NHS England

National Foundation Trainee Pharmacist Recruitment Outcome Report 2023 - 2024

Contents

Executive Summary

Health Education England coordinated a national scheme for recruitment to foundation pharmacist training programmes for the seventh time in October 2023.

There were 3899 training places available across all programmes, continuing the trend of a far greater number of available places within the Scheme than trainees to fill them.

A total of 2922 applicants applied for training programmes, 2429 of whom attended the assessments. At the end of the process, 99.5% (n=2385) of successful applicants had received a programme offer and 2213 of these final programme offers were accepted by applicants.

The scheme yielded a fill rate of 99.9% for NHS and 40.5% for community pharmacy programmes, and an overall fill rate of 56.8% to all programmes. The maximum overall fill rate achievable had all successful candidates been allocated places would have been 61.5% due to the large number of places available in the scheme in 2023 in comparison to the number of applicants who could fill them.

Overview

This was the seventh year that Health Education England conducted an entirely centralised process for recruitment to foundation pharmacist training programmes for hospital and community pharmacy (optional for this sector).

This report provides information on applicants, applications, and outcomes of the 2023 Foundation National Recruitment Scheme (NRS). Applications are reported by various demographics, highlighting any identified trends.

Independent analysis undertaken by the Work Psychology Group examines fairness issues surrounding use of the SJT and Numeracy test and reports on any group differences in performance.

If you would like further information on the process of foundation pharmacy recruitment, please refer to the pharmacy recruitment web pages: https://www.lasepharmacy.hee.nhs.uk/national-recruitment

Programme availability

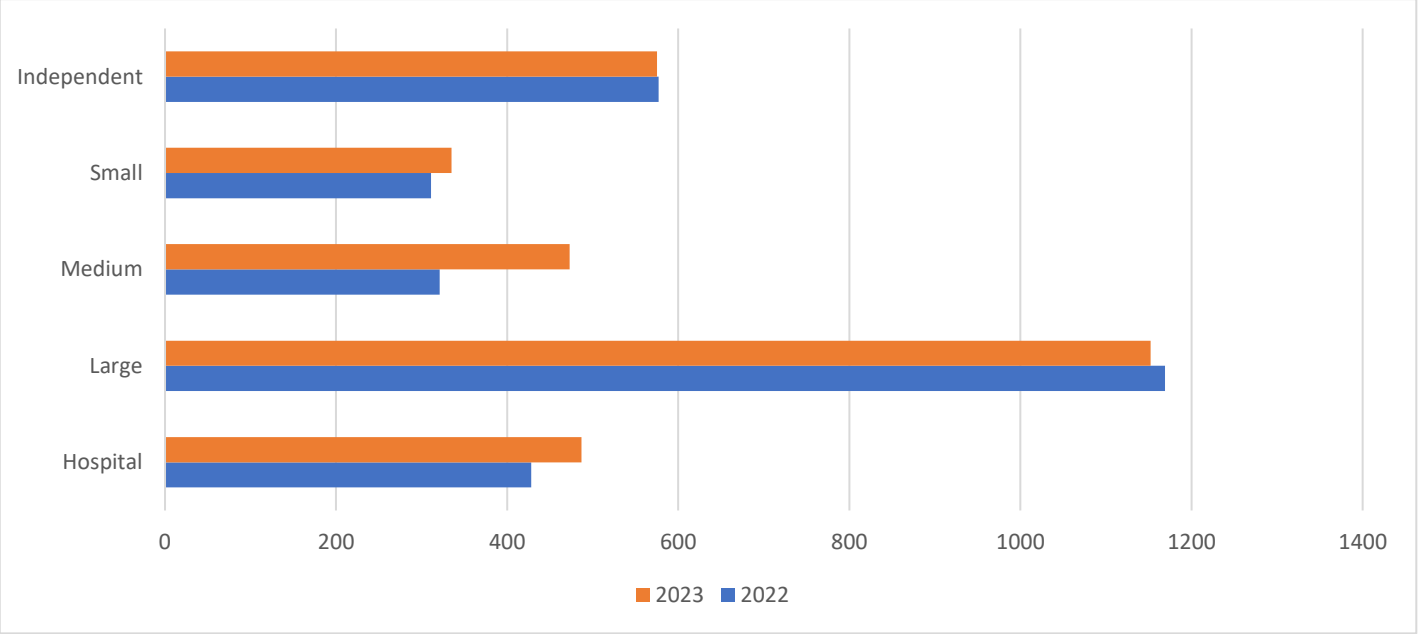
1. Employing organisations, programmes, and training places

1.1 The 2023 foundation trainee pharmacist National Recruitment Scheme listed 3022 programmes for applicants to choose from, a 7.7% increase from the previous year. In total 3899 training places were available across all programmes, a significantly greater number than the anticipated number of scheme applicants.

