



National Firefighter Selection Process
Firefighter Application Form
Technical Manual



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Please note: This material has been developed specifically for use with the Firefighter Application Form. It is not to be used for any purpose other than that for which it was originally designed.

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- Avon
- Berkshire
- Buckinghamshire
- Cambridgeshire
- Cheshire
- Cleveland
- Cornwall
- Cumbria
- Devon
- Dorset
- East Sussex
- Gloucestershire
- Greater Manchester
- Hampshire
- Hereford and Worcester
- Highlands and Islands
- Humberside
- Isle of Wight
- Jersey
- Lancashire
- Lincolnshire
- London
- Lothian & Borders
- Merseyside
- Mid and West Wales
- North Wales

- North Yorkshire
- Northern Ireland
- Nottingham
- Oxfordshire
- Somerset
- South Wales
- South Yorkshire
- Staffordshire
- Strathclyde
- Surrey
- Tyne & Wear
- West Midlands
- West Sussex
- West Yorkshire
- Wiltshire.

Section One

Introduction

- 1.1 This document records the development of the Firefighter Application Form and presents important technical information about this assessment tool.
- 1.2 The document is split into the following sections:
 - proper use of the Firefighter Application Form
 - overview of the Firefighter Application Form
 - the development of the Firefighter Application Form; and
 - technical information for the Firefighter Application Form.

Section Two

Proper use of the Firefighter Application Form

- 2.1 The Firefighter Application Form has been designed as the first stage of the National Firefighter Selection (NFS) process. This document outlines standards concerning the use and availability of the Firefighter Application Form and is in line with current opinion concerning best professional practice in the use and supply of assessment tools.
- 2.2 Cautionary Note – Assessment tools and their results are for use by appropriately trained and authorised users only. It is the responsibility of authorised administrators to ensure that appropriate measures are taken to safeguard the security, confidentiality and proper use of the Firefighter Application Form and applicants' results.

Section Three

Overview of the Firefighter Application Form

3.1 Introduction

3.1.1 This section provides an overview description of the Firefighter Application Form. The application form itself should be examined to gain a full appreciation of its content.

3.2 The Firefighter Application Form

3.2.1 The application form consists of the following sections:

- **Pre-Application Checklists 1 and 2**
These are for applicants' use only and are not assessed. The checklists encourage applicants to consider their suitability for the firefighter role. Checklist 1 asks whether the applicant is prepared to work in conditions/situations that are typical for a firefighter (e.g. work at height, deal sensitively with people in difficult situations). Checklist 2 asks whether the applicant meets the requirements to be a firefighter (e.g. aged over 17 years and 6 months, good unaided hearing, etc).
- **Section 1 – Personal Details**
The application form asks for information such as name, address, nationality, ability to meet the medical requirements of being a firefighter, previous fire service employment, criminal convictions (not spent under the Rehabilitation of Offenders Act 1974), etc.
- **Section 2 – Assessment of Personal Qualities and Attributes (PQAs)**
The application form assesses the following PQAs: Working with Others, Commitment to Diversity and Integrity, Commitment to Self Development, Confidence and Resilience, Commitment to Excellence and Openness to Change. For each of these PQAs applicants are required to describe an activity that best illustrates their experience in that area, how often they have completed the activity and how much experience they have of the activity. This section also asks an applicant to describe why they want to be a firefighter. Each of the PQA areas and the final question are assessed using the Sifting Guidelines.

- **Section 3 – Additional Information**
The application form asks for additional information such as additional languages spoken and voluntary/community work undertaken. The rationale for asking for such information is to provide FRSs with additional information with which to assess applicants. Using such information is on the strictest proviso that the FRS are able to demonstrate that additional languages or knowledge of the local community is a requirement of the firefighter role in that particular FRS.
- **Section 4 – References**
The applicant is required to provide the names and contact details of at least one person who can confirm the information that has been provided in Section 3.
- **Section 5 – Our Values**
The applicant is required to sign a declaration that they will practice and actively promote the Fire and Rescue Service Core Values.
- **Section 6 – Declaration**
The application form asks for applicants to declare any family relationship with an elected councillor or officer for the fire authority, and that the information they have provided has been true and correct.
- **Equal Opportunities Monitoring Information Form**
The application form asks for information about the applicant's age, gender, ethnic origin, disability, sexual orientation and religious belief/faith. This information is used solely for monitoring purposes and is not made available to those assessing the application.

