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Heartbeat for the Mining Industry

2013 Queensland Workforce Report

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Energy Skills Queensland

Who is Energy Skills Queensland?

Energy Skills Queensland is the Industry Skills Body leading energy industry and government engagement on education and training, skills development and labour market issues.

Established in 2008, Energy Skills Queensland has grown into a highly respected organisation at the forefront of developing solutions to help industry plan and develop their workforce, and provide opportunities for organisations and individuals to improve workforce skills by brokering training funding. To achieve this, Energy Skills Queensland partners with industry, contractors, education training organisations, and corporate groups across our industries, while engaging with other key stakeholders such as government, regulators, unions and other industry peak bodies to ensure solutions provide a holistic outcome to meet industry expectations.

Energy Skills Queensland's Workforce Planning Role

Energy Skills Queensland's Workforce Planning function offers a range of services to help address skills needs, mitigate associated risks and meet future workforce requirements. Our workforce planning process examines the current and future workforce needs and capabilities to attain a clear understanding of future skilling needs.

Energy Skills Queensland conducts workforce analysis at both an industry and enterprise level, and regularly monitor skill demand and supply across a number of sectors relating to mining, energy and telecommunications.

Key Objectives

The key objectives of Energy Skills Queensland are summarised as follows:

Workforce Planning

- Examine the current and future workforce to identify skills needs and associated risks.
- Develop and communicate strategies to address skills needs and associated risks.

Industry Engagement

- Act as the conduit between government, industry, education and training organisations and individuals.
- Lobby government and regulatory bodies to enhance skilling frameworks to meet skills needs.
- Assist industry to implement strategies to meet skills needs and mitigate workforce risk.
- Assist education and training organisations to deliver appropriate training and recognition of prior learning to meet skills needs.
- Generate stronger stakeholder engagement by joining and contributing to established groups, including committees, forums, workshops and boards within the energy industry.

Workforce Development

- Execute higher value skilling solutions.
- Develop innovative pathways to increase skill development to meet future needs.
- Further develop best practice recruitment and career advice portals.
- Further develop Energy Skills Queensland's ability to broker training and workforce development solutions.
- Work with selected Registered Training Organisations (RTOs) to develop specialist training facilities.
- Monitor the quality and assessment delivered by RTOs.

CEO Address

Energy Skills Queensland is proud to present the Heartbeat Report 2013 for the Queensland mining industry. This important research is the fourth in a series of evidence based workforce analysis reports and follows on from the 2006, 2009 and 2012 publications.

The research has been completed in conjunction with ten Queensland mining, resources and contracting organisations and I would like to acknowledge and thank the companies that contributed to developing this report. I also congratulate Energy Skills Queensland's workforce planning team for producing this high quality research publication.

Energy Skills Queensland looks forward to working with industry, government and key stakeholders to support the workforce development of the mining and broader resources sectors in Queensland.

Glenn Porter
Chief Executive Officer, Energy Skills Queensland

Image courtesy of
Peabody Energy

Executive Summary

The Heartbeat for the Mining Industry 2013 Queensland workforce report is the fourth in a series of evidence based workforce analysis reports. The report updates information from the 2012 publication and has been developed based on the data supplied by ten Queensland mining, resources and contracting organisations.

Progress against the predictions will be noted as the fourth Heartbeat Report provides authoritative, evidence-based responses. The report draws on a comprehensive sample of human resource data provided by industry about their employees.

In combination, the challenges identified in this report comprise the industry's capacity to realise the full economic benefits of new and existing projects. The result is an evidence based agenda for industry discussion, policy development and action.

As the mining industry strives for a skilled and sustainable workforce, it needs to continue to commit to effective research to identify the changing skill needs of the industry. Providing relevant and valid industry workforce information through ongoing Heartbeat Reports will ensure the sector can proactively address the labour market challenges of recruitment, retention and workforce development.

Workforce Snapshot

Heartbeat data and analysis allows specification and quantification of key mining industry workforce data. A number of noteworthy workforce issues emerge clearly from the study.

Workforce Growth

The Queensland mining industry workforce continues to grow and Queensland is the only State to have recorded consistent growth during the past year. In the previous report, the mining workforce was forecast to increase by up to 30,000 additional workers in the next five years.

It has already increased by 20,000 in the two years since that prediction. This continues to raise questions about the capacity to introduce new skilled workers to the industry.

Recent predictions suggest growth will be in the production and services areas covered by the Heartbeat Report rather then the exploration and support service areas.

Staff Turnover and Retention

Workforce turnover is contributing significantly to industry costs. Annual turnover is 19% overall excluding contractors and 23% including contractors. Of all separating employees, 18% left within the first 12 months of employment. The turnover rate for non-resident employees is 25%, with the FIFO workforce even higher at 31%.

The Non-resident Workforce

Almost half of the sample workforce continues to live more than 100km from their place of work with a quarter of all current employees living more than 300km away. Non-resident workers have a much lower length of service than resident workers at 4.3 years. In addition, the FIFO subset of the non-resident workforce has a length of service of 3.5 years. First year turnover for non-resident and FIFO workers is 25% and 31% respectively. The resignation rate is nearly triple for FIFO workers at 17%, compared to resident workers at 6%.

Age and New Recruits

The average age of the sector's workforce is trending downwards, from 44 (2009) to 40 (2013). Twenty-four percent of all employees are aged over 50 with 5% over 60 and eligible to retire. New entrants to the industry have an average age of 37 with only 15% of new recruits aged 50 or older. This suggests a continuing rejuvenation of the existing workforce, a positive trend in response to the risks of an aging workforce identified in previous reports.