1.2 16.1% (n=487) of programmes were within the NHS hospital sector, representing 27.4% (n=1069) of all available training places. This included n=112 places in Wales, in which all trainees are employed by the NHS in a multi-sector training programme. 38.1% (n=1152) of programmes were offered by large community pharmacy employers, 15.7% (n=473) by medium pharmacy employers, 11.1% (n=335) by small pharmacy employers and 19.0% (n=575) by independent pharmacy contractors.

1.3 There was a slight overall increase in the number of programmes offered through Oriel by community pharmacy employers, and a small increase in the number of programmes offered by hospital employers, compared with the previous year (Figure 1).

Figure 1: Year on year comparison of foundation training programme availability across sectors



1.4 Tables 1 and 2 below provide an overview of the numbers of employing organisations, programmes and training places available in the 2023 scheme, broken down by sector and geography.

Table 1: Programme Availability in the 2023 Foundation Pharmacist Recruitment Scheme

Sector	Number of Employing Organisations	Number of Programmes	Number of Training Places	Number of Tier 2 Sponsor Licences
NHS Hospital	165	487	1069	1060
Large Community Pharmacy (*Branches 200+)*	5	1152	1159	19
Medium Community Pharmacy (Branches *25-200*)	67	473	514	141
Small Community Pharmacy (Branches *6-25*)	97	335	410	148
Independent Community Pharmacy (Branches *1-6*)	472	575	747	125
TOTALS	**806**	**3022**	**3899**	**1493**

Table 2: Geographical Spread of Programmes (and Training Places), by Sector

HEE Pharmacy Region	HEE Local Area	NHS Hospital	Large Community Pharmacy	Medium Community Pharmacy	Small Community Pharmacy	Independent Community Pharmacy
East of England	East of England	50 (95)	123 (123)	60 (64)	27 (33)	93 (127)
London	London	66 (239)	89 (92)	45 (45)	112 (114)	210 (277)
Midlands	East Midlands	17 (58)	87 (88)	51 (58)	23 (27)	29 (36)
	West Midlands	35 (92)	89 (89)	71 (77)	48 (65)	68 (85)
North	North East	19 (56)	97 (98)	21 (21)	0 (0)	12 (14)
	North West	38 (108)	151 (151)	67 (84)	57 (66)	40 (56)
	Yorkshire and the Humber	37 (68)	129 (129)	67 (69)	18 (20)	52 (66)
South East	KSS	44 (73)	103 (104)	18 (18)	14 (14)	27 (29)
	Thames Valley	11 (23)	43 (43)	41 (45)	0 (0)	9 (13)
	Wessex	17 (30)	56 (56)	9 (10)	12 (16)	2 (2)
South West	South West	72 (115)	185 (186)	23 (23)	24 (25)	33 (42)
Wales	Wales	81 (112)	0 (0)	0 (0)	0 (0)	0 (0)
	TOTALS	487 (1069)	1152 (1159)	473 (514)	335 (410)	575 (747)

2. Skilled Worker Visa Sponsorship

2.1 Skilled Worker Visa-sponsored training place availability in the community pharmacy sector increased to 433 places in 2023; 43.4% (n=131) more sponsored places in total than were available to applicants' requiring visas in 2022 (n=302).

3. Multi-Sector placements

3.1 Two hundred and seventy-nine collaborative organisations registered split-placement training programmes on Oriel in 2023. These included HEE funded multi-sector programmes such as the GP foundation pilot. Programmes were split between at least two sectors, including Hospital, Community Pharmacy, GP Practice and Clinical Commissioning Groups, and Health and Justice posts.

3.2 Six hundred and thirty multi-sector programmes were available in total, representing a total of 970 training places. Split training programme availability was generally evenly spread across the regions, with the fewest programmes found in Wessex (n=12) and the most available in Wales (n=81) and London (n=148)

Applicant outcomes

4. Applications

4.1 The number of applications received via the Oriel system was 2922 (not including incomplete applications), compared with 2585 received in the first year, 2592 in the second year, 2485 in the third year, 2524 in the fourth year, 2763 in the fifth year and 3055 in the sixth year.

