

RUSHMOOR INTERNET VOTING SCHEME 2007 – EVALUATION AND OTHER SCHEMES

SUMMARY

- **Rushmoor Borough Council has undertaken a number of projects over 10 years to develop voter engagement including internet voting schemes and early voting.**
- **In 2007 nearly 6,700 people registered for internet voting and 3,827 cast their ballots this way.**
- **The scheme was successful and the principle of internet voting in Rushmoor was established amongst electors.**
- **A strategic approach and robust processes need to be developed to improve systems and processes and to ensure a suitable balance between security, accessibility and usability.**

1. INTRODUCTION

- 1.1 In the period 2001-2007, Rushmoor Borough Council drove forward a range of initiatives to improve the services provided to local residents for electoral registration and elections. Rushmoor was part of the Government's modernisation programme for elections and had trialled internet voting and early voting in the past. This paper focusses primarily on Rushmoor's 2007 internet voting scheme and provides an evaluation.
- 1.2 The paper has been prepared by Andrew Colver, the Head of Democratic Services at Rushmoor Council. He has over 20 years' experience in electoral administration and has led a range of initiatives including work to support engagement of military personnel in electoral processes.

2. BACKGROUND

(1) Profile

- 2.1 Rushmoor is situated in North-East Hampshire and is part of the Blackwater Valley sub-region. The Borough is generally urban and has a population of around 97,000 (approximately 67,000 electors). The population structure shows that the Borough has a relatively young population. Between the main towns of Aldershot and Farnborough lies the Aldershot Military Town, which has a population of around 8,000 military and civilian personnel.

2.2 Rushmoor has 37,000 households and there are approximately 50,000 jobs in the Borough. Whilst economic activity is at a high level, there is considerable movement of employees both in and out of the Borough. There is a net inflow of 5,000 commuters each day and approximately 24,000 commuters travel out of the Borough. Although Rushmoor is a prosperous area, there are some parts which are classed as deprived within national indices of multiple deprivation.

(2) Electoral Issues

2.3 Historically, turnout at both local and national elections exceeded 70% in Rushmoor, but in the 1980s and 1990s this fell steadily. Turnout at local elections fell below 30% after the Parliamentary election of 1997. At that time, the Council started to examine ways to address the fall in turnout and encourage participation at local elections. From 2000, the Borough set up a Member-led Elections Group to look at the issues and to prepare an elector turnout plan specifically aimed at raising awareness of democratic issues. Whilst there has been some recovery in turnout, a significant issue remains.

2.4 In 2003 the Borough trialled a successful internet voting pilot and in 2006 an early voting pilot was undertaken using an online register and ballot on demand software which allowed ballot papers to be printed for any ward. Polling stations were located in town centres and the Aldershot Garrison to allow early voting for four days before polling day. 1,250 electors took advantage of the arrangements. Whilst the pilot was successful, the general view was that its impact on the election had been limited.

(3) Internet Voting In 2003

2.5 Rushmoor ran an internet voting pilot in 2003 aimed at increasing choice and convenience for voters. The pilot worked using a system of pre-registration online so that the system could run in parallel with existing voting channels. The process adopted was as follows:-

- 21st – 26th March - information letter delivered to all electors with identification number to enable registration
- 21st March – 23rd April - i-voting registration (3,250 electors registered)
- 17th – 24th April - delivery of secure I-vote poll cards with user name and password
- 25th April (6.00 am) - i-voting period (85% of internet voters cast their ballots representing 15% of the total)
1st May (9.00 pm)

2.6 The registration process followed the same deadlines as those for postal vote applications and also featured several levels of security. In addition to voter identification numbers, internet voters also needed to generate their own passwords, such as a favourite food or a pet's name. Electors registered on-line by a remote website, accessed through the Council's own portal where information was also provided about the elections process and the candidates at the election.

2.7 Whilst the overall turnout fell by 2%, the internet users were very positive about the channel and over 75% completed the on-line questionnaire. The age breakdown of these voters was:

- 18-25 - 137
- 25-50 - 1,399
- over 50 - 792

Of the total, over 460 stated that they would not normally vote at local elections and 2,120 stated that they were more likely to vote over the internet than through other methods of voting. 1,900 found i-vote easy to use.

