Equality Monitoring in the Vehicle Certification Agency

V1.0

In House Analytical Consultancy

Department for Transport

GORS

Government Operational Research Service

Contents

Chapter 1: Management summary

1.1 Introduction

This report is an analysis of staff diversity, for staff in post between 1st April 2012 and 31st March 2013.

The analysis takes data on staff in post, cessations, grievances and discipline, sickness absence, training and recruitment, and considers whether there were significant differences with respect to sex, race, disability, pay band, age, job type and working pattern.

Where possible, comparisons have been made against the previous year.

Inequalities and differences identified have been described in non-statistical terms throughout this report. However, where differences have been found to be statistically significant, this has been highlighted. By statistically significant, we mean that the difference is unlikely to have occurred by chance. Where results are not specifically discussed, this generally means that no statistically significant inequalities were found.

1.2 VCA structure and organisation

VCA is the designated UK Vehicle Type Approval authority and supports industry by providing internationally recognised testing and certification for vehicles, their systems and components.

It is the smallest of the Department for Transport's executive agencies, with 151 staff (at 31st March 2013).

The majority of its staff were based at either the Bristol headquarters or in the Midlands centre in Nuneaton, with small numbers additionally in the Dangerous Goods Office in Leatherhead, Surrey (4), and based overseas (9 staff).

There were two main job roles: administrative (admin) and engineers. This report considers the roles separately as well as together, where relevant.

1.3 Key findings: Year on year changes and turnover

The number of staff increased by four since the previous year, a 2.7% rise: there were 147 staff on 31st March 2012.

There was little change in the diversity profile since the previous year.

The biggest change in staff profiles was a rise in the proportion of staff working part time, up from 10.2% to 17.9%. During the year, 12 staff moved to part-time working. It is thought that the main reasons for this were a number of staff choosing to move to part-retirement, and some reducing hours for personal reasons, such as caring commitments.

13 members of staff left during 2012/13 – 8.8% of staff in post at the beginning of the year. The proportion that left was slightly higher than in the previous year.

1.4 Key findings: Sex

72% of VCA staff were male – a significantly higher proportion than the proportion of males in the GB working-age population.

The majority of females were in admin roles (admin roles were fairly evenly split between males and females), but only three of the 63 engineers were female.

Females were more likely to have had recorded sickness absence, and had more days sickness absence, than expected, but females were more likely to be admin staff, be in PB2 and to work part time, which were the key drivers of sickness absence. Females were less likely to have had recorded training.

1.5 Key findings: Race

All staff had a recorded race, and 6.6% had identified themselves as Black or Minority Ethnic (BME) – not significantly different from the GB working-age population.

There were generally too few BME staff for statistical analysis.

1.6 Key findings: Disability

Information was available on the disabled status of all staff. 4.0% had identified themselves as disabled: a significantly lower proportion compared with disabled people in the GB working-age population.

There were too few disabled staff for detailed statistical analysis.

1.7 Key findings: Age

No individual age group was significantly over or underrepresented in VCA compared with the GB working-age population, but overall the age profile was different. There tended to be lower proportions of staff aged under 30 and 60-64, compared with the GB working-age population.

Younger staff were more likely to be in the lower pay bands.

Older staff tended to have more days' sickness absence than younger staff.

1.8 Key findings: Working pattern

Females were more likely than males to work part time.

Part-time staff were more likely to have had recorded sickness absence than full-time staff. Full-time staff were more likely to have had recorded training.

1.9 Key findings: Job type

42% of staff were engineers, and the remainder were in admin roles.

As in previous years, engineers tended to be in the higher pay bands and were predominantly male.

Admin staff were fairly evenly split between males and females.

Engineers were less likely to have had recorded sickness absence, and had fewer days sickness absence than admin staff, but were more likely to have had recorded training.

1.10 Information quality and recommendations

Data was provided on time and queries were dealt with promptly. A small number of errors were found in the previous year's data, but they would not have made a substantial difference to the findings from the statistical analysis.

Information was available on the disabled status and race of all staff in post. However, no data on sexual orientation or religion/belief was available. We recommend that this is addressed in time for the next report to meet the requirements of the Equality and Human Rights Commission.

Recruitment data was taken from DfT's DRG group this year, whereas last year it was provided by VCA. The proportion of applicants with known race dropped from 91% last year to only 20% this year.

VCA has concerns about the completeness of the training data they hold. We recognise that the analysis may only be a partial picture, and encourage improvements in the coverage of training data recorded, in order to increase the reliability and completeness of results in that section.

Chapter 2: Introduction

2.1 Equality Monitoring

This report contains an analysis of the diversity of VCA staff for 2012-13.

The aim of the analysis was to:

- identify differences between diversity groups within VCA;
- compare the diversity of VCA staff with the diversity of the local working-age population; and
- highlight any changes since previous years.

2.2 Analysis and reporting

This analysis has considered the following areas of diversity:

- Sex
- Race
- Disability
- Age
- Working pattern

And for the following datasets:

- Staff in post
- Recruitment
- Cessations
- Learning and development
- Disciplinary cases
- Grievance cases
- Sickness absence

It also gives information about maternity leavers and returners.

Most other DfT equality monitoring reports also consider equality differences in the awarding of performance marks, but VCA does not have a box mark-based performance management system, so analysis is not included here.