3.3 Assessing the application form

- 3.3.1 Each completed application form should be scored, or 'sifted', manually by trained and authorised sifters. Full scoring guidelines have been provided.
- 3.3.2 A two stage sifting process is used to assess an applicant's suitability to progress to the next stage of the NFS process.
- The Stage 1 sift includes a series of standard requirements that an applicant must satisfy. These include assessment of:
 - Age
 - Medical suitability
 - Requirement for a work permit
 - Declaration to practice and actively promote the Fire and Rescue Service Core Values

- Declaration of offences; and
- Signed declaration.

Candidates who satisfy all of the above requirements will be passed to the Stage 2 sift. Candidates who do not will have their application rejected.

- The Stage 2 sift assesses an applicant's responses to the PQA-based questions and their motivation to become a firefighter. In order to pass the Stage 2 sift an applicant must achieve a:
 - Minimum total score for the PQA-based questions
 - Minimum score for the Commitment to Diversity and Integrity PQA question; and
 - Minimum score for the motivation to be a firefighter question.

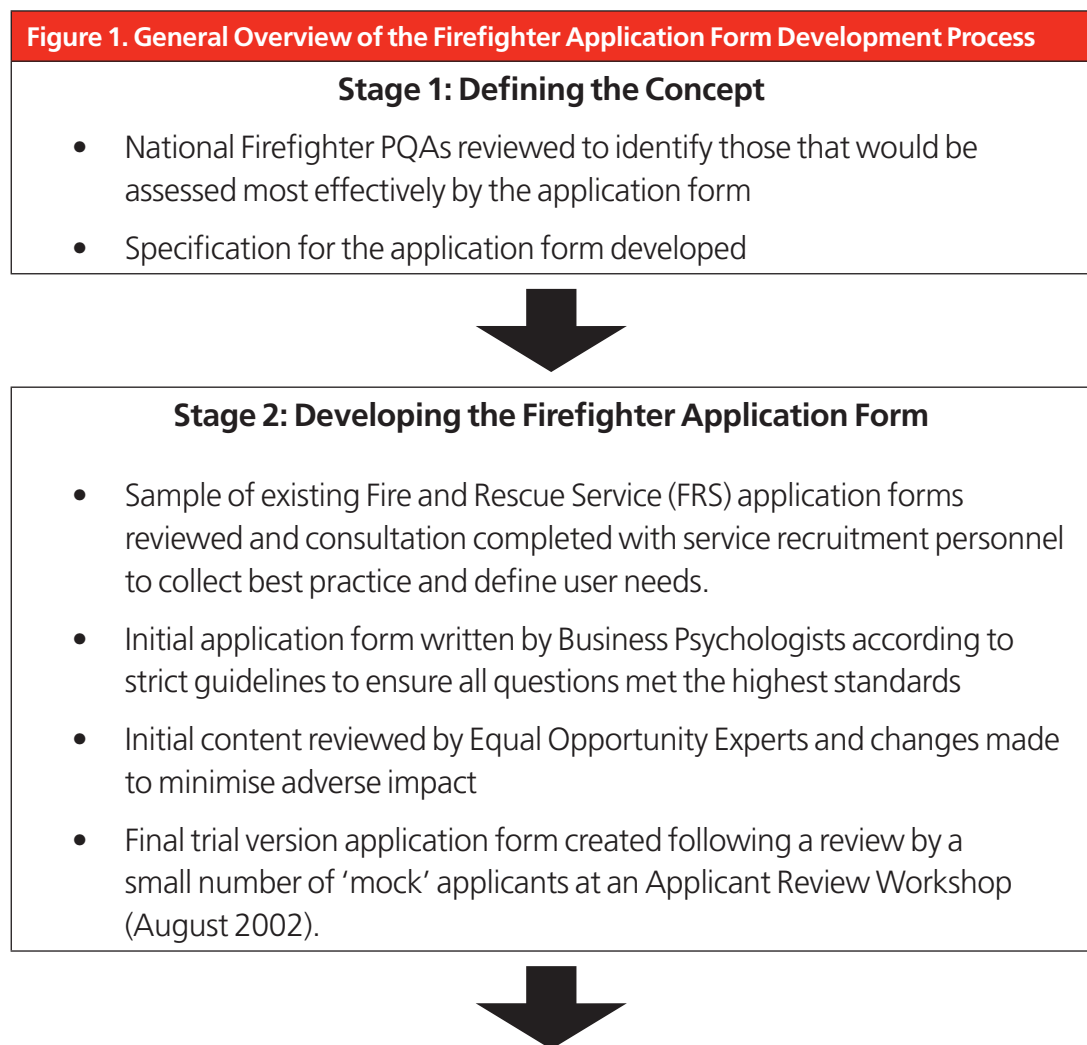
Section Four

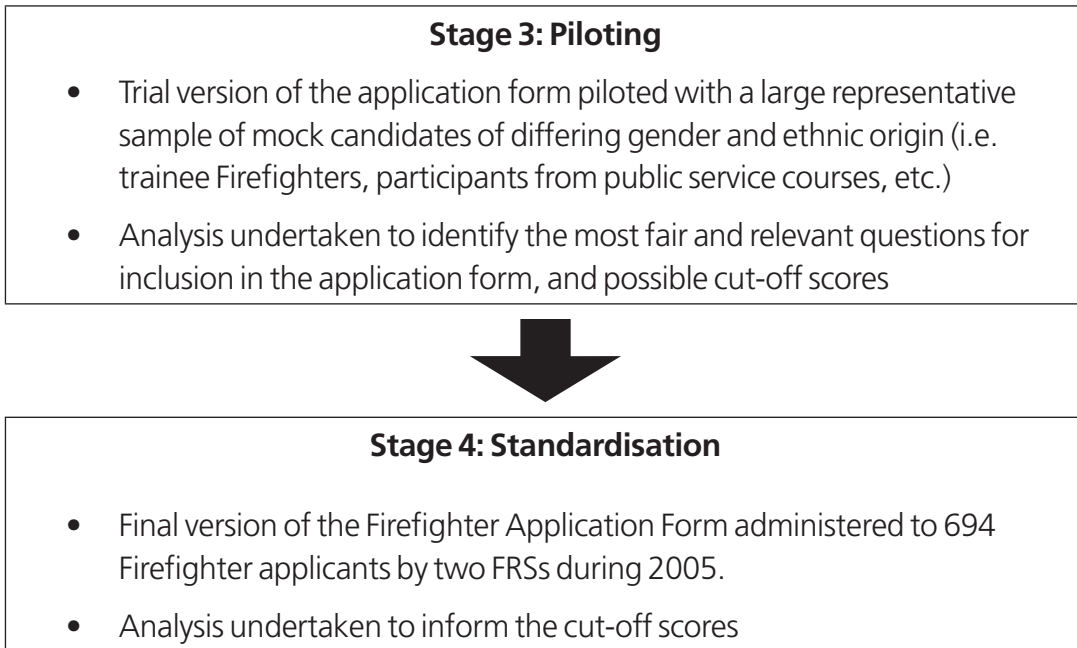
The Development of the Firefighter Application Form

4.1 Overview of the development process

4.1.1 The application form has undergone a rigorous four stage development procedure designed to ensure that the assessment is as fair and effective as possible.

4.1.2 Figure 1 presents a general overview of the development process.





4.2 Stage 1: Defining the concept

4.2.1 The starting point for the development of the application form, was the National Firefighter Personal Qualities and Attributes (PQAs). The PQAs were reviewed to identify those criteria that could be assessed most effectively by the application form. This 'sub-set' of PQAs was then further refined by considering the extent to which an assessment by Application Form would enhance the effective assessment of the PQAs overall given the combined focus of the other selection tools that comprise the National Firefighter Selection Process. As a result, this review identified the following PQAs for assessment by the Application Form:

- Working with Others
- Commitment to Diversity and Integrity
- Commitment to Self Development
- Confidence and Resilience; and
- Commitment to Excellence.

4.2.2 As a result of the review, the specification for an application form was developed. The remainder of this section outlines more specific information concerning the procedures followed to develop the application form.

