

# Checking signatures at postal vote openings

## Introduction

This guidance aims to provide practical advice on postal vote opening procedures, with special regard to carrying out manual checking of signatures. It has been developed by forensic experts from the Forensic Science Service,<sup>1</sup> along with the Electoral Commission's own staff, and provides some background to the way electors may write signatures on postal voting statements. This guidance is supported by the Scottish Police Authority (SPA) Forensic Services.

It provides three guiding questions that are of use when deciding whether to accept or reject a signature. It also provides a step-by-step decision-making tree to enable people with little knowledge of signature comparison to apply rules consistently.

## Aim

This guidance aims to set out a method for deciding whether to accept a signature on the postal voting statement after comparison with the signature of that elector previously supplied to the Electoral Registration Officer. The guidance will not teach the person looking at the signatures ('the examiner') to be an expert, but should help them to make a decision to accept or reject a vote for valid and documentable reasons.

In determining the validity of postal voting statements, the Returning Officer or Counting Officer must satisfy himself that the postal voting statement is duly completed and as part of that process must compare the date of birth and the signature on the postal voting statement against the date of birth and the signature contained in the personal identifier record.

Although this document contains guiding principles and specific steps that signature examiners should follow when going through the signature checking process, it is for each Returning Officer or Counting Officer to determine whether they can be satisfied that a statement has been duly completed with a genuine signature in each case. Every decision on a postal voting statement should be taken on an individual basis and take into account any other information the Returning Officer or Counting Officer may have.

## Control signatures

Returning Officers and Counting Officers must check the signature on the postal voting statement against the signature contained in the personal

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<sup>1</sup> The Forensic Science Service was a UK Government Company wholly owned by the Home Office with extensive experience in forensic science.

identifier record ('the control signature'). They may also refer to other sources, for example the signature provided on a registration form. Returning Officers and Counting Officers should be aware that even in very short timeframes a person's signature varies naturally and that the natural range of variation of a person's signature cannot be fully determined through such small samples. Therefore, our advice is that the examiner should only reject postal voting statements when they cannot satisfy themselves that the statement has been duly completed. Our approach in this guidance is that a Returning Officer or Counting Officer should be confident that a signature shows major and significant differences to the control signature before deciding that they are not so satisfied. In reaching this decision the examiner should take account of the underlying principles set out in this guidance and should bear in mind that if there are no large differences between the signature on the postal voting statement and the control signature then it is likely to be genuine.

## Electronic signature verification

Many authorities are using an electronic checking system to compare the signatures and this should reduce the number of signatures that need to be checked visually. There are a variety of systems on the marketplace and each one will handle the signatures slightly differently. Some of these systems display the control signature and the signature on the postal voting statement side by side on a computer screen. The consequence of this is that the signatures to be examined will be electronic images, not the ink signatures themselves. Provided that the scanning has been done correctly and the images are scanned at an appropriate quality this should in most cases be acceptable. However, it should be understood that information present on the original document is not always apparent on the electronic copies, so some of the features described in the guidance may be more difficult to determine in scanned signatures.

## Suggested process

The suggested process for comparing signatures asks the examiner to answer three questions, which are:

- Are the signatures a similar shape?
- Are the pen-paths of the signatures similar?
- Are the signatures similar in fluency?

The flow chart supplied with this guidance aims to help guide the examiner through the process to ask these questions in the correct order, and to help justify any decision made. The underlying principles to be applied are to look for major differences in shape, pen-path and fluency in that order. If the flow chart is used, the examiner will end up at a square or circle with a letter in it. By recording the letter they, if challenged, will be able to say why they have accepted or rejected a particular signature. The Commission considers that it is reasonable simply to make a record of this letter code. This can be achieved either by adding the letter code to the postal voting statement next to the word 'rejected'; by adding a column on the list of rejected votes and

adding the letter code to the relevant row, or by adding the letter code to any packaging that the rejected statement and ballot paper are to be stored in within the receptacle.

The guidance is based on eight proven principles for forensic examination.

## Making a decision

The decision-making process requires judgement and a measure of discretion; set out in this guidance is a framework and methodology developed in partnership with the Forensic Science Service. The process you use, whether electronic, visual or a mixture of both should be designed to reduce the risk of accepting illegitimate signatures as genuine.