VCA employees were also considered in two main groups by job type: engineering staff (referred to as engineers) and administrative staff (referred to as admin).

Results described in this report are based on the outcomes of statistical tests. These tests are used to identify statistically significant differences between groups – that is, differences larger than the likely range of natural variation.

Data for this report was provided by VCA HR, and has been summarised in the annex tables provided with this analysis. Recruitment data was provided by the DfT Resourcing Group (DRG).

2.3 Data coverage and quality

Data related to staff in post at the end of 31st March 2013, and cessations between 1st April 2012 and 31st March 2013.

For the purpose of these Equality Monitoring reports, Senior Civil Service (SCS) staff from across the DfT family have been analysed together in the DfT(c) report.

Staff on long-term leave (for instance maternity leave[1] and career breaks) are not included in the analysis, and nor are staff who are not civil servants (e.g. consultants, temporary administrators etc).

Data on staff sex, age and pay band are held for each member of staff, but data on disability, race, sexual orientation and religion / belief are voluntarily provided. As a result, and because staff may be unwilling to provide this information, these data often have significant numbers of unknowns or undeclared

[1] 1 staff on maternity leave on 31st March 2013

statuses and subsequently analysis was not always possible.

VCA had information on the race and disabled status of all its staff, but held no information on the religion/belief or sexual orientation of its staff.

Some small errors were discovered in the previous year's data but they would not have affected the previous year's statistical analysis. In particular, the data had the wrong age for two staff, one person recorded last year as on long-term leave had actually left VCA, four admin staff were recorded as engineers, and two PB4 staff were recorded as being in PB3.

2.4 Declaration rates

All employees are encouraged to complete an equality monitoring form, which records their race, religion or belief, sexual orientation, disabled status, age and sex. The individual information is confidential but the overall statistics are used to analyse trends and support diversity action plans. DfT is keen to achieve high declaration rates and to exceed 90% for all diversity strands (protected characteristics).

The table below shows the position for the year ending 31st March 2013. Age and sex have a 100% declaration rate because their data is automatically available for all employees.

Protected characteristic	Declaration rate
Age	100%
Sex	100%
Race	100%
Disabled status	100%
Sexual orientation	0%
Religion and belief	0%

Throughout the Equality Monitoring reports, any references to declaration rates or staff who had declared their [e.g. disabled] status apply to staff who identified with a particular diversity category – such as "disabled" or "White British". In other words, for the purposes of the analysis in the reports, staff who have declared that they prefer not to say have been grouped with those for whom no information is held, and described as unknown/undeclared. So if, say 10% of staff had chosen not to specify their race, and information was not available for a further 20%, we would quote a declaration rate of 70%, even though technically 80% had made a declaration. This issue did not affect the VCA report as there were no 'prefer not to say' declarations. However, this should be borne in mind if this report is read alongside those of other DfT agencies.

Chapter 3: Staff in post and geographical distribution of staff

This chapter considers the geographical distribution and the diversity mix of VCA staff.

It compares the diversity of staff across VCA with the diversity of the GB working-age population.

Key findings

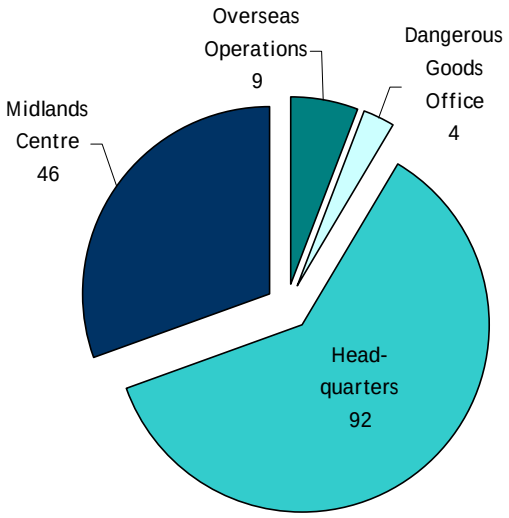
- 151 staff in post at end of March 2013. Four more staff than a year earlier.
- Little change in diversity since the previous year, except a higher proportion of staff worked part time.
- Females were more likely than males to work part time.
- Significantly higher proportion of males than in the GB working-age population – especially amongst engineers.
- Lower levels of disability declared by staff than reported in the GB working-age population.
- The proportion of BME staff was not significantly different from the GB working-age population.
- Staff age profile different from the GB working-age population. Although no individual age group was significant, there tended to be lower proportions of staff under 30 and 60-64 than in the population.

3.1 Geographical distribution of VCA staff

At the end of 31st March 2013 there were 151 staff in post.

Approximately six in ten (61%) of VCA's staff were based at the Bristol headquarters, and a further three in ten (30%) in the Midlands centre (Nuneaton). The remaining staff were either in the Dangerous Goods Office in Leatherhead, Surrey (4 staff or 3%), or in offices in North America, East Asia and China (9 staff or 6%).

