possible field staff effects.

Table 5.1.2.3 – Number of addresses added in areas that T1 and T3 both visited

Supergroup	Treatment		
	%* T1 added (actual number in brackets)	%* T3 indications of multi-occupancy (actual number in brackets)	%* T3 added (actual number in brackets)
1 - Industrial Hinterlands	0.81% (6)	1.22% (9)	0.68% (5)
2 - Traditional Manufacturing			
3 - Built-up areas	0.13% (1)	0.00% (0)	0.13% (1)
4 - Prospering Metropolitan	14.63% (109)	2.01% (15)	3.08% (23)
5 - Student Communities			
6 - Multicultural Metropolitan	8.93% (57)	0.00% (0)	0.94% (6)
7 - Suburbs and Small Towns			
8 - Coastal and Countryside	0.10% (1)	0.10% (1)	0.10% (1)
9 - Accessible Countryside	3.67% (15)	0.49% (2)	0.98% (4)
Totals	3.57% (189)	0.51% (27)	0.75% (40)

* Percentage calculated as all new addresses and households divided by all addresses/households identified in area.

Table 5.1.1.3 shows that T1 identified many more households than T3, 189 compared to 40 in total. There are large differences between the treatments in two of the supergroups 'Prospering Metropolitan' and 'Multicultural Metropolitan', with differences of 86 and 51 households respectively.

In the 'Prospering Metropolitan' area T3 staff identified 15 pre-listed addresses that had signs of multi-occupancy and further research was performed to investigate the number of households that may have been found if contact was made at these addresses. The research showed that T1 field staff identified 40 additional households within 10 of the 15 pre-listed addresses. This indicated that 5 addresses may not have contained additional households or were not highlighted through T1. Compensating for these 40 addresses still leaves a large difference between the number of household addresses that may have been added using a contact by judgement method and household addresses that were added by T1 in the 'Prospering Metropolitan' and 'Multicultural Metropolitan' supergroups. This analysis provides a strong case for the use of T1 for these two supergroup areas.

Table 5.1.2.4 – Number of addresses added in areas that T2 and T3 both visited.

Supergroup	Treatments		% T3 indications of multi-occupancy (actual number in brackets)	% T3 added (actual number in brackets)		
	% T2 added (actual number in brackets)					
1 - Industrial Hinterlands	0.40%	(2)	0.60%	(3)	1.99%	(10)
2 - Traditional Manufacturing	0.08%	(1)	0.08%	(1)	0.08%	(1)
3 - Built-up areas						
4 - Prospering Metropolitan	3.71%	(66)	1.24%	(22)	1.69%	(30)
5 - Student Communities	3.49%	(36)	0.10%	(1)	0.97%	(10)
6 - Multicultural Metropolitan	1.24%	(13)	2.76%	(29)	12.08%	(127)
7 - Suburbs and Small Towns	0.72%	(7)	0.10%	(1)	0.82%	(8)
8 - Coastal and Countryside						
9 - Accessible Countryside						
Totals	1.88%	(125)	0.86%	(57)	2.80%	(186)

* Percentage calculated as all new addresses and households divided by all addresses/households identified in area.

Table 5.1.2.4 shows that overall T3 added many more addresses compared to T2. The largest difference can be seen in the ‘Multicultural Metropolitan’ supergroup. There is a difference of over 100 addresses in this supergroup and these seemed abnormal given that many of the other supergroups show that T2 identified more addresses than T3. One possible reason for the difference could be an interviewer effect i.e. the member of field staff working in this area may not have followed the instructions correctly. Further assessment of our field staff can be found in section 5.2.1 Staff and Recruitment. Aside from this anomaly there were two supergroups that showed large differences in the number of additional households identified, ‘Prospering Metropolitan’ and ‘Student Communities’. This showed that T2 (a contact method) has the potential to identify many more households than T3 (a non-contact method) in these areas. This analysis adds further weight to the notion that a contact intensive method should be used in these areas.

5.1.3. Addresses not found

During the pre-delivery household address checking there were many pre-listed addresses that could not be found. For the purposes of this SST these were classified as one of two types, ‘unlikely to exist’ and ‘could not find’. An address was classified as ‘unlikely to exist’ if there were evident reasons for its non-existence, for example if a house no longer existed because a block of flats had been built in its place, the number of these can be found in Appendix A.3. An address was classified as ‘could not find’ if there was no apparent reason for its non-existence. Table 5.1.3.1 shows the number of address classified as ‘could not find’ according to treatment type and supergroup type.

Table 5.1.3.1 – T1, T2 and T3 – No of addresses not found (excluding controlled error rates).

Supergroup	T1 – not found	T1 – Percent of all addresses	T2 – Not found	T2 – Percent of all addresses	T3 – not found	T3 – Percent of all addresses
1 - Industrial Hinterlands	5	0.68%	0	0.00%	59	1.03%
2 - Traditional Manufacturing	0	0.00%	17	1.29%	25	1.07%
3 - Built-up areas	10	1.26%			52	1.97%
4 - Prospering Metropolitan	21	2.82%	60	2.95%	184	3.99%
5 - Student Communities			6	0.60%	26	0.82%
6 - Multicultural Metropolitan	6	0.94%	16	1.73%	313	5.63%
7 - Suburbs and Small Towns			2	0.22%	92	1.79%
8 - Coastal and Countryside	10	1.03%	5	0.99%	107	1.61%
9 - Accessible Countryside	27	6.60%	1	0.25%	120	5.62%
Total	82	1.54%	107	1.40%	978	2.58%

Table 5.1.3.1 shows that T1 and treatment T2 have a similar proportion of addresses that could not be found (around 1.5%). T3 has a higher proportion of addresses that could not be found (2.58%). One possible reason for the differences between treatments is that T1 and T2 staff revisited the area on their second and third sweeps which provided them with an extra opportunity to find addresses that they couldn't find at the first attempt. T1 and T2 checkers asked householders to help them locate addresses they could not find.

The supergroups where high percentages of addresses could not be found were 'Accessible Countryside' and 'Prospering Metropolitan'. Supergroup 'Multicultural metropolitan' had a high percentage of addresses that could not be found when T3 was used (5.63%).

5.1.4. Type of added addresses and type of pre-listed address

The field staff were asked to categorise each household or address that they added to their household-address list using the options available in their workbooks. The majority of addresses were classified as an 'existing address' or 'converted address'. Looking at the addresses as they were written it is clear that the majority of addresses were sub-dwelling units. It is thought that the distinction between these two categories was not fully understood by the field staff. Further clarity should be given to how each category should be used in future exercises. Appendix A.2 shows the number of addresses that were in each category according to treatment type and supergroup.

Field staff were asked to record whether or not each pre-listed address was a standard residential type, if an address was not a standard residential type they were asked to classify it as one of eight types. The PAF that was used during the SST was the small users version i.e. addresses that receive under a low level of mail. This excluded many large non-residential addresses but left some smaller non-residential addresses. The majority of pre-listed addresses that were not standard residential household addresses were small non-residential addresses. There were many pre-listed addresses classified as 'unlikely to exist'. These could have been addresses that did not exist for a known reason or addresses that were redundant due to definitional differences. Appendix A.3 shows the number of address that were in each category according to treatment type and supergroup.

5.1.5. Contact rates

Crucial to any contact method is a good contact and cooperation rate. Table 5.1.5.1 shows the contact and cooperation rate when T1 was used. The table provides an overall rate and the level of contact for each individual sweep. This provides an indication of the value associated with returning to addresses where contact could not be made in previous sweeps.

Table 5.1.5.1 – T1 - Success of gaining address information by area type – excluding office work

Supergroup	Contact made and cooperation gained						
	No of addresses where contact and cooperation gained - 1st sweep	1st sweep - %	No of addresses where contact and cooperation gained - 2nd sweep	2nd sweep - %	No of addresses where contact and cooperation gained - 3rd sweep	3rd sweep - %	Overall addresses where contact and cooperation gained - %
1 - Industrial Hinterlands	378	51.22%	100	30.86%	25	28.74%	73.54%
2 - Traditional Manufacturing	131	55.27%	6	22.22%	4	50.00%	80.53%
3 - Built-up areas	307	42.94%	49	25.13%	30	23.44%	66.26%
4 - Prospering Metropolitan	250	33.56%	108	28.35%	41	24.40%	60.16%
5 - Student Communities							
6 - Multicultural Metropolitan	192	30.09%	83	28.62%	19	20.65%	57.39%
7 - Suburbs and Small Towns							
8 - Coastal and Countryside	354	50.00%	115	47.92%	20	26.32%	74.06%
9 - Accessible Countryside	213	52.08%	47	37.60%	13	20.31%	76.09%
Total	1825	43.56%	508	32.11%	152	24.40%	68.65%

There was not always the time to perform a second and third sweep, therefore the contact rates are based on the number of contacts made divided by the number of attempts made in one sweep of contact. The overall contact rate gives a projected percentage figure for the proportion of the whole ward that would have been contacted if the report contact rates were experienced in a complete second and third sweep. The 'Traditional Manufacturing' supergroup has a high rate of contact in the third sweep of 50%. This is out of sync with the trend of decreasing contact and cooperation rates between sweeps and leads to a very high unrealistic contact and cooperation rate over three sweeps of 80.5%.

Table 5.1.5.1 shows that overall 43.6% were contacted during the first sweep of the area, 32.1% of remaining addresses in the second sweep were contacted and 24.4% of the addresses remaining in sweep 3 were contacted. This equated to a total contact rate of 68.65% using three contact attempts.

The contact rate varied according to the supergroup type. Response rates for the first contact were much lower than the average for 'Prospering Metropolitan' and 'Multicultural Metropolitan' supergroups; these had rates of 33.5% and 30.1% respectively. 'Industrial Hinterlands', 'Traditional Manufacturing', 'Coastal and Countryside' and 'Accessible Countryside' had contact rates of between 50% and 56%, this was between 7% and 13% higher than the overall average.

Table 5.1.5.2 shows the response rate when T2 was used. In T2 every third address was contacted and enquiries about the two adjacent addresses either side were made. This meant

that in theory information could be gained about three addresses by only contacting one address, potentially reducing time and cost as well as reducing public burden. Instructions for the field staff were devised which should have allowed for keying staff to distinguish between a contacted or enquired address. Unfortunately this was not always the case and meant that it was unclear whether information was still required by addresses in the second and third sweeps. This led to the inability to produce a percentage for the 'information gained' in sweeps 2 and 3 for T2.

Table 5.1.5.2 – T2 – Success of gaining address information by area type – excluding office work

Supergroup	No. of addresses successfully covered - 1 st sweep	1 st sweep covered - %
1 - Industrial Hinterlands	293	58.72%
2 - Traditional Manufacturing	676	53.78%
3 - Built-up areas		
4 - Prospering Metropolitan	686	37.16%
5 - Student Communities	287	39.32%
6 - Multicultural Metropolitan	330	42.80%
7 - Suburbs and Small Towns	451	64.34%
8 - Coastal and Countryside	318	70.82%
9 - Accessible Countryside	190	52.34%
Total	3231	48.84%

* Data not available for sweeps 2 and 3 – see explanation above.

The overall percentage of 'information gained' in the 1st sweep is slightly higher than the corresponding response rate for T1. Two supergroups have particularly high contact rates, these are 'Suburbs and Small Towns' and 'Coastal and Countryside'. Three supergroups have lower than average contact rates; these are 'Prospering Metropolitan', 'Student Communities' and 'Multicultural Metropolitan'. The 'Prospering Metropolitan' and 'Multicultural Metropolitan' supergroups had low contact rates when T1 was used which would suggest that these area types have consistently lower contact and cooperation rates.

The following three figures show the rate of contact according to time of day for each sweep using T1. The graphs are not split for rates of contact according to day of the week but on Saturday the hours of work were from 10am to 4pm and during the week the hours of work were 3pm to 8pm and therefore there is overlap between 3pm and 4 pm. Staff were given set hours to work and the way that they were asked to perform each sweep meant that they visited addresses in sweeps 2 and 3 on different days and at different times.

Figure 5.1.5.3 – T1 - First contact attempt – success by hour band

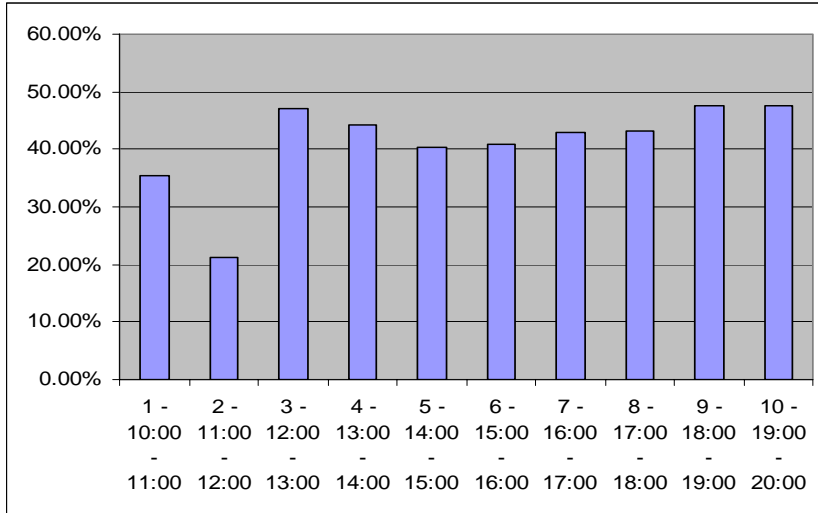
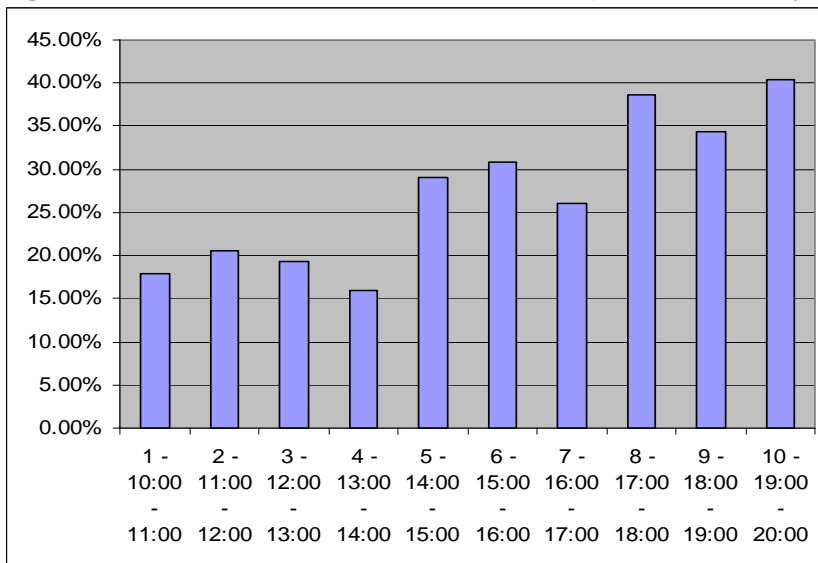


Figure 5.1.5.3 shows that weekday contact rates between 16:00 and 20:00 are consistently high with rates of success between 40% and 50%. The rates for Saturday work are high between 12:00 and 15:00 with a success rate between 40% and 50% whilst the contact rate between 10:00 and 12:00 is lower.