Critical Job Categories

Workforce shortages continue to exist in key job categories, and may worsen as demand grows. There are critical shortages in the following areas:

- Electrical Trades
- Fixed Plant Operators
- Maintenance Operators
- Mechanics
- Mobile Operators
- Occupational Health and Safety
- Statutory Roles
- Surveyors
- Supervisors
- Trainers
- Technicians

Introduction

The Heartbeat Report 2012-13 analyses detailed human resources data provided by industry about employees. Its purpose is to inform the mining industry and its stakeholders on trends and significant issues impacting the workforce in Queensland. Specifically, the Heartbeat Report will assist companies and stakeholders to plan future suitable workforce planning and development strategies, allowing for the setting of appropriate staffing targets, effective evaluation of initiatives and identification of priority workforce issues. The Heartbeat Report provides a compelling foundation for strategic discussions between industry leaders, educators and the broader sector.

Globally, the mining industry has undergone significant growth during the past 10 years driven by the increase in demand for resources, particularly in China and India. This growth is predicted to continue despite the financial and commodity issues of recent years. In Queensland, the mining workforce has continued to grow, as has the benefit to the State from employment, royalties and revenues.

This growth is also predicted to continue around the world during the next few decades with overall growth in the mining industry estimated to be two to three times its current size. This growth rate has already been seen in Queensland during the past decade as the mining industry has grown in size from 20,000 to 77,000 workers.

As the mining industry expands globally, there continues to be a global shortage of skills in demand. In general, there is a skills shortage, not a people shortage.

Two major challenges have been identified:

1. The regional and remote nature of employment in Queensland's mining industry.

2. The response time required to develop an employee to be fully productive, which may stretch into a number of years.

There is much to learn from past industry experience. Access to accurate and relevant workforce data continues to add to ongoing research, supporting the sector as it plans for growth, expansion and diversity. The Heartbeat Report series has been designed to provide detailed workforce information to enable strategic planning for the discipline, company or the sector as a whole. The Heartbeat Report also informs regional, state and national level decision making on education, training and employment reforms.

Feedback from participants also suggests that at the organisational level, the benefits of industry to organisational benchmarking is invaluable. This includes how this can be used both internally and as a sector to address shared skills and recruitment issues now and into the future. Additional information collected in the 2012-13 Heartbeat Report has been provided at the request of the participants and represents the collaborative and evolutionary nature of the Heartbeat process, ensuring the best result for industry from the report.

Image courtesy of BMA

Methodology

The Heartbeat Report for the Mining Industry 2012-13 is the fourth in a series of evidence-based workforce analysis reports of the Queensland mining industry and follows on from the 2006, 2009 and 2012 publications. The current sample has been collected for the 12 month period of June 2012 to May 2013, at the request of participants.

This report represents an overall sample of 30,398 employees working in the Queensland mining sector. In order to obtain a current and accurate sample, primary non-identifiable workforce data was collected in July and August 2013 for a 12 month period during 2012-13, with the assistance of ten mining, resource and contracting organisations.

The collection includes:

- The records of 25,232 current employees as at June 2013 including 4,508 new hires.

- An additional 5,166 employees who separated from the participating organisations during 2012-13.

As with previous Heartbeat Reports, a set of workforce information was aggregated from the the human resource management systems of ten companies in a manner that did not uniquely identify individuals. The integrity of the data was validated against set parameters and standardised before analysis. Graphical, demographic workforce information was used to undertake sample level and segmented job skills category analysis.

As in previous Heartbeat reports, jobs have been aligned into 21 "generic skills" categories to facilitate comparative and skill set analysis. The job roles and skill sets examined for this report are the same used in the 2012 Heartbeat Report and have been determined through consultation with the industry. Building on the knowledge created in the previous report when over 4,000 unique job titles were categorised, this time almost 10,000 unique job titles have been identified and segmented into the 21 generic skills categories.

This segmentation process provides the opportunity for a thorough examination of the data. For example, supervisors fill a combination of professional, trade or statutory roles, qualifications or skills. This year's redevelopment of the job category coding, required the 2010-11 data be realigned to ensure consistency between the two data sets. As a result, adjustments have been made to the 2010-11 data set and information may vary slightly from the last published report.

As detailed in the previous report, the 21 generic skills categories have been continued and are based on the following components:

- Profiles representing all of the industry sample.

- The seven largest numeric categories.

- Four statutory role categories.

- An internal talent pipeline category inclusive of the graduate, trainee, apprentice and cadets.

- A comparative set of five critical roles from the 2009 and 2012 Heartbeat Reports.

- Four job categories from the national and state skills shortage lists.

The 21 job categories are listed below:

Accounting	Maintenance
Administration	Mechanics
Blast/Shot Firers	Mobile Operators
Open Cut Examiners (OCE)	Occupational Health and Safety (OHS)
Mining Drillers	Deputies
Electrical Trades	Supervisors
Engineers	Surveyors
Fitters	Technicians
Fixed Plant Operators	Trainers
Geoscientists	Contractors
Graduates, Apprentices, Cadets and Trainees	

The 2012-13 data collection includes a number of new or enhanced fields based on consultation with participants and stakeholders, including where available, data on:

- A significantly larger number of postcode records for work and home.
- Aboriginal and Torres Strait Islander workers.
- 457 Visa workers.
- Unplanned leave.

