

# Outcome Report Year 3 (2019)

## National Pre-registration Pharmacist Recruitment



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## Executive Summary

Health Education England coordinated a national scheme for recruitment to pre-registration pharmacist training programmes for the third time in September 2019.

There were 3,189 training places available across all programmes, continuing the trend of increasing numbers of programmes within the scheme, and with the bulk of the increase attributable to community pharmacy employers.

A total of 2,485 applicants applied for training programmes, 2,092 of whom attended for interview. At the end of the process, 95% (n=1,992) of successful applicants had received a programme offer and 1,877 of these final programme offers were accepted by applicants.

The scheme yielded a fill rate of 99.8% for NHS and 44.7% for community pharmacy programmes, and an overall fill rate of 58.8% to all programmes. The maximum overall fill rate achievable had all successful candidates been allocated places would have been 62% due to the large number of places available in the scheme in 2019.

## **Overview**

This was the third year that Health Education England conducted an entirely centralised process for recruitment to pre-registration pharmacist training programmes for the NHS and community pharmacy (optional for this sector).

This report provides information on applicants, applications and outcomes of the 2019 (year 3) pre-registration 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, MMI and Numeracy test and reports on any group differences in performance.

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

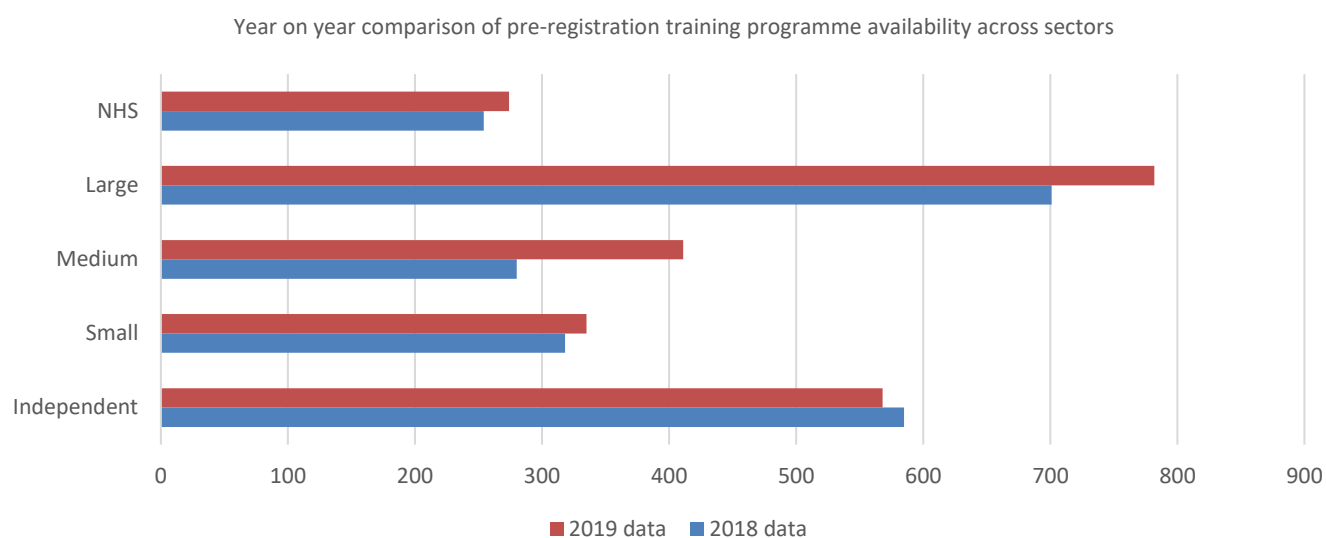
## **Programme availability**

### **1. Employing organisations, programmes and training places**

- 1.1 The 2019 pre-registration pharmacist recruitment scheme listed 2370 programmes for applicants to choose from, a 10% increase from the second year. In total, 3189 training places were available across all programmes; significantly greater than the anticipated number of scheme applicants.
- 1.2 11% (n=274) of programmes were within the NHS hospital sector, representing 25% (n=820) of all available training places. 32% (n=782) of programmes were offered by large community pharmacy employers, 17% (n=411) by medium pharmacy employers, 14% (n=335) by small pharmacy employers and 23% (n=568) by independent pharmacy contractors.
- 1.3 There was a significant overall increase in the number of programmes offered through Oriel by large, medium and small community pharmacy employers, and a small decrease in independent community pharmacy employers, compared with the previous year (Figure 1).

