

Review of Firefighter Recruitment Process

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**Supported by
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and
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Content

Page

- 3. Background
- 3. Our Establishment
- 4. Recruitment Strategy
- 5. Review of Firefighter Recruitment
- 5. Eligibility Criteria
- 6. Initial Application
- 7. Psychometric Testing
- 8. Practical Selection Tests
- 10. The Interview
- 12. Positive Action
- 13. Demographics

Appendix 1 – Statistics relating to initial Online Application

Appendix 2 – Statistics relating to Psychometric Testing

Appendix 3 - Statistics relating to Practical Selection Tests

Appendix 4 - Statistics relating to The Interviews

Appendix 5 – Demographic Data

Appendix 6 – Phase 2 Findings

Background

Early in 2013 the Fire Authority took the decision to recommend an increase in council tax to support additional funding and to go some way towards compensating for the ongoing reduction in formula grant.

The purpose of the additional funding was to support the maintenance of front line services and to ensure that the excellent level of service that we provide to the people of the West Midlands can be maintained. In addition, our ongoing commitment to maintaining our response times for all incidents relies on maintaining the right number of appliances available with the right number of people in all station locations. The number of people required is referred to as our establishment.

Our Establishment

Our establishment represents the number of people that we need to deliver our frontline service. A number of interventions have already been implemented to introduce a reduction in our establishment. The interventions taken, such as the introduction of Brigade Response Vehicles (BRV's), the AFA project and the migration of staff from the 'Late' shift to the 'Core' shift has seen the number of personnel required to deliver our core service reduce without the need for redundancy.

On average, the service loses around six Operational staff per month; leavers from our Operational workforce are mainly through retirement. Using workforce data and predictions on when people might leave, our Workforce Analyst is able to predict the number of staff available in relation to the number of people that we need to deliver our current level of service. This information drives our pattern of Firefighter recruitment and our internal pattern of promotion and progression.

Recruitment Strategy

National Firefighter Selection (NFS)

In 2005, a national approach was developed to the recruitment and selection of Operational Firefighters. This approach included the use of the same tests and assessments as well as the same principles for selection which proposed a consistent approach. The project was funded by CLG and co-ordinated centrally by a team based within the Fire Service College. West Midlands Fire Service championed this approach from its introduction to the last campaign that was run in 2007/2008.

The process included the design of a series of Psychometric Assessments and Practical selection tests based on the role of Firefighter. The development of a behavioural framework was also completed and featured heavily in the selection criteria.

Stages of recruitment included:

- Paper based application
- Psychometric Assessment
- Practical Selection Tests
- Interview
- Medical and Fitness Assessment

While this offered a standardised approach, it was not adopted by all services in the UK, many of whom felt that the methods of selection did not suit their individual brigades.

Removal of mandatory approach to Firefighter selection

In 2011, Fire Minister Bob Neill made a keynote speech encouraging the reduction of the seemingly bureaucratic systems that exist within local government, encouraging services to run systems and procedures that suit local, rather than national needs. This encouraged a review of our process of selection and allowed us to consider alternative approaches.

Removal of the mandatory nature of the NFS process has provided us with the opportunity to tailor our recruitment and selection processes to meet our requirements whilst maintaining a robust, legally defensible approach.

It was important however to ensure that the excellent work that had gone into developing tools for Firefighter selection, including the intensive research that had gone into their development, were not abandoned and that this approach was considered alongside any alternative recommendations that were made.

Review of Firefighter Selection

With the announcement of our plans to recruit, we took the opportunity to review the National Firefighter Selection process, carrying out an evaluation of each stage and the selection tools used. A further consideration was the volume of applicants that we would attract particularly as we had not run a Firefighter Recruitment campaign since 2007/2008 and that no other Fire and Rescue Service in the UK had plans to recruit Wholetime Firefighters.

We also took the decision to continue with a sequential selection process meaning that candidates either progress or are rejected on the results of each stage. This provides economic advantage when the number of candidates is high and allows the selection of high performers at each stage.

Eligibility Criteria

To enter the Firefighter recruitment process under the requirements of NFS, the main eligibility criteria included the need for applicants to be at least seventeen and a half years old, (to ensure that would be at least 18 at the point that they are employed and able to operate equipment under Health and Safety Regulations) and that they had to be resident or eligible to work in the UK.

These eligibility criteria needed to remain in place however, there had been no requirement to consider an individuals educational background. With the increased need now for considerable periods of study, examinations and assignment work along with the ability to understand and operate more technological equipment, for this campaign we introduced a minimum education level of GCSE grades A to C (or equivalent) in Mathematics and English.

In addition to this, the role of a firefighter now includes increased levels of interaction with members of the public. This might be through home safety fire checks, fitting of smoke alarms, attendance at open days and carrying out visits to schools to give fire safety advice. For this reason we also introduced the requirement that applicants should declare any unspent criminal convictions and carry out DBS (formally CRB) checks to ensure their appropriateness to work with young children.

For this campaign we also considered the changing role of a Firefighter which incorporates a more diverse set of skills relating to a much wider variety of incidents such as chemical and biological incidents, terrorist threat and search and rescue. Water rescue is a skill that all firefighters are expected to be trained in and prepared for, therefore we also introduced the need for applicants to be 'confident' swimmers in open water.

Other eligibility criteria that remained included an applicant's ability to:

- Work at height
- Work in enclosed spaces
- Work outdoors
- Carry heavy equipment

Initial Application

Under NFS, initial application included an examination of the criteria mentioned above as well as written answers to competency based questions on a paper based application form. All applications were processed and marked individually by hand with the results entered onto a spreadsheet.

With applications expected to reach as many as 10,000 and the relatively short space of time that we had, we opted to develop an electronic solution to manage, log and score applications. Using internal resources and existing e-learning technology, we were able to develop a system built around our eCademy platform. Applicants were able to complete applications on line and worked their way through a series of tests which focussed on :

- Understanding Information
- Situational Awareness
- Working with Numbers

Questions for these tests were taken from the tests that were designed for NFS and are used at the written test stage of the selection process where the full versions are used.

In addition, we also included a test which was designed to assess an individuals potential to work at supervisory level. This test had not previously been used as part of initial Firefighter selection, the Situational Judgment Test (SJT) was designed to assess the potential of existing Firefighters to work in the role of Crew Commanders. Its inclusion at this stage was to support the identification of potential higher performers during the selection process.

All tests were in a multiple choice format and marked electronically. Upon closure of the online application process, we were immediately able to identify the performance of applicants and use their scores in each test to produce a shortlist for progression to the written test stage.

There was recognition that existing wholetime Firefighters from other Services would be keen to be considered for transfer to West Midlands. As a service, we are also keen to recognise the skills and knowledge of existing Firefighters, however it was felt appropriate that these skills and levels of knowledge should still be examined to ensure their alignment to those required to work within WMFS. We therefore supported existing wholetime Firefighters by allowing entry to the written test stage without having to complete the online tests and eligibility checklists.

Existing Wholetime Firefighters were still able to apply through the online system and were able to bypass the application questions to just provide their personal information and contact details. We also recognised students who had recently graduated with Wolverhampton University with a Fire and Rescue degree. West Midlands Fire Service has worked in partnership with Wolverhampton University in the delivery of the practical elements of the degree; therefore, graduates from this programme were also allowed entry at the written test stage.

(Statistics relating to the completion of the on-line application, can be found in Appendix 1)

Psychometric Testing

Having considered the types of test used under NFS and their relevance to the current Firefighter role we opted to continue with the same approach, using the same tests that had been designed for this stage under NFS:

- Understanding Information
- Situational Awareness
- Working with Numbers

All tests were multiple choice and marked by hand using a marking template.

We also identified that an assessment of written English and an assessment of an individual's behaviours or personal qualities would add further value to this stage of selection. With the introduction of an electronic application, there was no longer an assessment of written skills.

Candidates were asked to answer three behavioural based questions giving examples from their own personal experiences. Responses were hand written and assessed against set marking criteria and the behavioural framework.

(Statistics relating to the completion of the psychometric tests, can be found in Appendix 2)

Practical Selection Tests

Under NFS, practical selection tests were radically transformed with tests such as the 'bleep' test which involved running between two set points within a set timescale were removed after it was proven that this had an adverse effect on women.

We were keen to remain with the principles of the tests designed under NFS, having considered the purpose and the nature of the test itself. However based on previous experience we identified changes to two of the tests.

The confined spaces test under NFS was carried out using a cage or racking system. The candidate will enter the cage system wearing a blacked out mask and full breathing apparatus (BA). This is a challenging test which exposes the candidate to an environment of unfamiliarity and restricted movement. We improved this test further by adding a more realistic environment. Candidates instead followed a guideline around the inside of a building, again wearing a blacked out mask and breathing apparatus, followed by the extraction of a dummy from our replica sewerage system.

We also introduced the grip test to the practical selection process. This replaces the test that measured manual dexterity. Data from previous recruitment campaigns demonstrated that this test adds little value to the selection process and has no history of failure, therefore offering little challenge to the candidate.

The strength of grip in an Operational context is inherent to the Firefighter role, particularly when carrying heavy equipment or carrying out activities such as climbing a ladder carrying hose.