As a result, a broader profile of the mining sector workforce in Queensland continues to evolve. The sample size for the report remained similar to the 2010-11 sample of 30,500 employees. The Queensland mining industry, as identified by the Australian Bureau of Statistics (ABS), includes oil and gas extraction and exploration. Based on the ABS figures, the average size of the mining workforce was 74,300 during the 2012-13 period. However, the Heartbeat Report sample does not include oil and gas extraction or exploration and the comparative mining workforce in Queensland was therefore 52,800 workers. The Heartbeat Report 2012-13 sample of 30,500 workers represents 58% of the comparative mining workforce, consisting of the coal, metals and other mining. The 2012-13 sample includes postcode data from 23,200 (92%) current employees and 4,600 (88%) separated staff. This process aligned employee home and work postcodes and calculated a straight line distance between the two based on ABS geospatial coding. For this report, the results were grouped into three categories; less than 100km, between 100km and 300km (drive-in, drive-out) and over 300km (fly-in, fly-out).

The less than 100km group is considered to represent the resident workers and the balance represents the non-resident workers. The 100km cut-off has been selected and tested as a robust limit for short and medium distance travel behaviour.

Published qualitative research results collected from multiple sources have been used to cross-reference and further validate the themes and findings from this report against the anecdotal and experiential comments from industry. The analysis of each of the 21 job categories is presented in the form of a one page overview which provides information and commentary on a range of measures, including:

Age	Gender
Recruitment Rate	Turnover of New Hires
Turnover Rate	Turnover of Long Term Staff
Eligibility to Retire	457 Visa Holders
Travel Behaviour	Unplanned Leave
Length of Service	Aboriginal and Torres Strait Islander Participation

It can be assumed that a proportion of separations are not leaving the industry but are leaving in order to join other organisations within the industry.

The contractor skill set has been distributed into their primary skill sets, rather than coded as contractors and as a result, the contractors do not have a separate analysis page in this report.
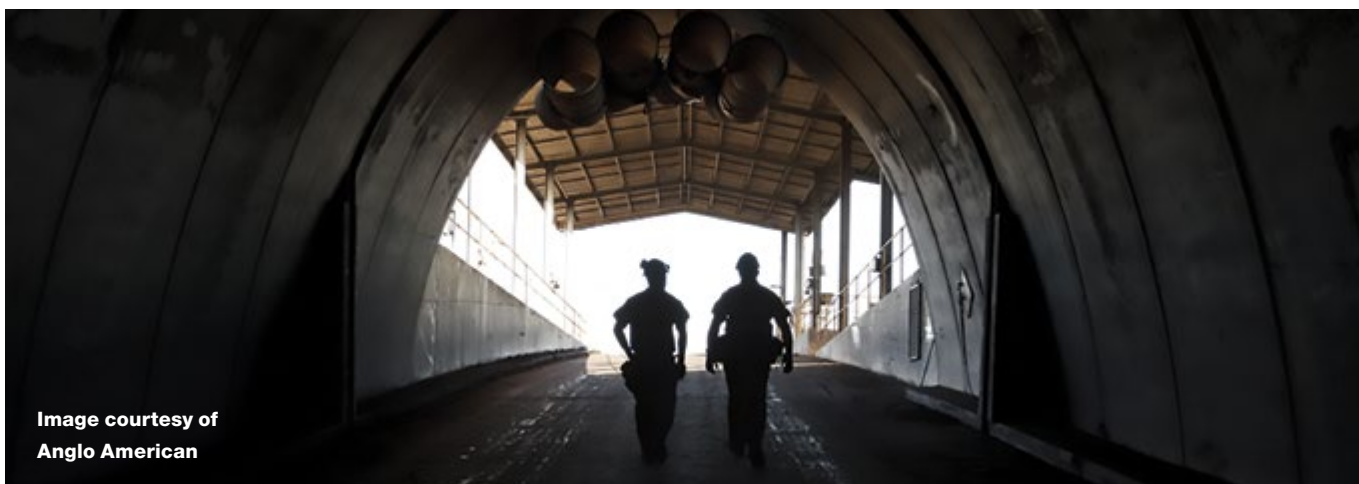
Image courtesy of Anglo American

Heartbeat: 'The Profile'

energyskills
queensland

Length of service (years)

5.5 ⌄ 0.5

Average age (years)

40.1 ⌄ 2.0

Retirement rate

0.23% ⌃ 0.06%

Eligible to retire

5.1% ⌄ 2.7%

Recruitment rate

17.9% ⌄ 0.2%

Female employees

14.0% ⌃ 1.8%

Resignation rate

10.5% ⌃ 1.0%

Turnover rate*

20.5% ⌄ 6.8%

457 Visa holders

1.25%

Aboriginal and Torres Strait Islander employees

2.7%

Workforce Changes

The Queensland mining sector workforce continues to grow. In the previous Heartbeat Report, the sector was forecasted to increase by up to 30,000 additional workers in the next five years. In just two years, the total mining workforce has increased by 20,000 workers according to ABS employment data.

Mining employment in Queensland had remained stable at around 20,000 workers from the mid 1980's through to 2003. Since then, the sector has experienced a significant growth period with an increase of 400% to the current figure of 77,600 reported by the ABS in August 2013. This is a significant growth pattern over time, especially when compared to the growth of the total Queensland workforce.

In line with the Department of Education, Employment and Workplace Relations (DEEWR) industry figures for work status, the mining industry is dominated by a full-time workforce (98%). This is reflected in the sample used for this report which has a 99% full-time workforce representation. This result is further supported by an average working week across the entire sample of 41 hours.