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Figure 1: Year on year comparison of pre-registration 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 2019 scheme, broken down by sector and geography

Table 1: Programme Availability in the 2019 Pre-registration Pharmacist Recruitment Scheme

Sector	Number of Employing Organisations	Number of Programmes	Number of Training Places	Number of Tier 2 Sponsor Licences
NHS Hospital	166	274	820	813
Large Community Pharmacy (Employs 200+)	5	782	848	66
Medium Community Pharmacy (Employs 25-200)	49	411	453	53
Small Community Pharmacy (Employs 6-25)	98	335	388	72
Independent Community Pharmacy (Employs 1-6)	454	568	680	66
<b>TOTALS</b>	<b>772</b>	<b>2370</b>	<b>3189</b>	<b>1070</b>

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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
Midlands and East	East Midlands	13 (51)	54 (58)	48 (55)	17 (18)	37 (45)
Midlands and East	East of England	29 (81)	62 (68)	14 (17)	25 (29)	76 (93)
Midlands and East	West Midlands	18 (57)	69 (72)	89 (85)	32 (46)	63 (83)
London and South East	Kent, Surrey and Sussex	20 (52)	60 (64)	18 (20)	21 (22)	46 (45)
London and South East	London	45 (205)	61 (64)	44 (55)	134 (157)	215 (246)
North	North East	14 (47)	49 (49)	29 (30)	12 (12)	11 (12)
North	North West	32 (82)	115 (127)	79 (94)	37 (46)	62 (83)
North	Yorkshire and the Humber	28 (57)	85 (90)	33 (32)	16 (17)	15 (22)
South	South West	27 (61)	95 (103)	4 (5)	17 (17)	13 (16)
South	Thames Valley	8 (28)	31 (33)	23 (30)	14 (14)	6 (6)
South	Wessex	18 (40)	51 (54)	13 (13)	4 (4)	13 (17)
Wales	Wales	22 (59)	50 (66)	17 (17)	6 (6)	11 (12)
	<b>TOTALS</b>	274 (820)	782 (848)	411 (453)	335 (388)	568 (680)

## 2. Tier 2 sponsorship

2.1 Tier 2 sponsored training place availability in the community pharmacy sector increased to 257 places in 2019; 22 % (n=1079) more sponsored places in total than were available to applicants requiring visas in 2018 (n=883).

## 3. Multi-sector placements

- 3.1. One hundred and fifty-one collaborative organisations registered split-placement training programmes on Oriel in 2019. These included HEE funded multi-sector programmes such as the [GP pre-registration pilot](#). These programmes were split between at least two sectors, including Hospital, Community Pharmacy, GP Practice and Clinical Commissioning Groups.
- 3.2. Two hundred and sixty-two multi-sector programmes were available in total, representing a total of 391 training places. Split training programme availability was generally evenly spread across the regions, with the fewest programmes found in Thames Valley (n=3) and KSS (n=7) and the most available in the North West (n=43) and London (n=48).

## Applicant outcomes

### 4. Applications

- 4.1. The number of applications received via the Oriel system was 2485 (not including incomplete applications), compared with 2585 received in the first year, and 2592 in the second year.
- 4.2. 1.1% (n=27) of applicants were either currently enrolled on an accredited Overseas Pharmacists' Assessment Programme (OSPAP) or were OSPAP graduates.

### 5. Longlisting

- 5.1. 0.04% of total applicants (n=1) did not progress through the formal longlisting process due to not meeting basic eligibility criteria.
- 5.2. Two applicants subsequently withdrew their application, leaving 2482 applicants invited to interview; a 1% decrease from the previous year.

### 6. Interviews

- 6.1. 2092 interviews were attended by applicants. Of these, 2025 (96%) were successful and subsequently received an overall ranking based on their test scores.

### 7. Applications and programme offers by demographic

- 7.1. For the purposes of this section, we refer to the following:
  - *Application* – the number of applications progressed *after* longlisting (n=2484)
  - *Offer* - applicants who received a pre-registration programme offer (n=1992), irrespective of whether this offer was accepted by the applicant.
- 7.2. Table 3 below provides a breakdown of applicant gender, along with data pertaining to successful applicants and programme offers received by these two groups.