Location of VCA staff

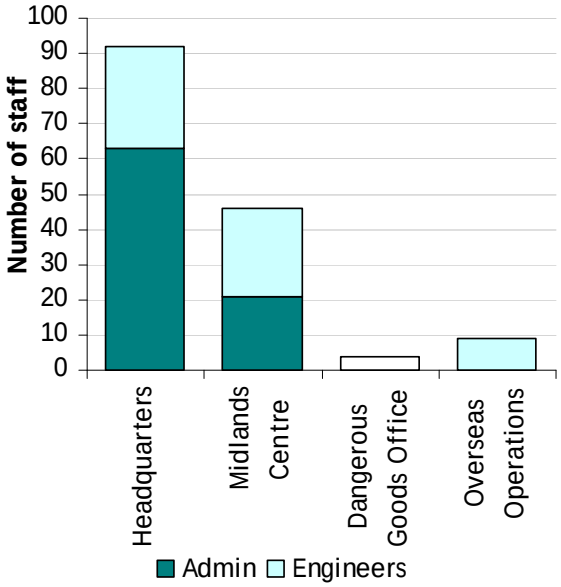


There were both admin and engineer staff in the headquarters and the Midlands centre. The Dangerous Goods Office was made up entirely of admin staff and the overseas locations entirely of engineers.

The Bristol headquarters had more admin staff than engineers (63 and 29 staff respectively) but there were similar numbers of admin staff and engineers in the Midlands centre (21 admin staff and 25 engineers).

The number of staff in VCA increased by 4 (2.7%) over the year. (Note 13 staff joined VCA during the year and five returned from long-term leave, but 13 also left and one is on maternity leave). The increase in staff was in engineers – two in the headquarters and two based overseas. In addition, there were three fewer admin staff in the Midlands centre, and three more in the headquarters.

Job roles in each location



3.2 Diversity profile of VCA staff

For all diversity types, comparisons have been drawn with the GB working-age population.

3.2.1 Sex

72% of VCA staff were male – significantly more than expected from the GB working-age population, which was 49.8% male.

95% (all but three) of the 63 engineers were male, as were 56% (49) of the 88 admin staff. The proportion of male admin staff was not significantly different from the proportion of males in the GB working-age population.

3.2.2 Race

All staff members had a recorded race.

10 staff had identified themselves as black or minority ethnic (BME) – all of whom worked in either the headquarters or Midlands office.

Just under 5% of engineers had identified themselves as BME, and 8% of admin staff.

There was no significant difference in the proportion of BME staff in VCA (6.6%) compared with the GB working-age population (12.8%).

3.2.3 Disability

All staff had identified themselves as either disabled or not disabled.

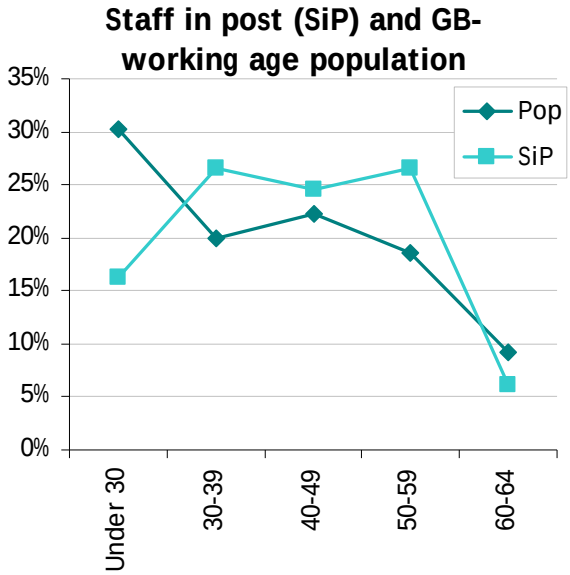
Six staff (4.0%) had identified themselves as disabled – significantly fewer than expected compared with the GB working-age population (20.8%)[2].

Only one engineer was identified as disabled, and both job types (engineers and admin) had fewer disabled staff than expected.

3.2.4 Age

The staff age profile was significantly different from that of the GB working-age population. Although significantly different overall, no individual age group was significantly different on its own. However, there tended to be lower proportions of staff aged under 30 and aged 60-64, and higher proportions aged 30-59 than in the GB working-age population. (Note: staff aged 65+ had to be excluded from this analysis, as the GB working-age population excludes those over 65).

The average age of VCA staff was 43.1, and 58% of staff were over 40. The average age for engineers was 41.9 compared with 43.9 for admin staff.



Note: staff aged 65+ are excluded for comparison

3.2.5 Working pattern

The biggest change in staff profiles over the last year was in the proportion of staff working part time. At the end of 2011/12, 10.2% of staff worked part time. By the end of 2012/13, this had risen to 17.9%.

Eight staff moved to part-time working during the year, and all returners from long term leave worked part time as did 2 of 13 new recruits. All staff that previously worked part time continued to do so in 2012/13.

The increase was seen across all diversity groups, job roles and pay band groups. For example, the proportion of females that worked part time increased from 32% to 45%, while the proportion of males that worked part time increased from under 2% to over 7%.

[2] For the disability status of the working-age populations, the definition of disabled includes both those with a disability covered by the Disability Discrimination Act and those with a work-limiting disability.

Female staff were significantly more likely than male staff to work part time.

3.3 Sexual orientation

Data was not available.

3.4 Religion and belief

Data was not available.

3.5 Maternity leave

There was one staff on paid or unpaid maternity leave at the end of March 2013. Five staff returned from maternity leave into VCA during the year.