Figure 1: Queensland mining employment 1984 to 2013
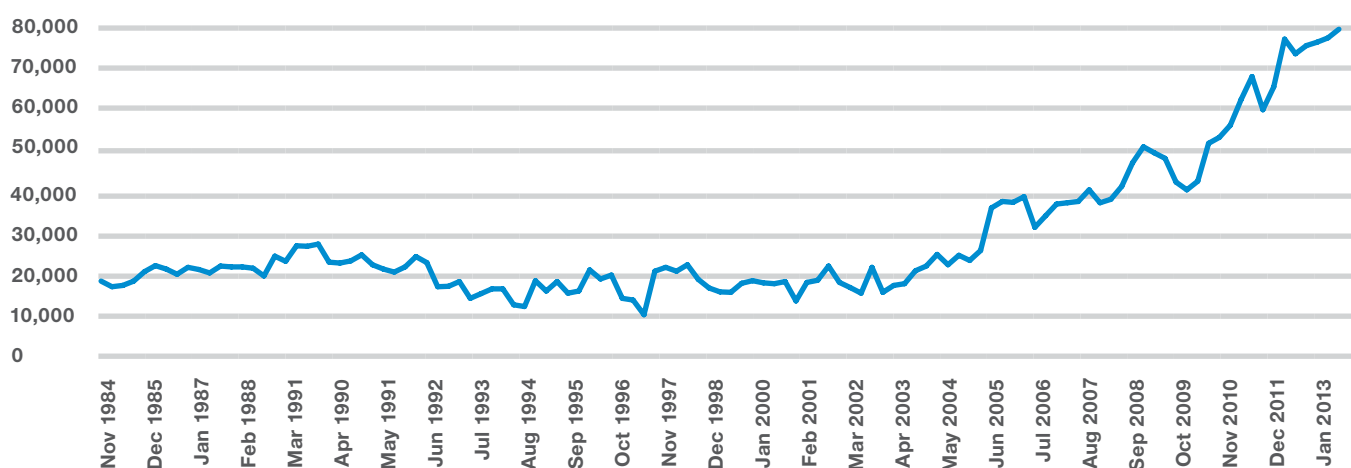
During the past five years, the Queensland mining industry increased by 30,000 workers (see Figure 1). In the year up to November 2012, mining employment growth in Queensland was the second highest sector (10,700 workers) and a significant contribution to the State's net growth of 21,600 workers. This is especially considering that mining represents less than 3% of the total Queensland workforce.

In the previous two Heartbeat Reports (2010-11 and 2012-13) between five and six thousand employees per year have separated from their organisations. This does not necessarily mean these employees have left the sector, only that they have left the company they were working for during that period. The job categories with the largest percentage of growth were Electrical Trades (12%), Fitters (7%), Blast and Shotfirers (6%), Open Cut Examiners (5%) and Geoscientists (4%). Conversely, the job categories with the largest decrease were Deputies (-16%), Trainers (-15%) and Mining Drillers (-14%).

Even with a full-time workforce of this nature, the industry has been able to introduce various workforce initiatives designed to deliver a more diverse workforce.

Growth in female participation in the workforce was 2%, resulting in an average of 14%. Aboriginal and Torres Strait Islander workforce participation has been included for the first time and represents 2.7% of the sample, of which 37% are under 30 years of age.

As part of the previous report, a predicted range of growth in the sector was made, varying between 5% and 14% per annum. These were graphed along with the Heartbeat baseline prediction of 6%. The growth rates were used to represent the variety of predictions in the market at the time, specifically relating to the future Queensland mining sector.

Workforce Changes

Workforce Change by Occupation

Electrical Trades	Mobile Operators	OHS	Accounting
+12%	**+1%**	**−3%**	**−7%**

Fitters	Engineers	Supervisors	Administration
+7%	**0%**	**−5%**	**−8%**

Blast and Shotfirer	Internal Talent Pipeline	Technicians	Mining Drillers
+6%	**−2%**	**−5%**	**−14%**

OCE	Maintenance	Surveyors	Trainers
+5%	**−3%**	**−6%**	**−15%**

Geoscientists	Mechanics	Operator Fixed	Deputies
+4%	**−3%**	**−7%**	**−16%**

Figure 2 shows this prediction and updates the growth by adding the ABS employment data for the sector during the past two years by quarters. The actual growth has been noticeably higher.

This growth has been achieved despite the 2011-12 commodity decline and subsequent employment downturn and is shown in both Figures 1 and 2. The sector's employment number based on the latest ABS figures has recovered quickly from this downturn and has grown by around 10% since August 2012.

The workforce growth at the rates identified, reinforces the challenge made in the 2012 Heartbeat Report.

The Heartbeat Report 2013 continues to compare results from previous reports and raise new and emerging issues. This Report continues to add to the recorded knowledge of the mining sector in Queensland.