4.2 8.5% (n=249) of applicants were either currently enrolled on an accredited Overseas Pharmacists' Assessment Programme (OSPAP) or were OSPAP graduates.

5. Longlisting

5.1 0.07% of total applicants (n=2) did not progress through the formal longlisting process due to not meeting basic eligibility criteria.

5.2 Thirty-two applicants subsequently withdrew their application, leaving 2888 applicants invited to assessment: a 4.4% decrease from the previous year.

6. Assessments

6.1 2429 applicants attended their assessments. Of these, 2398 (98.7%) were successful and subsequently received an overall ranking based on their test scores.

7. Applications and programme

7.1 For the purposes of this section, we refer to the following:

- Application – the number of applications progressed after longlisting (n=2920)
- Offer - applicants who received a foundation programme offer (n=2385), irrespective of whether this offer was accepted by the applicant.

7.2 Table 3 overleaf provides a breakdown of applicant gender, along with data pertaining to successful applicants and programme offers received by these two groups.

Table 3: Applications and programme offer by gender.

Group	Percentage of applications	Percentage of successful applicants	Percentage of offers made	Percentage of offers accepted
Male	27.4%	26.6%	26.5%	26.2%
Female	70.5%	71.6%	71.6%	71.9%
Not disclosed	2.1%	1.8%	1.9%	1.9%
Totals	100.0%	100.0%	100.0%	100.0%

7.3 Table 4 below provides a breakdown of applications received, along with data pertaining to the percentage of successful applicants and programme offers received, for each of the age categories.

*Table 4: Applications and programme offer by age group**

Group	Percentage of applications	Percentage of successful applicants	Percentage of offers made	Percentage of offers accepted
19-24 years	81.1%	82.2%	82.3%	82.2%
25-29 years	8.9%	8.1%	8.1%	8.1%
30–34 years	3.3%	3.0%	3.0%	3.0%
35-39 years	2.5%	2.7%	2.6%	2.7%
40-44 years	1.5%	1.5%	1.5%	1.5%
45-49 years	0.5%	0.5%	0.5%	0.5%
50-54 years	0.2%	0.2%	0.2%	0.2%
55-64 years	0.0%	0.0%	0.0%	0.0%
Not disclosed	2.0%	1.8%	1.8%	1.8%
Totals	100%	100%	100%	100%

**Age at 01 September 2023*

Table 5 provides a breakdown of applications and offers by individual ethnic groups.

7.4 73.2% (n=2135) of applications were received from applicants of ‘Black, Asian and minority ethnic’ (BAME) origin and 21.9% (n=641) were received from applicants of ‘White’ origin. 4.9% of applicants (n=144) chose not to declare their ethnic origin.

Table 5: Applications and programme offers by ethnic group

Group	Percentage of Applications		Percentage of Successful Applicants		Percentage of Offers Made		Percentage of Offers Accepted	
White – British	13.8% (402)	19.0% (555)	15.3% (368)	21.0% (504)	15.4% (368)	21.1% (503)	15.7% (348)	20.9% (462)
White - Irish	1.1% (31)		1.2% (29)		1.2% (28)		1.0% (22)	
Any other white background	4.2% (122)		4.5% (107)		4.5% (107)		4.2% (92)	
Mixed White and Black Caribbean	0.3% (9)	4.1% (121)	0.3% (7)	4.2% (100)	0.3% (7)	4.2% (100)	0.3% (6)	4.2% (91)
Mixed White and Black African	0.9% (25)		0.8% (18)		0.8% (18)		0.8% (17)	
Mixed White and Asian	1.8% (52)		1.8% (43)		1.8% (43)		1.9% (41)	
Any other mixed background	1.2% (35)		1.3% (32)		1.3% (32)		1.2% (27)	
Asian or Asian British Indian	13.6% (397)	43.7% (1276)	13.9% (334)	42.3% (1015)	13.9% (332)	42.1% (1004)	13.8% (305)	41.7% (923)
Asian or Asian British Pakistani	15.5% (453)		14.9% (357)		14.8% (353)		14.8% (328)	
Asian or Asian British Bangladeshi	4.8% (141)		4.5% (109)		4.5% (107)		4.4% (98)	
Any other Asian background	9.8% (285)		9.0% (215)		8.9% (212)		8.7% (192)	
Black or Black British Caribbean	0.4% (11)	16.4% (479)	0.3% (8)	15.8% (379)	0.3% (8)	15.9% (378)	0.3% (6)	16.3% (361)
Black or Black British African	15.3% (448)		14.7% (353)		14.8% (352)		15.2% (338)	
Any other black background	0.7% (20)		0.8% (18)		0.8% (18)		0.8% (17)	
Chinese	3.8% (111)		3.8% (92)		3.9% (92)		4.0% (89)	
Any other ethnic group	8.0% (234)		7.9% (189)		7.9% (189)		8.0% (178)	
Not disclosed	4.9% (144)		5.0% (119)		4.9% (119)		4.9% (109)	
Totals	**100% (2920)**		**100% (2398)**		**100% (2385)**		**100% (2213)**	