Test	Purpose
Ladder extension	Upper and lower body strength
Ladder climb	Ability to work at heights
Grip test	Grip strength and manual dexterity
Confined spaces	Ability to work in confined spaces
Equipment Carry	Assessment of stamina and endurance

Ladder extension

This test involved the simulation of raising a ladder using a pulley system. Candidates had to simulate this activity by hoisting and lowering a 35kg weight within a set period of time and using the correct technique.

A candidate will be unsuccessful if they do not extend and retract ladder as instructed or do not complete within the allocated time.

Ladder Climb

Candidates are required to ascend the 13.5m ladder to a height equivalent to the third story of a building. At this point they are required to apply a leg lock, let go of the ladder and lean back with their arms stretched out to the sides.

A candidate will be unsuccessful if they: Touch the strings at the back of the ladder, do not ascend and descend the ladder as instructed, do not climb and descend confidently, take their hands off the ladder while applying the leg lock, do not lean back or do not apply the leg lock as instructed.

Grip Test

Four candidates complete this exercise together. They are required to position themselves at each corner of a 13.5m ladder and carry it using the handles provided over a distance of 30m. At this point they put the ladder down, change hands and carry it back to the starting point.

A candidate will be unsuccessful if they: Drop the ladder, cannot continue or request to put the ladder down on more than one occasion. Candidates can request to put the ladder down to adjust their grip on one occasion only per hand.

Confined spaces

Candidates follow a guideline around the inside of a building, wearing a blacked out mask and breathing apparatus, followed by the extraction of a dummy from our replica sewerage system.

A candidate will be unsuccessful if they: Do not follow the guideline as instructed, do not work as a team, remove their BA mask during the exercise, refuse to repeat the exercise, cannot extract the dummy, cannot complete the exercise or do not work as a team when extracting the dummy.

Equipment Carry

Candidates are required run out hose and carry a range of heavy and awkward pieces of equipment between two points within a set period of time.

A candidate will be unsuccessful if they do not complete all tasks within the allotted time or do not follow instruction.

Candidates are informed on the day of their success or failure at this stage.

(Statistics relating to the completion of the practical selection tests, can be found in Appendix 3)

The Interview

The process of interview under NFS was based purely on an examination of each individual's behaviours in relation to the Personal Qualities and Attributes (PQA's) of the Firefighter role. This is a key element in assessing the way in which an individual might approach a task, solve a problem or interact with other people. In reviewing the process of interview we identified the opportunity to build on this further by adding further discussion around some of the aspects of the role and the organisation.

One key area that was considered was the individual's perception of what a Firefighter does. We are keen to ensure that individuals that join the service understand that the role of a Firefighter has changed significantly over the past few years and now has a heavy focus on prevention activity and community interaction, as well as the Operational elements. It was also important to ensure that individuals were aware of the more diverse types of incident that a Firefighter will be reacting to, such as chemical incidents, water rescue, terrorist threat and rescue from height.

In addition to this we were also keen to examine each individual's ability to communicate verbally with a group of people. The Firefighter role includes carrying out visits to schools and community groups where they will be required to plan and organise visits, give information about fire safety and talk to groups of children. A basic ability to communicate clearly and confidently, solve problems and plan effectively are key qualities of the role. Applicants were asked to prepare and deliver a brief presentation based on planning a communications event.

The Interview Structure

Presentation Exercise

Candidates were asked to prepare and deliver a briefing based on the planning of a Water Safety campaign in their local area. They were given some basic background information to support them and asked to consider how they would plan the campaign, who their target audience / audiences would be and why, what methods they would use to deliver their message and how they would plan and implement the campaign. A full technical knowledge of this activity was not expected from the candidates, the focus of assessment was on the way that they communicate, solve problems, plan and work with other people.

The Role of a Firefighter

Candidates were asked to talk about their understanding of the key role of a Firefighter and some of the skills that they feel a modern day Firefighter should have.

Organisational Objectives – The Plan

Applicants were made aware of 'The Plan' on invite to interview and directed to our website to give them an opportunity to find out more about the organisation and its key objectives. During interview candidates were asked to talk about the key objectives and priorities of West Midlands Fire Service.

Competency Based Interview

Candidates were asked to give examples from their own personal or professional experience which demonstrate some of the key behaviours associated with the role. The main focus was on their commitment to excellence, commitment to development, commitment to diversity and integrity, and communicating effectively (this was assessed indirectly, not by a set of questions).

(Statistics relating to the interview process can be found in Appendix 4)

Positive Action

We have a programme of on-going Positive Action initiatives aimed at attracting women and people from Black and minority ethnic (BME) groups to a career in the Fire Service.

Using targeted activity our key aims are:

- To increase the diversity of WMFS Operational staff by actively encouraging under represented groups to apply for forthcoming vacancies.
- To raise awareness and be viewed by the diverse communities we serve, as an employer of choice and promote the role of a firefighter as a career with prospects and opportunities.
- To develop a more diverse workforce that reflects the community that we serve and meets the needs of our communities.
- To communicate safety messages to all our communities more effectively, and an increased diverse mix of firefighters will enable us to engage with harder to reach communities and have an improved understanding of their cultural needs.

As part of this recruit campaign the following positive action a range of activities took place:

- Ten colleges were visited over the West Midlands area, information on the role of a firefighter and the recruitment process given to students studying public services.
- We attended Vaisakhi, religious festivals in Handsworth and Wolverhampton celebrating the founding of the Sikh community attracting up to 90,000 people at the main Handsworth Park festival. Much of the success of these events was due to enthusiastic support from Community volunteers and an operational Sikh Firefighter, who gave guidance on the customs of the community, translating where needed. Both events were a great opportunity to reach out to the Asian community whose religious leaders were very supportive in guiding their younger generation towards us.

- Helped develop further links within the Sikh community, resulting in two radio shows, a forty minute appearance on the Sikh channel breakfast show and a short live interview from the park on sky847 all promoting recruitment and life as a Firefighter.
- We attended Gay Pride, a stall was arranged through The Fire Fighters Charity in conjunction with Ladywood Station and volunteer fire fighters.
- Arrangements were made to have a stall at the Caribbean food festival in May a three day event of music food and entertainment in the city centre; unfortunately, it was cancelled the day before due to forecasted bad weather.
- Contacts were made with several Gudwaras. Dates were arranged to attend and promotional material including posters were displayed prior, to the event, to promote our attendance. A table was set up in which gave people the opportunity to show their interest and ask questions. We ensured that we were available both before and after their prayer session.
- The referrals from the temples was not extensive but it was invaluable to be accepted and respected by religious leaders and elders who have a great influence in the community, as in many Asian countries the role of a fire fighter is not highly thought of.

Information relating to the number of applicants from minority groups that entered the selection process can be found in **Appendix 1**. The progression of women and BME candidates can be found in **Appendices 1 to 4**

Demographics

Statistics relating to the demographic profile of applicants can be found in Appendix 5

Phase 2

To maintain existing levels of staffing and to support the phased implementation of the BRV's, it will be necessary to recruit a further 46 operational firefighters between July 2014 and October 2014.

Our Approach

In order to meet the demand for additional staffing, we had the option to run a new recruitment campaign. While this was achievable, it was difficult to identify the advantages of this approach either financially, practically or in providing a wider pool of new candidates from which to select.

In considering the options available, the approach that was the most expedient and that would give us sufficient numbers of people to achieve the final numbers required was to consider the next group of high performers from the online application process from the current campaign.

At this stage, applicants were required to complete three on-line tests which focussed on the key areas of Working with Numbers, Situational Awareness / Problem solving and Understanding Information. These tests have a psychometric approach and comprise of either 8 or 9 questions taken from the written test stage of the process. A Situational Judgment Test (SJT) was also used at this stage. This was set at Supervisory level and was designed to identify higher performing candidates and potential future leaders.

The top-slicing process identified candidates who scored a minimum of 96% across the three tests and a minimum score of 89% in the SJT.

In returning to this group of people, we were able to identify the next group of high performing candidates. Our proposal was to apply a minimum score of 92% from the first three tests, and 89% or above on the SJT. This approach identified a group of 557 applicants to progress to the written test stage.

The first cohort of applicants were required to score a minimum of 75% in each area of questioning. In addition, each candidate provided evidence against three PQA areas, Commitment to Diversity and Integrity, Working with Others and Openness to Change. Written communication methods were also considered at this stage. Candidates were required to score a minimum of 2 in each area to progress.

This second cohort were required to achieve the same standard. Successful applicants then progressed to the Practical Selection Test (PST) stage.

In addition, those applicants who were previously unsuccessful at the PST stage were invited to retake this part of the process.

The PST's are designed to ensure that individuals have the required level of fitness and upper body strength as well as the ability to work in confined spaces, at heights and to follow instruction. It is likely, following feedback previously unsuccessful applicants would be able to improve levels of fitness. We began actively targeting women and people from BME groups who fell just short of the required level as part of our ongoing Positive Action initiatives.

A high proportion of applicants were unsuccessful at this stage when completing the confined spaces test. The focus of this test has been reviewed and will concentrate less on the ability to follow the guideline and more on an individual's ability to work in dark, enclosed and unfamiliar surroundings. Successful applicants at this stage will progress to the interview stage.