4.3 Stage 2: Developing the application form

4.3.1 The format for the first draft of the application form was informed by a review of a sample of existing Firefighter application forms and by consultation with FRS recruitment practitioners representative of each of the five 'best value' groups. A review of current psychological research relating to initial sifting and application forms was also completed. This review and consultation process led to the development of an initial application form format that:

- Incorporated existing elements of FRS 'best practice';
- Introduced new elements or practices that would have the most likelihood of supporting effective assessment; and
- Took into account users' perspectives of the operational and organisational context in which the application form was to be used (e.g. the large numbers of applications received).

4.3.2 Following agreement of the application form format overall, an initial set of questions was written by a small team of Business Psychologists. The aim at this stage was to develop questions and sifting criteria that:

- Examined the breadth and depth of a candidate's experience in relation to the PQA areas;
- Represented a balance between those items that could be scored quickly and those items that, while redeeming a lot of information, took relatively longer to score; and
- Would be unlikely to bias the performance of any particular minority group

4.3.3 The initial application form was reviewed by external Equal Opportunity experts to ensure that the content was fair to all minority groups. Minor changes were made to the application form as a result of this review. Changes were also made to the application form in the light of the Bain Report and White Paper (e.g. the inclusion of a question to assess the PQA Openness to Change).

4.3.4 The final trial version of the application form was created following completion of the form by a small number of 'mock' applicants (e.g. existing firefighter applicants, recent recruits in the initial weeks of training) as part of an Applicant Review Workshop (August 2002). Participant feedback was sought concerning its instructions, ease of completion and questions. Changes were made to the application form following this feedback and a review of applicants' responses.

4.4 Stage 3: Piloting

- 4.4.1 The pilot application form was administered to 175 mock applicants (e.g. trainee Firefighters, participants from public service courses, prospective applicants, etc). Statistics for the piloting sample can be found in Appendix A. The application form was administered during piloting without a time limit, but candidates usually completed it in 80 to 100 minutes. Responses for Section 3 of the application form were assessed by trained sifters. These scores were analysed statistically to examine the fairness and usability of the assessment and to provide provisional norm data. Qualitative feedback was also collected from mock applicants on ease of completion. The content of the application form was revised in light of the applicants' comments (e.g. changes made to the instructions).

4.5 Stage 4: Standardisation

- 4.5.1 In the period of June to October 2005, two FRSs were authorised to use the revised version of the Firefighter Application Form as part of their actual selection process. Completed forms were received for 694 applicants (demographic statistics for the standardisation sample can be found in Appendix B).
- 4.5.2 Assessment and scoring of the applications was completed under close supervision from a business psychologist from Water for Fish. The objective was to collect representative norm Group data from 'live' applicants. The data from the standardisation sample was analysed to inform the cut-off scores for the application form. Restrictions in the demographic data collected by the participating FRSs meant that it is not possible to show disability data for the standardisation sample.
- 4.5.3 Constraints on the number of FRSs able to participate meant that it was not possible to collect sufficient data from female and black and minority ethnic candidates to allow for meaningful analysis looking specifically at these groups. As a result this analysis will need to be conducted during the early implementation of the NFS process.

Section Five

Firefighter Application Form Technical Information

5.1 Section contents

5.1.1 This section contains the following technical information and data:

- Summary statistics – standardisation sample
- Adverse impact; and
- Validity.

5.2 Summary statistics – standardisation sample

5.2.1 Total PQA Score¹ (maximum possible score = 36)

Table 1: Total PQA score descriptive statistics				
Sample size	Minimum score	Maximum score	Mean score	Standard Deviation
611	10	33	21.98	4.02

Table 2: Male/Female Total PQA score differences			
Gender	Sample size	Mean score	Standard Deviation
Male	576	21.96	4.00
Female	35	22.29	4.37

5.2.2 Commitment to Diversity and Integrity Score (maximum score = 6)

Table 3: Commitment to Diversity and Integrity score descriptive statistics				
Sample size	Minimum score	Maximum score	Mean score	Standard Deviation
694	0	6	3.79	1.07

¹ The data excludes those people who were rejected due to a below standard score on the Commitment to Diversity and Integrity PQA question and whose responses to the other PQA questions were not assessed.