Figure 5.1.5.4 – T1 – Second contact attempt – success by hour



Rates for the second sweep are consistently lower. The rates for weekdays are generally higher towards the end of their session of work from 17:00 to 20:00. At this point the contact rate is around 35% to 40%. Earlier in their session of work between 15:00 and 16:00 the contact rate is 25% to 30%. The Saturday contact rates were lower, in the period between 10:00 to 14:00 the rates vary between 15% and 20%.

Figure 5.1.5.5 – T1 - Third contact attempt – success by hour

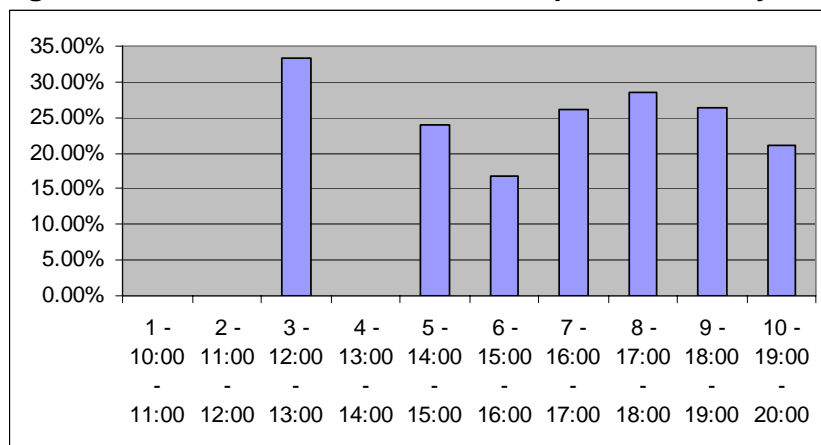


Figure 5.1.5.5 shows that the overall contact rate decreases again. On weekday evenings the contact rate decreases to around 20% to 30%. There is very little data for the contact rate of the third contact on Saturdays but during the hours 12:00 to 13:00 and 14:00 to 15:00 there are contact rates of 33% and 24%.

Overall these three tables show that the contact rate is highest during the later stages of the evening. This is probably due to the fact that this is when people have returned from work. The contact rates on Saturday were variable which could be because people were busy on Saturdays (the SST was conducted during the summer).

Occasionally contact was made with a householder but their cooperation could not be gained. Generally the refusal rate was low (around 3-4%) but three supergroups had higher refusal compared to the others. ‘Prospering Metropolitan’, ‘Multicultural Metropolitan’ and ‘Coastal and Countryside’ supergroups all had overall refusal rates of over 10%. There were differences between refusal rates according to the treatment type, T1 had higher refusal rates compared to T2. Appendix A.5 contains the refusal information for T1 and T2 by supergroup.

Five field staff were used during phase 1 of the SST. One member of field staff was much quicker than the other 2 field staff that performed T1 and T2. The two field staff who performed T3 had a similar checking rate. Appendix A.6 shows the variations according to field staff member and treatment type.

5.1.6. Controlled error rates

Controlled error rates were introduced to the address listing books given to the field staff. In simple terms this meant adding addresses to the address list and deleting addresses from the address list given to the field staff and checking whether they recognised these errors. Further details can be found in section 4.8.

Table 5.1.6.1 below shows the number of addresses that were deleted according to the supergroup and treatment used. It also shows the number of controlled deleted addresses that were subsequently identified together with a corresponding percentage figure.

Table 5.1.6.1 – T1, T2 and T3 – Number of controlled deleted addresses and the number which were subsequently identified.

Supergroup	T1 – Controlled Deleted addresses	T1 – identified	T1 - % identified	T2 – Controlled Deleted addresses	T2 – identified	T2 – % identified	T3 – Controlled Deleted addresses	T3 – identified	T3 – % identified
1 - Industrial Hinterlands	5	1	20.00%	5	3	60.00%	36	25	69.44%
2 - Traditional Manufacturing	1	0	0.00%	2	0	0.00%	19	9	47.37%
3 - Built-up areas	4	3	60.00%				18	12	66.67%
4 - Prospering Metropolitan	6	3	50.00%	19	6	31.58%	42	11	26.19%
5 - Student Communities				5	2	40.00%	9	3	33.33%
6 - Multicultural Metropolitan	4	3	75.00%	7	2	28.57%	27	5	18.52%
7 - Suburbs and Small Towns				6	6	100.00%	28	23	82.14%
8 - Coastal and Countryside	3	2	50.00%	3	2	66.67%	22	12	54.55%
9 - Accessible Countryside	6	4	66.67%	1	1	100.00%	19	4	21.05%
Mean Average	29	16	55.17%	48	22	45.83%	220	104	47.27%

It is important to remember that field staff using T1 and T2 covered fewer addresses than staff using T3 and therefore encountered fewer errors. The lower number of errors that field staff using T1 and T2 encountered should be kept in mind when interpreting these figures. The results show that approximately 50% of deleted addresses were subsequently found and this was consistent regardless of the treatment type used. Furthermore, the number of deleted addresses that were subsequently found seemed to have no consistent pattern according to the supergroup type. These figures are very low and could be in part due to data entry errors. See section 5.2.8 for further details.

Table 5.1.6.2 shows the number of added addresses that were subsequently could not be found. This is separated by treatment and supergroup type.

Table 5.1.6.2 – T1, T2 and T3 – Number of controlled added addresses and the number confirmed not to exist.

Supergroup	T1 – No. of controlled added addresses	T1 – confirmed not to exist	T1 - % confirmed not to exist	T2 - No. of controlled added addresses	T2 – confirmed not to exist	T2 - % confirmed not to exist	T3 - No. of controlled added addresses	T3 – confirmed not to exist	T3 - % confirmed not to exist
1 - Industrial Hinterlands	1	0	0.00%	0	0	n/a	6	5	83.33%
2 - Traditional Manufacturing	0	0	0.00%	0	0	n/a	0	0	n/a
3 - Built-up areas	4	2	50.00%				8	4	50.00%
4 - Prospering Metropolitan	6	4	66.67%	9	6	66.67%	29	14	48.28%
5 - Student Communities				0	0	n/a	2	0	0.00%
6 - Multicultural Metropolitan	2	2	100.00%	1	1	100.00%	8	6	75.00%
7 - Suburbs and Small Towns				2	2	100.00%	13	8	61.54%
8 - Coastal and Countryside	4	3	75.00%	1	0	0.00%	22	15	68.18%
9 - Accessible Countryside	0	0	0.00%	1	1	100.00%	1	1	100.00%
Average	17	11	64.71%	14	10	71.43%	89	53	59.55%

The number of added addresses that were confirmed not to exist was reasonably consistent across all treatments ranging from 59% to 71%. There is no clear pattern of the number of added addresses that were recognised according to supergroup type.

The rate of detection for addresses that were added was much higher compared to detection rates of addresses that were deleted. There are two likely reasons for this one it is was physically easier for field staff to say that an address did not exist compared to adding an extra address to the back of an Address-Listing book. Secondly these added controlled errors were easier to code via data entry.

Appendix A.7 combines the two previous tables to produce a table to the total proportions of controlled error rates that were identified.

Overall this analysis shows that the field staff have identified a lower than expected level of the controlled errors. Whilst these figures are broadly true there are likely to be several sources of error. These are outlined below:

- Recording errors - some of the workbooks suggest that errors were identified but not corrected in the correct manner. For example, number 2 Westlands Grove was deleted and it looks as though the member of field staff identified the address in the field but instead of adding a separate address in the back of the workbook as instructed the member of staff wrote +2 in the column beside numbers 1 and 3 Westlands Grove in the pre-printed address section. It is hard to estimate the extent of this problem but the field staff did not always follow the instructions that were given to them.
- Data Entry - It was particularly difficult for data entry staff to match every address that had been deleted and subsequently found. More information can be found in section 5.2.8.
- No longer errors in the field - for example one address no longer existed because it had been converted into several flats. It is unlikely that there are many errors of this type.

Even allowing for possible sources of errors the previous three tables raise concerns about how well the field staff performed the task that they were set. An overall detection rate of around 50% appears very low. This low detection rate suggests that staff may have not added addresses that were genuinely missing from the PAF. The following three tables compare how well each member of field staff identified their controlled error rate. Table 5.1.6.4 shows the number of addresses that were deleted and the number of these that were subsequently identified. Again, it should be kept in mind when interpreting this analysis that the figures for T1 and T2 are based on low numbers of controlled errors.

Table 5.1.6.4 - Number of controlled deleted addresses that could not be identified according to field staff member.

Field staff member	T1 – Controlled Deleted addresses	T1 – Identified	T1 - % Identified	T2 – Controlled Deleted addresses	T2 – Identified	T2 - % Identified	T1 – Controlled Deleted addresses	T3 – Identified	T3 - % Identified	Average
1	6	1	16.67%	14	11	78.57%	n/a	n/a	n/a	60.00%
2	13	8	61.54%	17	6	35.29%	n/a	n/a	n/a	46.66%
3	10	7	70.00%	17	5	29.41%	n/a	n/a	n/a	44.44%
4	n/a	n/a	n/a	n/a	n/a	n/a	110	51	46.36%	46.36%
5	n/a	n/a	n/a	n/a	n/a	n/a	108	52	48.15%	48.15%

Table 5.1.6.4 shows that there are large variations in the amount of controlled deleted addresses that were subsequently found. Out of the 3 field staff that used T1 and T2 field staff member 1 identified the highest overall percentage of addresses that were deleted and subsequently found but their percentage found varied dramatically between the two treatments. In T1 field staff member 1 identified only 16.67% of their deleted addresses and when T2 was used 78.57% of the deleted addresses were found. The reverse was true of field staff members 2 and 3. They found approximately 70% of their deleted addresses when T1 was used but this dropped to

around 30% when T2 was used. Field staff members 4 and 5 found slightly less than 50% of their deleted addresses.

Table 5.1.6.5 shows the number of controlled addresses that were added and subsequently correctly could not be found according to field staff member and treatment type.

Table 5.1.6.5 - Numbers of controlled artificially added addresses recognised by field staff member

Field staff member	T1 – No. of controlled added addresses	T1 – confirmed not to exist	T1 - % confirmed not to exist	T2 – No. of controlled added addresses	T2 – confirmed not to exist	T2 - % confirmed not to exist	T3 – No. of controlled added addresses	T3 – confirmed not to exist	T3 - % confirmed not to exist	Average
1	1	0	0.00%	3	2	66.67%	n/a	n/a	n/a	50.00%
2	12	9	75.00%	6	5	83.33%	n/a	n/a	n/a	77.77%
3	4	2	50.00%	5	3	60.00%	n/a	n/a	n/a	55.56%
4	n/a	n/a	n/a	n/a	n/a	n/a	30	18	60.00%	60.00%
5	n/a	n/a	n/a	n/a	n/a	n/a	59	35	59.32%	59.32%

Field staff member 1 recognised that 50% of the addresses that were added to their address listing books did not exist, field staff member 2 recognised 77% and field staff member 3 recognised approximately 56%. T3 staff both recognised approximately 60% of the addresses that were added to their books.

Appendix A.7 combines the total number of controlled errors that were recognised by each field staff.

5.1.7. Cost of operations

The table below shows the estimated cost per address according to the treatment used. The cost of treatment includes field staff wages and their expenses but it does not include expenses associated with the offices management of the task. The figures for T1 and T2 include the cost of returning to addresses in possible 2nd and 3rd sweeps.

Table 5.1.7.1 – Cost by treatment – Field costs

Treatment	Number of Checked Addresses	Cost of Treatment (£)	Cost per address (£)
T1	4190	3650	0.87
T2	7630	5006	0.66
T3	39432	3998	0.10

T1 is approximately 9 times and T2 is approximately 7 times more expensive the T3.

Given that T3 only performs one sweep of the area it is useful to compare the cost of treatment three against the cost of performing one sweep in T1 and T2.

Table 5.1.7.2 – Cost by treatment if only the first sweep of each treatment is considered – Field cost

Treatment	Number of addresses	Cost of Treatment (£)	Cost per address (£)
T1	4190	2362*	0.56
T2	7630	3034*	0.39
T3	39432	3998	0.10

*estimate calculated by taking whole cost and multiplying this by the proportion of time spent performing first sweep

The costs per address drops substantially when only the first sweep of T1 and T2 are considered. The cost per address falls from 87p per address to 56p per address for T1 and from 66p to 39p for T3. T1 and T2 are approximately 6 times and 4 times more expensive than T3.