Figure 2: Workforce projections against actual sector growth 2010-11
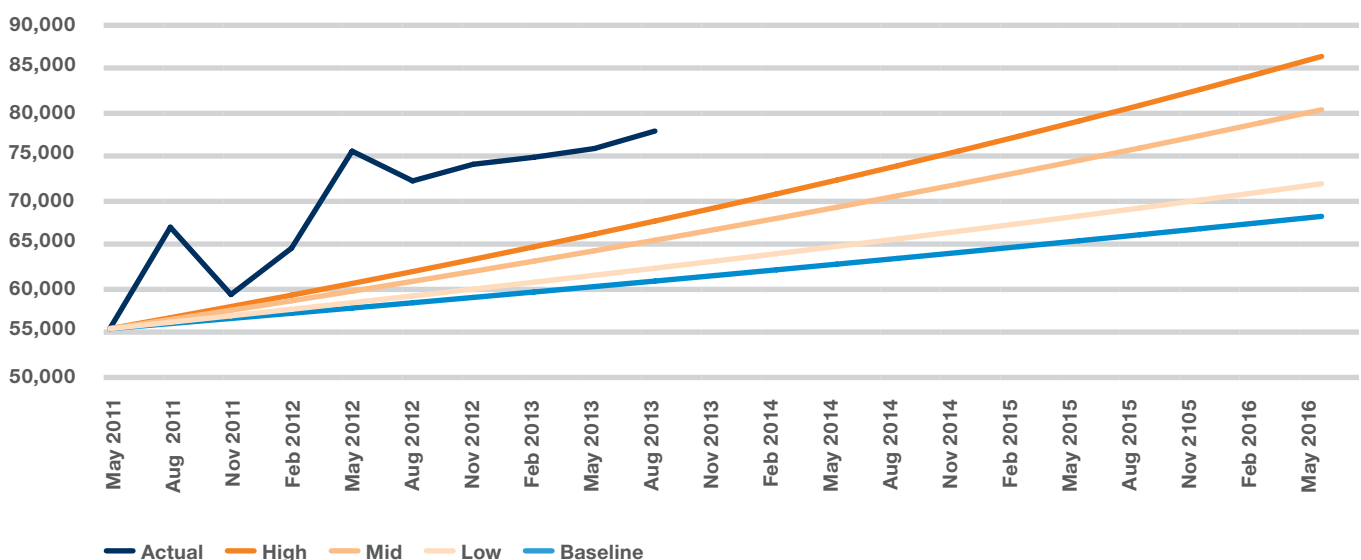
Recruitment

As recognised, the recruitment, induction and ongoing support of new recruits to the industry are particularly important to ensure a strong and capable workforce. The following information is drawn from the analysis of Heartbeat data on new recruits who have joined the participating companies during the 12 month period.

Key Statistics

- The recruitment rate for the industry in 2012-13 was 18% across all job categories.

- Separations among new recruits was 16% in 2012-13.

- 2% of new recruits were eligible to retire at the time of employment.

- 15% of new recruits were over the age of 50.

- 8% of new recruits chose to resign in their first year.

- New workers had an average age of 37, more than three years younger compared to the average worker.

- 17% of new recruits are women. This is 3% above the average result and supports the continuing increase of female participation in the workforce.

- 3.4% of new recruits are Aboriginal and Torres Strait Islander. This is above the sample and a continued growth pattern.

- New recruits have a non–resident worker contingent of 54%, of which 33% are FIFO.

Discussion

In 2012-13 the recruitment rate of 18% was lower than the previous sample and reflects the tightened market experienced in the overall industry during the period. More detailed analysis from Heartbeat suggests that a significant variability exists in the recruitment pool across the job categories, with some recruiting heavily and others slowing or using internal developmental practices during the 2012-13 period. The individual job category analysis can be found further in the report.

Blast and Shotfirers, Fitters, Electrical Trades, Mobile Operators, Occupational Heath and Safety, Open Cut Examiners and Geoscientists, as well as Graduates, Apprentices and Trainees, have all experienced high recruitment rates well above the sample average of 18%. This suggests the existence of a ready supply of candidates to recruit and/or develop.

Conversely, Deputies, Mechanics, Technicians and Supervisors had recruitment figures considerably below the average. This represents a trend which needs to be monitored as the sector attempts to attract and develop a sustainable workforce for these job categories. For example, Deputies and Supervisors have a reliance on internal recruitment pools and practice and in both cases have undertaken specialised development programs to maintain workforce supply rather than recruit externally.

Image courtesy of Thiess

Recruitment

Recruitment by Occupation

Accounting 14.5%	**Electrical Trades** 22.4%	**Maintenance** 15.5%	**Operator Fixed** 18.0%
Administration 17.6%	**Engineers** 17.2%	**Mechanics** 5.0%	**Supervisors** 12.4%
Blast and Shotfirer 29.8%	**Fitters** 26.5%	**Mobile Operators** 19.9%	**Surveyors** 20.8%
Deputies 0.8%	**Geoscientists** 19.2%	**OCE** 30.0%	**Technicians** 7.6%
Mining Drillers 15.2%	**Internal Talent Pipeline** 34.7%	**OHS** 20.5%	**Trainers** 17.4%

More work continues to be required by industry to determine the changing size and skills models required for the mining sector labour pool. This also includes the current and future Graduates, Apprentices and Trainees that represent the talent pipeline. Historically, mining has preferred to recruit candidates with mining experience, and until around 2005 this was a reliable model. During the past 10 years the growth of almost 400% in the Queensland mining workforce has challenged this assumption. Heartbeat analysis, 457 Visas, and industry consultation suggests the existence of an experienced recruitment pool continues to diminish and if true, industry can no longer rely solely on purchasing skills to match its future workforce requirements.

Workforce practices and non-traditional recruitment markets continue to emerge including increased participation from women, Aboriginal and Torres Strait Islander and non-resident workers and the report explores all of these further. Female participation has also increased and continues to represent an opportunity for the industry to maximise the available labour pool. New recruits within the industry had a higher representation of females than the current industry average.

Another key finding of the report and major change since the previous report is the age of new recruits is now more than three years younger than the age of the existing workforce, and in part contributing to a stabilised workforce age profile. Fifteen percent of new recruits in the industry are aged over 50 years, and 2% of these recruits are over 60 years of age and eligible to retire. These issues continue to challenge mining recruitment and is a risk that is now trending downward.

Organisational Separations

This section of the Heartbeat Report analyses data from the selected job categories to present a whole-of-industry overview of separation and turnover trends.