Once they have gained sufficient practice in looking at signatures, it is expected that most examiners will be able to make decisions on signatures quickly and with confidence. Accuracy of decision-making, however, is more important than speed. Examiners should take as long as they need to make a decision. The visual check provides examiners with three criteria on which to base their decisions, and these are derived from the nature of the writing. It is expected that most of the signatures examined will be shape variants of the genuine signature, with the same pen-path and fluency as the original signature, and therefore the decision to accept should be a straightforward one.

It should be emphasised that the examiner is looking for large differences in shape, pen-path or fluency. All signatures show differences to each other, and a common pitfall is that, when no large difference is discovered, smaller differences are given too much significance. If there are no large differences in shape, pen-path or fluency, then the signature is probably genuine and the Returning Officer or Counting Officer should be comfortable about making a decision.

## Actions to be taken once the decision to reject is made

Having asked the three questions, the examiner will discover some signatures that they wish to reject. The postal voting statement should be:

- marked 'rejected'
- entered on the list of rejected postal ballot papers – you may also find it helpful to record the reason for rejection, for example by noting the letter from the flow chart
- attached to the ballot paper envelope (or ballot paper if there is no envelope)
- placed in the receptacle for rejected votes

## Using the flow chart

The flow chart is designed to give the examiner guidance on looking for significant differences in shape, pen-path and fluency. While for the most part the decisions are straightforward, the following notes about each acceptance

or rejection point are supplied to help reach a decision using the chart. Decisions on signatures are rarely clear-cut, more often coming down to a balance of probabilities. This is backed by the wording of the legislation, which requires the Returning Officer or Counting Officer to be satisfied.

**Rejection at point A:** There are major differences in the shape of the signature which are unlikely to be explained by natural variation.

**Rejection at point B:** The signature is in a different name and there is no part of it which can be compared.

**Acceptance at point X:** The signature on the postal voting statement and the application form are the same general shape and the name is the same. The signatures also have the same pen-path and are similar in fluency.

**Acceptance at point Y:** The signature on the postal voting statement and the application form are the same general shape and the name is the same. The signatures also have the same pen-path but the signature on the application form is of lower fluency than the postal voting statement signature. There are genuine reasons why an application signature may be of a lower fluency – poor pen function, uneven writing surface etc.

**Acceptance at point Z:** The signature on the postal voting statement and the application form are the same general shape and the name is the same. The signatures also have the same pen-path. However, the signature on the postal voting statement is of significantly lower fluency than the one on the application form, but this lack of fluency is just in one part of the signature. The rest of the signature is of similar fluency to the application signature, and these parts of the signature match in shape.

**Rejection at point C:** The signature on the postal voting statement and the application form are the same general shape and the name is the same. The signatures also have the same pen-path. However, the signature on the postal voting statement is of significantly lower fluency than the one on the application form and this lack of fluency is not just in one part of the signature but is throughout the signature. (As a guide, expect to find three independent features demonstrating low fluency). There are possibly parts of the signature that do appear fluent, but these do not match the shape of the corresponding parts in the application form signature.

**Acceptance at point W:** The signature on the postal voting statement and the application are the same general shape and the name is the same. While there is a significant difference in the pen-path used to construct the signatures, either both the signatures are of low fluency or a significant proportion of the signatures matches in shape, pen-path and fluency.

Difference in pen-path is often because the signature is written by someone unfamiliar with the 'signature template' used by the owner of the signature. However, in some instances, particularly in the case of an elderly person with poor writing skill, the writer can become confused and use a different pen-path. Hence, accept signatures with a seemingly mismatched pen-path when

both signatures are low in fluency or where significant fluent parts of the signature match.

**Rejection at point D:** The signature on the postal voting statement and the application are the same general shape and the name is the same. However, there is a significant difference in the pen-path used to construct the signatures in that the pen is moving in a different direction at a specific point in one signature when compared with the other. In addition, one of the signatures is significantly more fluent than the other or they are both of reasonable (not low) fluency, and there are no parts of the signature which match well in shape.

#### **Additional actions where malpractice is suspected**

The Commission has already recommended that Returning Officers and Counting Officers who reject postal voting statements after comparison with the supplied identifiers should always consider referring them to the police, particularly if a pattern is evident. If this is contemplated, there are a number of actions that would assist the police.

It would assist any forensic investigation if latex/plastic gloves are worn when handling suspicious rejected postal voting documents.

