

The
Electoral
Commission

Pilot scheme evaluation

Stratford on Avon District Council

1 May 2003

Part A



Foreword

The Electoral Commission is a public body established on 30 November 2000 under the Political Parties, Elections and Referendums Act 2000 (PPERA). The Commission is independent of Government, non-partisan and directly accountable to Parliament. One of the Commission's aims is to encourage participation in the democratic process, and increase levels of electoral registration and voting.

As a result of measures introduced by the Political Parties, Elections and Referendums Act (PPERA) 2000, the Commission has a statutory duty to evaluate any pilot electoral scheme approved by the Minister of State for Local Government and the Regions, on behalf of the Secretary of State.

In accordance with the requirements of the Representation of the People Act (RPA) 2000, the Commission's evaluations will include a description of the scheme and an assessment as to:

- the scheme's success or otherwise in facilitating voting or the counting of votes, or in encouraging voting or enabling voters to make informed choices at the elections;
- whether the turnout of voters was higher than it would have been if the scheme had not applied;
- whether voters found the procedures provided for their assistance by the scheme easy to use;
- whether the procedures provided for by the scheme led to any increase in personation or other electoral offences, or in any other malpractice in connection with elections;
- whether those procedures led to any increase in expenditure, or to any savings, by the authority.

In addition to these statutory requirements, the Commission's evaluations will consider, where appropriate:

- the extent to which the pilot facilitated or otherwise encouraged participation among particular communities, including young people, ethnic minority groups and people with disabilities;
- overall levels of user awareness and comprehension of the voting method being tested, including an assessment of the effectiveness of any literature or other materials used in the promotion of the pilot;
- the attitudes and opinions of key stakeholders, including voters, with a view to determining overall levels of confidence in the voting method being tested;
- whether the pilot resulted in measurable improvements, or had any adverse impact, with respect to the provision of more efficient and effective service delivery to voters;
- whether the pilot resulted in measurable improvements to, or had any adverse impact on, the existing system of electoral administration;
- whether the pilot represented good 'value for money'.

Where appropriate, the Commission will also make recommendations as to whether changes should be made to electoral arrangements more widely through roll-out of the pilot.

The Commission is required to submit its evaluation reports to the Secretary of State and the local authorities concerned. The local authorities are required to publish the evaluation report for their area within three months of the election.

In preparing this report, the Commission has drawn upon its own observations and assessment of the pilot scheme, together with the following specialist reports prepared on the Commission's behalf:

- a survey conducted by the opinion polling organisation, MORI;
- a review of the technical aspects of the pilot scheme conducted by Actica Consulting Limited, an independent consultancy with expertise in e-democracy and specialists in the application of information and communications systems in the public sector;
- an evaluation of accessibility by disabled people to the pilot scheme undertaken by SCOPE, the disability organisation that has pioneered work on disabled access at previous elections.

The Commission has also published an overarching report commenting on the full range of electoral pilot schemes that took place during the May 2003 elections. The report is available to read at www.electoralcommission.org.uk.

The Electoral Commission is grateful to the Returning Officer at Stratford on Avon District Council and all those in the authority, political parties, the local community and suppliers who provided information and assistance during the evaluation process.

Introduction

Stratford on Avon District Council (SDC) applied to the Office of the Deputy Prime Minister (ODPM) in November 2002 to run an e-voting pilot combining early voting on the internet together with electronic voting kiosks in polling stations on polling day. Postal voting on request was allowed as normal. The council had used electronic voting kiosks in polling stations in 2000 and 2002 and believed that it would be a retrograde step to revert to traditional mechanisms. The application to also use early internet voting was partially in response to previous voter survey results that some potential voters were not able to attend polling stations but were not content with postal voting.

Cross party support was secured in a meeting of the Council's Political Management Committee held on 6 November 2002, where a range of options were discussed: all postal voting with and without electronic counting, traditional methods, electronic kiosks, and internet voting. The Chief Executive was authorised to apply for the combination of electronic kiosks, early internet voting and postal voting based on a combination of cost to the council (funding was available from ODPM for electronic kiosks and web based methods but not for full postal voting), and the Council's wish to build on its previous successful experience with the kiosks by the addition of the internet channel.

In accordance with the requirements of Section 10 of the RPA 2000, as amended by PPERA, the Commission was consulted on the Council's proposal and advised that it saw no reason for the pilot not to proceed. The Statutory Order permitting the pilot to proceed was made on 24 April 2003, the day that internet voting started.

Socio-economic description

Stratford on Avon District Council covers a large rural area, some 980 km² (378 square miles), right in the middle of England. About 114,000 people live in the District, the largest town being Stratford-upon-Avon with 23,000 residents. The Council has 53 councillors, each of whom is elected for four years. With its headquarters in Stratford-upon-Avon, the Council also operates three area offices in Alcester, Shipston-on-Stour and Southam.

The resident population of Stratford on Avon, as measured in the 2001 Census, was approximately 111,500 of which 48% were male and 52% were female. In 2001, 18% of the resident population were aged under 16, 58% were aged between 16 and 59, and 24% were aged 60 and over. The average age was 42. This compared with an average age of 39 within England and Wales.

The ethnic structure of Stratford on Avon is shown in the table below, based on the 2001 Census. Figures for England are shown for comparison purposes.

Percentage of resident population in ethnic groups:	Stratford on Avon	England
White	98.7	90.9
Mixed	0.5	1.3
Asian or Asian British	0.4	4.6
Black or Black British	0.1	2.3
Chinese or Other	0.3	0.9

Within Stratford on Avon in 2001, 76% of households lived in owner-occupied accommodation, whilst 13% lived in social rented housing (renting from the Council, a Housing Association or a Registered Social Landlord), and the remaining 11% rented privately, or lived rent free. The proportion of one-person households in Stratford on Avon was 27%. This compared to an England and Wales average of 30%. The proportion of lone parent households in Stratford on Avon with dependent children was 4%, compared to the England and Wales average of 6%. House prices in Stratford on Avon are about 40% higher than the average for the country as a whole.

Stratford on Avon is relatively prosperous – the unemployment rate was only 2% in 2001 compared to a national average of 3.4% – although it also has a higher than average number of retired people, at some 15% compared to the national average of about 13%. The crime rate is also substantially lower than the national average, varying from about a ninth of the national average for robbery to about two thirds of the national average for car crime. In the Department of Transport, Local Government and the Regions, Indices of Deprivation 2000, district council areas were ranked on a scale of 1 to 354, where 1 was the most deprived. There are a number of different measures of deprivation, but Stratford on Avon is ranked between 267 and 344 on all of them, i.e. there is little or no deprivation.