Table 5.1.7.3 shows the cost of the whole operation

Table 5.1.7.3 – Total cost of SST phase 1

Element of SST operation	Cost
Agency fees for field staff (incl VAT)	£11,056
Expenses for field staff (incl VAT) Includes mileage, parking (£39), phone calls (£4)	£1,589
Printing of pre-delivery household address checking information leaflets	£670
Binding of Address-Listing books (400 books)	£260
Laminating ID cards (agency and ONS staff)	£28
Data Entry staff	£1881
Total:	£15484

The breakdown of costs shows that the major components were the agency fees for the field staff. The second largest cost was the cost of the expenses associated with hiring the field staff mileage, parking and phone calls. Maps, bags and personal alarms were acquired from various departments within ONS at no charge. The Address-Listing books were printed within the 2011 Census department and thus these costs were absorbed.

5.2. Qualitative results and evaluation

5.2.1. Treatments

Three treatment methods were selected to trial in the SST, all sampled in EDs. Field staff were issued with a map displaying boundaries and an address book listing the addresses within the ED:

Treatment 1 and Treatment 2 Evaluation

The standard ONS definition of a household was included in the script for T1 and T2:

- One person living alone
OR
- A group of people (not necessarily related) living at the same address who either share a living room or at least one meal a day.

The three T1 and T2 agency staff, and many of the ONS staff who took part in the exercise, reported that the public frequently found the household definition confusing. Field staff attempted to break down the definition by asking 'How many people live at this address?' and then 'Do you live as a family?' or 'Do you share a meal once a day or a living room?'. Although the definition is outside the scope of this work any simplification or better guidance on how to use the definition would be welcome.

A small proportion of addresses that were added during T1 and T2 represented socially defined households. Field staff were asked to provide a postal address for each household by asking the respondent where the household belonged within the address for example 'top back room'. This was difficult information to gather at the point of contact. As a result many methods were used to record these types of addresses. Different examples included 'The lodger', 'Household 1', 'Mr A Smith', 'Bedsit 1', 'Front room'.

Treatment 1

T1 was tested in all Supergroups except SG5, Student Communities. It was the slowest method but did find the highest number of new addresses and controlled error rates. Contact rates varied widely between area types, see table 5.1.5.1 for further information.

The location of new addresses tended to be localised within particular EDs and particular types of housing. Very few new addresses were identified on council estates, they tend to have been designed and built as a whole and even when sold off premises do not lend themselves to multiple occupation conversion or infill building. For the same reasons blocks of studio flats or older persons sheltered housing were also a negligible source of found addresses or additional households.

The highest rate of locating new addresses were 15% in St Jude (SG 4) and 9% in Bevois (SG 6) both areas with high density of population and high rates of multiple occupation. Apart from a rate of approximately 4% in Compton & Otterbourne (SG 9), the remaining Supergroups returned less than 1% of new addresses.

Treatment 2

T2 was operated in all Supergroups except SG 3, Built-up areas. The general reaction from both agency and ONS staff was that T2 was surprisingly difficult to put into practise in the field. The layout of the books, with only 8 addresses per page, meant there was a great deal of page turning, particularly where odd/even house numbers were on opposite sides of the street. It was difficult to record all the details for three addresses while on a doorstep with a householder. When standing in the street making notes, staff reported they felt conspicuous and somewhat uncomfortable, worse in streets of terraced houses where they felt very exposed.

Staff also reported that the difficulty of operating T2 meant they concentrated on the address book listing and did not feel they were being as observant of their surroundings as they were with the T1 method.

Before field work started there was concerns that asking householders about their neighbours would not be well received by the public leading to high refusal rates and negative reaction to the checkers. In the event there was very little adverse reaction from the public. Most people were happy to answer for their neighbours; occasionally they would answer the first neighbour query but were reluctant to answer a second. In spite of explaining that the method was used to save resource many householders assumed that the neighbours were not in to be asked themselves. Where neighbours were plainly at home, e.g. washing the car in the next drive, the reaction was often unsurprisingly – ‘Well there they are, you can ask them’. T2 was particularly difficult to execute in rural areas with named properties. Where properties were long distances apart, or had lengthy drives, it was often time consuming to obtain the names of the two adjacent houses before making contact with a household. A positional, rather than alphabetical, address list would have helped with T2.

Treatment 3

All the addresses in the sample were covered by the two T3 address checkers. It was by far the fastest method, depending on the area type, see Table 5.1.1.1. The rural areas in S/G 9 were the slowest areas with Owslebury and Compton being, on average, 7 times slower than the fastest checking area – Leesland S/G 2.

It was often difficult to interpret typical signs of hidden households, for example it was suggested that 2 dustbins outside a house could be a sign of multiple occupation but Southampton UA only collect rubbish once a fortnight and so distribute 2 identical bins to any household that request them. The checkers found the restriction not to resolve queries quite frustrating but they appeared to stick to their brief and not ask the public for information.

The recording of signs of additional households at an address did not carry an indicator of how many additional households might be behind that one address. Further investigation, possibly with field visits, would be needed to clarify the numbers and adjust the counts.

The numbers of additional and hidden households that the T3 checkers counted were much lower than found by the contact methods in S/Gs 4, 5 and 6, areas of high multiple occupancy, see Tables 5.1.2.3 and 5.1.2.4. In the other S/G areas counts were more equivalent.

A cautionary note to add is that the two T3 checkers were probably not typical of likely recruits, both newly qualified teachers, extremely fit ladies in their late twenties, one was a marathon runner and the other an international yacht racer, so some adjustments should be made to allow for the speed of their checking!

5.2.2. Area types

Areas for address checking were wards, selected to most closely match the housing type and population density for each of the nine 2001 Census Supergroup Classifications. Two wards were selected for the largest five Supergroups.

NOTE: The percentage of the population given for each Supergroup are for UK as a whole and would need recalculating for England and Wales alone.

Supergroup 1 Industrial Hinterland (19.6% of the UK Population)

Bedhampton (Havant LA) T1/ T3

Area: They were largely 1960/70's estates of small houses and bungalows.

Issues: There was a noticeably high proportion of retired people* at home during the day and this probably contributed to the slightly better than average contact rates.

Comments: Three EDs had contact attempted, up to three times, at every address (T1). Every ED was covered by visual check (T3)

The number of new addresses found was low but consistent across T1 and T3 at 0.8%.

Portchester East (Fareham LA) T2/ T3

Area: Many estates of 1960's terraced houses also a mix of 1930's and 1960's semi and detached houses. An area of period houses and cottages in the old village around Portchester Castle.

Issues: Like Bedhampton there was a high proportion of retired people*.

Comments: Two EDs had T2 treatment. Every ED was covered by visual check (T3).

The number of new addresses found was small, T2 0.37% and for the same 2 EDs T3 0.54%.

Field staff comments: Very unproductive exercise, six hours work & no new households found. (ONS staff)

Supergroup 2 Traditional Manufacturing (11.7% of the UK Population)

Leesland (Gosport LA) T2/T3

Area: Leesland is a stable area largely consisting of small Victorian terraced housing with some post war flats, mainly LA.

Comments: Seven EDs had T2 treatment, rather more than most areas. The SST team had previously expressed their concerns to the member of field staff but doubts do remain on the quality of the data this member of field staff collected. Every ED was covered by T3 and both the number of new addresses and signs of additional households were small.

Warren Park (Havant LA) T1/ T3

Area: The area is almost entirely Local Authority (LA), or former LA, housing with pedestrian walkways and alleys between blocks of flats and terraced housing. There are a few through roads

on the estate but most of the houses are grouped around cul-de-sacs with scattered open spaces. LA estates are built as individual accommodation units and let as such while owned by the LA. Later piecemeal infill is not usually undertaken. When sold by the LA the accommodation does not easily lend itself to conversion for multiple occupation. The level of LA rented housing in Warren Park is very high**.

Issues: The ward is known for its deprived and challenging social environment, being in the 5% most deprived wards in England & Wales.

Comments: Only one ED was started by agency staff, a further three EDs were started by ONS staff but the overall coverage was poor and restricted to one attempt at contact. After working for two days the T1 contact checker was unwilling to return to the ward as she had been verbally abused. The T3 visual checker had previously worked in the ward and so was familiar with the area and completed all EDs. The no contact of T3 may have contributed to this. The rate of new found addresses was the lowest in the test at 0.30%. The T3 checker only identified 0.09% signs of additional houses.

Field staff comments:

Unsafe area, should be worked with 2 people.

Notorious place & could prove intimidating to some people.

Someone who resembles authority may not be particularly welcome.

Supergroup 3 Built Up Areas (3.3% of the UK Population)

Town (Gosport) T1/ T3

Area: Town ward was largely redeveloped with LA houses and tower blocks but there are still some rows of Victorian terraced houses. Redundant Ministry of Defence land is now being built upon and converted to high quality private developments.

Comments: T1 contact was undertaken in 3 EDs mainly redeveloped by the LA during the 1970's. T3 covered all EDs.

T1 found only 0.13% new addresses but the wider T3 found 4.02% new addresses.

Supergroup 4 Prospering Metropolitan (3.7% of the UK Population)

St Jude (Portsmouth UA) T1/ T2/ T3

Area: Consists of a mix of flats and houses with a lot of multiple occupancy. There is a very low level of LA rental and high level of private rental**. There is a mix of house types in St Jude, a lot of small Victorian terraced housing and many large houses which have been converted for multiple occupation. Most blocks of flats were low rise and there were some private managed retirement apartments. St Jude was the most densely populated ward within the exercise.

Issues: The rate of contact for T1 and T2 was the second lowest in the exercise. There are a high proportion of students in St Jude, around 12% ***, generally they seemed to have little knowledge of their neighbours, or their neighbours of them, and this may have been a factor in the T2 low contact rate. The refusal rate for both T1 was high at 11.42%.

Comments: One of the highest activity areas for address checkers recording new addresses and signs of additional households. Staff felt they were achieving more than in established areas with little to record.

Field staff comments:

Lots of changes to record.

Most productive area for identifying additional households.

Hardly anyone in when I called.

People in warden controlled flats instructed not to let visitors in unless expected and not to talk to callers.

Parking restrictions everywhere and nightmare finding a space on Saturday.

Supergroup 5 Student Communities (5.0% of the UK Population)

Swaythling (Southampton UA) T2/ T3

Area: Close to the University of Southampton, mainly terraced or semi-detached housing much of it Victorian.

Issues: Students make up 28% of the population.

Comments: In spite of the high number of students the T2 contact rates were around the averages for the exercise. The new addresses found rate at 3.71% was twice the average, half of these identified as existing properties. T3 addresses found and signs of additional households were both lower than average.

Supergroup 6 Multicultural Metropolitan (6.7% of the UK Population)

Bevois (Southampton UA) T1/ T2/ T3

NOTE: As this supergroup is almost exclusively located in London, Bevois was the closest match of characteristics and so was used as a proxy. The 2001 Census classification for Bevois is S/G 5, student community.

Area: The rate of multiple occupancy was high, both purpose built and conversion of large mainly Victorian houses. It was the second most densely populated ward in the exercise, accommodation veered towards the cheaper end of the market.

Issues: Bevois is an inner city ward with high levels of the population born outside the UK and not from the ethnic group 'white British'****. The area can appear intimidating for an outsider with groups of mainly youths and men gathered in the streets.

Comments: This was the most productive ward for finding changes through address checking, with both T1 and T3 finding highest levels of new addresses, largely conversions. T1 had high refusal rates and the lowest rate of contact in any ward. Staff reported a generally friendly reception from residents they contacted but they did feel they were viewed as outsider/authority representatives and that their activities were being observed. Staff felt they were questioned by the public more often in Bevois ward than other areas but explanations of the exercise were accepted.

Field staff comments:

Large houses, densely populated inner city location so lots of conversions.

Very hard to park, 1 – 2 hour limits or residential permit, and no public toilets.

Very worthwhile exercise lots of addresses to add.

Supergroup 7 Suburbs & Small Towns (27.7% of the UK Population)

Bursledon & Old Netley (Eastleigh LA) T1/ T3

Area: The area is composed of old established, often named, properties and large infill estate developments.

Issues: The mix of named and numbered properties in the same streets made for difficulties in identifying addresses, the book sequence being numbers followed by names, in alphabetical order, with no geographical positioning information. There were on occasions more names than properties, presumably due to renaming of properties or change of use to business and both names appearing on the PAF.

Comments: The first week of the SST was scheduled for T1 method by agency staff. They did not follow the procedures and the data recorded is of no value. Consequently ONS staff were used to cover the ward but as they mainly worked shorter hours there were few second or third visits to addresses, this maybe due to the time of contact attempted. T1, by ONS staff, had lower than average rates of contact at the first attempt but also lower refusal rates. For both T1 and T3 new found addresses were higher than average and included the only mobile homes located in our sample.

Field staff comments:

Dicing with death crossing back and forth with named properties. (ONS staff)

Fareham North (Fareham LA) T2/ T3

Area: Housing is mainly established estate developments, there is very little multiple occupancy. There are a few scattered farms and dwellings out at the ward boundaries.

Comments: Both T2 and T3 had very low rates of found new addresses. Checkers found some of the remoter properties hard to locate, long lanes with lack of name plates on lanes and houses. T2 checker did not attempt contact at a listed farm property as she was intimidated by the number and tone of notices attached to the gate – Beware of the dog / No admittance without an appointment / No hawkers or canvassers.

Supergroup 8 Coastal & Countryside (17.3% of the UK Population)

Emsworth (Havant LA) T1/ T3

Area: A varied ward with different types of housing development. The town centre is on the coast and has expanded from a traditional village where there is considerable infill and redevelopment of old workshops and yards. Away from the centre old hamlets have been incorporated into a wide range of later estates from council estates, purpose built flats through to individual detached housing on large plots.

Issues: The refusal rate in Emsworth was the highest in the sample, investigation showed that it was concentrated in a couple of roads of large detached houses, located on the edge of the town adjacent to open countryside. There were 'Neighbourhood Watch' posters prominently displayed on houses and lamp posts and it could be that the refusals were a reflection of the residents concern not to impart information concerning their households.