2.8 Overall the system worked well and, for an entirely new system and approach, there were few problems. Most difficulties were caused by the compressed timescales; although there were other issues particularly around the compatibility of some voters' computers, testing the scheme and integrating the internet voting data with the Council's existing elections system. The Council's evaluation concluded that it would want to be given the opportunity to repeat the pilot so that improvements could be made on what was achieved.

3. INTERNET VOTING 2007

3.1 Rushmoor's scheme in 2007 followed similar principles to 2003 with objectives to:

- Increase voter choice by providing an additional channel for electors
- Obtain 5000 registrations and increase the number of electors voting by 5%.
- Test the effectiveness and efficiency of the system
- Provide assistance to voters who have difficulty voting using current methods.

3.2 The process for voting over the internet involved the use of a manual registration system rather than an online system in order to obtain a wet signature. The main features of the scheme were as follows:

9th -18th March - Information letter and application form hand delivered to all electors in the Borough.

Mid-March – 18th April - Registration period for internet voters who could also transfer from a postal vote for

one election only. Once the data was inputted (username of up to ten alphanumeric characters and date of birth were personal identifiers), voter identification numbers were generated. All applications were acknowledged. The deadline for applications was the same as for postal votes.

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| 13th-22nd April | - | Delivery of poll cards by hand, including internet voting cards which incorporated a tamper proof strip with an 8 digit Voter Identification Number. |
| 20th April (6.00 am) to 3rd May (10.00 pm) | - | The internet voting portal was open for a period of over seven full days until the close of poll. The intention was to give electors a similar period to vote as postal voters. A helpline (run by the Council) was open between 6.00 am and 10.00 pm (27th April and 3rd May) and from 8.00 am to 10.00 pm on other days. The voting portal had instructions for electors on how to vote which included Polish and Nepalese instructions (two languages well represented within the electorate). |

The voting screens included:

- Human interface challenge – to ensure a human was accessing the system
- Credentials page for Voter Identification Number, username and date of birth
- Ballot page (in the same format as the paper ballots)
- Confirmation of selection page
- Vote cast confirmation page
- Receipt page showing a ballot receipt (using a random alphanumeric code which could be compared against a published list at the end of the poll) and the ballot signature
- On-line questionnaire (held on the Council website)

The system enabled the elector to cast a blank ballot although over-voting was not permitted.

3rd May – from 10.00 pm

The electronic ballot box with encrypted digital envelopes (votes) was sent to the Count Centre. The process was then:

- Submission of account showing number of electors accessing the system passed to the Returning Officer
- electronic ballot box transferred to tallying computer
- private keys (held by election officials) were used to open the ballot box
- mixing protocol separated receipts/votes
- ballot numbers presented to Returning Officer for verification
- once verified, the votes for candidates were counted

When the process was completed, the results were integrated with the manual count and the receipts list published.

4. VOTER AWARENESS

4.1 Raising awareness was seen as crucial to the effectiveness of the scheme and to meet the project objectives. A separate marketing and communications plan was prepared by the project team and a separate group was established to progress this stream. The materials built on the designs and format used in the 2006 pilot and focused on the registration process. A key principle behind the campaign was to focus on individual electors as far as possible which from previous work had been demonstrated to be most effective.

4.1 The main methods used in the campaign were:

- Personalised letter to all electors introducing the scheme with a general postcard highlighting the key messages
- Postcards identifying specific issues/deadlines and focusing on service personnel

- Use of empty shops, libraries etc for publicity including a rolling presentation
- Development of Rushmoor's website
- Use of press releases and a range of general and specific publications
- The Council also took the decision to web cast the Count. This was not publicised but there were 500 hits from eleven countries, including the United States, Canada, France and Argentina.

4.2 The campaign also enabled the Council to raise awareness of the local elections in general. Feedback from residents showed that the campaign did have an impact although it was much more low key once the registration process had been completed.

5. RESULTS AND OUTCOMES

(1) Overall Results

5.1 Turnout at the 2007 elections was slightly down from that in 2006 as was the number of electors who voted. The figures between the different channels were as follows:

	Registered Voters	Nos. Voted	Turnout	Proportion of total vote
Polling Station	48,926	13,851	28.3%	64.6%
Postal	5,324	3,773	70.9%	17.6%
Internet	6,686	3,827	57.2%	17.8%
TOTAL	60,936	21,451	35.2%	

Whilst turnout was down, there did appear to be greater awareness amongst the electorate of polling day. The use of the internet saw a 20% reduction in the number of postal voters and it was also possible to reduce the number of polling stations from 42 to 38. The number of polling places was kept the same.