3.6 Changes in staff diversity

There were 151 staff in post at 31st March – four more than both 2011/12 and 2010/11. There were no significant changes in the diversity profile of VCA's staff between 2011/12 and 2012/13.

A summary of the diversity statistics and year-on-year changes can be seen in Annex C.

Chapter 4: Staff in post across pay bands

This chapter considers how the minority groups are distributed across VCA. It compares PB1-3 with PB4-7.

In this section, "significantly more females than expected" (for example) means that there were significantly more females compared with the other pay bands rather than the GB working-age population.

Key findings

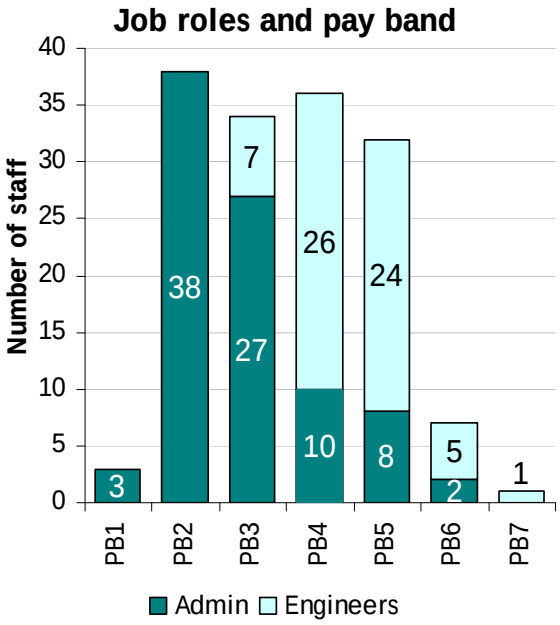
- Staff in PB1-3 were more likely to be admin staff, and PB4-7 staff were more likely to be engineers.
- As there were very few female engineers, females tended to be concentrated in PB1-3 (admin roles).
- PB1-3 staff tended to be younger than those in PB4-7.
- There were more part-time staff than expected in PB1-3.

4.1 Distribution of staff by diversity group

The two job types had different diversity and pay band profiles, and analysis across all staff was dominated by the diversity differences between engineers and admin staff.

The three key differences between PB1-3 and PB4-7 were in job role, age, and working pattern.

Admin staff tended to be in PB1-3, and engineers in PB4-7. Staff in PB1-3 were significantly younger and were significantly more likely to be part-time than those in PB4-7.



Sex did not appear as a significant factor in its own right – although female staff tended to be concentrated in PB1-3. This is because sex had a strong link with job role: there were very few female engineers, and engineers were mainly in PB4-7.

There were very few disabled staff (6) and BME staff (10), so any observed differences between pay bands are unlikely to be statistically significant. There were similar proportions of BME staff in both pay band groups (five BME staff in each), though only one of the six disabled staff was in PB4-7.

Chapter 5: Recruitment

This chapter considers the equality mix of candidates applying for roles within VCA in 2012/13.

Analysis has been split into two sections:

- The first section compares candidates with local working-age populations.
- The second section looks at the success of all candidates through the various stages of recruitment – sift, assessment centre and interview.

The recruitment freeze came into effect in 2010, and continued during 2012/13.

Since the start of the recruitment freeze, the DfT Resourcing Group (DRG) have managed all VCA recruitment. Data was collected by DRG for all recruitment campaigns launched outside VCA during 2012/13. This is different from last year, when data was provided by VCA themselves on all campaigns, including internal VCA campaigns. Civil Service Recruitment started holding this data from mid March 2013.

This year, recruitment data does not include campaigns that were advertised only within VCA as the majority are now handled by individual business units without DRG's involvement.

The data in this chapter relates to recruitment campaigns started, but not necessarily completed, during 2012-13. Therefore the figures here differ from those elsewhere in this report. For example, this chapter states that there were seven new appointees to VCA from campaigns started during the year (at least two of which were internal promotions), whereas there were 13 new staff in VCA during the year – some of whom would have been included in last year's recruitment analysis chapter as the campaign started during that reporting year.

Key findings

Diversity of applicants

- A higher proportion of male applicants to PB4-5 (96%) than the proportion of males in the GB working-age population (50%).
- This was not true at PB2 – roughly the same proportion of male applicants (43%) as males in the GB working-age population.
- Significantly lower proportion of disabled applicants than the proportion of disabled in the GB working-age population.

Success rates through the recruitment process

- 59 applications made for posts across VCA, and 7 applicants appointed.
- Little statistical analysis possible because of low numbers, but PB2 applicants less likely to have been successful at sift than PB4 or PB5 applicants.

5.1 Diversity of applicants

This section compares the profile of applicants with that of the local working-age population.

All of these applicants applied for posts that were advertised outside VCA (even if they were already employees within VCA). This includes posts that were advertised across the DfT family, across the civil service and external to the civil service.

There were 59 applicants to VCA. 35 were to PB2 admin posts, 20 were to PB4 engineering posts and four were to PB5 engineering posts.

5.1.1 Applicants compared with GB averages

Sex

Applicants to PB2 were slightly, though not significantly, more likely to be female (20 female and 15 male, or 57%), compared with the working-age population (50.2% female). However, at PB4, applicants were significantly more likely to be male (19 were male, only one was female), and all PB5 applicants were male.