Of particular note for the evaluation of internet based voting, Council research indicates that more than two thirds of people in the area covered by SDC have access to the internet, either from home or from their place of work.

Pilot description

A copy of the Statutory Order making provision for the pilot scheme is in Part B of this report.

Coverage

The District is divided into 31 wards, each having one, two or three councillors, depending on the size. There were 16 district wards up for re-election, comprising one third of the total seats. The pilot also covered 32 parish council elections, although all but seven were uncontested. Of the total electorate in the district, some 60,000 were eligible to vote during the local elections. The wards involved in the pilot scheme were as follows:

- Bidford & Salford;
- Stratford Avenue & New Town;
- Fenny Compton;
- Stratford Guild & Hathaway;
- Henley;
- Stratford Mount Pleasant;
- Kineton;
- Studley;
- Shipston;
- Tredington;
- Southam;
- Welford;
- Stockton & Napton;
- Wellesbourne;
- Stratford Alveston;
- Alcester.

Principal suppliers

A number of companies were involved in the provision of the voting mechanisms:

- The Strand Consortium provided the front-end elements of the web based voting channel. The consortium company with the greatest involvement in the pilot in Stratford was the Online Assessment Company (OAC), an Australian company specialising in the development and operation of web based voting mechanisms. Strand/OAC also provided project management support to SDC and supported the publicising of the web based voting mechanisms.
- The e-voting web site was hosted by the Athena Consortium. Consortium member Anite Managed Services provided a secure data centre which was used to host the web server and the infrastructure for the e-counting application. The e-counting application was provided by another Athena Consortium member, VoteHere Inc. The application is a dedicated back office vote verification and vote counting system supporting both proprietary and EML compliant remote electronic voting channels including internet voting and

telephone voting. A third consortium member, Consilia (UK) Ltd was responsible for the management and marking of the electoral roll.

- PowerVote Ltd provided the Voting Machines (VMs) used in the polling stations and the Integrated Election Software (IES) application that was used to set-up the election details, to programme the VMs prior to the election, to read the votes cast from the VM modules and to process the results to produce the declarations.

Poll cards

A poll card was sent to all eligible voters at their registered address during the week commencing 7 April 2003. The poll card included a considerable amount of information, including:

- An eleven digit Ballot Number (BN), a seven digit Roll Number (also termed the Voter Identification Number or VIN) and a five digit PIN. The VIN and PIN included check sums so that data entry errors could be captured before the information was submitted.
- The name of the district ward in which they were voting (where contested).
- The name of the parish council in which they were voting (where contested). Where no parish council election was taking place the poll card showed 'UNCONTESTED' as the parish council. This caused widespread confusion and it was reported that some voters had assumed it meant that there was no district election and threw the poll card away.
- The location of the polling station that they should vote at and the polling station opening hours (8am to 9pm).
- Instructions for internet voting including web site address and times during which web based voting would be available (9am on 24 April to 5pm on 29 April).
- Telephone numbers for the council staff responsible for electoral roll information and for the 24 hour helpline supporting the web based voting.
- Instructions on how to vote using the kiosk voting machines.

Eighteen people contacted the council to complain either that they had not received a polling card or that it was damaged beyond use. Once the details of these electors had been validated through a telephone conversation with the council staff responsible for the electoral roll, the credentials (i.e. BN, PIN and VIN) issued to the individuals concerned were invalidated and they were issued with a new poll card with new credentials. The new credentials were from a pool of an additional 1% (about 600) sets of credentials that had been generated but not allocated. Invalidating the initial credentials involved the OAC project manager sending details of the PIN/VIN to the Athena Consortium for the VoteHere administrators to mark them as invalid and to enable the new PIN/VIN combination.

The issue of a poll card providing all of the credentials needed to vote has subsequently been identified by SDC as a security weakness. In commercial applications, such as the issue of bank and credit cards, PINs are distributed under separate cover. It is expected that in any future e-election, SDC would not issue a single card containing all of the credentials. In addition, the wording on the poll card

caused considerable confusion, and the council has identified the general issue of polling card content, layout and security as a learning point for future elections.

Early internet voting

Voters who wished to vote using the internet were able to vote from their home, workplace or any other locations providing internet access, e.g. libraries, cyber-cafes etc. To encourage internet voting the Council provided access to internet facilities in its main offices, including terminals specifically set up with advertising and guidance material for visitors to the council to explore the demonstration site before voting started and to vote during the voting period.

Electors wishing to vote electronically over the internet were required to:

- Access a specified internet site (vote.stratford.gov.uk), which also provided links to 50-word candidate profiles.
- Enter their VIN, PIN and Ballot Number.
- Select the candidate or candidates (for Parish Council elections) of their choice by a mouse-click.
- Confirm their vote by a mouse-click. Voters could abstain by selecting no candidate and then confirming their voting intentions. Once the vote was confirmed the voter was required to enter a password or phrase of their own choosing which was used with information provided by the Vote counting application to create a 20 digit receipt. The combination of the receipt number and the password could be used subsequently to confirm that the vote had been counted.
- Voters were then taken to an optional survey page which was used to record their views on the internet based election process. Some 1,000 voters, about one third of the total, chose to fill in this questionnaire – the key results are summarised later in this report.

Once the period for internet voting had finished on 29 April the register was marked to show all those who had voted by internet or had requested a postal vote. The marked up roll was sent electronically to SDC for printing and distribution to the polling stations. A number of problems were experienced with the marked up roll in that initially:

- Some individuals that were 18 or over on the day of the poll were shown incorrectly as ineligible to vote. This was corrected in a second version of the roll provided by Consilia on 30 April.
- The marking used to indicate that someone had voted using the internet or had registered for a postal vote was not what the council believed that had been agreed previously and was potentially confusing.
- The format of the marked up roll was not compatible with the software used by SDC to manage the electoral roll.

A large amount of manual intervention was required by the OAC project manager and SDC staff to correct these problems, but the copies of the marked register required for the polling stations were completed by mid-afternoon on the 30 of April, the day before the polls opened.

There were two instances where people voting by the internet were sufficiently unhappy with their experience because of technical difficulties, that they were not content that their votes had been cast the way that they intended. In the circumstances, because of the pilot nature of internet voting, a decision was taken to make the votes that they had cast invalid and to issue new credentials to them using the same approach as for lost or damaged poll cards (described earlier). It would have been more appropriate for the council to have let the votes made initially to stand and then to offer the individuals concerned the opportunity to make a tendered vote – indeed a process had been agreed for these circumstances. While the small numbers of votes concerned mean that it would not have made any difference to the outcome; it is recommended that in future elections procedures in this area are made clearer and are more rigorously applied.