Selection at the interview stage involved a short briefing exercise based on the implementation of a Water safety Campaign, the behavioural framework was used to measure positive and negative examples of behaviour. Questions also related to the role of a Fire-fighter, the objectives of the organisation and the Personal Qualities and Attributes (PQA's) associated with the role. All questions were marked on a one to four scale. Applicants were required to score a minimum of seventeen out of twenty-eight with no individual scores of one.

Applicants who were previously unsuccessful at this stage were reviewed and subject to no adversely negative examples of behaviour, were eligible to re-enter the process at the interview stage.

Given that our staffing figures indicate the need for Firefighters to be posted onto fire stations from July 2014 to October 2014, new entrant commenced May 2014.

The Online Recruitment Process June 2013

An analysis of the applicants

Workforce Planning

Summary

9516 applicants registered for the online recruitment. 7539 started the application. 10% of these were female, 15% were Black or Minority Ethnic and 1% had a disability. The average age of applicants was 25.8 years, ages ranged from 16 to 60.

517 applicants were shortlisted for progression to the psychometric testing stage.

2% of Asian applicants were successful, compared with 8% of White British applicants and 5% of other Black and Minority Ethnic groups.

Asian / Asian British applicants were least successful when completing the duties checklist. Black and Minority Ethnic applicants were the least successful when completing the Situational Awareness and the Working with Numbers Assessment

The average age of successful candidates was 26.4, and of unsuccessful candidates was 25.8.

Total numbers of applicants

9516 applicants registered for the online recruitment.

The first three sections ('Personal details', 'Equal Opportunities Form' and 'Initial Assessment') could be filled in in any order, and different numbers of applicants completed each section:

Personal details = 7357

Equal Opportunities Form = 7372

Initial Assessment (where the applicants stated if they were wholetime Firefighters or not) = 7574

A total of 7701 applicants completed at least one of the sections.

A number of these applicants were excluded from any analysis:

- 8 were Brigade employees testing the system
- 1 applicant withdrew before the end of the online process
- 153 applicants had more than one attempt at the process¹

Therefore, 7539 applicants started the application (filled in at least one section).

Selection Criteria

The 5134 applicants who completed all sections and the 260 applicants who completed all sections apart from the Supporting Information were included in the selection exercise.

114 of the applicants scored 100% in three tests – ‘Understanding Information’, ‘Situational Awareness and Problem Solving Assessment’ and ‘Working with Numbers Assessment’.

1055 applicants scored 96% in the three tests - just one question wrong.

These 1169 applicants were then ranked according to their answers to the ‘Scenario Assessment’.

The 517 applicants who scored 88.89% or more on the Scenario questions were invited to the second stage of the process.

Demographic Profile of all the applicants that started the application

7539 applicants started the application. 10% of the applicants were female and 15% were Black or Minority Ethnic. Similar proportions of females applied from each ethnic group.

¹ 135 people had two attempts, 7 had three attempts and 1 had five attempts. White British applicants were less likely than Black and Minority Ethnic applicants to have more than one attempt, but the numbers were small.

The first attempts were kept unless the applicant had entered nothing on the first attempt (apart from the Personal Details), or if the first attempt stopped mid way and the second attempt was identical to the first but continued.

The average age of applicants was 25.8 years, ages ranged from 16 to 60.

The average age of female applicants was 26.3, and of male applicants was 25.8.

The average age of Black and Minority Ethnic applicants was 26.5, the average age of White British applicants was 25.7.

91 applicants (1.2%) said that they had a disability.

Current Wholetime Firefighters

118 applicants stated that they were wholetime firefighters of whom 68 told us their Brigade, four of these (6%) were female and nine (13%) were Black or Minority Ethnic. The relevant Brigades were contacted and if they confirmed that the candidate was a wholetime firefighter they were invited to the second stage of the process.

Eligibility Checklist

There were five questions on the eligibility check list, if any of the questions were answered incorrectly this resulted in a failed application.

6853 applicants started the eligibility checklist.

69 people (1% of those that completed the Eligibility Checklist) stated that they would not be 18 years of age by 18.10.13. Eight of these applicants gave a date of birth that made them older than 18. They either incorrectly completed their date of birth, or incorrectly stated that they were under 18.

612 applicants (9%) stated that they did not have a GCSE in Mathematics and 468 applicants (7%) stated that they did not have a GCSE in English.

Three applicants stated that they were not eligible to work in the UK, two were Black / Black British – African, and one was Black / Black British – Caribbean.

18 applicants stated that they did not commit to practise and promote core values.

Eligibility Checklist	Answered No	
	Number	Percentage
1. Will you be at least 18 years of age by 18/10/2013?	69	1%
2. Do you have a GCSE C or above in Mathematics?	612	9%
3. Do you have a GCSE C or above in English?	468	7%
4. Are you eligible to work in the UK?	3	0%
5. Do you commit to practise and actively promote the West Midlands Fire Service Core Values?	18	0%

There were no gender, ethnic or age differences in the pass rate of this section.

There were gender and ethnic differences in the percentage of applicants with a GCSE in English.

The percentage of applicants who stated that they had a GCSE in English

Ethnic Group	Gender		Total
	Female	Male	
White British	96.5%	92.5%	92.9%
White Other	100.0%	95.6%	95.9%
Asian	93.3%	91.6%	91.8%
Black	100.0%	96.3%	96.6%
Other & Chinese	91.7%	93.2%	93.0%
Prefer not to specify	100.0%	100.0%	100.0%
Total	96.5%	92.8%	93.2%

The average age of those who commit to practise core values was 26, the average age of those who did not commit was 23.

776 (11%) of the applicants who started the eligibility checklist answered one or more of the questions incorrectly and their application finished at this point; 6077 applicants answered all five questions correctly and moved onto the Duties checklist.

Duties Checklist

There were 22 questions on the duties check list, if any of the questions were answered incorrectly this resulted in a failed application.

6059 applicants started the duties checklist (so 18 applicants were successful on the Eligibility check list but did not continue with their application).

A small number of people answered the questions incorrectly, the details are shown below:

Duties Checklist	Answered Incorrectly	
	Number	Percentage
1. Are you prepared to work at height?	7	0%
2. Are you prepared to work in enclosed spaces?	3	0%
3. Are you prepared to work outdoors?	2	0%
4. Are you prepared to get wet during your work?	0	0%
5. Are you prepared to get hot and cold whilst working?	0	0%
6. Are you prepared to carry heavy equipment?	1	0%
7. Are you prepared to work unsocial hours?	2	0%
8. Are you prepared to work flexible hours?	1	0%
9. Are you prepared to work in situations where you may see blood, seriously injured or fatalities?	1	0%
10. Are you prepared to deal sensitively with people in difficult situations?	2	0%
11. Are you prepared to work and engage with people in the local community about fire safety?	2	0%
12. Are you prepared to work with someone with different religious beliefs from yourself?	1	0%
13. Are you prepared to work in a noisy environment?	3	0%
14. Are you prepared to co-operate in times of change?	4	0%

Duties Checklist	Answered Incorrectly	
	Number	Percentage
15. Are you prepared to ask colleagues for help when needed?	1	0%
16. Are you prepared to be told if not doing something properly?	2	0%
17. Are you prepared to do things you do not enjoy to achieve a result for the whole team?	3	0%
18. Are you prepared to challenge any work colleague displaying what you would consider to be inappropriate behaviour towards others?	21	0%
19. Are you a confident swimmer?	73	1%
20. Do you prefer to do the easy thing rather than the right thing?	18	0%
21. Do you think when people have different views from yourself they're not worth talking to?	36	1%
22. Can you keep your mind on the job when lots of things are happening around you?	12	0%

There were no gender or age differences in the pass rate of this section.

12% of Asian applicants failed this section, compared with 3% of the White British applicants, and 8% of the other Black or Minority Ethnic groups.

7% of Asian applicants could not swim, 2.6% of other Black or Minority Ethnic groups and less than one percent of White British applicants could not swim.

Those who were prepared to challenge inappropriate behaviour had an average age of 26, those who were not had an average age of 23.

225 (3.7%) of the applicants who started the duties checklist answered one or more of the questions incorrectly and their application finished at this point; 5834 applicants answered all five questions correctly and moved onto the Understanding Information Test.

Understanding Information Assessment

5781 applicants started the Understanding Information Assessment (so 53 applicants were successful on the Eligibility check list but did not continue with their application).

There were eight questions on the Understanding Information Assessment. Applicants had to answer at least 50% of the questions successfully to progress with their application. The number and percentages of applicants who answered the questions incorrectly is shown below. The most difficult questions were questions 6 and 7, two of the water relay questions:

Literacy / Understanding Info	Answered Incorrectly	
	No.	%
1. Fire Safety in the home - Planning your escape Q1	47	1%
2. Fire Safety in the home - Planning your escape Q2	848	15%
3. Fire Safety in the home - Planning your escape Q3	22	0%
4. Water relay communications procedure Q1	301	5%
5. Water relay communications procedure Q2	330	6%
6. Water relay communications procedure Q3	989	17%
7. Water relay communications procedure Q4	1317	23%
8. Water relay communications procedure Q5	286	5%

There were no gender, age or ethnic differences in the pass rate of this section.