Disability

The proportion of non-disabled applicants was significantly higher than the proportion of non-disabled in the working-age population. Only one applicant declared themselves as disabled (1.8% of the 57 with declared status), whereas 20.8% of the GB working-age population were declared as disabled.

No other diversity characteristics could be analysed – for example, race was missing (either not collected or the applicant preferred not to say) for 80% of applicants.

5.2 Sift to appointment analysis

This analysis compares the profile of applicants who were successful at sift and at interview with those who were unsuccessful. Finally, it compares all applicants who were offered a job with those who were not. It would also look at assessment centres, but there were none run by VCA during the year.

Of the 59 applications, 23 passed the sift, 32 did not and for four it is not known if they passed the sift. Of the 23 that passed the sift, seven passed an interview and were appointed, 13 did not pass the interview, and it is not recorded whether three passed the interview.

5.2.1 Sift

All four PB5 applicants passed the sift, as did half of the 16 PB4 applicants for whom a result is recorded. In contrast, less than a third of PB2 applicants passed the sift.

5.2.2 Interview and Appointment

There were not enough interviews to determine any diversity differences between those applicants that passed and those that did not.

There were not enough appointments to look at diversity differences in applicant performance during the recruitment process as a whole.

Chapter 6: Ceased employment

This chapter compares the profile of staff who left VCA during 2012/13 with that of the staff in post at the end of the reporting year.

Because of the small numbers, no statistical analysis of cessations has been carried out.

Key findings

- 13 staff left during 2012/13 – 8.8% of staff in post at the beginning of the year
- This rate is slightly higher than that of the previous year (4.7%).

6.1 Ceased employment

13 staff left VCA during 2012/13: four females and nine males. All of the leavers were white. One had identified themselves as disabled. Two were part-time.

Five leavers were from PB5, four were from PB2, and two each were from PB3 and PB4. Five leavers were engineers (all at PB4 or PB5), and eight were admin staff.

Three of the leavers were retirements. One of these was aged between 60 and 64, and two were aged 65 or over. Two of the three worked part time before retirement.

Three of the thirteen staff left VCA within a year of joining. Two of these joined after 31st March 2012 and left before 31st March 2013, so these two staff do not appear in the staff-in-post data for either year.

Chapter 7: Learning and development

This chapter considers days of recorded training undertaken by each diversity group.

The learning and development analysed here only includes training booked and recorded on VCA's SharpOwl database. It is therefore likely that this understates the total amount of both training, and wider learning and development actually undertaken. This analysis looks at the number of days training undertaken – analysis of some other DfT agencies considers the number of incidents of training rather than its duration.

The purpose of this analysis was to consider differences by diversity group in both the likelihood of recording any training and the number of days training recorded.

Key findings

- 6.6 days' training recorded, on average, per staff – increased from 4.9 days the previous year.
- Diversity differences seen in both incidence and amount of training recorded.
- Working pattern and job role were significant for both incidence and amount of training.
- Engineers were more likely than admin staff to have had recorded training, and also recorded more days (on average, 13.6 days and 1.5 days per staff respectively).
- Full-time staff were more likely than part-time staff to have had recorded training, and also recorded more days (on average, 7.9 and 0.5 per staff).
- Males recorded more days training than females (on average, 8.7 and 1.2 days, respectively)

7.1 Recorded training by diversity group

994.8 days of training were recorded during 2012/13, an average of 6.6 days per staff. This was an increase on the previous year (4.9 days). However, 10 staff had over four weeks (20 days) training recorded, and together accounted for nearly two thirds of all training. Two new recruits had over 100 days training recorded – the highest being 161 days.

In general there were too few staff in the minority diversity groups for statistical analysis.

7.1.1 Incidence of training

Engineers were more likely to have had at least one incident of recorded training compared with admin staff. PB4 staff were more likely to have recorded training than staff at other pay bands, which was still significant once job role differences had been accounted for. For example, 86% of PB4 staff recorded at least one training incident, compared to only 18% of PB2 staff. Staff that had no sickness absence were significantly more likely to have had recorded training.

Male staff were more likely to have had recorded training than female staff, as were full-time staff compared with part-time staff, but these factors were not significant after accounting for engineers (engineers were more likely to be male and full-time). However, when looking just at admin staff, full-time staff were significantly more likely to have had recorded training.

7.1.2 Amount of recorded training

Engineers had recorded significantly more days' training than admin staff, PB4 staff had recorded more days' training, and for engineers only, PB3 staff had recorded more days' training. Across all staff, full-time staff had significantly more days' training than part-time staff, and non-disabled staff recorded more days' training than disabled staff.

In a reversal from the previous year, males had recorded more training than females (on average, 8.7 and 1.2 days respectively across VCA, whereas last year the figures were 4.4 and 6.3 days respectively).

Chapter 8: Grievances and discipline

This chapter considers grievances and discipline cases by diversity group, looking at how representative they were of staff in VCA.

There was one discipline case during 2012/13. This was against a male, white, non-disabled member of staff. This staff member left VCA during the year.

There have been no recorded grievances raised against VCA in any of the past five years.

Key findings

- Only one discipline case raised against staff during the year.
- No grievances raised against VCA.