Comments: Overall the contact rate for T1 was the highest in the sample, probably due to the high ratio of residents aged 60+, 33%*. Both T1 and T3 found few new addresses or signs of

additional households. Those that were found were concentrated in the two EDs that covered the town / shopping centre area where redevelopment was taking place.

Field staff comments:

Lot of refusals within a small area.

Lee West (Gosport LA) T2/ T3

Area: Prosperous coastal area, housing mainly low rise flats, semi and detached houses. Some Ministry of Defence housing for service families.

Comments: There are a high proportion of residents age 60+, 40%* and this probably contributed to the T2 contact rate which was the highest in the sample. As in many retirement areas there are several purpose built owner occupied blocks of flats offering managed accommodation for older people. They do not meet the criteria for communal establishments and would be enumerated as households, however entry is restricted and access arrangements would have to be agreed with the manager, who is only in attendance at certain times. The management companies of these properties, such as McCarthy and Stone or Pegasus, can control large numbers of premises, all over the country, and approaching them centrally could be useful in explaining Census requirements to their local managers. The incidence of new addresses was low for both T2 and T3.

Field staff comments: Lots of sheltered / warden managed flats, ask for the manager or residents chairman and they will assist.

Supergroup 9 Accessible Countryside (5.1% of the UK Population)

Compton & Otterbourne (Winchester LA) T1/ T3

Area: Some hamlets and villages with mixed housing. Remote farms and mostly large properties spread along lanes and off road.

Issues: Properties in villages and hamlets were easy to access and residents generally interested in the exercise and very helpful. Remote named properties on long country roads were often extremely difficult to locate. Roads in the countryside often have no name board (both unadopted and council maintained roads). Some properties are hidden away at the end of long drives or redundant farm building redevelopments. House name plates are sometimes difficult to spot or missing altogether and properties can be renamed leading to duplicate entries on the PAF. Our address lists did not provide geo-positioning data and the maps did not indicate postcode boundaries, both of these could have helped locate isolated properties. Traffic was a big issue due to lack of footpaths and the speed of cars and staff often found parking spots few and far between.

Comments: This Supergroup was the most difficult to address check. The T1 and T3 staff both had incidents, at different locations, where they were able to enter an estate and a farm by security gates but were hampered in making their exit, one climbed over a hedge and the other escaped when a returning resident opened the security gate. T1 contact rate was high and the refusal rate was the lowest in the sample, country dwellers probably understand the issues around correct addressing! T1 and T3 had average levels of new addresses, mainly existing properties (possibly name changes) and under construction, there were few signs of additional households for T3. Times for checking each address were double the average times for the sample.

Field staff comments:

Rural roads difficult from a health & safety point of view.
 Cannot use a car to check addresses as traffic is too fast & houses set too far back.
 No pavements & fast moving traffic forcing me into bushes.

Owslebury & Curdrige (Winchester LA) T2/ T3

Area: The ward has a few villages and large expanses of open countryside with scattered farms and dwellings. It is positioned between Portsmouth/Fareham and the M3 motorway and many of the roads are used as short cuts by motorists.

Issues: This was the most difficult ward to address check, many roads being narrow, twisty and with a lot of fast traffic. Both T2 and T3 address checkers phoned in to report traffic too dangerous for them to continue walking along roadside, T3 staff could not check houses from the car as stopping or driving slowly was too hazardous. Further checking was performed by ONS staff without incident. T2 checking was difficult to implement with sparse housing, many named properties with long drives, and an address listing in alphabetical not positional order.

Comments: For T2 the time taken to check each address was twice the average for the sample. Staff had to find the names of adjacent properties before asking a householder about their neighbours which was very time consuming. Very few new addresses were found with T2 or T3. In comparison the time for each check using T3 was 4.5 times the average for the sample.

Field staff comments:

Fast & busy roads, no pavement or grass verge – dangerous.

Notes for Section 5.2.2

* 2001 Census S001, 'Age by sex & type of resident' % of population age 60+

England & Wales	21%
Bedhampton	28%
Emsworth	33%
Lee West	40%
Portchester East	29%

** 2001 Census KS18, 'Tenure'

England & Wales: LA rental	13%	/Private rental	9%
Warren Park	45%		1%
St Jude	1%		33%

*** 2001 Census T02, 'Theme table on schoolchildren & students'

England & Wales: Per cent of students in population	3%
St Jude	12%
Swaythling	28%

**** 2001 Census S015, 'Country of birth by sex & age'

England & Wales: CoB within UK	91%
Bevois	78%

2001 Census S101, 'Sex & age by ethnic group'

England & Wales: EG white British	88%
Bevois	64%

5.2.3. Staff and Recruitment

The field staff were all recruited by the Adecco Agency in Fareham under the HMPS contract. This generally worked well; Adecco staff were proactive in maintaining contact and checking on progress with both field staff and ONS.

Staff work sheets and claim forms were collected by ONS each Friday, checked and faxed to Adecco by noon on Monday, to enable staff to be paid weekly. A single Request to Purchase (RTP) was raised by Data Collection to cover staff costs. Invoices from Adecco were to be checked by Data Collection and paid against the RTP. On one occasion an invoice was sent directly to ONS Accounts who paid it with no reference to Data Collection. In the event there were no queries with any of the claims or invoices and staff were paid on time each week.

Agency staff complete a self declaration 'Character Enquiry' form, for the agency, that covers court convictions and insolvency and which is passed on to the employer. Adecco accompanied the first three staff to ONS on their training morning and handed over the completed Character Enquiry forms, one person had been convicted of an offence in 2001, detailed on the form. It was decided that the offence had no bearing on the address-checking job and the person was retained but Adecco were asked to ensure that these forms were sent to ONS in sufficient time for replacement staff to be found if a response made a person unsuitable for the job. It was asked that in future Character Enquiry forms were passed on in time to allow follow on questions to be pursued. Adecco agreed to have forms completed prior to the first day of work. However, for the second set of staff Character Enquiry forms again arrived along with the staff on the training day.

A meeting was held with Adecco on 20th June to review the first week of the SST. Staff had confirmed to Adecco that they were satisfied with the work and training. ONS would raise any task related issues after analysis of the completed address books.

Adecco agreed to pass copies of the instruction books to the second set of staff for familiarisation before the training day, ONS would pay for an hour of staff reading time.

All other arrangements were working well.

Two situations arose concerning our staff and these are explained in the Management section 5.2.6. One of these situations involved one member of staff who was unhappy working in the Warren Park ward. The T3 member of staff who covered Warren Park had worked in the area before so was familiar with the environment; also there was no requirement to speak with residents. Recruiting people who are accustomed to a difficult area and used to dealing with the residents would be advantageous and should be built into the recruitment strategy. However a quick response to the situation did mean that the worker was retained along with her goodwill.

Adecco staff were very efficient in resolving any issues that arose, the Character Enquiry forms being the only exception. Of the five field staff supplied four performed to a satisfactory or better level than expected, only one gave cause for concern.

Staff all proved to be remarkably robust and, although there were a few dental appointments, sore throats and sick pets, they were all keen to make up any time that they lost by working longer hours. Walking the streets for five or six days a week was quite physically demanding and it was fortunate that all of the staff kept healthy and injury free. A level of fitness was not specified to the agency when they recruited staff but should consider that not everyone would be able to cope with the physical demands.

5.2.4. Instructions and training sessions

5.2.4.1 Instructions

Three sets of instructions were produced for each individual treatment. These were thoroughly quality assured. Comments from field staff, Addeco and ONS field staff, were that the instructions were very clear and easy to follow. However three points were raised that should be addressed:

- The household definition was not easy to understand – maybe more examples would have been helpful.
- Recording of ‘number of households’ at an address was not covered in the instructions and there was no dedicated column to record that count in the address book.
- The sequence to process the address books for making second and third attempts at contact was illustrated with a diagram which completely confounded one checker. Her difficulty was resolved with a clear series of bullet point instructions and a personal explanation. This is quite a complicated sequence and it may be possible to improve our instructions.

5.2.4.2 Training Sessions

The training was generally well received by agency field staff and ONS volunteers. The feedback emphasised the value of the role play and the chance to ask questions.

At the debrief session the T1 and T2 staff all commented that they thought the training good and that they understood the task and felt well prepared to get started. The instructions were quite complicated as they had to cover not only the normal situations they would meet but all the exceptions, such as derelict houses, mobile homes, lodgers etc. that would only rarely be found. It was suggested that having the material to read before the training session would have been helpful. They all appreciated being accompanied for their first household calls. There are cost and time implications associated with accompanying field staff on their first visits but these cannot be quantified and will vary according to the area. It was felt that the accompanied visits were beneficial in reducing the risk if the instructions and training sessions were misunderstood.

The change in calling strategy to contact at one in three addresses, T2, took place after three weeks. Staff had not previously been told that the change would take place as it was thought they might not maintain enthusiasm for contacting every address. A new set of instructions were prepared and each checker was visited by one of the ONS team to explain the new method and accompany them for the first few calls. However, as this training was delivered by different ONS team members some variability in the training may have occurred. Although staff appeared to have understood the change, data recording for T2 is not of a uniformly good standard. Although the change did not seem huge it would probably have been better to call the staff in for a more formal training session with different recording situations and role play to emphasise the requirements of the new method.

As with the contact checkers T3 staff were accompanied by ONS staff for their first field visits. Comments at the debrief session were that the training was informative and thorough and they felt well prepared for the task, one felt the session could have been shortened. Both remarked that being accompanied had been useful and gave them confidence that they were working correctly.

All the staff valued the opportunity to report back at the debriefing session. It was a good way to bring closure to the task and hand back over the supplies.

5.2.5. Supplies and equipment

Comments on supplies and equipment were gathered throughout the test and it was a topic at the staff debrief sessions:

Maps – Ward maps were generally appreciated as clear and useful to plan routes between EDs. The ward maps showed statutory boundaries as at 2003 but ED boundaries as at 2000. Where wards had been subject to realignment staff did have problems interpreting the boundaries, mainly adding addresses within the ED but are now outside the ward. If the 2007 Test uses 2001 EDs boundaries will not always be aligned to the then current ward boundaries and adjustments will be required before map printing.

The ED maps were of variable print quality, some were quite blurred and illegible, and not all street names were shown. However, when field staff could not locate streets and called ONS for assistance. The SST team had an excellent success rate at finding them in the local area A to Z Red Map Books. Several staff used their personal copies of the Red Maps. A4 size ED maps were effective in densely populated areas but the larger A0 and A1 maps for rural areas were not popular with field staff. They were criticised as too cumbersome for use when walking, too large to unfold in the car and difficult to handle in the wind. Maps for large EDs would be better printed on several smaller pages.

The online maps 'Streetmap' and 'Multimap' were extremely useful when searching for streets unnamed on the ED maps and were used by both ONS staff and checkers. Local Authority websites were useful when trying to locate car parks for field staff in built up areas.

Maps were all printed on standard copier paper and were not very robust. They very quickly disintegrated in the wet. Laminating the maps would have improved their usability. Laminated address checking maps might then be available for reuse during later phases of the Census.

Address Listing books –

Production and design of Address Listing books

The production of address books was a lengthy process. The controlled error rates designed to monitor the field staff took a good deal of time to implement. When adapted the printing of the books was by the ONS team on the office printer, which is shared by many people and not designed for the quantity of print required. Due to difficulties in the construction of the books they had to be checked individually and so it was not possible to pass the printing to the ONS Reprographics Section.

Staff encountered problems whilst trying to write in the rain on wet paper. The field staff were supplied with a pen and it maybe that a pencil would write better on damp paper. Books were printed on normal quality office printer paper and it may be that a higher quality paper would last longer in the wet.

Use of Address Lists

Staff found it particularly difficult to locate named properties, especially in rural areas where housing was sparse; streets can continue for miles and consist entirely of named houses. The possibility of grouping named properties in a road into postcode order should be investigated as a possible improvement.

The numerical order of addresses in the book made working out where to call for the T2, 1 in 3 methodology quite difficult, especially when roads were 'odds' on one side of the road and 'evens'

on the other. With only 8 addresses on a page there was a lot of page turning involved and the books were generally seen as unwieldy.

Personal alarm & torch – Staff commented that having the alarm made them feel more secure and that they carried them at all times. One alarm was dropped and cracked but continued to operate so no replacement was necessary

ID Badge & lanyard – The lanyards were bright blue with ‘national statistics’ printed in white. Staff opinion was that the high visibility helped to establish their credibility with the public, underlining their official status and gaining cooperation.

Mobile phone – Staff were content with the phone call arrangement and rate.

The field support function was manned by rota, the ‘duty’ person answering the mobile phone for the duration of field working. The office mobile phone was a short term rental from Vodafone, through the ONS corporate contract, from 9th June to 10th August. This corporate contract did not offer good value. It would have been considerably cheaper to purchase a mobile phone, either on a tariff or ‘pay as you go’ terms. Agency field staff did not claim for all the calls they made, presumably many had a tariff that did not charge for individual calls. Only £4.20 was paid for calls (21 calls) in expenses.

Observation Booklet – The observation booklet served as a useful tool for staff to record their observations about the task. The book allowed the staff to enter comments at any stage of their field work which meant that observations were not lost and could easily be recollected during the debriefing session.

ONS Staff observations – Many ONS staff took part in the address checking exercise, their observations on supplies and equipment were generally in agreement with those made by agency staff. Comments from ONS staff:

- Bags – A non-slip pad on the shoulder strap would be helpful.
Difficult to hold on to all the equipment when standing on the door step, a shoulder bag that was easier to access would help.
- Address books – Request for a more solid backing for the book.
Print the books in portrait to get more entries on a page.
- Clipboard – If address books are in landscape format have the clip along the long edge of the board.
- Leaflet – Popular with the public, who seemed interested in the content.
Popular with staff, made them feel more ‘official’.