Only 54 (0.9%) of the applicants who started the Understanding Information Assessment scored less than 50% and their application finished at this point; 5727 applicants scored more than 50% on this section and moved onto to the Situation Awareness and Problem Solving Assessment.

Situational Awareness and Problem Solving Assessment

5679 applicants started the Situational Awareness and Problem Solving Assessment (so 48 applicants were successful on the Understanding Information Test but did not continue with their application).

There were nine questions on the Situational Awareness Assessment. Applicants had to answer at least 50% of the questions successfully to progress with their application. The number and percentages of applicants who answered the questions incorrectly is shown below.

81% of all applicants answered question five incorrectly – regarding delivering a box of leaflets to another station.

Situational Awareness Assessment	Answered Incorrectly	
	No.	%
1. Smoke coming from a house	1909	34%
2. Sweep the yard	13	0%
3. Wires hanging from a socket	578	10%
4. Fire in an Office	1439	25%
5. Deliver a box	4594	81%
6. Just mopped the floor	947	17%
7. Reporter	182	3%
8. RTC	1217	21%
9. Nightclub chairs	369	6%

There were no gender or age differences in the pass rate of this section.

98% of the White British applicants and 96% of the Black and Minority Ethnic applicants passed.

121 (2%) of the applicants who started the Understanding Information Assessment scored less than 50% and their application finished at this point; 5558 applicants scored more than 50% on this section and moved onto to the Situation Awareness and Problem Solving Assessment.

Working with Numbers Assessment

5520 applicants started the Working with Numbers Assessment (so 38 applicants were successful in the Situational Awareness Assessment but did not continue with their application).

There were eight questions in the Numbers Assessment. Applicants had to answer at least 50% of the questions successfully to progress with their application. The number and percentages of applicants who answered the questions incorrectly is shown below:

Working with Numbers Assessment	Answered Incorrectly	
	No.	%
1. The benefits of smoke alarms - Graph Q1	343	6%
2. The benefits of smoke alarms - Graph Q2	241	4%
3. The benefits of smoke alarms - Graph Q3	29	1%
4. Using hoses at a fire Q1	221	4%
5. Using hoses at a fire Q2	580	11%
6. Using hoses at a fire Q3	276	5%
7. Using hoses at a fire Q4	297	5%
8. Using hoses at a fire Q5	264	5%

There were no gender or age differences in the pass rate on this section.

97% of the White British applicants and 94% of the Black and Minority Ethnic applicants passed.

69 (1%) of the applicants who started the Working with Numbers Assessment scored less than 50% and their application finished at this point; 5451 applicants scored more than 50% on this section and moved onto to the Scenarios Assessment.

Scenarios Assessment

5394 applicants started the Scenarios Assessment (so 57 applicants were successful in the Numbers Assessment but did not continue with their application²).

There were nine questions in the Scenarios Assessment, each question was scored 1 to 4 with 4 being the best answer to the question. The percentage scoring a 4, the best answer, on each question; and the average score for each question are shown below. A higher average score means that more applicants scored highly on that question.

The highest scores were seen for question 3 regarding giving a fire safety presentation to members of a group whom English is not their first language. The lowest scores were seen for question 7 regarding addressing technical questions at a town hall presentation.

Scenarios	Percentage scoring a 4 (Best Answer)	Average Score
1. Chemical Presentation	63%	3.2
2. Local Authority Members	55%	3.0
3. English not first language	85%	3.7
4. Residential home fire	55%	3.4
5. Requests from public	69%	3.6
6. Presentation to the team	68%	3.5
7. Town hall presentation	44%	2.8
8. Manager left the room	77%	3.5
9. Working in a team	63%	3.2

There were some gender and ethnic differences in the scores to some of the questions:

- Females scored higher than males on question 3; and males scored higher than females on question 9.
- White British applicants scored higher than Black and Minority Ethnic applicants on questions 2, 4, 6 and 9.

² A total of 214 applicants were successful in previous assessments but did not continue with their application. Females, older applicants and Black or Black British applicants were the most likely not to continue with their application.

- Older applicants scored higher on questions 2, 7, 8 and 9; younger applicants scored higher on question 1.

The 1169 applicants who scored 100% or 96% on the three assessments 'Understanding Information', 'Situational Awareness' and 'Working with Numbers' were ranked according to their answers in the Scenarios Assessment. The 517 applicants who scored 88.89% or more on the Scenario questions were invited to the second stage of the process. Of the 1169 applicants who scored 100 or 96% on the three assessments:

- Asian applicants were the least likely to be successful based on their scenario score.
- There were no gender or age differences.

Supporting Information

5134 applicants completed the Supporting Information

Demographic Profile of the 517 successful candidates

11% of the successful applicants were female and 8% were Black or Minority ethnic.

The average age of successful applicants was 26.4 years, ages ranged from 17 to 52. Successful female applicants were older than successful male applicants – The average age of females was 28.2, the average age of males was 26.1.

Five of the successful applicants (1.0%) said that they had a disability.

There were no significant differences in the percentage of females who started the application and the percentage that were successful.

2% of Asian applicants were successful, compared with 8% of White British applicants and 5% of other Black and Minority Ethnic groups.

The average age of successful candidates was 26.4, and unsuccessful candidates was 25.

Gender	Total	Percentage
Female	711	9.9%
Male	6493	90.1%
Transgender	6	0.1%
Total	7210	100.0%

Gender	Total	Percentage
Female	58	11.2%
Male	459	88.8%
Transgender	0	0.0%
Total	517	100.0%

Percentage that were successful
8.2%
7.1%
0.0%
7.2%

Ethnic Group	Total	Percentage
White British	6084	84.4%
Black and Minority Ethnic	1094	15.2%
Prefer not to Specify	32	0.4%
Total	7210	100.0%

Ethnic Group	Total	Percentage
White British	468	90.5%
Black and Minority Ethnic	42	8.1%
Prefer not to specify	7	1.4%
Total	517	100.0%

Percentage successful
7.7%
3.8%
21.9%
7.2%

Ethnic Group	Total	Percentage
White British	6084	84.4%
White Other	154	2.1%
Asian and Asian British	391	5.4%
Black and Black British	472	6.5%
Other	77	1.1%
Prefer not to Specify	32	0.4%
Total	7210	100.0%

Ethnic Group	Total	Percentage
White British	468	90.5%
White Other	11	2.1%
Asian and Asian British	8	1.5%
Black and Black British	20	3.9%
Other	3	0.6%
Prefer not to specify	7	1.4%
Total	517	100.0%

Percentage successful
7.7%
7.1%
2.0%
4.2%
3.9%
21.9%
7.2%

*All 7539 applicants excluding the 329 who did not complete their Personal Details or the 344 who did not complete their Equal Opportunities Form

Ethnic Origin	Total	Percentage
White - British	6084	84.4%
White - Irish	55	0.8%
White - Any other white background	99	1.4%
Asian or Asian British - Indian	165	2.3%
Asian or Asian British - Pakistani	113	1.6%
Asian or Asian British - Bangladeshi	28	0.4%
Asian or Asian British - Any other Asian background	20	0.3%
Mixed - White & Asian	65	0.9%
Black and Black British - Caribbean	213	3.0%
Black and Black British - African	27	0.4%
Black and Black British - Any other black background	13	0.2%
Mixed - White & Black Caribbean	195	2.7%
Mixed - White & Black African	24	0.3%
Mixed - Any other mixed background	36	0.5%
Chinese	6	0.1%
Other	35	0.5%
Prefer not to specify	32	0.4%
Total	7210	100%

Ethnic Origin	Total	Percentage
White - British	468	90.5%
White - Irish	4	0.8%
White - Any other white background	7	1.4%
Asian or Asian British - Indian	4	0.8%
Asian or Asian British - Pakistani	0	0.0%
Asian or Asian British - Bangladeshi	1	0.2%
Asian or Asian British - Any other Asian background	0	0.0%
Mixed - White & Asian	3	0.6%
Black and Black British - Caribbean	7	1.4%
Black and Black British - African	2	0.4%
Black and Black British - Any other black background	0	0.0%
Mixed - White & Black Caribbean	9	1.7%
Mixed - White & Black African	2	0.4%
Mixed - Any other mixed background	3	0.6%
Chinese	0	0.0%
Other	0	0.0%
Prefer not to specify	7	1.4%
Total	517	100.0%

Percentage successful
7.7%
7.3%
7.1%
2.4%
0.0%
3.6%
0.0%
4.6%
3.3%
7.4%
0.0%
4.6%
8.3%
8.3%
0.0%
0.0%
21.9%
7.2%

Gender and Ethnicity - Numbers

Gender	White British	Black or Minority Ethnic	Prefer not to Specify	Total
Female	615	93	3	711
Male	5466	998	29	6493
Transgender	3	3	0	6
Total	6084	1094	32	7210

Gender and Ethnicity – Numbers

Gender	White British	Black or Minority Ethnic	Prefer not to Specify	Total
Female	53	5	0	58
Male	415	37	7	459
Transgender	0	0	0	0
Total	468	42	7	517

Gender and Ethnicity - Percentages

Gender	White British	Black or Minority Ethnic	Prefer not to Specify	Total
Female	10.1%	8.5%	9.4%	9.9%
Male	89.8%	91.2%	90.6%	90.1%
Transgender	0.0%	0.3%	0.0%	0.1%
Total	100.0%	100.0%	100.0%	100.0%