Chapter 9: Sickness absence

This chapter considers days recorded absent due to sickness by each diversity group.

Data on days lost to sickness absence were supplied for all staff that were in post at the end of the reporting year (i.e. not including staff who had left VCA during the year).

Both the likelihood of being absent due to sickness and the number of days recorded were analysed according to key diversity factors (sex, race and disabled status), as well as pay band, age and job type.

Only the factors that showed significant results are commented upon in this chapter.

The purpose of this analysis was to consider differences in sickness absence by diversity group. Like other analysis in this report, it applies to staff who were in post on 31st March 2013, excluding those on long term leave (except for staff on long term sick, who are included in this analysis). It therefore does not match the official sickness absence figures reported quarterly to the Cabinet Office, which should remain the official source.

The main difference with the Cabinet Office returns is that this analysis has not made adjustments for available working time – e.g. staff who have worked for less than the full year.

Key findings

Incidence of absence

- Admin staff were more likely to have had sickness absence than engineers (56% of admin staff had absence, but just 13% of engineers).
- Staff in PB2 and PB6 were more likely to have had sickness absence than staff at other grades.
- Part-time staff were more likely to have had sickness absence than full-time staff.

Amount of absence

- Job role, pay band and age were linked to amount of sickness absence:
- On average, admin staff had nearly ten times as much absence per person than engineers (8.1 days compared with 0.8 days);
- PB2 staff had more absence (on average, 9.5 days each, compared with 3.7 days for other staff).
- Older staff tended to have more days' absence – staff aged over 40 had, on average, an extra two days per person compared with younger staff.

Note: Where part-time staff working shorter than standard days had been absent on one of their working days, a full day was recorded in the data rather than the actual hours they had been expected to work. We cannot identify individuals' actual working patterns to make a suitable adjustment, so this means that the days quoted in the report may overstate the amount of sickness absence.

This issue does not arise for part-time staff working standard-length days.

9.1 Overall analysis

Cabinet Office Figures

Official Cabinet Office figures for sickness absence in VCA are as follows:

Average days of sickness absence (Average Working Days Lost)	5.1
% employees with sickness absence	38.71%

As stated in the introduction to this chapter, the Cabinet Office figures should remain the official source of sickness absence figures for the VCA. Any figures quoted from here on in are based on staff-in-post at midnight of 31st March 2013 and do not include employees on long-term leave at this point in time (those with long-term sickness absence are included in the analysis). Therefore any averages quoted will be different from the official Cabinet Office averages above.

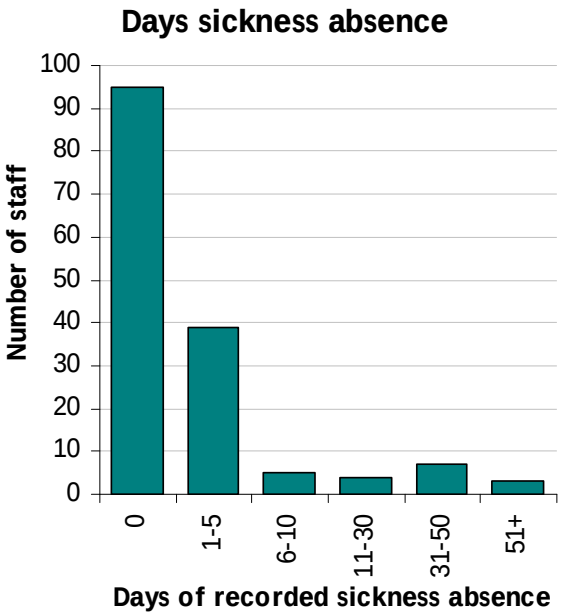
Equality Monitoring sickness absence

VCA staff who were in post at 31st March 2013 had, on average, 5.1 days of recorded sickness absence each in 2012/13.

784 days' absence were recorded during 2012/13 for the staff in post at the end of that year.

38% of staff had some sickness absence during the reporting year. Of these staff, the average total days recorded was 13.5 days.

Over three quarters of staff that had sickness absence had fewer than 10 days of absence, but 14 staff were absent for 11 or more days during the year, including two who were on long term sickness absence at the end of the year.



[Note absence bands in the above chart are of unequal size].

Of staff that had sickness absence, the 24% who had 11 or more days absence each, accounted for 82% of all recorded sickness absence days. The remaining 76% of staff with between 1 and 10 days absence accounted for 18% of all absence days.

The results were very similar in the previous year: in 2011/12, the proportion of staff with some absence, the average days' absence for all staff in post, and average days for those staff with some absence, were 38%, 5.1 days and 13.6 days, respectively.

9.1.1 Incidence of sickness absence

Admin staff were significantly more likely than engineers to have had sickness absence: 56% of admin staff had absence, whereas only 13% of engineers had.

Staff in PB2 and PB6 were significantly more likely, and staff in PB4 and PB5 were significantly less likely to have had

sickness absence than those in other grades.

Part-time staff were significantly more likely to have had sickness absence. Working pattern was significant even after accounting for admin staff and PB2 staff (part-time staff were more likely to be admin staff and PB2).

Considering sex only, female staff were associated with a higher likelihood of absence. However, female staff were more likely to be admin staff, PB2 and part-time, and when these were taken into account, female staff were no longer more likely to have had absence than males.