8. Group Differences at a Test Level for SJT & Numeracy

8.1. Independent analysis undertaken by the Work Psychology Group examined fairness issues surrounding use of the SJT and Numeracy test. Group differences in performance between applicants were analysed on the basis of age, gender and ethnicity. Analyses were conducted after outliers (applicants with very low/high scores and / or missing data) had been removed (n=12).

8.2. Age

8.2.1 Pearson's correlations were conducted to examine the relationships between age and scores on the SJT and Numeracy test.

8.2.2 SJT: A medium significant negative correlation (Pearson's r) between age and SJT score was found (r=-.326, p<.001). This suggests that younger applicants typically performed slightly better than older applicants on the SJT.

8.2.3 Numeracy: A significant negative correlation (Pearson's r) between age and Numeracy score was found (r=-.228, p<.001). This suggests that younger applicants typically performed slightly better than older applicants on the Numeracy test.

8.3. Gender

8.3.1 Independent t-tests were conducted to examine whether there were significant differences in SJT and Numeracy test scores based on gender (Table 6).

8.3.2 SJT: A significant difference in performance on the SJT based on gender was found, although the effect size was small, indicating that females scored marginally higher than males (t (2086) = -7.265, p<.001, d = -.36).

8.3.3 Numeracy: There were no significant differences in performance on the Numeracy test based on gender (t (2086) = .707, p=ns, d = .04).

Table 6: Sex – Descriptive Statistics by Selection Method

		Female	Male
SJT	**N**	1517	571
	Mean	579.56	567.61
	Std. Deviation	33.08	34.67
Numeracy	**N**	1517	571
	Mean	8.17	8.23
	Std. Deviation	1.70	1.65

8.4. Ethnicity

8.4.1 Ethnic backgrounds included: ‘White’, ‘Asian’, ‘Black’, ‘Chinese’, ‘Mixed’ and ‘Other’. Applicants were also given the response option ‘Prefer not to say’, though these individuals were not included in the analysis. Analyses of variance (ANOVAs) were conducted to investigate whether there were significant differences on the SJT and Numeracy test scores dependent on ethnicity (Table 7).

8.4.2 SJT: Significant differences in performance between applicants of different ethnicity were found on the SJT ($F(5,2021)=35.149$, $p<.001$, $\eta^2=0.088$), indicating a moderate effect size. Applicants who identified as ‘White’ scored significantly higher than those in the ‘Asian’, ‘Black’, ‘Chinese’, ‘Mixed’ and ‘Other’ groups. Applicants who identified as ‘Chinese’ scored significantly higher than those who indicated that they were ‘Asian’ or ‘Black’.

8.4.3 Numeracy: Significant differences in performance between applicants of different ethnicity were found on the Numeracy test ($F(5,2021)=23.117$, $p<.001$, $\eta^2= 0.05$), indicating a small effect size. Applicants who identified as ‘Chinese’ scored significantly higher than ‘Asian’, ‘Black’, ‘Mixed’ and ‘Other’ applicants. Applicants who identified as ‘White’ scored significantly higher than those in the ‘Asian’, ‘Black’ and ‘Other’ groups. Applicants who identified as ‘Mixed’, and applicants who identified as ‘Asian’ scored significantly higher than those identifying as ‘Black’.

Table 7: Race - Descriptive Statistics by Selection Method

		White	Asian	Black	Chinese	Mixed	Other
SJT	**N**	461	886	341	87	89	163
	Mean	593.87	570.84	571.23	582.48	573.39	570.77
	Std. Deviation	28.37	35.42	30.68	24.99	38.42	31.16
Numeracy	**N**	461	886	341	87	89	163
	Mean	8.70	8.04	7.67	9.10	8.39	8.10
	Std. Deviation	1.33	1.78	1.71	1.09	1.51	1.77

8.5. Summary

- For both the SJT and Numeracy Test, younger applicants scored marginally higher than older applicants.