Several of the political agents expressed a desire to be given copies of the marked up register so that they could concentrate their resources on voters who had not already voted. SDC did not provide the marked up roll for this election, but is aware that other pilot schemes have released the marked up roll to agents on a daily basis during the early voting period. SDC would prefer to be able to release this information in future elections.

Voting on 1 May

The electronic Voting Machines (VMs) were sited at the polling stations – with between one and four VMs being located at each polling station depending on the number of voters and the previous experience of large queues developing at certain poll stations. In addition where there were multiple VMs at a single location, a ‘meeter and greeter’ was assigned to help voters find the right VM to vote at¹. There were no reports of any significant queues this year.

The VMs were stand alone, (i.e. not networked), and could be operated either from mains electricity or from a 12v battery. Each machine has five columns of buttons, each column allowing up to 20 candidates to be represented. A paper overlay with the candidate names, in a format very similar to a traditional ballot paper, was placed over the buttons, such that a voter pressed the button next to a candidate name to vote for that candidate. When the button was pressed, a cross appeared next to the candidate name, to confirm that the voter’s preference had been registered. If the button was pressed a second time the preference was cleared, allowing the voter to select a different candidate. Once the voter was content with their choices in each of the elections that they were eligible to vote in, a ‘Cast Vote’ button was pressed. If the voter had not registered a preference for a candidate in a single vote election, or had selected fewer than the allowed number of candidates in the parish council elections, where, for example the voter had to vote for 6 out of 9 candidates, then an error message was displayed. The error message asked the voter to either correct their preferences or to press the cast vote button again to confirm that they intended either to vote for no candidate (i.e. abstain) or to vote for fewer candidates than was allowed.

When a voter entered the polling station, they were required to identify themselves to the polling station clerk in the normal manner. The clerk checked that they were eligible to vote by examining the marked roll to confirm that they were on the roll and had not registered for a postal vote or voted via the Internet. They were then given a

¹ The electoral roll for the polling district was split between different VMs in those polling stations where multiple VMs were located. It was therefore necessary to direct voters to the VM corresponding to the part of the electoral roll including the voter’s name.

sequentially numbered ticket, and the ticket number was recorded against their name on the electoral roll. The voter then presented the ticket to the Presiding Officer who enabled the machine so that the voter could vote and briefly described how to use it. The control unit operated by the Presiding Officer also provided an indication that the voter had completed the voting process – in some cases voters did not complete the process before they started to walk away and it was the Presiding Officer's responsibility to ask the voter to return to the kiosk to complete the process.

Where there was only a district election taking place, there were very few occasions where a voter did not complete their vote correctly. However, where the same voting machine was used for both District and Parish Council elections, a high proportion of voters did not complete the process correctly, predominantly because they did not select the maximum number of parish council candidates allowed and did not notice the error message indicating that they needed to press the 'Cast Vote' button a second time.

Several problems were encountered on the day. One was that a very small font was used to print the electoral roll and the street information was unclear, making the roll difficult to use and difficult to mark. More importantly, people that had registered to vote by proxy were incorrectly marked as having voted. This led to a number of proxies being turned away by Presiding Officers until the problem was identified. Once identified, all presiding officers were informed of the problem and all of those that had been turned away were contacted and allowed to cast the proxy vote, either by returning to the polling station or by being given a postal voting form which was collected from them by SDC staff. A number of voters were unhappy with the process of taking a number and that number being recorded because it compromised the confidentiality of their vote. They were not aware that their vote can also be traced in a traditional election – indeed it is easier to do so with traditional techniques.

Many people attending the polling stations on 1 May complained that they had wished to vote using the internet on polling day, even though the poll card stated that the period for internet voting closed two days earlier. Voters did not understand why this needed to be the case (because time is needed to process and produce the marked up electoral roll). The SDC team has commented that if early internet voting is used again then the closing date for internet voting should be clearly printed on the outside of the polling card so that those people that do not open their polling cards until election day will know when the internet voting period closes.

Postal votes

Postal voting on request was allowed as normal, and postal votes were accepted until the close of the polling stations at 9pm on 1 May. About 3,000 people registered for postal voting and just under 2,000 postal votes were returned. Envelopes containing postal votes received by mid-afternoon on 30 April were opened by council staff who checked that a correctly witnessed declaration of identity accompanied each vote, counted the number of postal votes received to that time in each ward, and returned the separate envelopes containing the votes themselves unopened into a separate metal box for each ward ready for counting once the polls had closed. This process was witnessed by a representative of the Returning Officer and a number of party agents and councillors.

Project management

The Chief Executive of SDC acted as the Returning Officer and had final responsibility for all aspects of the election. Day to day responsibility for the election and for the project management of all of the elements was delegated to the Senior Democratic Officer. Project Management meetings were held fortnightly with the following key attendees:

- Senior Democratic Officer (Chair);
- SDC Publicity Officer;
- OAC Project Manager. The OAC project manager reported to the Strand Consortium project manager on a weekly basis.

The information provided for evaluation indicates that the project was not managed using any formal methodology. Rather progress was tracked against a series of high level milestones, with individual team members and suppliers managing the lower level details themselves and reporting back as necessary. Some of the suppliers, particularly the OAC project manager, appear to have supported the SDC project manager in a wider range of activities than was contractually necessary in order to ensure that the pilot was successful. Given the relatively short duration of the project and the relatively small number of people concerned, the project management approach is assessed to be appropriate.

Risk management was also relatively informal and was limited to the maintenance of a rudimentary risk log. At the highest level, the fall back plan for the failure of the internet voting channel to be available on time was to revert to the combination of postal voting and voting electronically in the polling stations. There was no fallback plan in place in case the VM based solution was not ready by polling day because it had been used successfully for several years by SDC and they regarded it as very low risk. Overall it is assessed that the risk management arrangements were reasonable for the scale of the project.

The major difficulty in terms of the management and implementation of the e-voting pilot was the compressed timescales that arose because of delays in the ODPM letting contracts to the suppliers – the contracts with Strand and PowerVote were only signed in late March and early April. This meant that much of the supplier activity was undertaken at their risk. The compressed timescales for the implementation of the e-voting pilot had a number of consequences:

- User acceptance testing was either undertaken by directly council staff or by witnessing testing undertaken by the suppliers, although the approach to testing was fairly informal with a list of aspects to be tested rather than formal test scripts. However, there was little time available for end to end testing including testing the interface with the VoteHere e-counting application. Better end to end testing would have helped to avoid many of the minor glitches that occurred.
- There was no time to get feedback on the design and layout of the polling cards. Such feedback may have helped to avoid one of the largest problems that occurred with the pilot.
- There was insufficient time to train SDC staff in the use of the OAC application and the PowerVote EIS application that was used to collate the count. The impact of this was that supplier staff had to operate the various systems – causing additional cost to the suppliers and more importantly giving SDC less control of the overall process.