Age Group	Total	Percentage
18 or less	161	2.2%
18 to 24	3196	44.3%
25 to 29	2253	31.2%
30 to 34	920	12.8%
35 to 39	345	4.8%
40 to 44	171	2.4%
45 to 49	60	0.8%
50 to 54	12	0.2%
55+	3	0.0%
Not Known	89	1.2%
Total	7210	100.0%

Gender and Ethnicity - Average Age

Gender	White British	Black or Minority Ethnic	Prefer not to Specify	Total
Female	26.4	26.2	22.3	26.3
Male	25.7	26.5	25.9	25.8
Transgender	28.5	29.0		28.8
Total	25.7	26.5	25.6	25.8

Gender and Ethnicity – Percentages

Gender	White British	Black or Minority Ethnic	Prefer not to Specify	Total
Female	11.3%	11.9%	0.0%	11.2%
Male	88.7%	88.1%	100.0%	88.8%
Transgender	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

Age Group	Total	Percentage	Percentage successful
18 or less	7	1.4%	4.3%
18 to 24	221	42.7%	6.9%
25 to 29	164	31.7%	7.3%
30 to 34	74	14.3%	8.0%
35 to 39	28	5.4%	8.1%
40 to 44	15	2.9%	8.8%
45 to 49	3	0.6%	5.0%
50 to 54	2	0.4%	16.7%
55+	3	0.6%	100.0%
Not Known	0	0.0%	0.0%
Total	517	100.0%	7.2%

Gender and Ethnicity - Average Age

Gender	White British	Black or Minority Ethnic	Prefer not to Specify	Total
Female	28.5	25.4		28.2
Male	26.1	26.9	25.0	26.1
Transgender				
Total	26.3	26.7	25.0	26.4

Sexual Orientation	Total	Percentage
Bisexual	134	1.9%
Heterosexual	6648	92.2%
Gay/Lesbian	215	3.0%
Prefer not to say	213	3.0%
Total	7210	100.0%

Sexual Orientation	Total	Percentage
Bisexual	10	1.9%
Heterosexual	471	91.1%
Gay/Lesbian	20	3.9%
Prefer not to say	16	3.1%
Total	517	100.0%

Percentage successful
7.5%
7.1%
9.3%
7.5%
7.2%

Marital Status	Total	Percentage
Living Together	1404	19.5%
Civil Partnership	76	1.1%
Divorced	65	0.9%
Domestic Partner	192	2.7%
Married	1094	15.2%
Separated	54	0.7%
Single	4258	59.1%
Widowed	1	0.0%
Prefer not to say	66	0.9%
Total	7210	100%

Marital Status	Total	Percentage
Living Together	115	22.2%
Civil Partnership	3	0.6%
Divorced	6	1.2%
Domestic Partner	7	1.4%
Married	83	16.1%
Separated	1	0.2%
Single	296	57.3%
Widowed	0	0.0%
Prefer not to say	6	1.2%
Total	517	100.0%

Percentage successful
8.2%
3.9%
9.2%
3.6%
7.6%
1.9%
7.0%
0.0%
9.1%
7.2%

Religious Belief/Faith	Total	Percentage
Christian (Catholic, Protestant, Church of England, etc.)	3580	49.7%
Buddhist	27	0.4%
Hindu	28	0.4%
Humanist	8	0.1%
Jewish	8	0.1%
Muslim	184	2.6%
Pagan	14	0.2%
Sikh	120	1.7%

Religious Belief/Faith	Total	Percentage
Christian (Catholic, Protestant, Church of England, etc.)	276	53.4%
Buddhist	0	0.0%
Hindu	1	0.2%
Humanist	0	0.0%
Jewish	0	0.0%
Muslim	4	0.8%
Pagan	0	0.0%
Sikh	2	0.4%

Percentage successful
7.7%
0.0%
3.6%
0.0%
0.0%
2.2%
0.0%
1.7%

None	3066	42.5%
Prefer not to say	152	2.1%
Other	22	0.3%
Not Known	1	0.0%
Total	7210	100.0%

None	215	41.6%
Prefer not to say	16	3.1%
Other	3	0.6%
Not Known	0	0.0%
Total	517	100.0%

7.0%
10.5%
13.6%
0.0%
7.2%

Disability	Total	Percentage
Yes	91	1.3%
No	7092	98.4%
Prefer not to say	27	0.4%
Total	7210	100.0%

Disability	Total	Percentage
Yes	5	1.0%
No	508	98.3%
Prefer not to say	4	0.8%
Total	517	100%

Percentage successful
5.5%
7.2%
14.8%
7.2%

Special Assessment Requirements	Total	Percentage
Yes	44	0.6%
No	7151	99.4%
Total	7195	100.0%

Special Assessment Requirements	Total	Percentage
Yes	1	0.2%
No	516	99.8%
Total	517	100%

Percentage successful
2.3%
7.2%
7.2%

Asthma	Total	Percentage
Yes	550	7.6%
No	6645	92.4%
Total	7195	100.0%

Asthma	Total	Percentage
Yes	33	6.4%
No	484	93.6%
Total	517	100%

Percentage successful
6.0%
7.3%
7.2%

Epilepsy	Total	Percentage
Yes	25	0.3%
No	7170	99.7%
Total	7195	100.0%

Epilepsy	Total	Percentage
Yes	2	0.4%
No	515	99.6%
Total	517	100%

Percentage successful
8.0%
7.2%
7.2%

Diabetes	Total	Percentage
Yes	43	0.6%

Diabetes	Total	Percentage
Yes	2	0.4%

Percentage successful
4.7%

No	7152	99.4%
Total	7195	100.0%

No	515	99.6%
Total	517	100%

7.2%
7.2%

Convictions	Total	Percentage
Yes	96	1.3%
No	7099	98.7%
Total	7195	100.0%

Convictions	Total	Percentage
Yes	4	0.8%
No	513	99.2%
Total	517	100%

Percentage successful
4.2%
7.2%
7.2%

Recruitment Process The Written Tests July 2013

Workforce Planning

The candidates

599 candidates were invited to the written tests. Of whom:

- 517 applied through the online process
- 49 were wholetime firefighters who applied through the online process
- 10 were wholetime firefighters who applied through the post
- 23 were from Wolverhampton University

61 of the candidates (10%) were female, 85% were White British, 8% were Black or Minority Ethnic³ and 7% were of unknown ethnicity. The average age of the candidates was 26.8 the youngest candidate was 17 and the oldest was 52.

Did not attend

121 (20%) of the candidates did not attend - 33 withdrew before the test, 87 did not attend, and 1 person had entered fictitious details.

All of the candidates from Wolverhampton University, 81% of those who applied on line and 60% of wholetime firefighters attended.

31% of female candidates and 19% of male candidates did not attend.

The three tests

478 candidates attended the tests and had to complete three written tests:

- Situational Awareness and Problem Solving
- Understanding Information
- Working with Numbers

³ 22 Black or Black British, 10 Asian or Asian British, 12 Other white, and 3 Other

The pass mark for each test was 75%.

285 (60%) of the candidates who sat the tests passed all three tests.

Candidates found the Situational Awareness test the most difficult:

155 (32%) failed the Situational Awareness test

64 (13%) failed Understanding Information - 29% of females and 12% of males.

31 (7%) failed Working with Numbers - Black and Minority Ethnic candidates were more likely than White British candidates to fail this test – 5% of White British candidates and 18% of Black or Minority Ethnic candidates.

PQAs

All candidates then completed three Personal Qualities and Attributes (PQAs) written questions:

- Working with people of different backgrounds, ages or gender
- Building working relationships and working as a supportive team member
- Being open to change and actively supporting it

The PQAs of the 285 candidates who had passed the three tests were marked, candidates had to score more than 1 on each of the questions in order to pass the PQAs. 88% of females and 70% of males passed the PQAs.

The successful candidates

204 candidates (72%) passed the PQAs, 7 of whom were Wolverhampton students and 14 of whom were current wholetime firefighters. 190 successful candidates (all apart from the wholetime firefighters) were invited to the practical tests.

22 (11%) of the successful candidates were female, 87% of successful candidates were White British, 6% were Black or Minority Ethnic⁴ and 7% were of unknown ethnicity.

The average age of the candidates was 26.8 the youngest candidate was 17 and the oldest was 46.

⁴ 4 Black or Black British, 3 Asian or Asian British, 3 Other white, and 2 Other

Nine candidates informed us that they had dyslexia and they were given more time on the tests, two of these candidates were successful.

One of the successful candidates has a disability and requires special assessment requirements. 16 have asthma and 2 have convictions.

Recruitment Process The Practical Tests July 2013

Workforce Planning

The Candidates

204 candidates passed the Written Tests, 7 of whom were Wolverhampton University students and 14 of whom were current wholetime firefighters. 190 successful candidates (all apart from the wholetime firefighters) were invited to the practical tests.

21 (11%) of the candidates invited to the practical tests were female, 87% White British, 6% were Black or Minority Ethnic⁵ and 6% were of unknown ethnicity.

The average age of the candidates was 26.6 the youngest candidate was 17 and the oldest was 45.