- For the SJT, females scored significantly higher than males, whilst for the Numeracy Test, males scored slightly higher than females. However, this difference in performance between females and males was not significant.

- For the SJT and Numeracy Test, differences in performance were seen based on applicant ethnicity. For the SJT, applicants who identified as 'White' performed better than 'Asian', 'Black', 'Chinese', 'Mixed' and 'Other' applicants. Applicants who identified as 'Chinese' scored significantly higher than those who identified as 'Asian' or 'Black'.

9. Differential Item Functioning (DIF)

9.1 One explanation for test level group differences is that SJT item content discriminates against applicant sub-groups, however the content development process aims to ensure that items are designed to avoid content that might discriminate (for example, avoiding the use of colloquial words/phrases) which might disadvantage some groups. Another explanation for group differences in performance is that real differences exist between groups of applicants due to differences in experience, attitudes, or differential self-selection.

DIF analysis was performed to identify whether individual items are differentially difficult for members of different groups (i.e. based on gender and ethnicity). DIF analysis considers whether the prediction of an item's score is improved by including the background grouping variable in a regression equation after total score has been entered. A positive result suggests that people with similar overall scores from different groups have different success rates on the item. However, because of the number of statistical tests involved, there is a danger that random differences may reach statistical significance (type 1 error). For this reason, positive results are treated as 'flags' for further investigation of items, rather than confirmation of difference or bias. Items exhibiting R-squared values with a negligible effect size, even where these differences are significant, are unlikely to indicate a meaningful difference in the performance between the groups. As such, only items exhibiting at least a small effect size are reported, as determined by an R-square change value of 0.01 or above (Cohen, 1988).

One item was flagged for gender differences (males performed better than females) at a test level for Paper A. One item was flagged for gender differences (females performed better than males) at a test level for Paper B. Four items were flagged for ethnicity differences (White performed better than BME for one item and BME performed better than White for three items) at a test level for Paper A. Four items were flagged for ethnicity differences (White performed better than BME for three items and BME performed better than White for one items) at a test level for Paper B.

Given most items were not flagged for gender or ethnicity differences, this suggests that group differences at a test level are not likely the result of the questions being more difficult for some groups. Therefore, it is recommended that other explanations of group differences are considered. The items that were flagged will be reviewed considering the results, to identify whether there appears to be any potential bias in the item content. A note will also be made in the item bank so that this can be taken into consideration in the placement of the item for any future use.

Differences in Performance Based on Date

9.2 Analysis of variance (ANOVA) were conducted to investigate whether performance differs on the SJT, and Numeracy test based on when applicants go through the assessment process. This was operationalised as whether assessments were completed at the beginning (21st September – 30th September), middle (1st October – 3rd October) or end (4th – 10th October) of the testing period. The sample size per testing window were: n=765 (31.49%) completed the test in Time One, n=869 (35.78%) completed the test in Time Two, and n=795 (32.73%) completed the test in Time Three. Analyses were conducted after outliers (those with very low/high scores and/or missing data) had been removed (n=12). Descriptive statistics are outlined in Table 8.

9.3 SJT: A significant difference in performance on the SJT based on the time point within the selection window it was completed was found ($F(2,2414)=11.725$, $p<.001$, $\eta^2 = 0.01$). Applicants who completed the SJT in Time 1 scored significantly higher than those who completed the SJT test in Time 2 and Time 3 ($p<.05$), although the effect size was small. No other comparisons between time points were significant.

9.4 Numeracy: No significant difference in performance on the Numeracy test was found based on the time point within the selection window it was completed ($F(2,2414)=2.731$, $p=.065$, $\eta^2 = 0.002$).