9.1.2 Amounts of sickness absence

Three factors were identified as being related to the amount of recorded sickness absence: job role, pay band, and age.

The strongest relationship was with job role: admin staff had significantly more absence than engineers (8.1 days per admin employee on average, compared with 0.8 days for engineers).

In addition, staff in PB2 had, on average, significantly more absence per person and staff in PB1, PB3, PB4 and PB5 had significantly less. The one member of staff in PB7 had no absence. Staff in PB2 had, on average, 9.5 days absence per employee, compared with 3.7 days for staff in all other pay bands.

Older staff had significantly more days' absence; staff aged 40 and under had, on average, 4.0 days, compared with 6.0 for staff aged over 40.

Looking only at sex, females had significantly more days' absence. On average, females had 8.5 days absence, compared with males' 3.8 days.

However, after taking job role and pay band into account, the difference between males and females was not significant.

Annex A: Notes on data

A.1 Working-age populations

A.1.1 Reporting locations

To compare the diversity of staff in post with local working-age populations, we attached each building where staff were located to a Reporting Location, e.g. London, Swansea, etc. This means that all of the staff based in London, for example, were considered as being in one location, irrespective of which part of London they were located in.

For each Reporting Location we identified a catchment area and generated local working-age population figures based on data for that catchment area.

A catchment area would typically include the relevant Local Authority area for the Reporting Location, plus neighbouring Local Authorities, as agreed with each Agency. For example, for the London Reporting Location, we used the working-age population of all the London boroughs as well as those counties that border them.

A.1.2 Data sources

The UK population data at Local Authority[3] level is from the **Annual Population Survey (APS).** This survey is a combined survey of households in Great Britain, updated quarterly and available at Local Authority level and above. It is a residence-based labour market survey which includes population and economic activity, broken down by sex, age, race, industry and occupation[4] .

The majority of DfT agencies have staff based only in Great Britain, but the Maritime and Coastguard Agency (MCA) also has staff working in Northern Ireland. In previous years, data for Northern Ireland was taken from the **Northern Ireland Labour Force Survey (NI LFS)**; however, this year, this data was also available as a part of the APS dataset.

Where a nationwide population comparison was required, for all agencies other than MCA, the GB working-age population (i.e. not including Northern Ireland) was used. For MCA, the UK working-age population was used.

APS data used in the 2012/13 Equality Monitoring reports was based on the one year period October 2011 - September 2012, and downloaded from www.nomisweb.co.uk ("Nomis") on 7th May 2013.

A.1.3 Population

Population data at local authority level from the APS was combined with **mid-year** (30 June) **population estimates** for 2011 – the most recent year available. These were also available at Local Authority level and were based upon results from the 2011 Census with allowance for under-enumeration. These figures covered the entire population, not just the working-age population, so to estimate the working-age population we took the

[3] Local authorities including County Councils rather than District Councils.

[4] Further information on the survey can be found at http://www.ons.gov.uk/ons/about-ons/who-we-are/services/unpublished-data/social-survey-data/aps/index.html

number of males and females aged 15-64 years[5] (only five year age bands were available).

A.1.4 Disabled status

The APS asks respondents whether they are currently DDA disabled, work-limiting disabled, both DDA disabled and work-limiting disabled, or not disabled. For this report, we have combined data on DDA disabled, work-limiting disabled, and both DDA and work-limiting disabled to calculate proportions of the working-age populations that are disabled.

Northern Ireland disability statistics from the NI LFS were obtained via Nomis.

A.1.5 Race

APS data was available for the following ethnic groups:

- Mixed;
- Indian;
- Pakistani/Bangladeshi;
- Black/Black British; and
- Other.

For our analysis, we have combined all the above into a single BME category.

A.1.6 Sickness absence data

For DfT(c) and all agencies, data was available on the number of days of recorded sickness absence for each member of staff, with one record per incidence.

Working pattern

No adjustment has been made to absence records for part-time staff. The analysis has been performed on the number of days absent (i.e. how many days of work were recorded as missed).

If the analysis suggests that part-time staff had significantly more sickness absence, then we can be confident that this finding is correct. i.e. we are saying that they were absent for more actual calendar days than other staff- not making any allowance for the fact that they may have been due to work fewer calendar days in the first place.

Conversely all being equal, we might expect part-time staff, say, working three days a week to have a lower chance of being ill on any given standard work day than full-time staff, so the reverse result (part-time staff having significantly less absence) may not be relevant.

[5] Please note that as of August 2010, the official definition of "working age" expanded to include both males and females aged 16-64 years old; this reflects a planned change in the female state pension age. All have been included in our working-age populations.

Annex B: Analytical approach

Two statistical approaches have been used to test for differences in the data: univariate methods that test one variable at a time and multivariate methods that compare several variables simultaneously.

B.1 Univariate methods – chi-squared and proportions tests

These tests were employed to test whether the proportion of staff by each diversity grouping was significantly different from that found within the local working-age population. They were also used to investigate recruitments to check if the proportion of candidates by each diversity grouping was significantly different from that of the local working-age population.

The results of these statistical tests give an indication of whether the pattern observed in the data was “significantly different from what would have been expected” or conversely whether any difference in proportions could be explained by natural variation.