5.2.6. Management

Although only five staff were employed in the SST the aim in managing the SST was to emulate, where possible, the address checking exercise in the 2007 Test when Team Managers will have around 10 – 15 staff. The intention was to operate a remote style of management, visiting staff once a week. The original plan was for one of the ONS team to visit the staff members in the field during Friday afternoon to collect the agency work sheets and claim forms and to give out the maps and address books for the next week. This proved difficult even during the first two weeks with only three field staff. The sample wards were spread from Winchester to Havant, around 35 miles, and so travelling between staff could take considerable time, particularly given a Friday afternoon traffic. It then took further time to locate the staff within the ED and return to their car to swap maps and books. The visual check staff worked at a much faster rate than the contact checkers and completed all the books for a ward in less than one week, field staff were then met to collect completed books and supply new books and maps. To try and save time the plan was revised so that if it was convenient checkers could collect supplies from the ONS office and drop off completed books and time sheets. If not feasible two or three ONS staff would meet up with the checkers on Friday. This was arranged on an ad-hoc basis.

Managing the supplies for the field was sometimes problematic. The late inclusion of the T3, visual checking methodology, meant that many more books and maps had to be produced than was originally envisaged. Allowing for the controlled error addresses for the QA process, Address-Listings books were being printed just days before they were required in the field. The process would not have kept the process moving without the wholehearted cooperation of ONS Reprographic Section in binding the books at very short notice. Maps on paper larger than A3 size had to be printed by ONS Geography and were time consuming to produce, there being only one, not completely reliable, printer able to handle large sheets of paper. The procedures for producing address books and maps will need to be revised for the quantities required for the 2007 Test, although ONS Geography have now replaced their large paper printer.

Analysis of the controlled errors in the Address-Listing books completed in the first week showed that while two staff were working well one gave cause for concern. It was not clear whether the member of staff had misunderstood the task or carried it out with wilful disregard for the instructions. An ONS staff member retraced the route, checking addresses, and concluded that the task had not been undertaken properly and much of the data was fictional or incorrectly recorded. Several options were considered, replacing the person would mean running another training session and extending the timescale of the SST. It was thought that the person concerned was quite able to understand the task and our concerns were discussed directly with them. Over the next week ONS staff observed the person at work and reported that they now appeared to be working to the instructions. Adecco were informed of the situation. This was actually a useful situation to arise as realistically not all staff are likely to work conscientiously and it was an opportunity to learn how best to manage the situation. This highlighted the usefulness of the controlled error rate.

A situation arose in the second week when an address checker moved to the Warren Park ward, an area she was unfamiliar with. It is a deprived area almost entirely occupied by a 1960's LA housing estate. The checker found the layout of the estate, with alleyways connecting the housing blocks, intimidating. Groups of residents gathered outside had observed her closely and on occasions followed her around. Householders were sometimes suspicious of her motives and did not see the point of asking after hidden households, possibly as they were most likely to be renting from the LA. On the second day after a particularly unpleasant householder made abusive remarks to her she contacted Adecco and said she was very concerned about returning to the area. Adecco contacted ONS and the checker was visited at home the next day. She was very upset but did not want to let the SST team down by quitting the job. It was agreed that she would work in a different area and ONS staff would cover Warren Park. Again this was a scenario that is likely to occur in the 2007 Test and Census.

An ONS staff rota was drawn up for handling day to day queries from the field. The hours were 9.00am to 8.00pm Monday to Friday, 10.00am to 4.00pm on Saturday; a dedicated mobile phone was used to enable the duty staff to provide cover from home. A log of calls with their outcome was maintained, most related to locating addresses where street names were not shown on maps, a few queries on how to record unusual situations they discovered such as lodgers or second homes and where to park their car.

The Hampshire Police and the ONS Newport Contact Centre had been notified of our activities, no calls were made to the police and only one to the Contact Centre. The caller queried why there was work on the Census six years before the next one was due. The person was called back by a SST team member and was satisfied with the explanation.

Due to field problems with workloads incomplete in two areas the SST had to rely on ONS volunteers to undertake address checking and additional QA'ing. Around 20 ONS staff took part in the SST, checking addresses and for QA'ing field work. As most only undertook a few sessions there was a considerable amount of organisation required by the SST team. The tasks had to be explained and areas allocated, each address book issued to ONS staff had to have the QA additions/deletions annotated and extra maps printed. Some ONS staff were less tolerant of the field conditions and demands of the test than our agency staff and required considerable support. However it did provide valuable experience in understanding field work and interfacing with the public for many of ONS staff without previous experience.

The SST team underestimated the level of support and amount of time that was required for the operation of the SST.

Several months after the completion of the SST fieldwork the SST team conducted a 'Pause and Review' meeting during this meeting the main findings of the operation were discussed. This provided an opportunity to look back on the operation as a whole.

5.2.7. Quality Assurance of fieldwork

During the SST the controlled errors were used in an informal manner. The controlled errors were checked against the completed Address-Listing books at the end of the first week. At this point it was noticed that the one member of field staff was not recognising the errors (this situation was explained in the management section 5.2.6).

Office staff conducting the final week QA work had different interpretations of one (vital) column on the QA sheets. Data entry staff also had problems entering the data as each QA'ed address was not explicitly linked to a treatment type. Due to the additional volume of T3 there were many more addresses to QA and many more office staff conducted the QA and their work varied. Overall the QA data is of poor analytical quality, although the valuable qualitative information is reported below.

The exercise highlighted a number of issues with the work the agency field staff had done:

- Addresses marked as not found were found by QA checkers
- Some addresses found by the checkers were outside the ED boundaries (the importance of checking addresses are within the boundary of the ED being checked needs to be emphasised in future exercises)
- Insufficient details had been recorded about new addresses making it impossible or very hard to check these addresses

That said, most findings were verified and some addresses added were very difficult to find by office staff suggesting the address checkers had done a thorough job in places. Also, some

addresses found by address checkers couldn't be found by office staff. This could be because the addresses were in a different ED, didn't exist or it could be that the checkers found it but office staff couldn't. Sometimes in rural areas, a member of the public would know an address existed and give directions but it still couldn't be found by office staff.

By necessity the QA had to be organised in a fairly ad-hoc basis this was exasperated by the fact that many ONS staff were on vacation. This led to a higher workload and some misunderstandings about the task; there was differing understanding about the completion of one column on the QA sheets (whether 'confirm address' meant confirm it physically existed or confirm agreement with what the address checker had found).

Aside from giving opinions on the quality of the original task done, the QA process yielded some important operational findings in itself.

- It can be very hard to find individual addresses especially when they are named properties and/or in rural areas. For example, looking for a named property in a road effectively means checking each property in the road until it is found or until the end of the road is reached (meaning it doesn't exist). So, it can take as long to check one address as to check a whole road. This is an important finding for follow up in the Census. Follow up enumerators will be faced with visiting individual properties they have not visited before and for which they may have no information beyond the address. Merely finding the address could take some time.
- Help from members of the public is very valuable in finding individual properties and roads. In many case contact is needed to find the address but not needed to verify it once there.

Management/organisation of the Quality Assurance

The QA gave more information about the areas and addresses checked. There are a number of lessons that can be learned about the management and organisation of it to make any future exercise more effective in terms of results and resource usage.

The main problem encountered was that there was insufficient time to effectively plan the QA stage. This was largely a consequence of the addition of T3 at a late stage which meant the production of workbooks and maps was ongoing during the field activity, the management workload increased and the volume of addresses that needed to be QAd was increased.

The QA work was divided up amongst many office staff. This was necessary given the higher volume of addresses than anticipated and the benefits of widening field experience within the office; but it made the task harder to manage because it was broken up into small bits. Many of the staff involved had also done some address checking and so rightly it was decided they should QA different areas - this further complicated organising the exercise.

Note: only work done by the agency address checkers was subject to QA not that done by office staff.

5.2.8. Data Entry

The data entry took much longer than was expected. This was partly because of the way that the data entry database was constructed and in part due to the nature of the data that was keyed.

The way that the database was constructed was complicated for the data entry staff to use. Each Address-Listing book had a ward code and ED code, the data entry staff member then navigated through a set of folders to find the particular spreadsheet they needed. Once in the spreadsheet the data entry staff were faced with approximately 200 pre-listed addresses. The data entry staff then had to code every input from the Address-Listing book into the spreadsheet. There were many columns in each spreadsheet which meant a lot of scrolling!

Another complication was the controlled error rates. If an address had been deleted from an Address-Listing book it would still appear in the spreadsheet but with a marker against it. Data entry staff then had to examine the book to see if this address had been added and if it had been they would then enter the relevant data against the address as it appeared in the spreadsheet. The complexities associated with the handling these controlled error rates may have led to inaccuracies.

T1 and T2 Address-Listing books took the most time to key and this was due the fact that it was necessary to key every date and time (up to three sets for each address if three contacts had been made). T3 books had no dates or times to key. The other time consuming element of the keying was adding addresses the field staff had added to each book. This applied to all books regardless of treatment type. Each T1 or T2 book took approximately 1 and half hours to key and every T3 book took 10-15 minutes to key. Each book contained approximately 200 addresses. The total cost of data capture was £1881 which was approximately 10 weeks of work by one member of data entry staff.

The problems with the database structure stemmed from the lack of time dedicated to its construction. Ideally the spreadsheet would have had a user-friendly graphical interface with pop-up boxes for each field that required entering. Data validation checks could have also been added. Unfortunately due the late inclusion of T3 and the associated time spent producing workbooks and other resources there was no time to develop a better solution.

6. Conclusions and Recommendations

The SST of a pre-delivery household address check has been a success, especially considering the limited resources that have been available. The fundamental conclusions and recommendations focus on the method(s) used for a pre-delivery household address check and the coverage of the method(s), i.e. how to perform a pre-delivery household address check and where.

Other conclusions and recommendations focus on the operational practicalities associated with a pre-delivery household address check, e.g. instructions, training, and supplies. These are important aspects that will affect the cost and quality of any pre-delivery household address checks and must not be overlooked.

The following section outline the conclusions stemming from the SST and the recommendations based on these conclusions. All recommendations consider both the quantitative information and qualitative information gained from the test. **These are recommendations for the 2007 test after which there will be further evaluation of the pre-delivery household address checking methodology.**

6.1. Treatments

Conclusion

Analysis of the methods has shown that T1 provided the highest quality household address frame whilst T3 was the quickest and cheapest method but at the expense of quality. The T2 method lies between T1 and T3 in terms of cost and quality. The savings of T2 compared to T1 are not large. The difference in quality between T1 and T2 cannot be quantified but intuitively it is expected that information obtained second hand about a neighbouring address would be of poorer quality compared to information obtained from the householder themselves. Field staff found it difficult to apply T2 in the field, they had difficulties using the address-listing books and recording the information. Surprisingly there was no noticeable adverse reaction from the public when field staff asked about the neighbouring addresses but the quality of this information has not been assessed. For these reasons the SST team propose that T2 is not used in the future.

There is a necessary balance that must be struck between cost and quality as it is unlikely that Census will have the resources to use T1 nationwide. If T3 were used nationwide it is likely that there would be large pockets of under-coverage on the household address frame. The research has shown that T1 was particularly effective in areas that had many sub-dwelling units, hidden households and areas of high change. During the SST these areas were found within supergroups 'Prospering Metropolitan', 'Multicultural Metropolitan' and 'Student Communities'. The difference between the T1 and T3 was not as pronounced in other areas. This would suggest that Census should target resources and use T1 in areas with high proportions of sub-dwelling units, hidden households and high change and T3 in the majority of areas.

Recommendations

- 6.1.1 T1 (all contact) should be applied in areas where there is likely to be high proportions of sub-dwelling units, hidden households and areas of change;
- 6.1.2 A variant of T3 (contact on judgement) should be applied in the remaining areas which should allow field-staff to make contact* at an address if they suspect that there may be sub-dwelling units or hidden households. Guidelines should be set out on how the field staff would identify such addresses;
- 6.1.3 Variant of T3 (contact on judgement) is trialled before 2007;

- 6.1.4 A targeting classification should be developed to focus pre-delivery household checks (see recommendations 6.2.1 and 6.2.2);
- 6.1.5 Other sources are used to identify sub-dwelling units or socially defined households. Sources could include Local Authority's, Royal Mail or TV licensing.

* Field staff using T3 were unable to contact addresses in our SST to avoid re-contacting addresses which may have been contacted through T1 or T2.

Discussion

After much discussion and on the basis of the evidence collected through the SST two methods were proposed for use in the 2007 Test. The 2007 Test will evaluate whether the pre-delivery household address check will be required nationwide and whether the methods used are suitable. There are advantages and disadvantages of each proposed method and these formed much of the discussion. These are outlined below.

T1 Contact all

Advantages

- Identifies socially defined households upon contact;
- Identifies hidden sub-dwelling units;
- Therefore supplies highest quality household-address list.

Disadvantages

- Cost and time;
- Time spent contacting addresses unlikely to contain socially defined households or sub-dwelling units;

Variant version of T3 contact by judgement

Advantages

- Likely to identify most sub-dwelling units;
- Fast and cheap.

Disadvantages

- Unlikely to identify all sub-dwelling units (may not have a large impact after Royal Mail's ongoing work to identify such addresses);
- Unlikely to identify any socially defined households;
- Reliant on field staff judgement about signs of multiple occupancy (in part reliant on training given);
- Reliant on field staff to make contact at addresses where they suspect multiple occupancy.

The evaluation suggests that T1 should be used in areas where there are higher proportions of definitional differences between the PAF and household-address list that Census requires. The variant version of T3 should be used in all other areas. This reduces the risk of the household address frame containing large amounts of under-coverage. This may mean that more fieldstaff are required in the more 'difficult to household address check areas' and there is likely to be a correlation with the more 'difficult to enumerate areas'. This has implications for the Census as much of the work will be targeted in concentrated areas. See Appendix B for a contrasting view based on cost suggestions regarding methods for pre-delivery household address checking.