It is our assessment that the compression of the timescales was the greatest source of risk to the project. The SDC staff and all of the suppliers believe that in future more time should be available – ideally the orders should be completed by January, contractual arrangements for suppliers should be in place at the same time and the systems should be dry run and then locked down a few weeks before voting starts.

The way in which the ODPM took the decision to match suppliers with each other and entered into contracts itself, rather than each council having a contract with one or more suppliers, led to a number of project management related difficulties:

- There were a number of activities for which the responsibilities were unclear. In the case of SDC, the OAC project manager ended up taking responsibility for a number of key activities which were not within the Strand bid. Examples include:
 - designing the poll card layout;
 - providing an application to reformat the electronic voting results files from the format produced by VoteHere into the format required by PowerVote;
 - supporting the printing of the marked up electoral roll.
- No single organisation, except possibly the ODPM, had any responsibility for the end to end operation of the pilots.
- No organisation, except possibly the ODPM, had clear responsibility for managing conflicts between the various suppliers, who had to work together to make the pilots a success but often had conflicting commercial priorities.

It is strongly recommended that in future the contracting arrangements are modified to ensure that there is a single entity with responsibility for the overall success of each pilot and with the ability to control the various suppliers contributing to that success.

Relationship management

There were a number of important relationships that underpinned this e-voting pilot, namely:

- between the ODPM and SDC;
- between ODPM and the various suppliers (Athena Consortium, Strand Consortium, PowerVote, etc);
- between SDC and the various suppliers;
- between the various suppliers;
- between SDC and the press;
- between SDC and the electorate.

The relationship between the ODPM and SDC was somewhat strained. The first point made firmly at the initial contact between the EC Evaluator and the SDC team was that the ODPM did not demonstrate sufficient respect for local authority staff and the legal and procedural constraints that they had to work within. Key issues for SDC included:

- The Order for the election was not agreed or signed by the time that the Returning Officer had to publish Notice of the Election (on 24 March). This meant that if the order eventually agreed was different to that anticipated the

Notice of the Election may have been incorrect. In fact the Order was not finally signed until 23 April, the day before early Internet voting started.

- In preparing the Order the ODPM representatives required extremely rapid turnaround (i.e. hours) from the council on drafts, which was not easily achievable as the council's senior legal staff could not always be made available on this timescale. At the same time the ODPM often did not respond to requests for information from SDC.

It was also commented that the ODPM had not allowed SDC to use its preferred supplier for internet voting. However the SDC was very pleased with Strand/OAC, the supplier that ODPM forced on them (see below for further details).

The relationship between the SDC staff involved in running the election and their main supplier points of contact (Roy Loudon from PowerVote and Craig Burton from OAC/Strand) appeared to be extremely good and was critical in achieving the successful outcome of the election. It was also noted that the front end suppliers (chiefly OAC/Strand) had to represent the hosting and infrastructure suppliers (Athena) in discussions with the council, as SDC did not see the need for a direct relationship with them.

There was a clear need for a good working relationship between the front end and back end suppliers (broadly the Athena and Strand consortia). The impression gained was that there was a reasonably professional relationship with both sides motivated to make the overall solution work. However, it would have been better if the service levels agreed with the ODPM by the various suppliers were made visible to the other suppliers so that each had a better understanding of what could be expected from the other and any responsibilities that had not been identified could be identified before, rather than during, the run up to the election.

Public awareness and feedback

The council, supported primarily by Strand/OAC, conducted a major campaign to publicise the elections and the new voting mechanisms being piloted. This was organised by the SDC publicity officer and supported by Strand. It consisted of a combination of leaflets, articles in the local press, discussions on local radio, banners on the town hall and road shows/presentations.

Notwithstanding all of the publicity, many voters interviewed at the polling stations commented that they had not known about the internet voting and that it would have been useful had it been better publicised – for example by articles in the local press! Given that articles had been written in the local press it is unclear how SDC could have improved its publicity campaign.

A number of different mechanisms were used to gather feedback from voters and the wider electorate. These included:

- a MORI poll conducted for The Electoral Commission;
- an exit poll on polling day conducted by SDC staff;
- an online questionnaire for Internet voters to complete after they had voted.

MORI Poll

A MORI poll was conducted on behalf of The Electoral Commission after the election. MORI conducted 200 interviews by telephone in Stratford on Avon between 2 and 11 May 2003. Interviewing was stratified to ensure around 100 interviews with voters and around 100 with non-voters. The final data have been weighted by age, gender and working status to match the known population profile and the actual turnout in the 1 May 2003 local elections. Indicative sampling tolerances are $\pm 7\%$ at the 95% confidence level.

The survey found that seven out of ten (69%) said they were aware of the new arrangements for voting, and half (50%) felt well informed about them. When those claiming to know about the new arrangements were asked to identify them, 68% mentioned internet voting, 57% were aware that postal voting was available and 36% correctly identified voting using an electronic machine in a polling station.

A quarter of people (24%) who said they knew what the new arrangements were said they gave them more encouragement to vote (as did 21% of voters). Three out of ten people (31%) who did not know about the new arrangements said they would have encouraged them to vote had they known about them (rising to 36% among non-voters – although note the small base size of 46). Overall, 19% of voters and 31% of non-voters said the new arrangements either would have encouraged them or did encourage them to vote.

People were mainly positive about the new arrangements – 53% of all respondents said that they made the process of voting better. Generally speaking, most voters, and non-voters, were also positive about the specific attributes of internet voting and voting using an electronic machine in a polling station (though many non-voters said 'don't know'), with the exception of the safety from fraud of internet voting. Internet voting received higher ratings for convenience, while more people thought electronic machines provided privacy for the voter and safety from fraud (they received equally good ratings for ease of use). When asked why they rated internet voting as being unsafe from fraud or abuse, responses focused on concerns that others could find out how you voted (57%).

When asked why they did not vote, non-voters in Stratford on Avon mentioned that they were away on 1 May (13%), circumstances (12%) and the untrustworthiness of politicians (9%). It should be borne in mind that actual turnout was 37%, despite 60% of non-voters claiming to be aware of the new arrangements.

SDC exit polls

The SDC exit poll was undertaken by a research agency who interviewed 453 voters as they left a number of urban and rural polling stations. The main results were that:

- Three quarters of those surveyed always voted in local elections – the new method of voting made no significant difference to whether they voted.
- Younger people and people in rural locations were more likely to vote because of the use of the voting machines.