(2) Internet Voting Outcomes

5.2 In terms of the scheme's objectives the outcomes were as follows:

- The total of registered electors was 6,686 against a target of 5,000. There were several hundred more applications but these were either made by electors in error (or without intention) or were cancelled once submitted.
- The overall turnout did not increase against the objective of a 5% increase in voters.
- The system worked satisfactorily and as a test the scheme proved very informative. However, learning from the project showed the need to make changes to the system
- Work with harder to reach groups achieved some positive results, with a number of service personnel showing interest in internet voting and a number did register. One example is that a service voter voted from Sierra Leone.

5.3 In terms of the results from the scheme, they show the need for further trials to take place. The key results are as follows:

- The total number of registered internet voters who voted was 3,827, 57% of those who registered. A further 196 cancelled their registrations and voted in person. Nearly 3,000 electors chose not to vote and there was little evidence that this was because of difficulty with the system (similar results were obtained elsewhere). The youngest voter appears to have been 18 and the oldest 95.
- Over the voting period the spread of votes saw a majority cast on polling day. The spread was as follows:

Ivote Daily Participants

	Date									
	26th April 06:00 until 17:00	26th April 17:00 until 27th April 17:00	27th April 17:00 until 28th April 17:00	28th April 17:00 until 29th April 17:00	29th April 17:00 until 30th April 17:00	30th April 17:00 until 1st May 17:00	Tue 1st May 17:00 until 2nd May 17:00	2nd May 17:00 until 3rd May 17:00	17:00 Thur 3rd May until 22:00	
Daily total	202	335	239	246	291	397	435	909	773	

A decision was taken not to issue any publicity by e-mail for the election and this may have been a factor in the spread of votes

- The main problem during the poll was an incorrect ballot discovered 15 minutes after the channel opened. This was corrected after 45 minutes with only one vote having already been cast by that time. The correct ballots had been signed off by the Council.
- There were a large number of calls to the call centre compared to the number of voters. By far the most common query was that the elector had lost/forgotten his/her username, which reflected the issues with the manual registration system.
- Feedback from the online questionnaire was provided by 1104 electors which accounts for approximately 30% of those who voted. The feedback was generally very positive with the key data being:
 - 12% did not normally vote in council elections
 - 96% found it simple to register
 - 92% found it simple to vote
 - 20% said they had difficulty reaching the voting station
 - An additional 9% were not resident on the polling day
 - 97% would use the system again
 - Most wanted it made available all the time

5.4 The provision of internet voting generated a substantial amount of interest from amongst the electorate. This was replicated in the media which was much more intrusive than in previous years. There was generally a positive response from the candidates/party workers with the view that there had been an impact on awareness locally and the additional choice had been a success. Staff were also supportive of the scheme but found that the workload was considerably greater than in 2003.

6. KEY LEARNING POINTS FROM THE PROJECT

6.1 The experience of internet voting provided help in guiding future work and the wider aspects of electoral policy. There were a number of key learning points from the project:

(1) Internet Voting

6.2 The results of Rushmoor's scheme seems to show that in 2007 the principle of internet voting was supported by electors and those involved in the elections process. More electors registered than expected and the view from officials and comments from residents suggested that there is a further untapped market. Whilst it would take time to build the database, it is likely to be considerably larger than the numbers registered in 2007.

6.3 Work should focus on developing a planned approach. The key to success however will be to ensure that the option to vote this way is provided on a frequent basis and then refined and scaled up as part of the approach.

(2) Timescales and Development Planning

- 6.4 The single biggest issue was the timescales allowed for the project and the amount of work needed to comply with the process and security requirements. It was challenging to meet the needs of the project planning process and statutory deadlines.
- 6.5 A clear plan and framework for future work should enable more time to be built into the processes. Establishing a framework for a period of 2/3 years minimum would help to achieve this. The use of a framework agreement was beneficial overall to the procurement of services to ensure consistency and quality.
- 6.6 For future schemes, it is important to ensure that the planning, development and procurement of services is carried out before the implementation stage. This would ensure that there was no confusion and would allow proper project management to take place. At the very least a set of principles should be established around registration, voting period, quality assurance, criteria and security from which solutions could be formulated.