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Table 3: Applications and programme offers by gender

Group	Percentage of applications	Percentage of successful applicants	Percentage of offers made	Percentage of offers accepted
Male	31.06% (772)	30.12% (630)	29.91% (596)	29.19% (548)
Female	66.19% (1644)	67.04% (1402)	67.26% (1340)	67.87% (1274)
Not disclosed	2.73% (68)	2.37% (59)	2.81% (56)	2.91% (55)
<b>Totals</b>	100% (2484)	100% (2091)	100% (1992)	100% (1877)

- 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 offers by age group\*

Group	Percentage of applications	Percentage of successful applicants	Percentage of offers made	Percentage of offers accepted
19-24 years	87.2% (2169)	88.04% (1841)	88.65% (1766)	89.07% (1672)
25-29 years	5.91% (147)	5.40% (113)	5.22% (104)	4.95% (93)
30-34 years	1.85% (46)	1.72% (36)	1.60% (32)	1.49% (28)
35-39 years	1.28% (32)	1.29% (27)	1.20% (24)	1.17% (22)
40-44 years	0.76% (19)	0.66% (14)	0.55% (11)	0.53% (10)
45-49 years	0.36% (9)	0.23% (5)	0.15% (3)	0.10% (2)
50-54 years	0.16% (4)	0.19% (4)	0.20% (4)	0.21% (4)
55-59 years	0	0	0	0
Not disclosed	2.37% (58)	2.43 (51)	2.40% (48)	2.45% (46)
<b>Totals</b>	100% (2484)	100% (2091)	100% (1992)	100% (1877)

\*Age at 01 September 2019

- 7.4. Table 5 provides a breakdown of applications and offers by individual ethnic groups.
- 7.5. 70% (n=1746) of applications were received from applicants of Black, Asian and minority ethnic (BAME) origin and 24% (n=600) were received from applicants of 'White' origin. 6% of applicants (n=139) chose not to declare their ethnic origin.
- 7.6. Applicants in the 'Chinese' group had a lower proportion of offers to applications than those in any other ethnic group.
- 7.7. Significant differences in MMI performance by the Chinese group, compared with other ethnic groups are a contributing factor (see 8.4.3). This would have resulted in lower overall rankings amongst the Chinese group, reducing the likelihood of receiving an offer for a training place for any of their preferred programmes, particularly where small numbers of programmes were preferred or where more popular programmes were preferred.



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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	19.91% (495)	24.14% (600)	20.85% (436)	24.91% (521)	21.58% (430)	25.70% (512)	22.26% (418)	26.21% (492)
White - Irish	0.76% (19)		0.66% (14)		0.65% (13)		0.58% (11)	
Any other white background	3.46% (86)		3.39% (71)		3.46% (69)		3.35% (63)	
Mixed White and Black Caribbean	0.24% (6)	2.93% (73)	0.28% (6)	3.01% (63)	0.30% (6)	2.96% (59)	0.31% (6)	2.87% (54)
Mixed White and Black African	0.36% (9)		0.33% (7)		0.35% (7)		0.26% (5)	
Mixed White and Asian	1.20% (30)		1.14% (24)		1.00% (20)		0.95% (18)	
Any other mixed background	1.12% (28)		1.24% (26)		1.30% (26)		1.33% (25)	
Asian or Asian British – Indian	13.88% (345)	39.67% (986)	13.00% (272)	38.30% (801)	13.05% (260)	38.35% (764)	13.05% (25)	38.09% (715)
Asian or Asian British – Pakistani	13.36% (332)		12.57% (263)		12.85% (256)		12.46% (234)	
Asian or Asian British – Bangladeshi	4.66% (116)		4.73% (99)		4.66% (93)		4.74% (89)	
Any other Asian background	7.76% (193)		7.98% (167)		7.78% (155)		7.83% (147)	
Black or Black British - Caribbean	0.44% (11)	13.11% (326)	0.43% (9)	13.24% (277)	0.45% (9)	13.35% (266)	0.37% (7)	13.15% (247)
Black or Black British - African	12.27% (305)		12.33% (258)		12.44% (248)		12.30% (231)	
Any other black background	0.40% (10)		0.47% (10)		0.45% (9)		0.47% (9)	
Chinese	8.5% (213)		8.79% (184)		8.08% (161)		7.77% (146)	
Any other ethnic group	5.95% (148)		6.12% (128)		5.87% (117)		5.96% (112)	
Not disclosed	5.59% (138)		5.59% (117)		5.67% (113)		5.91% (111)	
<b>Totals</b>	2484		2091		1992		1877	

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

8.1. Independent analysis undertaken by the Work Psychology Group examined fairness issues surrounding use of the SJT, MMI 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.