- Three quarters of voters felt the VMs were convenient and easy to use and 80% said that they should be used in future elections.
- 36% of those surveyed at the polling stations had seen publicity about Internet voting, with voters in the 35-64 age group being more aware. 41% of voters had access to the internet (which is lower than the overall average for all eligible voters within SDC). By age group, internet access ranged from 82% for 18-24 age group to 12% for the over 65s.

Post-voting internet survey

1,004 internet voters completed the internet questionnaire after voting. Some of the results of the survey include:

- about 5% of voters rarely or never voted at local elections, so these were potentially new voters encouraged to vote because of the web based voting channel;
- 43% of voters had been encouraged to vote because of the new methods;
- about 60% of voters thought that the security of the system was good or very good;
- nearly 90% of voters thought that the privacy provided was good or very good;
- more than 80% of voters found that the new methods made the process of voting better;
- less than half of the voters saw any publicity about the web voting in the weeks before the election – of those who did, 50% thought that the information provided was insufficient.

Impact on campaigns

The various parties were generally supportive of the use of early internet voting and the use of the VMs in the polling stations. However, there was no evidence that the main political parties had changed the way that they campaigned to take into account the additional voting mechanisms.

The only exception to this was that an agent for one of the independent candidates commented that the extended voting period meant that his team were able to spread their activities out over a longer period and hence contact a larger number of people than would have been possible with the shorter timescales associated with traditional elections.

At the count an agent commented that voting over an extended period could change the dynamics of a general election, as the swings that can happen close to polling day would be damped down by the fact that some people would have voted before the swings happened.

Technical operation

The internet voting system consisted of a web server running software developed by OAC hosted in a secure data centre operated by the Athena Consortium. Votes collected by the web based application were then passed to the VoteHere application, also in the same data centre.

Once an elector had cast their vote using the internet and the Athena Election Platform had recorded the vote, the elector was not able to use that ballot code number again. Security of the ballots was maintained in the Athena hosting and infrastructure portion of the system by immediately encrypting the ballot upon its receipt into the ballot box, and writing that encrypted ballot to a redundant storage device.

To provide the confidentiality of the votes cast the Athena Election Platform only held details of the electors ballot code number and vote selection. The ballot code numbers of those who had voted were securely passed to Consilia who matched the ballot code number to the elector's official roll number on the electoral register and used this information to produce the electronic marked register. The marked register also identified those who had registered for a postal vote (and so were not eligible to vote on the day) and those people for whom a proxy voter had been registered.

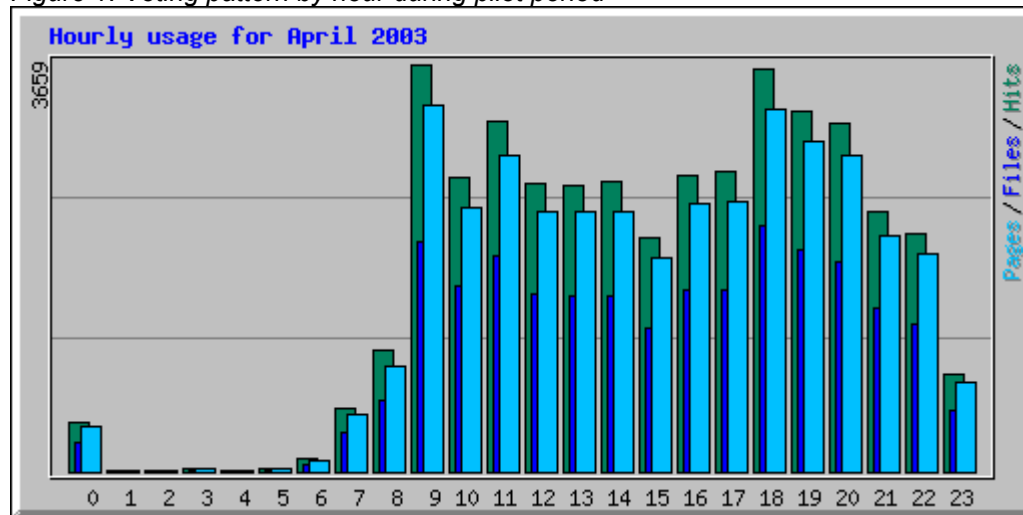
The OAC software was based on their standard product but had been adapted in two major ways for this election:

- The OAC application normally provides both the front end web-server functionality and also a vote counting database. OAC had initially bid on the basis of providing both elements of functionality and had designed and costed an infrastructure mirrored between two separate data centres to meet the very high availability target (99.99%) that the ODPM had initially set. However as part of the procurement process, the ODPM dictated that OAC should only provide the front end functionality, with its application working with an e-counting application provided by a separate supplier (which turned out to be VoteHere) via the EML interface. This required a major change to the OAC application and introduced a large integration risk as the EML specification was largely untried.
- The existing OAC application was based on the use of HTML forms running over a link protected using SSL (Secure Sockets Layer). This is an industry standard approach to security and is the approach used for example to secure e-banking. However, some concerns have been expressed about the available implementations of SSL. Therefore OAC developed a new approach in which a java applet was downloaded to run on the voter's machine. The main function of the applet, apart from presenting the information required by the user, was to provide end-to-end encryption of information using public key based approaches, eliminating any vulnerabilities relating to the use of SSL. Ideally the vote related information would have remained encrypted until it reached the e-counting application. However, the lack of any guidelines on encryption within the EML standard meant that a weaker solution had to be developed; the voting information was encrypted from the user to the web server, but transferred in plaintext over the link from the web server to the VoteHere application. Since both the web server and VoteHere were hosted in the same data centre, this probably represents an acceptably small risk, but it would be better to improve the EML specification to include the provision for end-to-end encryption for the future. The java applet approach was used by the majority of voters but was found not to work well where voters had old machines either running old versions of browser software, non-standard browsers or screens with resolutions below 1024 by 768. Where voters experienced problems they were able to use the original HTML based interface as a fallback.

In order to ensure the security of their solution, OAC contracted a specialist security company to carry out penetration testing. The initial stages of testing identified a number of potential vulnerabilities and recommended changes to reduce them. Subsequent penetrations tests by the same company and by a team undertaking a quality review for the ODPM found that there were no significant residual vulnerabilities in the application or the data centre.

The internet voting facilities were available 24 hours a day during the period from the 24 to the 29 April. The pattern of voting during this period is shown in Figure 1 below².

Figure 1: Voting pattern by hour during pilot period



The requirement set for the pilots by the ODPM was to provide a 24 hour helpdesk function during the internet voting period. It can be seen from this figure that an extended hours helpdesk service, perhaps from 7am to midnight, would be sufficient to cover the vast majority of the calls.