(3) Roles and Responsibilities

- 6.7 Throughout the project there was a lack of clarity regarding the roles and responsibilities of the suppliers, Rushmoor and, to a lesser extent, the Ministry of Justice. Rushmoor takes the view that the Council should be carrying out as much of the project as it can, but it was unclear as to where the line was drawn between the Council and suppliers.
- 6.8 Identification of the roles and responsibilities of Government departments, the Council and the suppliers should be agreed at the planning and procurement stage. This would help to ensure effective project management and also assist in identifying whether the costs are accurate.

(4) Accessibility/Security/Usability

- 6.9 The scheme that Rushmoor piloted in 2003, although implemented in shorter timescales than in 2007, was far more useable and accessible for electors. Usability and accessibility appeared to be sacrificed for security, which made it more difficult for the elector to take advantage of the voting channel. Many comments made by voters through the on-line questionnaire referred to the need to ensure that the system was simpler to use.
- 6.10 It is really important that any system should reflect the needs of the elector with security and processes built around those needs. The system should also reflect the other processes involved in elections so that they are all broadly similar.

(5) **Manual Registration**

- 6.11 The system using paper forms for registration proved to be problematical for electors, the suppliers and the Council. The system needed to be simple and accurate and should have helped to build confidence for the elector. Compared to the on-line system in 2003 it put the Council at greater risk of mistakes because of the number of times the data was 'handled', even though it was aimed to address a specific security issue. For the Council, the process of inputting, checking and interpretation was considerable and impacted on other election processes. This caused the large number 'waste' calls to the helpline.
- 6.12 Other ways of registration for e-voting should be developed that ensure much less manual handling of data. Ideally this should be an online system using other forms of personal data (eg self-generated passwords, national insurance number). Use of biometrics could also be considered. An e-system should be provided from start to finish. In addition, information should be collected as part of the electoral registration process which then separates it from a specific election.

7. **THE WIDER CONTEXT**

- 7.1 Electoral Services have been subject to significant changes in recent years. These changes have delivered improvements for electors in both registration and voting activities and ensured greater consistency in service delivery. Nevertheless, there is a danger that the needs of electors, for whom the system is supposed to ensure their democratic rights, are treated almost as if peripheral. Rushmoor has periodically surveyed voters about their experience in the last 10 years and seeks regular feedback from elected Members. Some of the key messages from the consultations are:
- Residents want services to work for them and work first time
 - Electors want to be able to vote in a way that suits them
 - People see the use of technology as a natural part of the evolution of services, including electoral services
- 7.2 In developing new approaches, there needs to be a focus on electors and what we are trying to achieve for them. If a quality service can be delivered efficiency will improve. Successful elections need to reflect:
- Ease of use for electors
 - Accessibility for all
 - Trust in their security
- 7.3 Each method of voting will have elements of each of these, but the key is to get them into balance. In terms of Rushmoor's e-voting trials, the 2003 system seemed much better balanced than 2007 where the security arrangements had a significant negative impact on accessibility/usability. The model can be

applied to other forms of voting: in postal voting accessibility is excellent but this is not necessarily in balance with security and usability.

- 7.4 It is clear from the trials of e-voting, particularly those involving remote internet voting, that there is a significant and growing number of people who are happy to use the internet as a convenient and effective media for voting. Many would like to use it each time they exercise their right to vote and ask regularly why it is not available.
- 7.5 The impact of e-voting on turnout is less clear. Rushmoor's pilots did not show a direct positive impact on turnout though there is evidence that some electors voted who would not otherwise have voted. Trials of more than one year might help to clarify this issue.

8. **CONCLUSIONS**

- 8.1 The experience from Rushmoor's internet voting scheme has thrown up a number of issues and challenges and whilst the effort required was considerable, there is enthusiasm to take the work forward in the context that the use of e-based technologies in elections is a natural extension of what is happening in society. The application of technology within the Individual Elector Registration system has started to provide a platform to move forward.
- 8.2 The principle of internet voting has a significant level of local support, but the development of new systems will need to ensure the correct balance between security, accessibility and usability. There is also a need to ensure that a strategic view is developed on how elections might look over the medium term and where robust e-election technologies might fit into this.

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