When handling the documents, touch them only on the edges. Handle the documents only to package them. Do not undo staples, flatten, or in any other way alter the document. Avoid handling the documents as much as possible.

Locate the original postal voting statement and all its associated documents and isolate them from other voting papers.

Take a loose-fitting plastic bag or a brown envelope and record the ballot paper number on the outside, together with any other relevant information such as the name of the individual whose vote it is and the electoral area in which they voted. It would help if the date, time, where the questioned papers were found, who has packaged them and anyone else who has handled them were also recorded.

Place thin pieces of card either side of the questioned papers (to prevent them becoming marked), place them into the pre-labelled loose-fitting plastic bag or brown envelope and seal the packaging with adhesive tape.

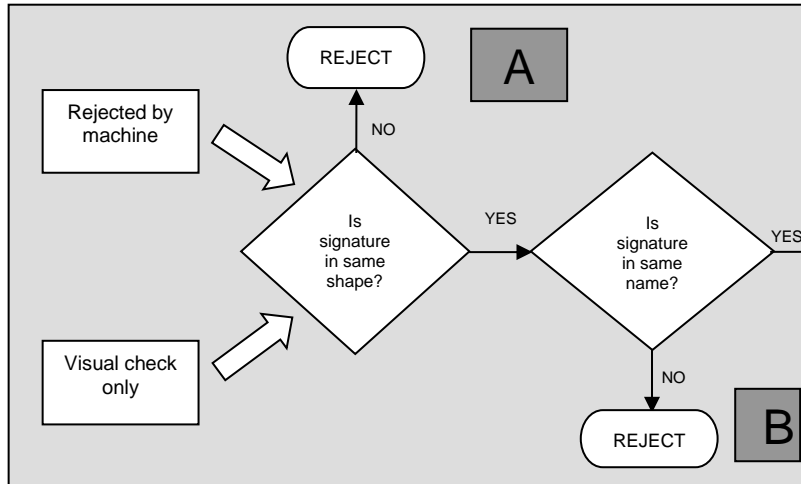
Maintain a list of all documentation and keep it safe.

It is the Commission's view that the additional protection of the contents of the receptacle for rejected votes as mentioned above is reasonable to maintain the safe custody of the receptacle and therefore its contents.

The signatures used as control signatures, i.e. the signatures on the applications to vote by post, will also be important in any forensic process but are unlikely to require examination for fingerprints, DNA or other evidence types. Provided that they are kept safe and can be recovered later it is