Conclusion

An element of each method is the number of contact attempts that should be made at an address. During the SST field staff using T1 and T2 were asked to make a maximum of three contacts and varying the times at which they attempted contact to maximise response. Table 5.1.5.1 showed that the response rates dropped dramatically between contact stages. In 'Prospering Metropolitan' and 'Multicultural Metropolitan' supergroups there were lower than average response rates but these were areas where many addresses were added to the PAF. The other areas had generally higher contact rates. The following recommendations build upon earlier recommendations that propose a split in method dependent on area type.

Recommendations

- 6.1.6** There should be three contacts made in areas where T1 is applied. In the SST these were areas with poor response rates but with many new addresses. Three contacts are necessary to achieve good coverage*;
- 6.1.7** There should be three contacts made in areas where the variant version of T3 is applied*. Addresses not contacted are likely to be scattered and so it will cost comparatively more (time and travel) to revisit these addresses.

* Further evaluation of the necessity of three contact attempts will be made after 2007.

Conclusion

During the SST field staff were asked to work set hours and generally this worked well. Because the SST is proposing methods that involve contact all field staff will need to work hours when contact is most likely to be made. Tables 5.1.1.9, 5.1.1.10 and 5.1.1.11 show the contact rates for T1 for each sweep of the area. This shows that the best time to make contact was in the late evening and Saturday day. There is a large amount research into the best times to make contact and traditionally the times when contact is most likely are weekday evenings and at the weekend. There are certain population sub-groups who can be contacted at other times. The SST was conducted in June – August whilst the operation in the 2007 Test is planned to take place in September to October time. The lighting and weather conditions will be very different at this time of year and this should be considered when planning working patterns. During the SST there were no problems recruiting field staff to work the hours that were set.

Recommendations

- 6.1.8** For T1 (all contact) field staff the working times should be Monday to Friday 3pm to 8pm and on Saturdays from 10am to 4pm;
- 6.1.9** For T3 (contact on judgement) field staff the working times should be Monday to Tuesday 2.30pm to 8pm, Wednesday to Friday 12pm to 6pm and on Saturdays from 10am to 4pm.
- 6.1.10** Second and third contacts should be made during evenings or weekends.

Conclusion

There are concerns that the household-address list will not be fully accurate at the time of the Census because the pre-delivery household address check is scheduled to take place at least six months prior to the Census. This is particularly valid concern for areas that could experience a large amount of change in this six month period. As yet the SST team have not evaluated the

level of change that is likely to occur in this six month period as it is outside the scope of this report. Statistics Canada are intending to re-check targeted areas six weeks prior to their Census.

Recommendations

- 6.1.11** Research should be conducted given to either conducting the pre-delivery household address check nationwide six months before and targeting a proportion of areas to revisit or to perform the pre-delivery household address check in the majority of areas and leaving some targeted areas until closer to the Census date;
- 6.1.12** There should be research into the added quality and value that a check closer to the date of the Census would provide (potentially six weeks prior in targeted areas);
- 6.1.13** A targeting classification should be developed to specify the areas where a pre-delivery household address check should be conducted closer to the date of the Census.

6.2 Areas

Conclusion

During the SST there were three supergroups that stood out as having a high proportion of sub-dwelling units, hidden households and change, these were 'Prospering Metropolitan', 'Multicultural Metropolitan' and 'Student Communities'. There are concerns that areas where there are high proportions of sub-dwelling units, hidden households and high rates of change are not strictly limited to the aforementioned supergroups and that the NS 2001 Area Classification is not at low enough level.

Recommendations

- 6.2.1** A classification is developed that is accurate enough to predict areas where there are high proportions of sub-dwelling units, hidden households and change. This would help decide where T1 should be applied thus making full use of the resources available;*
- 6.2.2** The variant of T3 should be applied in the remaining areas.

* Until this classification is developed the coverage of each treatment is unclear but as an approximate estimate the three aforementioned supergroups cover 15.4% of the UK population. Therefore it could be expected that T1 would be implemented in approximately 15% of the population and the variant of T3 in the remaining 85% percent. However, the cut-off point between the treatment targeting should be based on a cost-quality comparison.

Conclusion

Accessible countryside areas provided a significant challenge for our field staff. Many new addresses were added to the household-address list but conversely many pre-listed addresses were not identified. Some problems stem from the way the addresses are sparsely distributed; this made it very hard for the field staff member to be sure that they had exhaustively covered their area. Staff also had difficulties with Address-Listing books for these areas as they were not necessarily in an intuitive order. The address ordering method is inherently geared towards numbered street addresses and a large proportion of the addresses in rural areas were named properties. In addition to these difficulties Section 5.2.3 details health and safety concerns that our field staff reported whilst working in these areas.

Recommendations

- 6.2.3** Further research should be given to a pre-delivery household address check in rural areas which could mean that an alternative method is sought.

Conclusion

The recommendations regarding methods and areas lead to a set of estimated workloads and suitable ranges for each proposed method. These estimated workloads are outlined in the three tables below.

The three supergroups where it is proposed that T1 should be applied all have similar address checking rates (per hour) and similar contact rates (both factors that influence the number of addresses to be covered in a week).

Recommendations

- 6.2.4** The recommended T1 workloads are:

	Addresses per week*
Upper limit: 5% increase in address checking rate and 5% increase in contact rates.	650
Average.	610
Lower Limit: 5% decrease in address checking rate and 5% decrease in contact rates.	570

* Assumptions: Field staff will work a 31 hour week, three attempts at contact will be made.

- 6.2.5** The recommended variant T3 workloads are:

	Addresses per week*
Upper limit: based on highest address checking rate from SST.	3450
Average.	3050
Lower limit: based on lowest address checking rate from SST.	2750

* Assumptions: Field staff will work a 35 hour week, 3 attempts at contact will be made where it is deemed necessary.

- 6.2.6** The recommended variant T3 workloads for rural areas are:

	Addresses per week*
Upper limit: 10% increase in address checking rate.	1325
Average.	1200
Lower limit: 10% decrease in address checking rate.	1075

* Assumptions: Field staff will work a 35 hour week, 3 attempts at contact will be made where it is deemed necessary.

Estimates were based on the assumptions outlined underneath each table. Using data from the SST the proportion of time spent making each contact was calculated which was strongly linked to the speed of the pre-delivery household address checking and contact rates that could be achieved. The variant of T3 was not tested during the SST. The workloads have been calculated

for this treatment by estimating the level of contact that is likely to be made and then calculating the time spent making this level of contact as well as the time spent performing the standard T3. All T3 estimates have been reduced by 10% to allow for the high fitness level of the staff employed during the SST.

6.3 Staff and Recruitment

Conclusion

The field staff were all recruited by Adecco employment agency in Fareham under the HMPS contract and this generally worked well. Adecco supplied the SST team with five staff over the 7 weeks of the SST and although there were difficulties with one member of staff they all met our initial requirements.

Recommendations

- 6.3.1** A set of initial recruitment requirements are constructed built around the set of requirements found in section 5.2.3 – staff should be given an indication as to amount of walking necessary;
- 6.3.2** The agency requirements are updated on the set of requirements found in section 5.2.3;
- 6.3.3** Consideration given as to whether staff should work in pairs in unsafe areas.

6.4 Instructions, training and debriefing

Conclusion

The instructions, training sessions and debriefing sessions were generally well received by the field staff. The set of instructions were considered clear and easy to follow, although a few sections need to be refined.

Recommendations

- 6.4.1** Instructions, training sessions and debriefing sessions should include input from other ONS experts such as SDCAS and MD.
- 6.4.2** More emphasis on consistent recording of new addresses given in instructions and training session (see Phase 2 evaluation report). The field staff will need to record whether the address they are adding represents either a) new address, b) a sub-dwelling in an existing address or c) a socially defined household;
- 6.4.3** Simplification of household definition or further examples should be provided, as it was not always easy to comprehend. Provide several examples of how the definition could be applied on the doorstep;
- 6.4.4** Better explanations of when to return to make subsequent contacts;
- 6.4.5** Instructions given to field staff to ask public if they have problems locating an address;
- 6.4.6** Instructions sent to field staff for pre-reading;
- 6.4.7** Team Manager instructions need to be developed;
- 6.4.8** The variant T3 instructions need to be developed and incorporated into the instructions, with particular attention given to the circumstances of when field staff should make contact.

Conclusion

The training session was designed to take the field staff through their set of instructions applying definitions to examples they were given and performing role-play of a doorstep routine. Staff were also accompanied for their first hour or two of work this provided an opportunity to give them hints and tips or to correct any mistakes they may have been making from the outset.

Recommendations

- 6.4.9** Training sessions piloted as quality assurance exercise;
- 6.4.10** More definition examples should be covered during training. Role-play examples should also be covered;
- 6.4.11** Field staff should be accompanied during the task for about an hour at some point during their first few days. This can boost the staff members confidence and provides an opportunity to iron out any faults in their work at an early stage;
- 6.4.12** Team Manager training developed.

Conclusion

The debriefing sessions held for the field staff was an invaluable opportunity to learn about their experiences. The initial thinking behind a debriefing session was to gather information on each individual aspect of the operation, but it was clear that the staff appreciated the chance to meet with each other and share their experiences. It is important that a debriefing session is held after the 2006 pre-delivery household address check in order to gather information that can refine the task.

Recommendations

- 6.4.13** A debriefing session is conducted by the Team Manager or ONS after the 2006 Pre-delivery household address check;
- 6.4.14** Debriefing material is prepared for the Team Manager or ONS in order to get structured feedback;
- 6.4.15** Field staff should continue to be issued with an observation booklet to complete throughout their field work;
- 6.4.16** Debriefing session for Team Managers is developed.

6.5 Supplies and equipment

Maps

Conclusion

Staff were provided with three types of maps, an overall map of the area (to plan routes between wards), a map of the ward (to plan routes between EDs) and a map of each ED. It was crucial that the ED maps have clear boundaries so that staff do not add addresses from other EDs. There were several areas where ward boundaries had changed but the EDs were not realigned. This meant that there was a mismatch between ward maps and ED maps. This needs rectifying before 2007. Section 5.2.5 provides further details on the maps used and the recommendations are based on this evidence.

Recommendations

- 6.5.1** ONS Geography should supply addresses and maps based on 2000 Ward and ED boundaries to avoid any mismatch (EDs are not being updated for 2007 Test);
- 6.5.2** Clear Ward maps are provided with ED boundaries are produced/provided;
- 6.5.3** Clear ED maps with full street names are produced/provided;
- 6.5.4** Paper sizes kept to a minimum;
- 6.5.5** Advantages and disadvantages of laminating maps are considered.

Address-listing books

Conclusion

Staff were given an Address-Listing book for every ED. The production of the books was very manually intensive. Addresses needed to be added and removed from each book (to create the controlled error rates) and then the addresses were sorted into a suitable order. The books were then printed on the office printer and bound in reprographics.

As previously mentioned the addresses were not in an intuitive order particularly in rural areas. Therefore the ordering method needs to be developed, perhaps grouping addresses by postcodes in these areas. Section 5.2.5 provides further details on the Address-Listing books. It is unfortunate that PDA's can not be tested and used in the 2007 Test because it is likely that they may provide some solutions on how to locate addresses.

Recommendations

- 6.5.6** Software for PDA's are developed and tested possibly for the 2007 Test;
- 6.5.7** Research should be undertaken on the ordering of the pre-listed addresses within the workbook, especially in rural areas;
- 6.5.8** The process to order the pre-listed addresses and produce individual electronic files for each book should be developed and automated;
- 6.5.9** The design and content of the workbook should be revisited looking at which information should be recorded.

Other supplies

Conclusion

There are many other supplies that need to be issued as part of a pre-delivery household address checking task. The following recommendations are based on section 5.2.5.

Recommendations

- 6.5.10** Staff should be supplied with Personal Alarm and Torch (all in one unit) for health and safety purposes, particularly as they will be working in the dusk/dark;
- 6.5.11** Staff continue to be supplied with ID badge and NS lanyard. This underlined their official status and helped gain cooperation;
- 6.5.12** Staff should provide their own mobile phones and claim back at a standard call charge rate. Staff should ring their Team Manager or Census HQ who would call back immediately;
- 6.5.13** A different supplier of mobile phone should be authorised according to office policy (if mobile phones are to be supplied);

- 6.5.14** The thank you/information leaflet should be considered as it was well received by public and a useful tool for field staff;
- 6.5.15** A set of instructions for quick and easy reference together with health and safety instructions should be produced/supplied;

6.6 Management

Conclusion

During the SST the intention was to use a 'hands off' management style as much as possible, replicating the amount of contact and support that a Team Manager would be able to provide in the 2007 Test. One of the major roles of the support team was distributing the week's workload, and collecting the Adecco time sheets for validation. This usually involved a round trip to visit every member of field staff. This was time consuming and should be better planned for the future as this will be performed by on Team Manager potentially covering a larger area.

There were two situations that called for immediate action. The first situation was when the work of one of field staff was called into question (identified through checking of the controlled error rates). Different options on how to handle the situation were considered but there were no pre-determined actions for this scenario. The second situation arose when a field staff member was uncomfortable with the area she was working in and did not want to return to complete the work. Again, there were no pre-determined actions for this scenario.

Recommendations

- 6.6.1** All Address-listing books are prepared prior to the operation but delivered to field staff in separate batches (to avoid overwhelming field staff and to maintain contact with field staff during their work);
- 6.6.2** Field staff should only use only work with one treatment method to avoid confusion and confounding effects;
- 6.6.3** Thought needs to be given to field staff working in pairs in some areas where they are likely to feel threatened;
- 6.6.4** Timesheets are collected by Team Managers on a weekly basis;
- 6.6.5** Guidance is produced on how deal with certain situations. Obviously not every situation can be planned for but Team Managers should have access to this advice;
- 6.6.6** Team Managers role should be defined;

Conclusion

Management support was provided through an office mobile phone. An On-Call roster was devised which provided cover whilst the field staff were at on duty. The support was well used, helped the field staff resolve their queries and was appreciated by the field staff.