Did not attend

Five (2.6%) of the candidates did not attend - 3 withdrew before the test and 2 did not attend. Two were female and three were male, all were White British.

The Practical tests

185 candidates attended the tests and had to complete five practical tests:

- Ladder extension
- Ladder climb
- Grip test
- Confined spaces
- Equipment Carry

⁵ 4 Black or Black British, 3 Asian or Asian British, 3 Other white, and 2 Other

Candidates found the Confined spaces test the most difficult:

- 11 (6%) failed the ladder extension.
- 24 (13%) failed the ladder climb.
- 4 (2%) failed the grip test.
- 90 (49%) failed the confined spaces test.
- 13 (7%) failed the equipment carry.

Of the five tests:

1 candidate passed none of the tests

3 passed 1 test

4 passed 2 tests

18 passed 3 tests

77 passed 4 tests

82 (44%) passed all five tests and therefore passed the practical tests.

The successful candidates

The 82 candidates who passed all five tests (4 of which were Wolverhampton University students) were invited to interview along with the 14 current wholetime Firefighters.

7 (9%) of the 82 successful candidates were female, 82% of successful candidates were White British, 12% (N = 10) were Black or Minority Ethnic⁶ and 6% were of unknown ethnicity.

The average age of the candidates was 26.7 the youngest candidate was 17 and the oldest was 43.

⁶ 3 Black or Black British, 3 Asian or Asian British, 2 Other white, and 2 Other

Recruitment Process The Interviews August 2013

Workforce Planning

The candidates

The 82 candidates who passed all five practical tests were invited to interview along with the 14 current wholetime firefighters.

8 (8%) of the 96 candidates invited for interview were female, 88% were White British, 12% (N = 11) were Black or Minority Ethnic⁷ and one preferred not to state their ethnicity.

The average age of the candidates was 27 the youngest candidate was 18 and the oldest was 46.

Twelve of the successful candidates had asthma and two had dyslexia.

Four of the Wolverhampton students passed the practical tests.

Did not attend

One of the candidates had to withdraw because he did not meet the required standard of eyesight.

The three tests

95 candidates attended the interview and were scored in seven areas:

- Briefing
- Role of a firefighter
- Knowledge of objectives
- Commitment to excellence
- Commitment to development
- Commitment to equality and diversity
- Effective communication

The seven areas were each given a score from 1 to 4, so the maximum total score available was 28.

⁷ 4 Black or Black British, 3 Asian or Asian British, 2 Other white, and 2 Other

The lowest total score obtained was 8.5 and the highest was 26.5.

The pass mark was 17.

There were no gender, ethnic or age differences in the scores of each of the sections or in the total score.

The successful candidates

The 55 candidates who scored 17 or more in the interviews passed this stage and were invited for a medical.

Six (11%) of the 55 successful candidates were female, 84% of successful candidates were White British, 15% (N = 8) were Black or Minority Ethnic⁸ and one preferred not to state their ethnicity.

The average age of the successful candidates was 27, the youngest was 19 and the oldest 46.

Seven of the successful candidates have asthma.

Eight of the successful candidates were current wholetime firefighters at other Brigades (2 from Staffordshire, 2 from West Yorkshire and 1 each from Cheshire, Derbyshire, London and Surrey).

Two of the Wolverhampton students were successful.

⁸ 2 Black or Black British, 2 Asian or Asian British, 2 Other white, and 2 Other

The 2013 Recruitment Process

Where did the applicants live?

Workforce Planning

7539 applicants started the online application⁹, 55% of these applicants came from the West Midlands and 20% from surrounding areas. Appendix A lists the home location of all applicants.

517 applicants passed the online test in Phase 1, 42% of whom lived in the West Midlands and 25% in surrounding areas (Appendix B).

247 applicants passed the online test in Phase 2, 45% lived in the West Midlands and 26% in surrounding areas (Appendix C).

118 applicants stated online that they were wholetime firefighters, of whom 68 told us their Brigade and so were included in the process. Their home locations are shown in Appendix D.

55 applicants were successful, 27% of these were from the West Midlands, and 35% from surrounding areas (Appendix E).

There was no difference in the gender mix of those applying from inside and outside the area – 10% of all applicants were female. There was a difference in the ethnic mix, 78% of local applicants were White British, compared to 92% of applicants from other areas. Local applicants were the most likely to be Black (9.6% of local applicants and 2.3% of other applicants) or Asian (8.3% of local applicants and 1.4% of other applicants).

From within the West Midlands the highest number of applicants were from Birmingham, this is as expected as Birmingham has the highest working population. The fewest applicants per head of population were from Coventry, and the most applicants per head of population were from Dudley and Sandwell (Table 1).

Table 1: The number of applicants and the working population in each District of the West Midlands

⁹ The paper applications from Staffordshire Firefighters and from Wolverhampton College are not included in this analysis.

District	Number of applicants	All Persons aged 16-64	Applicants per 1,000 population
Birmingham	1527	696,500	2.2
Coventry	269	211,700	1.3
Dudley	606	193,900	3.1
Sandwell	590	196,200	3.0
Solihull	297	126,700	2.3
Walsall	413	167,300	2.5
Wolverhampton	335	159,600	2.1
Not known	118		
Total	4155	1,751,900	2.4

Mosaic is a geo-demographic segmentation system, it classifies all households in the UK into 15 groups and 69 types using census data, lifestyle information and credit activity. The Mosaic types of the applicants' home address are shown below (Table 2). As the average age of applicants was 25.8 years I suspect that the Mosaic group is often that of their parents' residence.

Table 2: The Mosaic group of the applicants' home address

Mosaic Group	Number of applicants	Households	Applicants per 1,000 population
Residents with sufficient incomes in right-to-buy social housing	695	129,236	5.4
Middle income families living in moderate suburban semis	706	148,615	4.8
Couples with young children in comfortable modern housing	125	27,840	4.5
Residents of small and mid-sized towns with strong local roots	173	40,019	4.3
Owner occupiers in older style housing in ex-industrial areas	509	119,213	4.3
Couples and young singles in small modern starter homes	216	53,827	4.0
Successful professionals living in suburban or semi rural homes	198	50,079	4.0
Families in low-rise social housing with high levels of benefit need	460	118,737	3.9
Lower income workers in urban terraces in often diverse areas	416	145,513	2.9
Young people renting flats in high density social housing	145	62,433	2.3
Young, well - educated city dwellers	134	60,900	2.2
Elderly people reliant on state support	144	66,207	2.2
Active elderly people living in pleasant retirement locations	50	27,464	1.8
Wealthy people living in the most sought after neighbourhoods	36	28,475	1.3
Residents of isolated rural communities	1	1,354	0.7
Not known	147		

Appendix A. The home location of all applicants

Area	Number of applicants	Percentage of applicants
WMFS	4155	55.1%
Staffordshire	613	8.1%
Hereford and Worcester	356	4.7%
Warwickshire	318	4.2%
Wales	238	3.2%
Shropshire	200	2.7%
Leicestershire	107	1.4%
Derbyshire	83	1.1%
Lincolnshire	65	0.9%
Greater Manchester	63	0.8%
Oxfordshire	61	0.8%
Gloucestershire	58	0.8%
Northamptonshire	55	0.7%
Devon	49	0.6%
Lancashire	44	0.6%
Nottinghamshire	42	0.6%
Cheshire	40	0.5%
Hampshire	38	0.5%
London	38	0.5%
Somerset	37	0.5%
Buckinghamshire	33	0.4%
West Yorkshire	33	0.4%
Merseyside	31	0.4%
Scotland	31	0.4%
South Yorkshire	29	0.4%
North Yorkshire	28	0.4%
Kent	26	0.3%
Avon	23	0.3%
Berkshire	22	0.3%
Cambridgeshire	21	0.3%
Bedfordshire	20	0.3%
Tyne and Wear	20	0.3%
Wiltshire	19	0.3%
Cornwall	17	0.2%
Suffolk	16	0.2%
Durham	15	0.2%
Essex	15	0.2%
Norfolk	15	0.2%
Northumberland	15	0.2%
East Sussex	13	0.2%
Hertfordshire	12	0.2%
Humberside	12	0.2%
Dorset	11	0.1%
Surrey	10	0.1%
North Ireland	9	0.1%
Cumbria	8	0.1%
West Sussex	8	0.1%
Cleveland	3	0.0%
Isle of Wight	3	0.0%
Ireland	2	0.0%
USA	2	0.0%
Malta	1	0.0%
No address given	356	4.7%
Total	7539	100.0%