## 8.2. Age

- 8.2.1 Pearson's correlations were conducted to examine the relationships between age and scores on the SJT, MMI and Numeracy test.
- 8.2.2 SJT: A small significant negative correlation (Pearson's  $r$ ) between age and SJT score was found ( $r = -.18, p < 0.01$ ). This suggests that younger applicants typically performed slightly better than older applicants on the SJT.
- 8.2.3 MMI: A small significant negative correlation (Pearson's  $r$ ) between age and MMI score was found ( $r = -.13, p < 0.01$ ). These findings suggest that, on average, younger applicants performed slightly better than older applicants on the MMI.
- 8.2.4 Numeracy: A small significant negative correlation (Pearson's  $r$ ) between age and Numeracy score was found ( $r = -.16, p < 0.01$ ). 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, MMI 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, indicating that females scored significantly higher than males, though the effect size was small ( $t(1032.17) = -7.29, p < 0.01, d = .37$ ).
- 8.3.3 MMI: A significant difference in performance on the MMI based on gender was found, indicating that females scored significantly higher than males on the MMI, although the difference was small ( $t(1934) = -4.45, p < 0.01, d = .22$ ).
- 8.3.4 Numeracy: No significant differences in performance were found on the Numeracy test based on gender ( $t(1934) = .22, p = ns$ ).

Table 6: Group Differences by Gender

		Female	Male
SJT	N	1340	596
	Mean	583.57	574.20
	Std. Deviation	24.03	26.97
MMI	N	1340	596
	Mean	89.90	86.98
	Std. Deviation	13.33	13.31
Numeracy	N	1340	596
	Mean	7.71	7.73
	Std. Deviation	1.78	1.78

#### 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, MMI and Numeracy test scores dependent on ethnicity (Table 7).

8.4.2 SJT: Significant differences in performance between applicants of different ethnic groups were found on the SJT ( $F(6,1920)=28.10$ ,  $p<0.01$ ,  $\eta^2 = 0.08$ ); although the effect size was small. Applicants who indicated that they were 'White' performed better than applicants in other ethnic groups, and 'Asians' performed better than those who identified as 'Other'.

8.4.3 MMI: Significant differences in performance between applicants of different ethnic groups were found on the MMI ( $F(6,1920)=25.61$ ,  $p<0.01$ ,  $\eta^2 = 0.07$ ), although the effect size was small. Applicants in the 'White' group achieved significantly higher scores than those in all other ethnic groups. All ethnic groups scored significantly higher than those indicating they were 'Chinese'.

Table 7: Group Differences by Ethnicity

		White	Asian	Black	Chinese	Mixed	Other
SJT	N	512	764	266	161	59	117
	Mean	592.01	578.40	574.03	577.32	581.26	570.02
	Std. Deviation	23.92	23.77	24.81	22.02	24.81	29.14
MMI	N	512	764	266	161	59	117
	Mean	93.94	88.45	87.73	80.50	88.05	88.09
	Std. Deviation	12.89	13.11	12.77	12.10	12.41	12.97
Numeracy	N	512	764	266	161	59	117
	Mean	7.82	7.68	7.38	8.22	7.95	7.48
	Std. Deviation	1.77	1.71	1.86	1.90	1.31	1.88

8.4.4 Numeracy: Significant differences in performance between applicants of different ethnic groups were found on the Numeracy test ( $F(6,1920)=4.75$ ,  $p<0.01$ ,  $\eta^2 = 0.02$ ), although the effect size was small. Applicants indicating they were 'Chinese' scored significantly higher than those in the 'Asian', 'Black' and 'Other' groups. Applicants who identified as 'White', scored significantly higher than those indicating they were 'Black'.

## 8.5 Summary

8.5.1 Some group differences on the SJT, MMI and Numerical assessment were found based on age, gender and ethnicity. Small significant differences for age, gender and ethnicity were observed, but all effect sizes were small.

## 9. Differences in Performance Based on Date

9.1. Analysis of variance (ANOVA) were conducted to investigate whether performance differs on the SJT, MMI and Numeracy test based on when applicants go through the assessment process (Table 8 below). This was operationalised as whether assessments were completed at the beginning (Time Point 1), middle (Time Point 2) or end (Time Point 3) of the testing period. Analyses were conducted after outliers (applicants ( $n=6$ ) with very low/high scores and/or missing data) had been removed.

9.2. SJT: No significant difference in performance on the SJT based on the time point within the selection window it was completed was found ( $F(2,2085)=1.12$ ,  $p=ns$ ).

- 9.3. MMI: Significant differences in performance on the MMI based on the date it was completed were found ( $F(2,1989)=12.97$ ,  $p<.01$ ,  $\eta^2=0.01$ ). Post-hoc results found that time point one scored significantly higher than those in time point two and three ( $p<.01$ ).
- 9.4. Numeracy: No significant differences on the Numeracy test, based on the date it was completed was found ( $F(2,2085)=1.73$ ,  $p=ns$ ).
- 9.5. This finding is likely to be different to the perceptions of many applicants that attending a later MMI date provides an unfair advantage over applicants that attend an earlier MMI date. This will continue to be monitored during future selection cycles.