Strand/OAC monitored the availability of the web server continuously during the voting period and did not detect any periods of non-availability, and their testing had indicated that the front and back end components were all capable of supporting much higher rates of voting than occurred (the highest rate was about 150 votes per hour at 9am on the first day of voting; load testing showed that a sustained rate of 1,000 votes per hour could easily be maintained). A small number of voters did call the help desk to complain that they either could not access the web site or to report unacceptably slow performance. It is believed that this is most likely due to ISP problems as the total traffic into the Athena data centre peaked at less than 25% of available capacity. There were no reported periods of downtime of the hosting and infrastructure services. Overall it is assessed that the availability of the web-voting service provided by the suppliers had a good level of availability that was suitable for the purpose of an election, but it is not possible to state with certainty that it achieved the 99.95% availability level that the ODPM set.

The PowerVote Voting Machines all performed well over the day of polling, except for one which was found to have a faulty display panel when switched on prior to the start of polling. This device was replaced by a spare before polling started and the

² This figure is taken from the Strand Business Systems report on the SDC election, written by Craig Burton, the OAC manager working with SDC. It provides a vast amount of statistics on the Internet based voting and many useful lessons.

failure had no effect on the ability of any electors to cast their vote. It is believed that the display had been packed incorrectly after the VM had been tested, causing it to be damaged in transit.

Impact on counting

Venue and attendance

The main count took place at the Levi-Fox Hall of the King Edward VI Grammar School in Stratford on Avon, which was close to the Town Hall. At least a hundred candidates, councillors, agents and their family members and press representatives were present to witness the count. In addition there were SDC staff conducting and managing the count of the postal vote and managing the overall process and staff from PowerVote operating the Integrated Election Software (IES). Other interested parties, including the OAC project manager, watched the proceedings from a balcony above the hall but were not allowed into the main area of the hall itself. One police constable was present. The level of SDC staffing at this election was broadly similar to that used in the previous two elections because both those elections also used the PowerVote Voting Machines rather than a paper ballot. If a traditional paper ballot had been used it was estimated that the number of votes to be counted manually would have been about ten times larger – many more staff would have been needed to count the votes, and it would also have taken longer with more risk of counting error.

Voting Machine count

Prior to polling day PowerVote staff working with the council entered the details of the various district and parish elections for each polling station, including candidate details and the total number of eligible voters into the IES application. This was then used to programme the modules for each of the 79 VMs being used for the election so that each was individually tailored to a specific polling station. Once the modules had been programmed and installed, each individual VM was tested by entering a number of test votes and confirming that the VM captured and allocated them correctly. This testing was undertaken by PowerVote working with council staff. Once tested, a checksum was calculated for the data and code held within the machine. This was checked by the presiding officers on the start of polling day to confirm that the VM had not been tampered with prior to the start of voting.

When the polls closed at 9pm, the Presiding Officer responsible for each Voting Machine was required to:

- close the poll electronically so that no more votes could be cast;
- print out and sign two copies of the summary of votes cast for each candidate on that machine;
- remove the memory module containing the count information from the machine;
- to pack away the voting machine, leaving one copy of the count summary inside the machine;
- personally take the memory module and the second summary print out to the closest of the four counting stations where the modules would be read electronically;
- return the voting machine to the main council offices for safe storage until the suppliers reclaimed them.

Four counting stations running the IES software, each within a council building, were used because in previous years the time taken to drive the modules across the large district council area had significantly delayed the count. At each of the counting stations a computer was used to read in the count from each of the modules as it was received and a check was made against the summary print accompanying the module. Once the count was complete it was exported as a file which was then sent electronically to the main count location where it was read in to the master copy of the application. In addition the count was printed locally and faxed to the central location so that the electronically transmitted information could be checked against the fax.

Postal vote count

The count of the postal votes started on 1 May at 9pm, when the polls were closed. The first stage was checking that any postal votes received since the previous day had a valid declaration of identity. Once this was confirmed all of the postal votes were opened and manually counted in the normal way. The results of the postal votes were then written down and passed to the PowerVote staff for entering into their results analysis application. As with the internet votes, the postal votes were represented in the IES application as an additional polling station in each of the district wards and parish council areas.

Internet count

Once the internet voting was closed at 5pm on 29 April, a file was generated in EML format from the VoteHere application which recorded the number of votes cast for each candidate in each district and parish election and the number of spoilt votes. Within the file the results were sorted in each election in descending order of votes cast for each candidate, i.e. winner first within each election. The file was encrypted using the Pretty Good Privacy (PGP) application and emailed over the internet to the OAC project manager who decrypted the information and reformatted it so that the results for each election were in alphabetical order of candidate surname, as this was the format required by the PowerVote results software. The reformatted file was then passed to PowerVote for entry into their system.

The internet votes were represented within the PowerVote software as an additional polling station in each of the district wards and parish council areas. The need to reformat the EML file was undesirable in that it meant that the results of the internet voting were known by the suppliers involved from late on the 29th of April although the Order states that the results are not to be printed or displayed until the close of polling. It also introduced a potential source of error, although the EML file is (just) human-readable and the Returning Officer personally checked that the information entered into the PowerVote IES application was correct, (i.e. matched the data in the originally formatted EML file).

Combination of partial counts and declaration

By 9pm when the count of the postal votes started, the early internet counts had already been loaded into the EIS application. The electronic count from all of the VM modules was complete by approximately 9.45pm. The count of the postal votes started at 9pm, and the postal votes for the district elections were all counted by 10pm. As the postal results from each ward were completed, they were recorded on a form and the form was taken to the PowerVote staff running the EIS application for entry. A council staff member checked that the numbers had been entered correctly.

The EIS application then produced a declaration form identifying the votes cast for the different candidates which was passed to the Returning Officer. The Returning Officer briefly checked that the relevant agents were happy with the results and then announced the results over the loudspeaker system. All 16 of the district ward results were announced by 10:30pm. The parish council postal votes were counted once the district counts were complete and the last of the parish council results were declared about 11.15pm.

The Returning Officer believes that the results could have been declared more quickly if the EIS application had been used differently, with the counts being handed to him as soon as they were available rather than being released in groups by the PowerVote staff. It is worth noting that PowerVote believe that council staff should in future operate the EIS application, in which case the count could be conducted exactly as the Returning Officer decides. However, the compressed timescale leading to this year's pilot did not give sufficient time to train the council staff adequately to operate the equipment.

A recount of the postal votes was conducted in one ward where there was a one vote difference between the top two candidates but the count was found to be accurate. In another ward there was a difference of 12 votes and the Returning Officer did not accept a request for a recount of the 100 or so postal votes as he did not believe that an error of this size could have occurred in a count of so few votes.