Appendix B. The home location of the 517 Phase 1 successful applicants

Area	Number of applicants	Percentage of applicants
WMFS	218	42.2%
Staffordshire	60	11.6%
Wales	35	6.8%
Warwickshire	28	5.4%
Hereford and Worcester	26	5.0%
Shropshire	17	3.3%
Leicestershire	10	1.9%
Derbyshire	9	1.7%
Cheshire	9	1.7%
Gloucestershire	8	1.5%
Oxfordshire	7	1.4%
Nottinghamshire	7	1.4%
Northamptonshire	7	1.4%
Somerset	6	1.2%
Lancashire	6	1.2%
Greater Manchester	5	1.0%
Berkshire	5	1.0%
Kent	4	0.8%
Hertfordshire	4	0.8%
Devon	4	0.8%
Avon	4	0.8%
Wiltshire	3	0.6%
Lincolnshire	3	0.6%
Hampshire	3	0.6%
East Sussex	3	0.6%
Bedfordshire	3	0.6%
South Yorkshire	2	0.4%
Scotland	2	0.4%
North Yorkshire	2	0.4%
London	2	0.4%
Essex	2	0.4%
Dorset	2	0.4%
Cambridgeshire	2	0.4%
Buckinghamshire	2	0.4%
Tyne and Wear	1	0.2%
Suffolk	1	0.2%
Humberside	1	0.2%
Durham	1	0.2%
Cumbria	1	0.2%
Cornwall	1	0.2%
Cleveland	1	0.2%
Total	517	100.0%

Appendix C. The home location of the 247 Phase 2 successful applicants

Area	Number of applicants	Percentage of applicants
WMFS	110	44.5%
Hereford and Worcester	22	8.9%
Staffordshire	17	6.9%
Warwickshire	15	6.1%
Shropshire	11	4.5%
Wales	10	4.0%
Leicestershire	8	3.2%
Derbyshire	5	2.0%
Devon	5	2.0%
Northamptonshire	5	2.0%
Gloucestershire	3	1.2%
Lancashire	3	1.2%
London	3	1.2%
Oxfordshire	3	1.2%
Somerset	3	1.2%
Bedfordshire	2	0.8%
Cheshire	2	0.8%
Hampshire	2	0.8%
Lincolnshire	2	0.8%
Nottinghamshire	2	0.8%
Suffolk	2	0.8%
Wiltshire	2	0.8%
Buckinghamshire	1	0.4%
Cleveland	1	0.4%
Cornwall	1	0.4%
Cumbria	1	0.4%
East Sussex	1	0.4%
North Yorkshire	1	0.4%
Northumberland	1	0.4%
South Yorkshire	1	0.4%
Surrey	1	0.4%
West Yorkshire	1	0.4%
Total	247	100.0%

Appendix D. The home location of the 68 online firefighter applicants

Area	Number of applicants	Percentage of applicants
Staffordshire	15	22.1%
WMFS	12	17.6%
Devon	7	10.3%
Hereford and Worcester	4	5.9%
Avon	2	2.9%
Hampshire	2	2.9%
Merseyside	2	2.9%
North Yorkshire	2	2.9%
Northumberland	2	2.9%
Shropshire	2	2.9%
Warwickshire	2	2.9%
Berkshire	1	1.5%
Derbyshire	1	1.5%
East Sussex	1	1.5%
Leicestershire	1	1.5%
Lincolnshire	1	1.5%
London	1	1.5%
Northamptonshire	1	1.5%
Oxfordshire	1	1.5%
Scotland	1	1.5%
South Yorkshire	1	1.5%
Wales	1	1.5%
West Sussex	1	1.5%
West Yorkshire	1	1.5%
Wiltshire	1	1.5%
No Address	2	2.9%
Total	68	100.0%

Appendix E. The home location of the 55 successful applicants

Area	Number of applicants	Percentage of applicants
WMFS*	15	27.3%
Staffordshire [§]	9	16.4%
Shropshire	5	9.1%
Hampshire	3	5.5%
Nottinghamshire	3	5.5%
Wales	3	5.5%
Warwickshire	3	5.5%
Buckinghamshire	2	3.6%
Hereford and Worcester	2	3.6%
Bedfordshire	1	1.8%
Berkshire	1	1.8%
Derbyshire	1	1.8%
Lancashire	1	1.8%
London	1	1.8%
Scotland	1	1.8%
Somerset	1	1.8%
South Yorkshire	1	1.8%
West Yorkshire	1	1.8%
Wiltshire	1	1.8%
Total	55	100.0%

**2013 Recruitment
Phase II
Jan & Feb 2014**

Workforce Planning

The candidates

789 candidates were included in phase II of the recruitment campaign:

- 31% of these candidates (247) had only completed the online application.
- 16% (125) had been invited to Phase I but had not attended and
- 53% (417) attended Phase I but had not been successful.

Twenty one of the candidates were Wolverhampton students and 37 were current wholetime firefighters.

Eight applicants declared that they had a disability, of whom three declared special assessment requirements. 44 declared they had asthma, two epilepsy and three diabetes.

Seven declared that they had convictions.

Online application

Selection criteria

The online application contained three tests - 'Understanding Information', 'Situational Awareness and Problem Solving Assessment' and 'Working with Numbers Assessment'; and a Scenario assessment.

The selection criteria for Phase I was all the questions correct or only one wrong (100 or 96%), in the three tests, and 89% or more on the scenario assessment.

The selection criteria for Phase II was two questions wrong (92%), in the three tests, and 94% or more on the scenario assessment.

Demographic profile

10% (25) of the Phase II online candidates were female, and 12% (29) were from Black or minority ethnic communities. The average age was 27, the youngest was 18 and the oldest 50.

There were no differences in the gender, ethnicity or age profile of Phase I and Phase II online candidates.

Did not attend Phase I

125 candidates had been invited to Phase I of recruitment but did not attend, and were invited back in Phase II¹⁰. 121 candidates had not attended the written tests and four had not attended the practical tests.

16% (20) of these candidates were female, and 10% (N=12) were from Black or minority ethnic communities. Their average age was 29, ranging from 18 to 53.

Were not successful in Phase 1

417 candidates had not been successful in Phase 1:

- 274 failed the written test
- 103 failed the practical test and
- 40 failed the interview

Eight percent (34) of these candidates were female, 7% (27) were from Black or minority ethnic communities. The average age was 27, ranging from 18 to 46.

The Written Tests

The 789 candidates were emailed to invite them to express an interest in being involved in Phase II of the 2013 recruitment campaign. Two thirds of the candidates replied positively. Those who did not attend Phase I were the least likely to respond:

	Interested?		
	Yes	No	No response
Online	68.8% (170)	4.5% (11)	26.7% (66)
Did not attend Phase I	29.6% (37)	6.4% (8)	64.0% (80)
Failed Phase I Written	75.9% (208)	2.2% (6)	21.9% (60)
Failed Phase I Practical	73.8% (76)	2.9% (3)	23.3% (24)
Failed Phase I Interview	82.5% (33)	5.0% (2)	12.5% (5)
Total	66.4% (524)	3.8% (30)	29.8% (235)

The 524 candidates who responded positively were invited to attend the written tests.

¹⁰ One candidate who failed the eyesight test and one who was pregnant were not invited back for Phase II.

Eight percent (44) of these candidates were female, 87% (458) were White British, 8% (41) were Black or Minority Ethnic¹¹ and 5% (25) were of unknown ethnicity. The average age of the candidates was 27.2 the youngest candidate was 18 and the oldest was 49.

Did not attend

Seventeen percent (89) of the candidates did not attend. This was similar to the 20% of candidates who did not attend the Phase I tests.

Those that did not attend the written test in Phase I were the least likely to attend the written test in Phase II. There were no gender, ethnic or age differences between those who did attend and those who did not.

The three tests

435 candidates attended the tests and had to complete three written tests:

- Situational Awareness and Problem Solving
- Understanding Information
- Working with Numbers

The pass mark for each test was 75% (the same pass mark as in Phase I).

244 (56%) of the candidates who sat the tests passed all three tests. This is a similar figure to Phase I when 60% of candidates passed.

Candidates found the Situational Awareness test the most difficult: 163 (38%) failed the Situational Awareness test. Black and Minority Ethnic candidates were more likely than White British candidates to fail this test – 36% of White British candidates and 60% of Black or Minority Ethnic candidates failed. Younger candidates were the most likely to fail the test. However, in Phase I no such differences were found, therefore these results should be treated with caution.

43 (10%) failed Understanding Information. In Phase I females were more likely than males to pass this test, in Phase II there was no such relationship.

24 (6%) failed Working with Numbers. Black and Minority Ethnic candidates were more likely than White British candidates to fail this test – 4% of White British candidates and 29% of Black or Minority Ethnic candidates failed. Similar results were found in Phase I.

¹¹ 23 Black or Black British, 8 Asian or Asian British, 9 Other white, and 1 Other

PQAs

All candidates then completed three Personal Qualities and Attributes (PQAs) written questions:

- Working with people of different backgrounds, ages or gender
- Building working relationships and working as a supportive team member
- Being open to change and actively supporting it

The PQAs were marked to assess the candidates written communication skills. Four candidates (1%) failed the PQAs¹². This is much lower than in Phase I when 17% of candidates failed the PQAs.

The successful candidates

240 (55%) of the candidates who sat the tests passed all the written tests. This is higher than in Phase I when 42% of candidates passed all the written tests.

18 (8%) of the successful candidates were female; 89% (214) of successful candidates were White British, 4% (10) were Black or Minority Ethnic¹³ and 7% (16) were of unknown ethnicity.

Black and Minority Ethnic candidates were more likely than White British candidates to fail the written tests – 43% of White British candidates and 71% of Black or Minority Ethnic candidates failed. This was not observed in Phase I.

The average age of the successful candidates was 27.5 the youngest candidate was 18 and the oldest was 49.