The industry continues to experience high staff turnover, presenting significant challenges and opportunities for the future development of the industry's workforce. As a result, replacement demand for labour will remain significant for the next few years following the commodities driven decline of recent years.

Key Statistics

- The current staff turnover rate in the industry is 19% and this figure increases to 21% when contractors are included.

- The highest turnover rates were experienced in the Mining Driller, Surveyor, Administration, Fixed Plant Operator, Open Cut Examiner, Occupational Health and Safety, Geoscience, Mobile Operators, Maintenance and Fitter job roles.

- 16% of all employee separations occur within 12 months of recruitment.

- Workers who separated had taken 24 hours more unplanned leave at 97 hours, compared to current staff.

- 27% of all workforce separations were from workers under 30 years of age and 22% were workers over 50 years of age.

- Separating staff had an average of 3.3 years length of service, two years less than the average.

- The separation rate for women of 18% is 4% higher than the average.

- 58% of separations are non-resident workers, and 39% of separations are FIFO workers.

- In 2012-13, resignations accounted for 54% of separations, redundancy was 24%, and 7% for dismissals as well as 7% for end of contract. This is a significant change from the last report and reflects the volatility of the market.

Discussion

A key finding from this Report is the ongoing change of employees within the industry. The staff turnover rate of 19% with contractors and 21% without contractors, represents both movement between organisations and movement out of the industry through dismissals and retirements. At current staff turnover rates, the industry will need to replace the equivalent of its whole workforce within five years. This sustained level of change remains a significant risk and cost encumbrance for the sector, which requires ongoing intervention.

The profile on separations suggests that staff leaving are one year younger than the workforce average. Compared to the previous report, this average age has decreased by four years. Staff separating are 6% more likely to be under 30 years of age.

Further analysis highlights the highest turnover rates are currently experienced in the Mining Driller, Surveyor, Administrator, Fixed Plant Operator and Open Cut Examiner, Occupational Health and Safety, Geoscience, Mobile Operator, Maintenance and Fitter job roles. Because of the groups' size, the Mobile Operator workforce has also experienced significant loss of staff at the rate of 19% per annum.

In Queensland's mining sector, 16% of workers leaving had only commenced their employment in the last 12 months. These workers therefore failed to achieve one year of service, and although down from the last sample, it still reflects a costly loss.

Figure 3: Top four reasons for separations in the Queensland mining industry
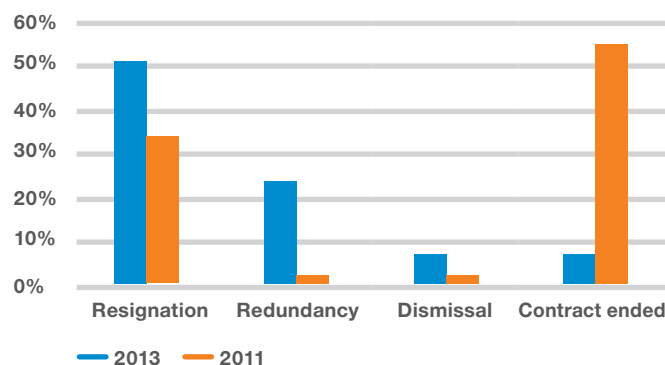
Organisational Separations

Turnover by Occupation

Accounting 21.5%	**Electrical Trades** 10.7%	**Maintenance** 18.2%	**Operator Fixed** 24.9%
Administration 25.7%	**Engineers** 17.4%	**Mechanics** 7.9%	**Supervisors** 17.7%
Blast and Shotfirer 23.4%	**Fitters** 19.9%	**Mobile Operators** 19.1%	**Surveyors** 26.4%
Deputies 16.7%	**Geoscientists** 15.3%	**OCE** 24.5%	**Technicians** 12.4%
Mining Drillers 29.7%	**Internal Talent Pipeline** 36.9%	**OHS** 23.9%	**Trainers** 32.4%

The volatility in the market during the past few years is shown in Figure 3. The comparison of the reasons provided for the organisational separations within the 2010-11 and 2012-13 Heartbeat Report sample can be clearly seen with the movement in the represented reasons for separation. Two years ago, contract-end and resignations accounted for 92% of the reason for departures. This year's sample has seen the employee driven resignation become the main reason at 54%, and the emergence of employer driven redundancy as the second reason with 24%.

This shows the change in the sector's employment environment during the period. The evidence shown in Figure 3 reflects anecdotal reports from industry engagement. It is important to note that the total number of separations across the two samples has decreased slightly from 27% to 21%. The major shift has been within the reasons stated for separations. Table 1 shows all reasons for separations during the two year samples. As a change from the last report, health issues have been a new addition to the list of reasons for separations.

Table 1: Breakdown of reasons for separations

	2013	2011
Resignation	53.7%	35.0%
Redundancy	24.4%	0.8%
Dismissal	6.7%	1.3%
Contract ended	6.5%	57.3%
Other	2.0%	1.1%
Transfer	1.7%	0.3%
Health issues	1.4%	0.6%
Retirement	1.3%	1.4%
Completion of fixed term	1.2%	0.5%
Abandoned	0.7%	1.5%
Training pipeline end	0.4%	0.2%
Total	**100%**	**100%**
Total separations as percentage of sample	**20.5%**	**27.3%**

Female Participation

Key Statistics

Women in mining have:

- An average age of 36 which is five years below the average.

- A shorter length of service at 3.4 years, almost two years below the average.

- A turnover rate of 27%, still higher compared to the industry average of 21%.

- 36% of workers are under the age of 30, and only 12% are over 50 years old.