The Returning Officer noticed an error in the turnout information provided by the EIS application and stopped declaring the turnout after the first few declarations. The error was subsequently found to be due to the way the application identified spoiled votes and to the information that had been entered on the number of eligible voters in each ward. Similar errors had occurred the previous year and the Returning Officer was unhappy that the lessons had not been learnt by the supplier. The errors did not affect the outcome of the election as the votes cast were counted correctly. The Returning Officer and his team calculated the correct turnout figures the following morning.

It was intended to project the results as they came in on two large screen displays driven from the computers used to process the results. However on the night one of the projectors was found to be faulty and the other was not used as planned. Both of these problems would have been avoided if there had been time for a dry run of the full counting and declaration process. It is recommended that such a dry run should be conducted in future pilot elections until the technology and business processes are mature and well understood.

No candidates or their agents raised any concern about the accuracy or integrity of the counting process on the day,³ although it was difficult for political agents and candidates to verify what was happening because of their lack of understanding of the entire process. There were however some concerns expressed subsequently about the apparently high level of blank ballots in some wards, particularly Southam where the labour councillor lost by 12 votes and there were 86 abstentions. However, it is the Returning Officer's view that the number of abstentions in this ward was

³ SDC had agreed with political agents that they would be able to verify the VM cartridge data included in each ward result. One candidate stated that he was refused access to this information at the count, being told he would have to request verification by an audit process after the event. However the Returning Officer did give access to another counting agent who requested this verification.

similar to that in other similar wards (i.e. where the parish councils were contested) and similar to the level in previous years.

A comment was made that it was more difficult for candidates and parties to get a 'gut' feel for whether the results were correct or not – they could not see piles of ballot papers being sorted into votes for the different parties and there was no way of undertaking a recount of internet votes or of votes cast using the voting machines. It may be that candidate participation can be improved by more effective use of display devices to show partial counts as they arrive (e.g. as each voting machine result is added in).

Impact on turnout

A detailed breakdown of the turnout this year and in 2002, together with an analysis of the percentage of votes by channel and the number of blank ballots/rejected votes is provided in Appendix A.

Overall the turnout fell from 39.18% in 2002 to 36.6% this year. Of the 22,245 votes cast, 9% were postal votes (67% of those registering for postal votes actually voted), 14% were internet votes and the remaining 77% were cast at the polling stations on the day.

It is difficult to know exactly what impact the introduction of the new voting mechanisms had on the overall turnout (i.e. whether the decline in voting would have been bigger if the pilot had not been implemented). It is clear that a number of external factors could have contributed to the decline in turnout.

The internet voting site included a post voting survey which was completed by about 1,000 people. About 5% of those completing the questionnaire said that they rarely or never voted in local elections, indicating that these may be additional voters who would not otherwise have voted. However, this effect does not appear to be large – most people voting this way would have voted anyway. It is unlikely that the use of voting machines in the polling stations would have had much effect on turnout – especially since any novelty factor in using voting machines may have declined with the same machines having been used for three years in SDC.

Accessibility

Accessibility was given a high priority by SDC and by the Strand Consortium:

- the polling stations were examined to ensure that they were accessible to people in wheel chairs;
- SDC held discussions with local disability groups to obtain their views throughout the period running up to the election;
- Braille overlays were provided with the voting machines so that they could be used by the blind;
- a large print HTML version of the Internet voting application was available;
- the Royal National Institute for the Blind (RNIB) was contracted by the Strand Consortium to assess the accessibility of the voting application for blind and partially sighted people. This resulted in a change in the design of the form so that it would be compatible with screen-reading or Braille browsing equipment used by disabled voters.

Some comments were received that it was difficult to open the poll card because a strip had to be torn off three edges.

Discussions with polling station staff showed that in general the old and disabled were able to vote using the Voting Machines at the polling stations without any problems. However, at least one voter in a wheel chair had to ask a Presiding Officer to press the 'Cast Vote' button because it was too high to be reached while sitting in the wheel chair. There was also a concern that the liquid crystal displays used to show a cross next to the selected candidate relied on ambient lighting and may not be clear when viewed from a seated position (because of the viewing angle) or in bad lighting. It is understood that PowerVote is considering the use of light emitting rather than reflective display technologies in the future.

SCOPE has been contracted by The Electoral Commission to undertake a Disability Access Audit of the Stratford election. The initial conclusions of this audit are reproduced below:

- The two-channel approach to voting worked well but had some serious access barriers. The council tried a variety of methods to engage with disabled people and should be commended for doing so.
- It was disappointing that the Internet voting website was not compliant with Web Content Accessibility Guidelines 1.0. (WCAG 1.0) Conformance Level 'Double-A'. We noted however that some steps had been taken to ensure accessibility. We are particularly interested in seeing the 'large print' HTML forms.
- The type of kiosk used in the Stratford on Avon DC was simple to use. It was however not particularly flexible. Although it could be dismantled and moved this would have been difficult to do within the polling station environment.
- Touch-screens or push-button machines create specific issues for people with hand-eye co-ordination, visual and/or mobility impairments. It is our opinion that these problems constitute a serious access barrier and should not be the sole method available to voters on election day.
- By providing internet voting the pilot opened up an equivalent alternative for some disabled people. This may be particularly useful for visually impaired people who can use screen reading technology such as JAWS. Closing the ballot early for people using the Internet will have removed this alternative for people who chose to vote on election day.

It is worth noting that some of the access barriers identified in the SCOPE report were also identified by the RNIB team working for Strand and that the majority of them were rectified. This may have occurred after the SCOPE audit was undertaken and it may be that this conclusion will be modified in the final SCOPE report. The SCOPE report also comments that the ODPM requirements for the Internet voting application are inconsistent in some respects with the WCAG guidelines. This should be addressed by the ODPM.

Security and fraud

Concern was expressed by many people interviewed, including councillors, candidates and agents, that the introduction of new voting methods would increase the risk of fraud. The main areas of concern were related to:

- the potential harvesting of poll cards from vacant property, multiple occupancy houses etc., since the poll cards provide sufficient information to vote;
- coercion or deception of vulnerable people such as the old or mentally handicapped who could be 'helped' to vote in a way that they did not intend.

Both of these risks exist with the traditional approach to absent voting and there is no evidence that either of these risks actually occurred in these elections. There was no significant increase in the number of reported lost polling cards, and a survey of eligible voters conducted after the election had completed did not identify any voters who were recorded as having voted but claimed not to have done so. There were no allegations of fraud made to the Returning Officer.