Recommendations

- 6.6.7** On-Call support should be provided to the field staff during their working hours;
- 6.6.8** Personal questions should be directed to Team Manager and task related issues to Central support unit.

6.7 Quality Assurance

Conclusion

The SST has shown that controlled error rates can provide a very beneficial management tool for future address-checking work especially if they are used in more formal manner. In the first week of the SST it was recognised that one member of field staff was not finding addresses that were deleted. Overall the level of controlled errors that were identified during the SST was low and this would suggest that the staff were not adding a large proportion of addresses that were truly missing. This is worrying and effort must be made to improve this aspect in the future. The way in which controlled errors are matched and checked needs to be improved for the future. PDA's would make the process easier to recognise and manage.

The way in which the controlled error rates were created was a very manually intensive process and it is likely that adding addresses could only ever be done using a manual process. There are also concerns that field staff spent long periods of time 'hunting' for added addresses. It is possible that addresses could be deleted using an automated process. During the SST the field staff were not told that their Address Listing books contained a controlled error rate; it is a possibility that the field staff could be told that some addresses have been manually deleted, although the way this is explained to the field staff should be carefully considered. This approach could improve the quality of the field staffs work.

Recommendations

- 6.7.1** There should be a focus on developing the controlled error rate system as quality management tool. It should be the Team Manager's role to check workbooks and implement the relevant action;
- 6.7.2** Artificial addresses should not be added to the address list and the controlled error rate should consist only of deleted addresses;
- 6.7.3** An automated system for deleting addresses should be developed. Consideration is needed regarding the percentage of addresses removed from the Address-Listing book as well as when and what action should be taken;
- 6.7.4** Research should be conducted as to whether field staff are told that there are addresses that have been artificially deleted. This could improve the quality of field staff work;
- 6.7.5** Consider QA'ing a small sample of EDs.

6.8 Data Entry

Conclusion

The keying of the data took much longer than expected but this was in part due to a poorly designed database and the nature of some of the data which was being keyed purely for analysis purposes. In the future the times to key the data should be greatly reduced if a purpose built database is constructed. Data entry time and cost would be eliminated if PDA's were used instead of 'pen and paper' but software for the PDA's is unlikely to be developed and tested before the 2007 Test. In the meantime alternatives to manual data entry should be considered. It is possible that the Address-Listing books could be developed that could be scanned and captured using a similar process as is used to capture Census Questionnaire data.

Recommendations

- 6.8.1** Better purpose built database is built and tested with built-in edit checks;

- 6.8.2** Consideration is given as to whether it is necessary to enter every element of data collected (date and time in particular);
- 6.8.3** Consideration of other methods for data entry, for example scanning of books similar to the Census questionnaires;
- 6.8.4** Use of PDA's considered for 2007 Test to reduce data entry costs (see recommendation 6.5.6).

7 Appendices

Appendix A

Further quantitative results

Appendix A.1 – Address checking rates for each individual sweep of T1 and T2.

Table A.1.1 and table A.1.2 show the address checking rates for sweep 1, 2 and 3 for T1 and T2 respectively. The rate is based on the number of addresses visited in each sweep divided by time it took to visit these addresses. The supergroup average is the total number of visits made divided by the total time spent making these visits.

Table A.1.1 – T1 – Addresses per hour for each individual sweep – includes ONS fieldwork

Supergroup	T1 - Addresses per hour			
	Sweep 1	Sweep 2	Sweep 3	Average ¹
1 - Industrial Hinterlands	29.19	23.12	16.95	25.86
2 - Traditional Manufacturing	32.34	17.05	48.00 ²	30.98
3 - Built-up areas	47.39	43.33	43.89	46.21
4 - Prospering Metropolitan	46.46	48.12	40.00	45.97
5 - Student Communities				
6 - Multicultural Metropolitan	46.06	32.83	83.63 ²	42.89
7 - Suburbs and Small Towns	38.85	53.75		39.63
8 - Coastal and Countryside	38.43	31.71	27.64	36.17
9 - Accessible Countryside	18.95	24.19	26.48	20.50
Average	36.06	32.25	33.34	34.94

¹Total number of visits made divided by the total time spent making these visits

²The household address checking rate seems excessively high compared to all other figures.

Table A.1.1 shows similar patterns as in tables in section 5.1.1, with urban supergroups demonstrating faster household address checking rates compared to rates in rural areas. There is no real pattern between the sweeps. The rate of address checking neither increased nor decreased in a systematic way between the different supergroups. One possible reason for the differences is that in some areas there may have been clusters of addresses that were revisited and in other areas the addresses may have been more widely spread, requiring more travelling time between addresses.

Table A.1.2 shows the address-checking rate for each sweep when T2 was used. This should show whether there are any systematic differences in the address-checking rate for each sweep. Unfortunately given the data that was collected it was unclear how many addresses were covered by T2 in sweeps 2 and 3.

Table A.1.2 – T2 – Addresses per hour for each individual sweep – includes ONS fieldwork

Supergroup	Sweep 1
1 - Industrial Hinterlands	45.54
2 - Traditional Manufacturing	78.42
3 - Built-up areas	
4 - Prospering Metropolitan	65.43
5 - Student Communities	73.24
6 - Multicultural Metropolitan	69.66
7 - Suburbs and Small Towns	39.33
8 - Coastal and Countryside	39.25
9 - Accessible Countryside	25.22
<u>Mean average</u>	<u>55.15</u>

¹Total number of visits made divided by the total time spent making these visits

Table A.1.2 above shows similar patterns as the previous table for sweep 1. Urban supergroups have higher address-checking rates whilst rural areas have lower address-checking rates. Again, the address-checking rate neither increases nor decreases in a systematic way between sweeps.

Appendix A.2 – Address types

When a member of field staff entered a new address in their workbooks they were asked to indicate what type of address they were adding using four categories; converted address, existing address, new build address and under construction address. The field staff were also able to tick a box in the property type box if it was relevant these boxes were; non-residential, derelict, vacant, being renovated, residential household within a non-residential address, mobile structure, and communal establishment.

The table below shows the number of added addresses that fell into each category when T1 was used.

Table A.2.1 – T1 – Type of new address for by area type*

Supergroup	T1 – number added	Percentage non-residential	Percentage vacant	Percentage converted address	Percentage existing address	Percentage new build	Percentage under construction
1 - Industrial Hinterlands	6	0.00%	0.00%	33.33%	50.00%	0.00%	0.00%
2 - Traditional Manufacturing	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3 - Built-up areas	1	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4 - Prospering Metropolitan	109	1.83%	2.75%	39.45%	33.94%	0.07%	0.00%
5 - Student Communities							
6 - Multicultural Metropolitan	57	0.00%	0.00%	57.89%	7.02%	0.12%	0.00%
7 - Suburbs and Small Towns							
8 - Coastal and Countryside	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
9 - Accessible Countryside	15	0.00%	0.00%	0.00%	46.67%	0.00%	0.00%
Totals	190	1.58%	1.58%	41.05%	26.84%	0.00%	0.00%

*Doesn't always add up to 100% because an address type was not always recorded.

It is clear that the percentages for each supergroup don't always add up to 100%, this is likely to be due to poor workbook completion of these new addresses. The highest proportions of new addresses in each supergroup are either converted addresses or existing addresses, with overall proportions of 41% and 27% respectively. The highest proportion of converted addresses are in the 'Industrial Hinterlands', 'Prospering Metropolitan' and 'Multicultural Metropolitan'. The highest proportions of existing addresses are in 'Industrial Hinterlands', 'Prospering Metropolitan' and 'Accessible Countryside'.

Table A.2.2 shows the number of added addresses that fell into each category when T2 was used.

Table A.2.2 – T2 – Type of new address for by area type*

Supergroup	T2 – number added	Percentage converted address	Percentage existing address	Percentage new build	Percentage under construction
1 - Industrial Hinterlands	2	100.00%	0.00%	0.00%	0.00%
2 - Traditional Manufacturing	1	0.00%	0.00%	0.00%	0.00%
3 - Built-up areas					
4 - Prospering Metropolitan	66	9.09%	10.61%	0.00%	6.06%
5 - Student Communities	36	2.78%	47.22%	16.67%	0.00%
6 - Multicultural Metropolitan	13	15.38%	38.46%	0.00%	0.00%
7 - Suburbs and Small Towns	7	0.00%	42.86%	14.29%	0.00%
8 - Coastal and Countryside	2	0.00%	0.00%	50.00%	0.00%
9 - Accessible Countryside	11	9.09%	36.36%	27.27%	0.00%
Totals	138	8.70%	26.09%	7.97%	2.90%

*Doesn't add up to 100% because an address type was not always recorded.

Again, the highest proportion of new households/addresses were converted and existing addresses. The proportions found in each supergroup are similar to those in the T1 table although only four types were recorded.

Table A.2.3 shows the number of added addresses that fell into each category when T3 was used.

Table A.2.3 – T3 – Type of new address for by area type*

Supergroup	T3 – number added	Percentage non-residential	Percentage vacant	percentage converted address	percentage existing address	percentage new build	percentage under construction
1 - Industrial Hinterlands	47	21.28%	0.00%	2.13%	2.13%	21.28%	0.00%
2 - Traditional Manufacturing	7	71.43%	0.00%	0.00%	0.00%	0.00%	0.00%
3 - Built-up areas	106	0.00%	1.89%	3.77%	12.26%	58.49%	1.89%
4 - Prospering Metropolitan	126	0.00%	0.00%	28.57%	56.35%	5.56%	0.00%
5 - Student Communities	22	0.00%	0.00%	9.09%	45.45%	36.36%	4.55%
6 - Multicultural Metropolitan	353	0.00%	0.00%	60.34%	8.22%	7.08%	9.07%
7 - Suburbs and Small Towns	104	0.96%	0.00%	4.81%	21.15%	41.35%	0.00%
8 - Coastal and Countryside	52	26.92%	0.00%	0.00%	28.85%	19.23%	0.00%
9 - Accessible Countryside	53	0.00%	0.00%	1.89%	20.75%	20.75%	1.89%
Totals	870	3.45%	0.23%	30.11%	19.77%	20.23%	4.14%

*Doesn't add up to 100% because an address type was not always recorded.

Again there are high proportions of converted and existing addresses but additionally there are high proportions of new build addresses. The proportions of these types of addresses are found in similar patterns of supergroups.

Appendix A.3 – Type of pre-listed addresses

During the fieldwork our field staff were asked to indicate if a pre-listed address was not simply a standard residential address by ticking one of the following; non-residential address, derelict property, duplicate address, address unlikely to exist, vacant, being renovated, second residence, communal establishment, mobile structure and residential address within a non-residential address.

The percentage of pre-listed addresses that fell into each category when T1 was used are shown below.

Table A.3.1 – T1 – Type of pre-listed addresses (excludes added addresses) – excludes office work

Supergroup	T1 – number of pre-listed addresses	% - comm estab.	% - address within non-residential address	% - derelict	% - duplicate	% - mobile	% - non-residential	% -second residence	% - being renovated	% - unlikely to exist	% - vacant
1 - Industrial Hinterlands	738	0.0%	0.5%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.7%	0.4%
2 - Traditional Manufacturing	237	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3 - Built-up areas	715	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.1%	1.5%	0.0%
4 - Prospering Metropolitan	745	0.1%	0.0%	0.0%	0.1%	0.0%	2.8%	0.4%	0.0%	2.7%	1.7%
5 - Student Communities											
6 - Multicultural Metropolitan	638	0.0%	0.0%	0.2%	0.2%	0.0%	1.1%	0.0%	0.5%	1.3%	1.1%
7 - Suburbs and Small Towns											
8 - Coastal and Countryside	708	0.4%	0.0%	0.0%	0.0%	0.0%	1.3%	0.3%	0.3%	0.1%	0.3%
9 - Accessible Countryside	409	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	3.4%	0.0%
Totals	4190	0.1%	0.1%	0.0%	0.0%	0.0%	1.5%	0.1%	0.1%	1.4%	0.6%

Table A.3.1 shows that the two categories that have over 1% of pre-listed addresses are ‘non-residential’ addresses and ‘unlikely to exist’ properties when T1 was used. The highest proportions of non-residential addresses were found in ‘Prospering metropolitan’, ‘Industrial Hinterlands’, ‘Built-up areas’ and ‘Coastal and countryside’ supergroups. The proportion of addresses that were unlikely to exist was noticeably higher in two supergroups, ‘Prospering metropolitan’ and ‘Accessible countryside’. The other categories show proportions of addresses less than 1%.

The percentage of pre-listed addresses that fell into each category when T2 was used is shown in the table below.

Table A.3.2 – T2 – Type of pre-listed addresses – excludes ONS fieldwork

Supergroup	T2 – number of pre-listed addresses	% - communal estab	% - address within non-residential address	% - derelict	% - duplicate	% - mobile	% - non-residential	% - being renovated	% - second residence	% - unlikely to exist	% - vacant
1 - Industrial Hinterlands	546	12.4%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.18%	0.2%	0.7%
2 - Traditional Manufacturing	1319	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.00%	1.2%	0.3%
3 - Built-up areas											
4 - Prospering Metropolitan	1969	0.1%	0.5%	0.2%	0.3%	0.0%	5.4%	0.1%	0.05%	1.4%	0.8%
5 - Student Communities	971	0.0%	0.1%	0.0%	0.0%	0.0%	1.5%	0.0%	0.00%	0.1%	2.3%
6 - Multicultural Metropolitan	910	0.1%	0.0%	0.0%	0.0%	0.0%	5.1%	1.0%	0.00%	0.7%	1.0%
7 - Suburbs and Small Towns	889	0.1%	0.1%	0.0%	0.0%	0.0%	0.3%	0.0%	0.00%	0.2%	0.7%
8 - Coastal and Countryside	501	11.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.2%	0.00%	0.6%	0.4%
9 - Accessible Countryside	387	0.2%	0.3%	0.0%	0.5%	0.0%	5.7%	0.3%	0.52%	1.6%	3.6%
Totals	7492	1.7%	0.2%	0.0%	0.1%	0.0%	3.2%	0.2%	0.05%	0.8%	1.0%

Table A.3.2 shows that overall 3.2% of pre-listed addresses were non-residential addresses; this is the category with the highest proportion. Three supergroups proportions of non-residential addresses over 5%; these were 'Prospering metropolitan', 'Multicultural metropolitan' and 'Accessible countryside'. The table also shows that 1.7% of pre-listed addresses were communal establishments, this was largely due to high proportions of communal establishments in two supergroups, 'Industrial Hinterlands' (12.4%) and 'Coastal and Countryside' (11.0%). There were no other categories with high percentages of pre-listed addresses.