Thirteen candidates informed us that they had dyslexia and they were given more time on the tests, three of these candidates did not attend, five were successful and 5 were not successful.

Twelve of the candidates who passed the tests were Wolverhampton students and 10 were current wholetime firefighters.

Two of the successful candidates declared a disability and special assessment requirements. 19 had asthma, 1 had diabetes.

1 candidate had a conviction.

¹² All were male, 3 were White British and 1 had an Ethnicity of Unknown.

¹³ 5 Black or Black British, 4 Asian or Asian British and 1 Other white.

The table below shows the entry route of the candidates, and the percentages who passed, and failed, the written test.

- Nearly half of those that failed the Written Tests in Phase 1 passed them in Phase II.
- 17% of those who passed the Written Tests but failed the Practical Tests in Phase I failed the Written Tests in Phase II.
- 15% of those who passed the Written and Practical Tests but failed the Interview in Phase I failed the Written Tests in Phase II.

	Passed the written test	Failed the written
Online	47.9% (70)	52.1% (76)
Did not attend Phase 1	45.0% (9)	55.0% (11)
Failed Phase I Written Tests	48.0% (86)	52.0% (93)
Failed Phase I Practical	82.8% (53)	17.2% (11)
Failed Phase I Interview	84.6% (22)	15.4% (4)
Total	55.2% (240)	44.8% (195)

The 86 candidates who failed the written tests in Phase I but passed them in Phase II most commonly failed on the Situational Awareness Tests and the PQAs in Phase I:

Phase I results:

- Situational Awareness and Problem Solving - 39 failed
- Understanding Information – 12 failed
- Working with Numbers – 3 failed
- PQAs – 39 failed

The Practical Tests

230 of the successful candidates (all apart from the 10 wholetime firefighters) were invited to the practical tests.

18 (8%) of the candidates invited to the practical tests were female, 90% (207) were White British, 4% (9) Black or Minority Ethnic¹⁴ and 6% (14) were of unknown ethnicity.

The average age of the candidates was 27 the youngest candidate was 18 and the oldest was 49.

Two of the successful candidates had a disability and required special assessment requirements. 18 candidates had asthma and 1 had diabetes.

One of the candidates had a conviction.

¹⁴ 4 Black or Black British, 4 Asian or Asian British and 1 Other White.

Did not attend

Eleven (5%) of the candidates did not attend. Two were female, all were White British.

The tests

219 candidates attended the tests and had to complete five practical tests:

- Ladder Extension
- Ladder Climb
- Grip Test
- Confined Space Test
- Equipment Carry

Candidates found the Ladder Climb the most difficult:

- 4 candidates (2%) failed the Ladder Extension (2 females and 2 males, all White British).
- 25 (11%) failed the ladder climb. There were no gender or ethnic differences in those that passed or failed the ladder climb, but those who passed tended to be older¹⁵.
- None of the candidates failed the Grip Test.
- 5 (2%) failed the Confined Space Test. All were male, 3 were White British, 1 Black or Minority Ethnic and 1 unknown ethnicity.
- 8 (4%) failed the Equipment Carry. All of the candidates who failed this test were female (8 White British and 1 Black or Minority Ethnic).

Of the five tests:

6 (3%) candidates passed 3 tests

30 (14%) passed 4 tests

and 183 (83%) passed all five tests and therefore passed the practical tests.

Females were the least likely to pass the practical tests – half of the women (8) passed, compared to 86% (174) of the men. There was no difference in the pass rate of different ethnicities and different ages. These are different results than found in Phase I where Black and minority ethnic candidates were the most likely to pass the tests.

¹⁵ Average age of those that failed the Ladder Climb = 24.3
Average age of those that passed the Ladder Climb = 27.7

The successful candidates

Eight (4%) of the 183 successful candidates were female; 90% (164) of successful candidates were White British, 3% (N = 6) were Black or Minority Ethnic¹⁶ and 7% (13) were of unknown ethnicity.

The average age of the candidates was 27 the youngest candidate was 18 and the oldest was 45.

Eleven (92%) of the twelve Wolverhampton students who attended the practical tests passed them.

One of the successful candidates had a disability and required special assessment requirements. 15 candidates had asthma and 1 had diabetes.

One of the candidates had a conviction.

The table below shows the entry route of the candidates, and the percentage who passed, failed, and did not attend the Physical Tests. 89% of those who failed the Physical Tests in Phase 1 passed them in Phase II.

	Physical Test		
	Passed	Failed	Did not attend
Online	75.7%	20.0%	4.3% (3)
Did not attend Phase I	87.5% (7)	12.5%	0.0% (0)
Failed Phase I Written Tests	76.5%	18.5%	4.9% (4)
Failed Phase I Practical Tests	88.7%	5.7% (3)	5.7% (3)
Failed Phase I Interview	77.8%	16.7% (3)	5.6% (1)
Online	79.6%	15.7%	4.8% (11)

The 47 candidates who failed the practical tests in Phase I but passed them in Phase II most commonly failed on the Confined space test in Phase I:

Phase I results:

- Ladder Extension – 4 failed
- Ladder Climb – 10 failed
- Grip Test – 2 failed
- Confined Space Test – 39 failed
- Equipment Carry – 5 failed

¹⁶ 3 Black or Black British and 3 Asian or Asian British

The Interviews

The 183 candidates who passed all five tests were invited to interview along with the 10 current wholetime firefighters.

Eight (4%) of the candidates were female; 88% (171) were White British, 4% (N = 7) were Black or Minority Ethnic¹⁷ and 8% (15) were of unknown ethnicity.

The average age of the candidates was 28 the youngest candidate was 18 and the oldest was 45.

Eleven were Wolverhampton students.

One of the candidates had a disability and required special assessment requirements. 16 candidates had asthma and 1 had diabetes.

One of the candidates had a conviction.

Did not attend

Two candidates failed the sight requirements and so were not interviewed (both were White British males).

Three candidates did not attend (2 White British males, 1 Black British male).

The three tests

188 candidates attended the interview and were scored in seven areas:

- Briefing
- Role of a firefighter
- Knowledge of objectives
- Commitment to excellence
- Commitment to development
- Commitment to equality and diversity
- Effective communication

The seven areas were each given a score from 1 to 4, the maximum total score available was 28. The lowest total score obtained was 8 and the highest was 28.

¹⁷ 4 Black or Black British and 3 Asian or Asian British

The candidates were ranked by their total score at interview, and then by their score on the written tests. The top 53 candidates were selected, the pass mark was 24 on the interviews and 83 on the written test. This was much higher than the interview pass mark of 17 in Phase I.

Candidates scored the highest on Effective Communication, 75% scored 3 or 4. Knowledge of Objectives was the lowest scoring question, only 52% scored 3 or 4:

Percentage of candidates scoring 3 or 4:

Score	Briefing	Role of a Firefighter	Knowledge of Objectives	Commitment to excellence	Commitment to development	Commitment to Equality and Diversity	Effective Communication
3 or 4	70%	65%	52%	67%	61%	62%	75%

Seven (88%) of the eight female candidates passed the interview, as compared to 46 (26%) of the 180 male candidates. Female candidates scored higher than male candidates on the Briefing Exercise, Role of a Firefighter and Effective Communication.

Two (33%) of the six Black or Minority Ethnic candidates passed the interview, as compared to 42 (25%) of the 167 White British candidates. White British candidates scored higher than Black and Minority Ethnic candidates on the Briefing exercise and Commitment to Excellence.

Eighteen of the candidates who failed the interview in Phase I were interviewed in Phase II. All but one of these candidates scored higher in Phase II than in Phase I, and 7 passed the Phase II interview.

The successful candidates

The 53 candidates who passed the interview stage were invited for a medical.

Seven (13%) of the 53 successful candidates were female; 79% were White British, 4% (2) were Black or Minority Ethnic¹⁸ and 17% (9) had not stated their ethnicity.

The average age of the successful candidates was 27.6, the youngest was 19 and the oldest 39.

Three of the successful candidates had asthma.

¹⁸ 1 Black or Black British, 1 Asian or Asian British

Four of the successful candidates were current wholetime firefighters at other Brigades (from Berkshire, London, Staffordshire and Surrey). Ten of the candidates were retained firefighters. Five of the Wolverhampton students were successful.

A third of the successful candidates were from the West Midlands, and a third from surrounding Brigades:

Home address	Number of successful applicants	Percentage of applicants
WMFS	18	34.0%
Staffordshire	7	13.2%
Wales	5	9.4%
Hereford and Worcester	5	9.4%
Warwickshire	2	3.8%
Shropshire	2	3.8%
Lincolnshire	2	3.8%
Avon	1	1.9%
Lancashire	1	1.9%
Leicestershire	1	1.9%
Hertfordshire	1	1.9%
London	1	1.9%
Northumberland	1	1.9%
Durham	1	1.9%
Berkshire	1	1.9%
Suffolk	1	1.9%
Devon	1	1.9%
Gloucestershire	1	1.9%
Wiltshire	1	1.9%
Total	53	100.0%

Nine of the successful candidates had only completed the online application, 4 had been invited to Phase I of recruitment but did not attend and 40 had attended Phase I but had not been successful¹⁹.

¹⁹ 15 failed the Written Test, 18 the Physical Test and 7 the Interview.