Table 4: Male/Female Commitment to Diversity and Integrity score differences			
Gender	Sample size	Mean score	Standard Deviation
Male	657	3.77	1.07
Female	37	4.08	1.04

As Table 2 suggests there were no significant differences in performance between male and female candidates for the Total PQA score or the Commitment to Diversity & Integrity score. However, the number of female applicants was small and further monitoring will be required to determine the true nature of potential difference by gender.

5.3 Adverse impact

- 5.3.1 Adverse Impact refers to whether an assessment disproportionately discriminates against a minority group compared to a majority group. Adverse impact can be calculated by comparing the pass rate of the minority group to that of the majority group. Where the pass rate of the minority group is less than four fifths (i.e. 80%) that of the majority group, a test is judged to demonstrate adverse impact. The four-fifths cut-off is not a requirement of current UK Equal Opportunities legislation but is recommended by the Commission for Racial Equality and is part of wider best practice. Calculations of adverse impact are used as a general indication of unfairness in assessment, but do not necessarily mean that an assessment is unfair.
- 5.3.2 Despite the small number of female applicants an adverse impact figure for gender was calculated (see Table 5). The figure is based on a total cut-off score of 24 and a Commitment to Diversity and Integrity score of 3 (i.e. an applicant must obtain scores at these levels or above to be successful at this stage).

Table 5. Adverse Impact figure for Males vs Females		
Gender	Pass Rate	Adverse Impact
Male	31.1% (204/657)	138.9%
Female	43.2% (16/37)	

- 5.3.3 As the adverse impact figure is above 100% it shows that the Application Form is not disadvantaging female applicants and so is a fair assessment tool with regards to gender. However, given the small number of female applicants the analysis should be repeated when more data becomes available.

5.3.4 The number of participants from black and minority ethnic groups was far below the threshold required in order to conduct meaningful and reliable analysis. Therefore, levels of adverse impact and mean differences between the test performance of white and black and minority ethnic candidates were not examined. As soon as sufficient minority data has been collected during the early implementation of the NFS process such analysis will be conducted.

5.4 Validity

5.4.1 Further information concerning the Firefighter Application Form's validity will be presented once the data on 'live' Firefighter candidates become available.

Appendix A

Piloting sample statistics

Table 6: Firefighter Application Form/FRS		
FRS	Number of Participants	%
Avon/Somerset	22	12.6
Devon/Cornwall/Jersey	20	11.4
Dorset	14	8.0
Gloucestershire	35	20.0
North Yorkshire	14	8.0
South Yorkshire	16	9.1
West Midlands	3	1.7
West Yorkshire	34	19.4
Wiltshire	17	9.7
Total	175	

Table 7: Firefighter Application Form/Gender		
Gender	Number of Participants	%
Male	100	57.1
Female	75	42.9
Total	175	

Table 8: Firefighter Application Form/Ethnic Origin		
Ethnic Origin	Number of Participants	%
White	152	93.3
Black and Minority Ethnic	11	6.7
Undeclared	12	
Total	175	

Table 9: Firefighter Application Form/Age		
Age	Number of Participants	%
16-20	68	38.9
21-25	49	28.0
26-30	28	16.0
31-35	15	8.6
36-40	11	6.3
41-45	2	1.1
45+	2	1.1
Total	175	

Table 10 : Firefighter Application Form/Disability		
Disability	Frequency	%
Yes	3	98.3
No	172	1.7
Total	175	

Appendix B

Standardisation sample statistics

Table 11: Firefighter Application Form /FRS		
FRS	Number of Participants	%
Hampshire	513	73.9
Staffordshire	181	26.1
Total	694	

Table 12: Firefighter Application Form/Gender		
Gender	Number of Participants	%
Male	657	94.7
Female	37	5.3
Total	694	

Table 13: Firefighter Application Form/Ethnic Origin		
Ethnic Origin	Number of Participants	%
White	668	96.3
Black and Minority Ethnic	13	3.7
Undeclared	13	
Total	694	

Table 14: Firefighter Application Form/Age		
Age	Number of Participants	%
16-20	125	18.0
21-25	249	35.9
26-30	120	17.3
31-35	99	14.3
36-40	68	9.8
41-45	25	3.6
45+	8	1.2
Total	694	

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