The percentage of pre-listed addresses that fell into each category when T3 was used is shown in Table A.3.3.

Table A.3.3 – T3 – Type of pre-listed addresses (excludes added addresses) – excludes office work

Supergroup	T3 – number of pre-listed addresses	% - comm. estab.	% - address within non-residential address	% - derelict	% - duplicate	% - mobile	% - non-residential	% - being renovated	% - secondunlikely residence to exist	% - vacant
1 - Industrial Hinterlands	5727	0.1%	0.0%	0.1%	0.0%	0.0%	2.5%	0.1%	0.0%	0.4%
2 - Traditional Manufacturing	2326	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.2%
3 - Built-up areas	2639	0.0%	0.0%	0.0%	0.0%	0.0%	9.2%	0.1%	0.0%	0.3%
4 - Prospering Metropolitan	4616	0.1%	0.0%	0.2%	0.2%	0.0%	6.3%	0.2%	0.0%	0.7%
5 - Student Communities	3159	0.2%	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.3%
6 - Multicultural Metropolitan	5564	0.0%	0.0%	0.0%	0.3%	0.0%	5.9%	0.2%	0.0%	0.7%
7 - Suburbs and Small Towns	5144	0.1%	0.0%	0.0%	0.0%	0.0%	2.9%	0.1%	0.0%	0.3%
8 - Coastal and Countryside	6644	0.1%	0.2%	0.1%	0.0%	0.0%	4.9%	0.1%	0.0%	0.3%
9 - Accessible Countryside	1586	0.1%	0.0%	0.1%	0.1%	0.0%	1.7%	0.0%	0.0%	0.1%
Totals	37405	0.1%	0.0%	0.1%	0.1%	0.0%	4.3%	0.1%	0.0%	0.4%

The table above shows that overall 4.3% of pre-listed addresses were non-residential. Over 9% of all pre-listed addresses in the ‘Built-up’ supergroup were non-residential and ‘Prospering metropolitan’, ‘Multicultural metropolitan’ and ‘Coastal and countryside’ have around 5-6% of non-residential addresses. Other categories have low levels of percentages.

Appendix A.4 – Refusal rates

Occasionally contact was made with a householder but their cooperation could not be gained. The table below shows the number of addresses where contact was made but cooperation could not be gained when T1 was used.

Table A.4.1 – T1 – Refusal of information area type – excluding office work

Supergroup	No of addresses that refused information - 1st sweep	1st sweep information refused - %	No of addresses that refused information – 2 nd sweep	2nd sweep information refused - %	No of addresses that refused information – 3 rd sweep	3rd sweep information refused - %	T1 – Overall information refused - %
1 - Industrial Hinterlands	29	3.93%	11	3.40%	0	0.00%	5.45%
2 - Traditional Manufacturing	5	2.11%	1	3.70%	0	0.00%	3.69%
3 - Built-up areas	14	1.96%	3	1.54%	2	1.56%	3.44%
4 - Prospering Metropolitan	47	6.31%	25	6.56%	5	2.98%	11.42%
5 - Student Communities							
6 - Multicultural Metropolitan	37	5.80%	11	3.79%	4	4.35%	10.12%
7 - Suburbs and Small Towns							
8 - Coastal and Countryside	70	9.89%	15	6.25%	2	2.63%	12.87%
9 - Accessible Countryside	0	0.00%	1	0.80%	0	0.00%	0.38%
Total	202	4.82%	67	4.24%	13	2.09%	6.91%

Overall approximately 5% of addresses refused to provide the information that our field staff asked for. This percentage showed large variations according to supergroup type. The 'Coastal and Countryside' supergroup had the highest refusal rate with close to 10%, this was followed by 'Prospering Metropolitan' and 'Multicultural Metropolitan' that had a refusal rate of approximately 6%. 'Built-up areas' and 'Accessible Countryside' had lower refusal rates than average with 1.96% and 0% respectively.

Table A.4.2 shows the number of addresses where contact was made but cooperation could not be gained when T2 was used. The table includes addresses where enquiries were made but the respondent refused to provide information. It was unclear how many addresses were visited in sweeps 2 and 3 so percentage figures could not be produced.

Table A.4.2 – Refusal of information for T2 by area type – excluding office work

Supergroup	No of addresses contacted or enquired about where information refused - 1st sweep	1st sweep information refused - %
1 - Industrial Hinterlands	8	1.60%
2 - Traditional Manufacturing	6	0.48%
3 - Built-up areas		
4 - Prospering Metropolitan	22	1.19%
5 - Student Communities	8	1.10%
6 - Multicultural Metropolitan	2	0.26%
7 - Suburbs and Small Towns	2	0.29%
8 - Coastal and Countryside	1	0.22%
9 - Accessible Countryside	3	0.83%
Total	52	0.79%

* Data not available

The number of addresses that information was refused from is much lower than that in T1. One possible reason for this is only approximately a third of addresses were contacted whilst the remaining addresses were enquired about and it may have been easier for the respondent to deny information about the neighbouring addresses rather than explicitly state that they did not want to respond on behalf of a neighbour.

Appendix A.5 – Household address checking rates according to field staff member

Five field staff were used during phase 1 of the SST. Like in many field operations there were variations in how the field staff applied themselves to the task. This section separates the work carried out by each staff member to enable identification any potential variation. Despite best efforts to place field staff in a variety of areas there will be differences in the areas that they visited, there is likely to be some interaction with natural variation.

Table A.5.1 shows the number of addresses covered by each field staff in each of the three method types. The table also shows the number of addresses covered per hour assuming that T1 and T2 covered three sweeps of the area.

Table A.5.1 – Addresses per hour by field staff (T1, T2 and T3) – Considering sweeps 1-3

Field staff	Total number of addresses checked at least 1 sweep			Average household addresses per hour			
	T1	T2	T3	T1	T2	T3	
1	975	1947	n/a	17.70	25.38	n/a	
2	2091	3823	n/a	39.10	35.91	n/a	
3	1124	1860	n/a	22.18	24.92	n/a	
4	n/a	n/a	18892	n/a	n/a	182.83	
5	n/a	n/a	20540	n/a	n/a	171.52	
Total	4190	7630	39432	Average	26.31	33.43	176.76

Table A.5.1 shows that Field staff 1-3 worked on T1 and T2 and Field staff members 4 and 5 used T3. There is a clear difference in the numbers of addresses covered by T1, T2 and T3. Interestingly, Field staff members 1 and 3 demonstrate similar address checking rates for both treatments but Field staff member 2 demonstrates a much higher address checking rate which was approximately double the rate of field staff 1 and 2 when T1 was used. There is a small difference between the address checking rates of the two T3 field staff.

T1 and T2 involved 3 sweeps of an area in order to improve contact rates. T3 did not involve any contact which meant that only a single sweep of an area was needed. Table A.5.2 compares the address checking rate for T3 against the rate when only the first sweep of T1 and T2 was considered.

Table A.5.2 – Addresses per hour by field staff (T1, T2, and T3) – Considering first sweep

Field staff	Total number of addresses checked at least 1 sweep			Addresses per hour			
	T1	T2	T3	T1	T2	T3	
1	975	1947	n/a	28.52	40.87	n/a	
2	2091	3823	n/a	62.99	59.38	n/a	
3	1124	1860	n/a	31.51	42.68	n/a	
4	n/a	n/a	18892	n/a	n/a	182.83	
5	n/a	n/a	20540	n/a	n/a	171.52	
Total	4190	7630	39432	Average	40.66	55.15	176.76

Table A.5.2 shows the field staff 2 again had much higher address checking rates when compared to field staff 1 and 3.

Appendix A.6 – Controlled error rates

Table A.6.1 – T1, T2 and T3 – Total number of errors with the number that were recognised by field staff.

Supergroup	T1 – Total errors	T1 – Total errors found	T1 - % of errors found	T2 – Total errors	T2 – Total errors found	T2 – % of errors found	T3 – Total errors	T3 – Total errors found	T3 – % of errors found
1 - Industrial Hinterlands	6	1	16.67%	5	3	60.00%	42	30	71.43%
2 - Traditional Manufacturing	3	0	0.00%	2	0	0.00%	19	9	47.37%
3 - Built-up areas	9	5	55.56%	0	0		26	16	61.54%
4 - Prospering Metropolitan	12	7	58.33%	28	12	42.86%	71	25	35.21%
5 - Student Communities	0	0		5	2	40.00%	11	3	27.27%
6 - Multicultural Metropolitan	6	5	83.33%	8	3	37.50%	35	11	31.43%
7 - Suburbs and Small Towns	0	0		8	8	100.00%	41	31	75.61%
8 - Coastal and Countryside	8	5	62.50%	4	2	50.00%	44	27	61.36%
9 - Accessible Countryside	6	4	66.67%	2	2	100.00%	20	5	25.00%
Mean Average	50	27	54.00%	62	32	51.61%	309	157	50.81%

The detection rate of controlled errors is reasonably similar for all treatments ranging from 54% for T1 to 50.81% for T3. Again there is no consistent pattern for the detection rates according to the supergroup type.

Table A.6.2 - numbers of controlled errors subsequently found by field staff member

Field staff member	T1 – Total errors	T1 – Total errors found	T1 - % of errors found	T2 – Total errors	T2 – Total errors found	T2 – % of errors found	T3 – Total errors	T3 – Total errors found	T3 – % of errors found	Average
1	7	1	14.29%	17	13	76.47%	n/a	n/a	n/a	58.33%
2	25	17	68.00%	23	11	47.83%	n/a	n/a	n/a	58.33%
3	14	9	64.29%	22	8	36.36%	n/a	n/a	n/a	47.22%
4	n/a	n/a	n/a	n/a	n/a	n/a	140	69	52.10%	52.10%
5	n/a	n/a	n/a	n/a	n/a	n/a	167	87	49.29%	49.29%

Overall the five field staff have identified similar proportions of their controlled errors, the proportions range from 47.22% for field staff member 3 and to 58.33% for field staff members 1 and 2. It is important to recognise that the field staff that used T1 identified the most errors with 58.69% of all errors recognised.

Appendix B

Address checking methodology - preference for visual checking with discretionary contact in all areas

View of Neil Townsend, Enumeration and Compliance, Data Collection.

The CDWG on 14 December agreed and the Evaluation report for the SST recommends that address checking should be done in 2 ways:

- visual checking with contact where necessary in most areas of the country
- contact at every address in areas of the country likely to have high levels of multi-occupancy.

I believe that a more appropriate method would be for visual checking with discretionary contact to be conducted everywhere. This note sets this out as a record of my views.

My concern about an exercise that involves attempting to make contact at every address in any area centres on cost effectiveness.

With an address checking exercise we are attempting to get an accurate list of the household spaces that we should deliver a Census questionnaire too. Address checkers will be given a list of the household spaces we know about and required to update this to reflect reality on the ground. The most likely additions to this list are:

- addresses, houses that do not exist on the list, they are newly built, have been converted for residential use or are just simply missing from the list
- sub divisions of properties where one address is listed and field checks find there is actually more than one household space present.

The first category are more straight forward to deal with because they are visible; contact may be necessary because the address or status of the property may not be apparent from observation. The second category are likely to need contact to establish the number of household spaces within the property though there may be visual indicators such as many cars parked outside, multiple doorbells, many wheely bins, different net curtains and more than one satellite dish.

The recommendation for contact everywhere is based on identifying areas where multiple occupation is likely to be relatively high. However, it is unlikely that every address will or can contain multiple households. Unless areas are identified at a very low level of geography and with great knowledge in any area there will be numerous addresses that cannot contain more than one household. The highest level of new addresses found in the SST was 14.6% and given that these were mainly sub-divisions and so many would relate to the same address, even in these Enumeration Districts probably over 90% of addresses were as stated with no changes. Examples of addresses which won't have sub-divisions include:

- purpose built flats
- developments of small housing - one/two bedroom housing
- converted flats that are already listed on our address list (if as we expect, advances in address lists mean sub-divisions are listed increasingly well, this will be increasing numbers of addresses).

Making contact at these will therefore mean that a large amount of time and money is wasted contacting addresses where there is no possibility of finding additional households. There may also be unnecessary return visits to addresses that are clearly sub-divided and this could be established by visual checking alone.

I feel it would be much better use of resources to make contact only where necessary to establish the address or number and identity of sub-divisions.

Our principle reason for address checking is to ensure our address/household list is complete enough to allow a post-out Census. If we are required to conduct an address checking exercise with contact at every address in some areas, the cost of this plus the postage for sending the Census questionnaire may well exceed the cost of hand delivery. In which case, we may as well hand deliver the forms in those areas especially if the Test proves contact at the point of delivery has a positive impact on response.

Neil Townsend, Enumeration and Compliance, Data Collection.

8 References

- [The 2011 Census: A design for England and Wales](#) (March 2004)
- For further information about the National Statistics 2001 Area Classification visit http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/wards/default.asp
- Adecco employment agency, visit <http://www.adecco.co.uk/>.
- Phase 2 evaluation (February 2006).