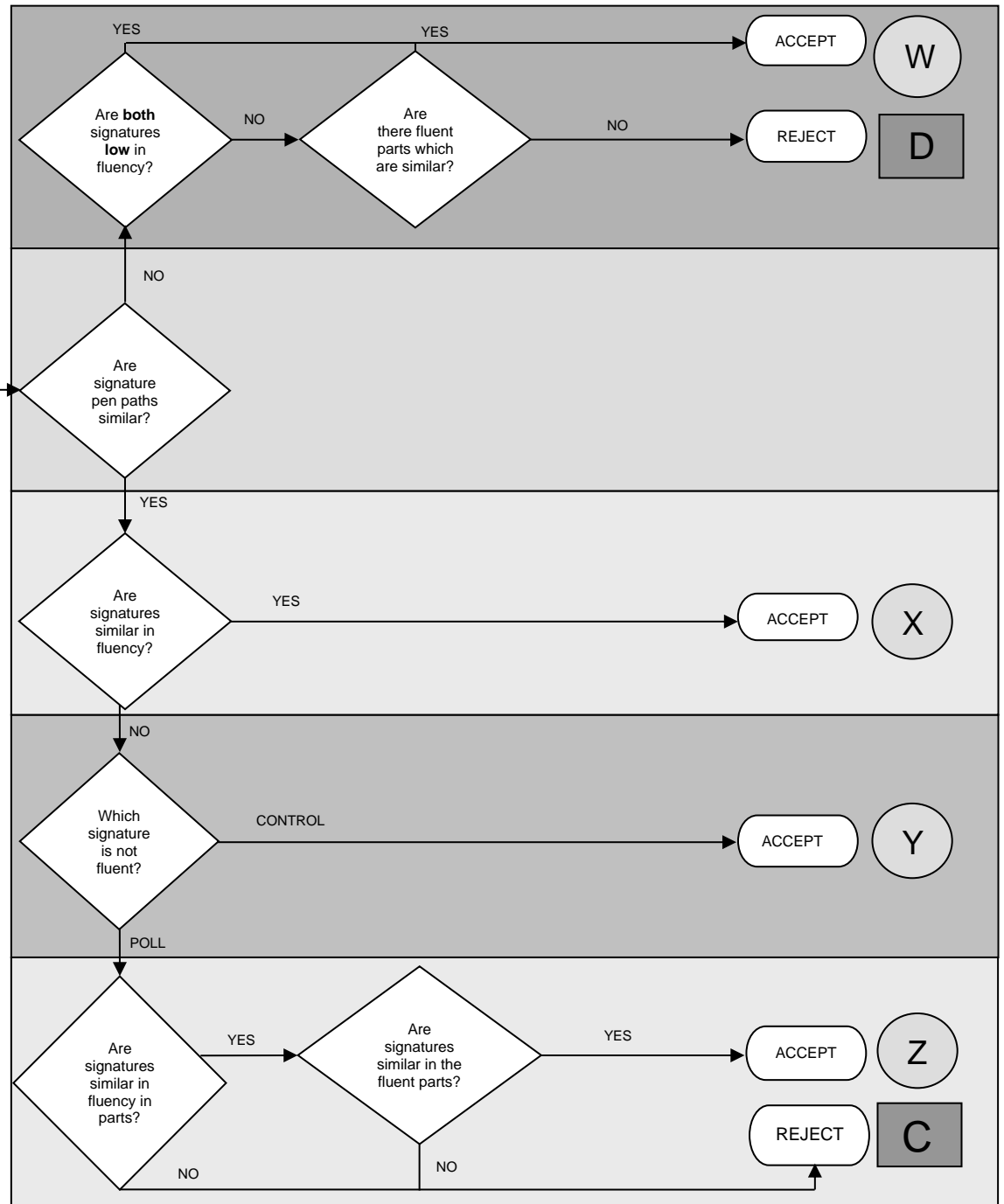
probably best to wait for instructions from the police to decide how these should be packaged and submitted.

# Flow chart



- PRINCIPLE 1  
The writing and signature of an individual cannot necessarily be connected.
- PRINCIPLE 2  
The signature of one individual has a natural variation.
- PRINCIPLE 3  
The signature of one individual has a range of variation that cannot be determined from one control signature.
- PRINCIPLE 4  
Coincidental matches are uncommon.
- PRINCIPLE 5  
Signatures must be pictorially similar to be accepted.
- PRINCIPLE 6  
A successful forger has to reproduce the shape and the fluency of a signature.
- PRINCIPLE 7  
Genuine signatures usually have the same pen path.
- PRINCIPLE 8  
Genuine signatures are usually similar in fluency.

**SHAPE\*PEN PATH\*FLUENCY**



## Principles of examination

### **PRINCIPLE 1: The writing and signature of an individual may not necessarily be connected: compare like with like**

The writing style and signature of an individual may not necessarily be connected, so someone writing their signature in ordinary writing on the application form and as a signature on the postal voting statement may have their signature rejected.

Some people use their full signature on some documents and an abbreviated form on others; notwithstanding this, there should still be parts of the signature that can be compared and the absence of a part of the signature (e.g. John Smith on one and J Smith on the other) should not be taken as a difference in style. However, if the name is spelt wrongly (e.g. Smith instead of Smythe) then this should be rejected at rejection point B as people are usually consistent about how they spell their own name.

Occasionally people will have changed their name between signing the application and signing the postal voting statement, for instance when they get married; it is their responsibility to inform the Electoral Registration Officers when this occurs and to supply a new control signature. There may still be parts of the signature that can be compared (e.g. the first name, if used), but signatures in different names with no points of comparison should be rejected.

### **PRINCIPLE 2: The signature of one individual has a natural variation**

A signature can be regarded as a learnt habit and therefore one individual's signature conforms to a specific template that has been developed over a period of time. It is therefore automatic for that individual (i.e. they do not have to remember the template each time they wish to write their signature), but people are not machines and therefore do not reproduce the template in exactly the same shape every time. The software comparing signatures will have been set up to reject signatures because they appear 'too perfect' for these reasons.

The signature of one individual can vary from minute to minute and day to day, depending on the conditions under which they are signing. It is affected by cold, writing position, the pen used, the surface they are writing on, health and so on, but it will fall within a range of variation which is a characteristic of that individual.