- Women are recruited at a 22% rate, 4% above the average.

- Women have a 4% Aboriginal and Torres Strait Islander participation, well above the average.

- Annual unplanned leave for women accounts for 83 hours.

- 66% of the female workforce are resident workers, 12% above the average.

Female participation continues to represent an opportunity for the industry to maximise the available labour pool. Participation in the workforce continues to grow and is currently 14%. The sector has a desire to achieve 20% participation of women in mining by 2020. At the current rate of growth of approximately 1% per year, the industry target of 20% is an achievable aim.

New recruit and internal talent pipeline female participation data supports the continuing increased participation of women, at 17% and 23% respectively.

The majority of female representation within the industry remains in traditional roles such as Administration (65%), Accounting (57%), Occupational Health and Safety (34%), Trainers (33%), and Geoscience (32%). Increasingly, growth is beginning to occur in non-traditional roles such as Fixed Plant Operators, Electrical Trades and Mobile Operator job categories. Table 2 shows all job categories.

Figure 4 shows the percentage distributions for the male and female mining workforce across the age range. Female workers have significantly higher representation in the younger age groups compared to male workers, especially in those age groupings between 20 and 34, before a redistribution occurs from 35 years onwards. This result potentially represents a continuing generation change model, as recruitment and work practices are evolving. Female workers are targeted through the talent pipelines and non-traditional employment initiatives. Alternatively, this may represent an existing gender distribution model with family and parenting considerations emerging around the age of 35. Compared to the female age distribution from the 2010-11 Heartbeat Report sample, the evidence shows there is a trend towards an increase in younger female participation, suggesting there is a larger influx of women through new recruitment and pathways.

Figure 4: 2013 comparative female and male age distribution by %
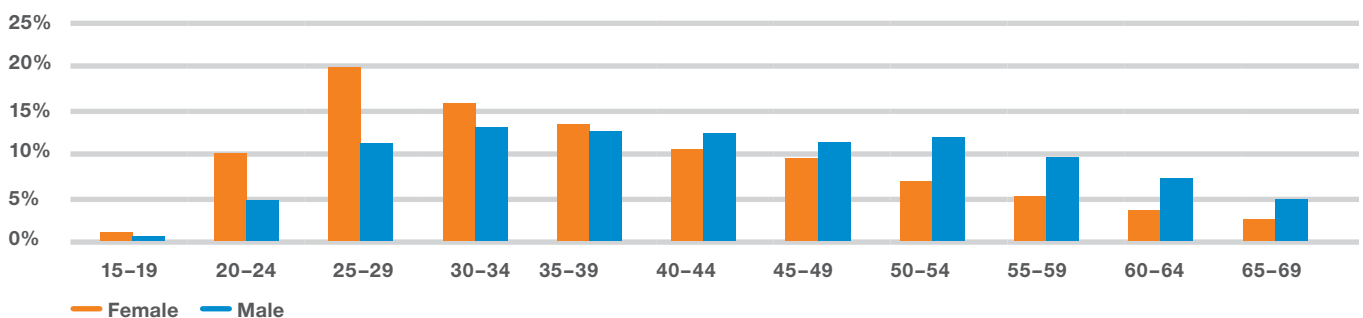
Female Participation

Table 2: Female workforce by occupation 2012–13

Job Categories	2013	2011	% Change
Accounting	56.5%	47.9%	+8.6%
Administration	65.1%	62.6%	+2.5%
Blast and Shotfirer	4.1%	2.2%	+1.9%
Contractor	9.2%	7.0%	+2.1%
Deputies	0.0%	0.0%	0.0%
Mining Driller	1.4%	3.3%	−1.9%
Electrical Trades	4.1%	1.8%	2.3%
Engineers	10.1%	9.6%	+0.5%
Fitter	0.5%	0.1%	+0.4%
Geoscientist	32.8%	24.7%	+8.0%
Internal Talent Pipeline	23.0%	17.3%	+5.7%
Maintenance	2.8%	2.9%	−0.1%
Mechanic	0.3%	0.0%	+0.3%
Mobile Operators	10.1%	9.3%	+0.8%
Open Cut Examiners	0.9%	4.0%	−3.1%
Occupational Health and Safety	33.7%	40.6%	−6.9%
Operator Fixed	9.4%	4.6%	+4.8%
Surveyor	0.0%	2.6%	−2.6%
Technician	7.4%	8.0%	−0.6%
Trainer	33.3%	28.5%	+4.8%
Total	**14.0%**	**12.2%**	**+1.8%**

Average Age
35.5   1.8 ⌄

Length of Service (years)*
3.4   0.1 ⌄

Average Working Hours
40.0   ⌃ 0.2

Average Unplanned Leave (hours)*
82.8

Recruitment Rate
21.5%   5.5% ⌄

Resignation Rate
14.5%   ⌃ 2.2%

Retirement Rate
0.03%   0.04% ⌄

Eligible to retire (>60)
1.3%   0.6% ⌄

Turnover Rate
26.7%   1.7% ⌄

Non-Resident
34.0%   ⌃ 10.3%

Resident
66.0%   10.3% ⌄

Aboriginal and Torres Strait Islander
4.0%

457 Visa
1.2%

Age profile

Under 30 years old
35.5% ⌃ 7.8%

30–49 years old
52.0% 4.5% ⌄

50 years old and over
12.4% 3.3% ⌃

⌄% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Non-resident Workforce

Queensland's mining workforce has grown significantly in the past decade and this growth has seen the evolution of a non-resident workforce which is now working and living further away from home. This trend is fundamentally changing travel to work behaviours. The 2012-13 Heartbeat Report sample includes postcode data from 23,200 (92%) current employees and 4,600 (88%) separated staff. The analysis aligned employee home and work postcodes, and calculated the direct distance between the two locations, based on the ABS geospatial coding.