For example, if there had been 100 staff, 30 of whom were male, and the local working-age population was 50% male and 50% female, the tests would tell you whether the group was statistically different from any random sample of 100 from the working-age population.

For these tests we used the “95% confidence level”. This means that if we reported a difference as being significant it meant there was only a 5% likelihood that the difference could have occurred purely by chance. We have also reported on differences that were significant at the 99% level – i.e. a 1% likelihood that the differences would have occurred by chance.

A certain amount of variation is expected, even with completely random samples, and so it should not be assumed that something that is statistically significant indicates that there is a bias – the level of significance only indicates the likelihood of something occurring. For example, a significant result at the 99% level would indicate something which is more unusual than something that is only significant at the 95% level.

As there are several characteristics to be tested, several univariate tests had to be conducted. One of the drawbacks of multiple univariate testing is that the more tests that are undertaken the higher the probability of finding false significant results. To reduce this risk, we have used the Bonferroni adjustment to the significance levels.

A further drawback with univariate approaches is that they do not take into account all of the other factors simultaneously. In practice an individual staff member has several characteristics: their sex, race, working pattern etc. In looking at only one of these characteristics at a time (for example in relation to performance), the effect of another characteristic is not taken into account and results can be misleading. It is possible to use multi-dimensional contingency tables for chi-squared tests, but the interpretation of the results can be difficult.

It is still, however, an appropriate approach in many circumstances – particularly when the group of staff should be reasonably comparable with the rest of the population (e.g. staff ages compared with working-age population; or the sex split across pay bands).

B.2 Multivariate methods – regression analysis

The main technique used to analyse data taking into account several factors simultaneously was regression: either multiple, logistic, Poisson or negative binomial.

Regression attempts to predict a dependent variable (e.g. the amount of sickness absence taken) using one or more independent variables (such as sex, age etc). In using multiple regression, the principle is to find the "line of best fit" by minimising the sum of the squared distance from the fitted line to each observation. (This approach is sometimes referred to as ordinary least squares regression). The aim is to find a set of independent variables that have a significant relationship with the dependent variable.

Much of the data that was analysed had a binary (0/1) result, for example, was in a pay band or not; obtained the top performance rating or did not; was selected for interview or was not etc. This type of data lends itself to being analysed using logistic regression. Logistic regression is analogous to ordinary least squares regression, with the exception that a logistic curve rather than a straight line is fitted to the data. In some cases, neither multiple nor logistic regression was suitable – for example for analysing the amount of sickness absence taken, which for the majority of people was nothing or very little but for a small number of cases was very high. For this analysis Poisson or negative binomial models were used.

In all these approaches, the first step is for each characteristic to be tested in turn to see if it is significantly associated with the outcome (e.g. passed a recruitment stage or not). By significant, we mean that a staff characteristic accounted for an unusually high proportion of the variation seen in the dependent variable. For example, to see if sex had a significant relationship with whether people had passed the interview stage. In this case we would say something was successful or significant in "explaining the variation", to mean that if you knew the characteristic of the staff member, you would have a better chance of predicting the outcome (for example if you knew the sex, you would also know something about the likely interview outcome). The starting assumption was that prior knowledge of someone's sex; race; age etc should not enable the model to predict whether they were more likely to have received the highest performance rating or were interviewed etc. Again, as with the univariate approach, significance does not necessarily equate to bias but gives the relative likelihood of it occurring.

The next step in the modelling process was to include the characteristic that explained the majority of the remaining variation after taking account of the first variable. This step was repeated until the variables outside the model could explain no further variation.

Generally an outcome could not simply be explained by a single characteristic. Often, it was several characteristics together that were important. For example, age, sex and race were quite often found to be a powerful combination. A major advantage of the multivariate approach, compared with univariate, is that it is easier to see the relative importance of the characteristics.

There was an element of judgment involved in deciding which variables to include. In some cases variables were highly correlated, e.g. sex and full time equivalence: females were more likely to be part-time than males. Where both were statistically significant and improved the amount of variation that could be explained, both were included.

Annex C: Tables and charts

C.1 Year on year comparison – all staff

The following table shows headline figures for the current and previous reporting years.

Staff Type	March 31st 2012			March 31st 2013			Percentage point change	% change from 2010
	2011/2012	% of total	% of total that declared	2012/2013	% of total	% of total that declared		
All staff	147			151				
Males	106	72.1%	72.1%	109	72.2%	72.2%	+0.1	+2.8%
Females	41	27.9%	27.9%	42	27.8%	27.8%	-0.1	+2.4%
White	137	93.2%	93.2%	141	93.4%	93.4%	+0.2	+2.9%
BME	10	6.8%	6.8%	10	6.6%	6.6%	-0.2	+0.0%
Unknown Race	0	0.0%	-	0	0.0%	-	+0.0	+0.0%
Non-disabled	141	95.9%	95.9%	145	96.0%	96.0%	+0.1	+2.8%
Disabled	6	4.1%	4.1%	6	4.0%	4.0%	-0.1	+0.0%
Unknown disability	0	0.0%	-	0	0.0%	-	+0.0	+0.0%
Full Time	132	89.8%	89.8%	124	82.1%	82.1%	-7.7	-6.1%
Part Time	15	10.2%	10.2%	27	17.9%	17.9%	+7.7	+80.0%
Average age	43.1			43.1				