### **PRINCIPLE 3: The signature of one individual has a range of variation that cannot be determined from one control signature**

The signature of one individual can have a small range of variation or a large range of variation. While some generalisations can be made, it is safer to assume that the range of variation for one individual cannot be determined from one control signature. You will always be able to find differences in shape between two signatures, but the difference may not be significant. Therefore the examiner should allow for a range of variation before deciding to reject the postal voting statement signature.



**PRINCIPLE 4: Coincidental matches are uncommon**

To guess what a person's signature looks like from their name alone is very difficult, and becomes more and more difficult as the signature becomes more complex. A coincidental match is only likely to occur when the writing style used is simple, but even then it would be uncommon. If the forger is guessing at the signature it is very unlikely to be the same shape or follow the same pen-path.

**PRINCIPLE 5: Signatures must be similar in shape to be accepted**

If people want to use their signature to identify themselves, they must produce signatures that look similar. Anything that is wildly different should therefore be rejected (rejection point A). Here the examiner is looking for very different shapes, not minor differences caused by natural variation, and should only reject when the signature is effectively a completely different shape.

Sometimes the person signs the wrong form or signs in a different name (e.g. someone signing with their married name on one occasion and maiden name on another). Where there are parts of the signature that can be compared (for instance, if they use the same surname but a different first name) then the parts which can be compared should be compared while the different parts should be discounted (as one cannot compare parts of the signature which are absent). If there is nothing that can be compared, then the signature should be rejected (rejection point B).

**PRINCIPLE 6: A successful forger has to reproduce the shape and the fluency of a signature**

If the person attempting to steal a vote has available an example of a genuine signature of the person whose vote it is, they may try to simulate the signature. (Note that we use the term simulate, not copy, to distinguish this deliberate attempt to reproduce the signature from the simple act of photocopying the signature). There are several ways of simulating a signature. Most people will use a freehand simulation by placing the signature in front of them and trying to reproduce the pen-path and shape. Others may try to trace the signature or reproduce it from memory.

When signatures are fairly simple in design it is possible to produce a reasonable copy and these may well be accepted by the examiner. The process will not differentiate a good simulation from a genuine signature. As the signature becomes more and more complex simulation becomes more difficult. Most forgers do not practice very much and will get the shape, the pen-path or the fluency wrong. It is usually possible to get either the shape or the fluency correct, but it is very difficult to get both the shape and the fluency correct in all but the simplest of signatures.

**PRINCIPLE 7: Genuine signatures usually have the same pen-path**

The pen-path is the way the pen moves across the paper. It is a learnt habit for many writers and therefore they will follow the same pen-path automatically, irrespective of other conditions that may be affecting their writing (such as cold, writing position etc.). It forms the basic template of the signature and is therefore a good indicator of whether the signature is

genuine. A complex, fluent signature with the same pen-path is almost certainly by the same author.

The examiner is encouraged to imagine how the pen is moving in making a signature. This includes the movements the pen is making off the paper to get from the finish of one letter to the start of the next. A significant difference is where the pen is moving up instead of down at a particular point in the signature, or clockwise instead of anti-clockwise, left to right instead of right to left, etc. In some signatures the appearance may be significantly altered because the pen has left the paper in one signature but not in the other, so that the joining stroke is evident. This is not considered to be a significant difference in pen-path.

**PRINCIPLE 8: Genuine signatures are usually similar in fluency**

Fluency is a reflection of the writing skills of an individual. People generally write with similar fluency all the time. There are exceptions, for instance when medication or injuries are influencing the writing, but these are uncommon.

Skilled writers can usually write fast and are therefore able to write with high fluency, signs of which include:

- smooth curves
- variation in pen pressure
- tapered ends to letters
- joining of three or more letters together
- pen in contact with the paper for long sections of the signature
- flourishes, lead-in strokes and exit strokes

At the other extreme there are some people, particularly the elderly or infirm, who do not have good writing skills and therefore exhibit signs of low fluency, which are:

- jerky curves
- even pen pressure throughout
- blunt ends to letters
- separate letters
- pen lifts, hesitations and blobs
- simple design

Many simulations are written with low fluency, but it should be noted that low fluency is not necessarily a sign of simulation. It is important that the examiner looks for major differences in the fluency and not simply low fluency, as the former can be an indication of different writers producing the signatures.