With any internet connected information system there is always a risk that it will be subject to attack, particularly such high profile systems as those supporting the election pilots. However, the security arrangements have been subject to review by the ODPM and to evaluation by The Electoral Commission and the overall conclusion is that the security is to a good commercial standard with no significant risks being identified. The risk with the Voting Machines is lower, because they are not connected to any network. Overall therefore it is assessed that the pilot should not increase the risk of electoral fraud.

However, in view of the fact that many of the people contacted had concerns about the security of electronic voting methods, it may be sensible for a coordinated publicity campaign to be undertaken to reassure people about this issue before moving to larger scale trials.

It is also worthy of note that the SDC team has concluded that in any future elections the PIN and VIN should be sent out separately, to make it more difficult to capture sufficient credentials to vote fraudulently. The Strand/OAC suggestion is that registration should include the voter choosing their own PIN number so that interception of the post would not provide sufficient information for personation.

Cost

The total cost of the election is estimated at £858,000 including applicable VAT, compared to about £43,000 for the most recent 'traditional' election, which was 1999. The ODPM contributed just under £806,000, excluding VAT, so that the net cost to SDC would be around £50,000. The major cost elements were as follows:

- internet services: £282,960;
- internet hardware and connectivity: £70,000;
- kiosk implementation costs: £76,500;
- hire of voting machines: £366,700;
- programming/reading units for the count: £9,600.

Approximately 3,000 votes were cast using the internet, and the cost for this channel was roughly £120 per vote. The cost per vote cast for the voting machines was approximately £22 per vote. The cost of the postal votes was limited to the cost of postage of the completed postal vote and the staff time to validate and count the votes and to administer the postal vote registration process. Taken together this probably amounts to between 50p and £1 per postal vote. The cost per vote at the last equivalent election, assuming similar turnout, was less than £1 per vote cast.

However, it is worth considering the scalability of the various solutions. The cost of the Internet voting channel would be unaffected if all of the electorate voted this way – so that the cost per potential vote would be closer to £6 and this would fall further if additional councils shared the same equipment. In comparison, if many more people tried to vote via the voting machines, more machines would need to be deployed to avoid queues, and it is unlikely that the cost would fall beyond the £10-£15 per voter range unless the price per VM charged by the supplier also fell. The costs of postal voting cannot really be reduced unless automatic counting is introduced, which might reduce the costs.

Internet based voting is relatively immature at present, and existing applications required considerable modification to meet the ODPM requirements and the reference model that was adopted. This would have added considerably to the cost, and the inherent scalability of the technologies employed suggests that once the applications and services are more mature the cost should fall considerably.

The voting machines, on the other hand, are relatively well developed, relying on simple and proven technology and with few if any developments being required specifically for this election. As such the cost per voting machine (hire charge of over £4,500 per machine) appears relatively high. If such devices were needed on a large scale and on a recurring basis, a competitive market may develop, and costs should fall drastically.

Conclusions

In terms of the five statutory evaluation criteria, the Commission's conclusions are as follows:

- The combination of internet based voting and voting machines on polling day allowed the votes to be counted more quickly and more accurately than with a traditional election. It also allowed people to vote at a time of their choosing and from a variety of remote locations.
- There is little evidence to suggest that the use of internet based voting had a marked effect on encouraging people to vote, although around 5% of internet voters stated that they rarely or never voted previously. The use of voting machines at the polls is unlikely to have affected the turnout because people still needed to attend the polling stations during the opening hours.
- The MORI survey and the various surveys conducted by the council demonstrated that voters generally found the web based voting and the voting machines easy to use, indeed two thirds of those interviewed on exit from the polls felt that electronic voting was quicker and easier than the traditional method.
- There is no evidence to suggest that the procedures provided for in this election led to any increase in personation or other electoral malpractice.
- The cost per voter in these elections is an order of magnitude higher than the last comparable traditional elections in SDC, primarily because the methods being piloted are immature, and expensive professional services were required to support SDC. It is unlikely that the introduction of new voting channels (e.g. web based voting) could result in cost savings while voting in person at the ballot box on polling day is retained as well.

In terms of the additional evaluation criteria it is concluded that:

- There is no clear evidence that the introduction of early internet voting significantly improved participation among any particular communities, although there were many comments collected in the post-internet voting survey that supported the view that working people, mothers with young children, disabled people and those working or living away during the voting period found that Internet voting made it much easier or possible for them to vote.
- The SDC survey at the polling stations found that only about a third of voters had seen publicity about internet voting, compared to about 50% for voters who actually voted on the internet. The MORI poll found a higher level of awareness (around 70%), but this was conducted between 2–11 May and there may have been additional publicity after the election. While SDC conducted a fairly extensive publicity campaign this year, it is clear that delivering effective communication represents a key challenge for pilot authorities.
- All of the various surveys, and the Evaluator's discussions with councillors, agents and voters, show that the vast majority of people thought that the new methods were an improvement on traditional methods and that they had a high degree of confidence in them.
- The pilot clearly resulted in the provision of more efficient and effective service delivery to voters, in that it allowed voters to vote over a longer period of time and without needing to visit a polling station.
- The major impact of the pilot on the existing system of electoral administration is the reduction in effort required to count paper ballot papers and the increased speed and accuracy of the count.
- It is difficult to make an assessment of whether the pilot represents good value for money because while the costs are quantifiable, research would be needed to assess the value of the benefits to voters. However:
 - There is a strong view from voters that the pilot has brought the election process into the twenty-first century and that once these methods have been used there would be reluctance to go back to purely traditional voting methods.
 - It is assessed that the cost per vote using the various electronic methods should fall dramatically as they mature and are used on a larger scale where many of the costs can be shared across a much larger voter base.

In addition to the evaluation criteria above, the following additional points should be noted:

- Overall it is assessed that this pilot was a success, in that the new voting mechanisms were delivered on time to allow voting to take place and operated effectively throughout the election period.
- The most effective way of reducing the risk of a pilot failing would be to allow more time. Where possible orders and contracts should be in place four or five months before election day to enable pilot implementation to be undertaken to the best professional standards. Most of the problems that arose with this pilot could have been avoided if more time had been allowed.

- If the ODPM takes a similar approach to the technical delivery in future pilots, with multiple suppliers providing front and back end services, then the contracts should be constructed such that one organisation has responsibility for end to end provision of services and all parties should have visibility of service levels that the others are working to.
- Even though SDC invested in a sustained publicity campaign using a range of channels, a large proportion of the voters were still not fully aware of the new methods of voting. As the use of such methods is introduced more widely, sustained national level publicity will be needed to ensure both that people are aware of the new approaches to voting and are confident that their votes will be secure.

The Electoral Commission
July 2003