*Table 8: SJT, MMI and Numerical assessment performance by date of assessment*

Test	Descriptive	Time Point One	Time Point Two	Time Point Three
SJT	N	605	717	766
	Mean	578.41	580.49	579.91
	Standard Deviation	26.28	25.90	25.07
MMI	N	778	553	661
	Mean	90.85	88.58	87.33
	Standard Deviation	13.25	13.17	13.56
Numeracy	N	605	717	766
	Mean	7.59	7.77	7.71
	Standard Deviation	1.83	1.71	1.84

## 10. Applicants with Tier 4 Student Visas

- 10.1. International students must in the main switch from a tier 4 study visa to a general tier 2 work visa before beginning the preregistration year. 11% (n=281) of longlisted applications were received from those requiring training places which offer tier 2 sponsorship.
- 10.2. Following the selection process, 79% (n=224) were deemed successful, amounting to 12% of all successful applicants.

10.3. Training place offers were made to 96% (n=216) of the applicants requiring tier 2 sponsorship, a 52% increase in offers for this group from the previous year. A key contributing factor for this increase is the higher number of tier 2 sponsored training places available within the NRS. In particular, a new approach to trainee recruitment in Wales has seen all trainees become NHS-employed and undertaking rotations across multiple practice areas. NHS-employed pharmacy trainees receive salaries according to Agenda for Change pay scales which are higher than tier 2 minimum thresholds, in effect allowing all training posts in Wales to become eligible for selection by tier 2 candidates.

## **11. Final programme offers**

11.1. At the end of the process, 98% of successful applicants (n=1992) had received a programme offer. Of these, 35 offers were declined and 45 offers expired. Overall, 94% (n=1877) of final programme offers were accepted by applicants.

11.2. 1.6% (n=33) of successful applicants were left without a pre-registration programme offer at the end of the process; a 75 % decrease from the previous year. These applicants fall into one or both of the following categories:

- 24% (n=8) required a general Tier 2 work visa before beginning the pre-registration training year and either:
  - did not achieve a ranking high enough to gain an offer for programme/s offering Tier 2 sponsorship
  - preferred programme/s not able to offer Tier 2 sponsorship
  
- Applicants did not achieve a ranking high enough to gain an offer for any of their preferred programme/s. This was common in instances where applicants preferred very few programmes.

## Employer outcomes

### 12. Fill-rates

- 12.1. At the end of the recruitment process, 99.8% of available NHS Hospital training places were filled and 44.7 % of community pharmacy training places.
- 12.2. The fill-rate overall was 58.8%. Due to there being a greater number of places in the scheme than applicants to fill them, the maximum fill rate had all trainees been allocated a place was 64%.
- 12.3. Table 9 below provides a breakdown of the fill-rate, by number of training places available within each sector
- 12.4. The HEE-funded GP pre-registration pilot achieved a 81% fill-rate via the NRS, indicating the attractiveness of these posts regardless of the primary employer being a community or hospital pharmacy

Table 9: Summary of fill-rate by sector.

	NHS Hospital	Large Pharmacy	Medium Pharmacy	Small Pharmacy	Independent Pharmacy	All Programmes
Total Training Places Available	820	848	453	388	680	3189
Training Places Not Filled	0.2% (1)	57.0% (483)	51.5% (233)	52.1% (202)	57.7% (392)	41.2% (1311)
<b>Overall Fill-Rate (Training Places Filled)</b>	99.8% (819)	43.0% (365)	48.5% (220)	47.9% (186)	42.3% (288)	58.8% (1878)

- 12.5. Table 10 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 North region experienced the lowest fill-rate.
- 12.7. Wales achieved a near-maximum fill rate, even in those areas that were traditionally difficult to recruit to. This was due in large part to the attractiveness of a new training programme as described in 10.3 above.

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Table 10: Summary of regional fill-rates

HEE Pharmacy Region	HEE Local Area	Places	Accepted	Fill Rate (Local)	Fill Rate (Regional)
Midlands and East	East Midlands	227	113	49.7%	51.6%
Midlands and East	East of England	288	148	51.3%	
Midlands and East	West Midlands	343	182	53%	
London and South East	Kent, Surrey and Sussex	203	111	54.6%	67.5%
London and South East	London	727	517	71.1%	
North	North East	150	91	60.6%	51.5%
North	North West	432	212	49%	
North	Yorkshire and the Humber	218	109	49.9%	
South	South West	202	97	48%	54.4%
South	Thames Valley	111	81	72.9%	
South	Wessex	128	62	48.4%	
Wales	Wales	160	155	96.8%	96.8%
<b>TOTALS</b>		3189	1878		

**END OF REPORT**