Table 8: SJT and Numerical assessment performance by date of assessment

Test	Descriptive	Time One 21/09 - 30/09	Time Two 01/10 – 03/10	Time Three 04/10 – 10/10
SJT	N	762	864	791
	Mean	581.52	576.25	573.47
	Standard Deviation	32.01	34.50	33.02
	Minimum	463.00	428.00	462.00
	Maximum	656.00	654.00	660.00
Numeracy	N	762	864	791
	Mean	8.28	8.24	8.09
	Standard Deviation	1.61	1.65	1.76
	Minimum	2	1	1
	Maximum	10	10	10

10. Applicants with Tier 4 Student Visas

10.1. International students in the main, require a Tier 4 visa to undertake their academic study in the UK. 9.2% (n=270) of longlisted applications were received from those who indicated their immigration status as requiring a Tier 4/student visa. These applicants would generally enter their training year either by applying for a Skilled Worker (formerly Tier 2) Visa (requiring employers to be registered as sponsors) or obtaining a training place via the Graduate Visa route of entry.

10.2. Following the selection process, 81.1% (n=219) of applicants with Tier 4 visas were deemed successful, amounting to 9.1% of all successful applicants.

10.3. Training place offers were made to 100% (n=219) of Tier 4 student visa applicants, a 2.9% increase in offers for this group from the previous year. This is largely due to there being a significantly greater number of available Skilled Worker Visa (SWV) places in the NRS than applicants to fill them and the option of the Graduate Visa route, affording a variety of training environments for applicants to select from. Any applicant wishing to utilise the Graduate Visa route of entry could select any training place within the NRS, as this route does not require employers to be registered as sponsors for overseas trainees.

10.4 Table 9 below provides a breakdown of places accepted by those applicants on Tier 4 student visas, displayed by employer type and nation.

Table 9: Tier 2 training places accepted by employer type and region

Region	Community Pharmacy	Hospital
England	93	97
Wales	0	10
Totals	93	107

11. Final programme offers

11.1. At the end of the process, 99.5% of successful applicants (n=2385) had received a programme offer. Of these, 98 offers were declined, 55 offers expired and 19 were accepted and then withdrawn. Overall, 92.8% (n=2213) of final programme offers were accepted by applicants.

11.2. 0.3% (n=7) of successful applicants were left without a foundation programme offer at the end of the process, five more than the previous year. These applicants did not achieve a ranking high enough to gain an offer for any of their preferenced programmes. This normally occurs in instances where applicants preferenced very few programmes.

Employer outcomes

12. Fill-rates

12.1. At the end of the recruitment process, 99.9% of available NHS Hospital training places were filled and 40.5% of community pharmacy training places.

12.2. The fill-rate overall was 56.8%. As there were a greater number of places in the NRS than applicants to fill them, the maximum fill rate had all trainees been allocated a place would have been 61.5%.

12.3. Table 10 below provides a breakdown of the fill-rate, by number of training places available within each sector.

12.4. The GP foundation pilot, which placed foundation trainee pharmacists into GP rotations, achieved an 85.0% fill-rate via the NRS, indicating the attractiveness of these posts regardless of whether the primary employer was a community or hospital pharmacy.

Table 10: Summary of fill-rate by sector.

	NHS Hospital	Large Pharmacy	Medium Pharmacy	Small Pharmacy	Independent Pharmacy	All Programmes
Total Training Places Available	1069	1159	514	410	747	3899
Training Places Not Filled	1	814	304	177	390	1686
Overall Fill-Rate (Training Places Filled)	99.9% (1068)	29.8% (345)	40.9% (210)	56.8% (233)	47.8% (357)	56.8% (2213)

12.5. Table 11 below provides a breakdown of programme fill rate by Health Education England region.

12.6. The ratio of hospital to community pharmacy training places available, particularly in areas that are traditionally hard to recruit to, will have affected regional fill-rates. The South West region experienced the lowest fill-rate.

12.7. Wales continued to achieve a fill rate far higher than the NRS average, even in those areas that were traditionally difficult to recruit to. This was likely due in large part to the attractiveness of their multi-sector training programme.

Table 11: Summary of regional fill-rates

HEE Pharmacy Region	HEE Local Area	Places	Accepted	Fill Rate (Local)	Fill Rate (Regional)
East of England	East of England	442	187	42.3%	42.3%
London	London	797	585	73.4%	73.4%
Midlands	East Midlands	267	157	58.8%	55.9%
	West Midlands	408	220	53.9%	
North	North East	189	110	58.2%	58.3%
	North West	465	310	66.7%	
	Yorkshire and the Humber	352	166	47.2%	
South East	KSS	238	114	47.9%	44.1%
	Thames Valley	124	47	37.9%	
	Wessex	114	49	43.0%	
South West	South West	391	156	39.9%	39.9%
Wales	Wales	112	112	100.0%	100.0%
TOTALS		3899	2213	56.8%	

END OF REPORT