The results were grouped into three categories; less than 100km (resident), between 100km and 300km (DIDO) and over 300km (FIFO). The less than 100km group is considered to represent the resident workers, whereas the balance represents the non-resident workers. The 100km cut-off has been selected and tested as a robust limit for short and medium distance travel behaviour.

Almost half of the sample workforce continues to be non-resident workers, with a quarter of all current employees classified as FIFO workers. Resident workers have on average a length of service of 6.8 years. Non-resident workers have a much lower length of service at 4.3 years. In addition, the FIFO subset of the non-resident workforce has a length of service of only 3.5 years. First year turnover for non-resident workers is 21%, compared to only 11% for resident workers. Resignation rates for resident workers are relatively low at 6%, whereas non-resident workers resign at a rate of 13%, with FIFO workers higher at 17%.

The Heartbeat Report data shows that 97% of the current mining workforce is employed in the Mackay (39%), Fitzroy (30%), the North West (20%) and South-East Queensland (9%) regions. This is supported by the Queensland's Office of Economic and Statistical Research (OESR) data on the regional nature of the mining workforce.

Key Statistics

- 46% of the current workforce are non-resident workers.

- 25% of the current workforce is a FIFO workforce.

- The female workforce is higher for resident workers at 17% compared to 10% for non-resident workers.

- The recruitment rate for FIFO workers (25%) is well above resident workers (16%).

- 2.1% of the Queensland industry workforce is from interstate, mainly New South Wales and the Northern Territory.

- FIFO workers have a 6% Aboriginal and Torres Strait Islander participation, well above the average.

Figure 5: Work-travel behaviour
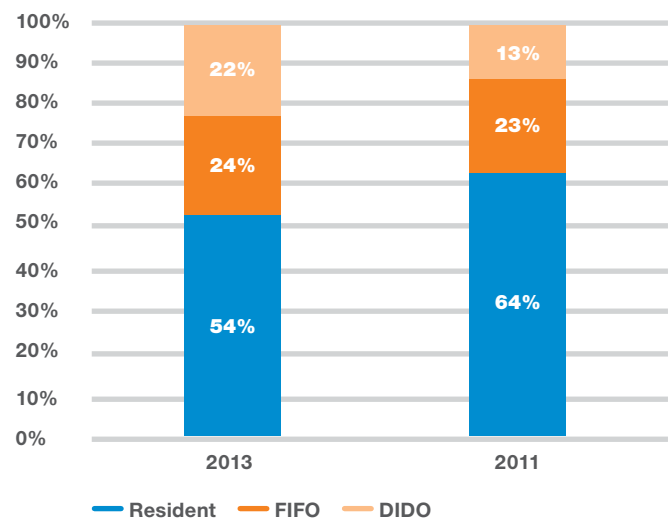
Managing the issues arising from the mobility of the workforce, remains a key challenge for the industry

Non-resident Workforce

Discussion

The increase of the non-resident workforce represents a major challenge given the industry's reliance on FIFO and DIDO models in meeting the current and projected workforce demands. Based on current trends, the number of non-resident workers is projected to continue to increase. This number could increase significantly with some FIFO projections for new mining projects being as high as 75% of the workforce.

The capacity of local mining regions to accommodate forecasted growth is the main reason for the predicted growth in FIFO arrangements. The North West, Mackay and Fitzroy regions together employ 88% of Queensland's mining workforce.

The majority of mining workers continue to reside in the Mackay and Fitzroy regions (55%), however there is a redistribution to South-East Queensland, Townsville, Cairns, and Wide Bay regions that act as home regions. There is a growth in employee movement from major coastal communities to the mining and resource regions.

Managing the issues arising from the mobility of the workforce is a key challenge for the industry. This is a key risk in terms of the industry developing a sustainable workforce capable to achieving future workforce growth targets.

Image courtesy of
Peabody Energy

Age Profile

Key Statistics

- The industry workforce is rejuvenating and new entrants to the industry are on average three years younger.

- Less than 10% of the industry workforce remains under 25 years of age.

- 24% of employees are over 50 years of age.

- 5% of employees are over 60 years of age and are eligible for retirement.

- 15% of new recruits are 50 years of age or older.

- Statutory roles such as Deputy and Open Cut Examiner represent the highest risk job categories in terms of eligibility to retire.

Discussion

An analysis of the industry's age profile shown in Figure 6 indicates the industry is more likely to employ staff once they enter their late twenties. This reinforces the notion that industry actively seeks experienced workers. Approximately 83% of the internal talent pipeline training group are under 30 years of age. The 17% of workers aged over 30 results primarily from the uptake of mature age apprenticeships and graduate models.

In the mining industry, 24% of all employees are aged 50 years or older and 5% of these employees are over 60 years of age and eligible to retire. This represents a group of employees who will potentially leave the industry during the next ten years. Ensuring operational continuity through identification and retention of high-value knowledge held by retirement-eligible workers is a key priority for the industry. The "at risk" job categories include; Deputy, Open Cut Examiner, Surveyor, Supervisor, Mining Driller, Mechanic, Electrical Trades, Mobile and Fixed Operator roles. The ageing profile of these roles is exacerbated by workforce replacement practices which recruit older workers. The inherent ageing workforce profile for these job roles poses a significant risk through the loss of critical skills, knowledge and experience.

Figure 6: Mining industry age profile

Legend: 2013, 2011
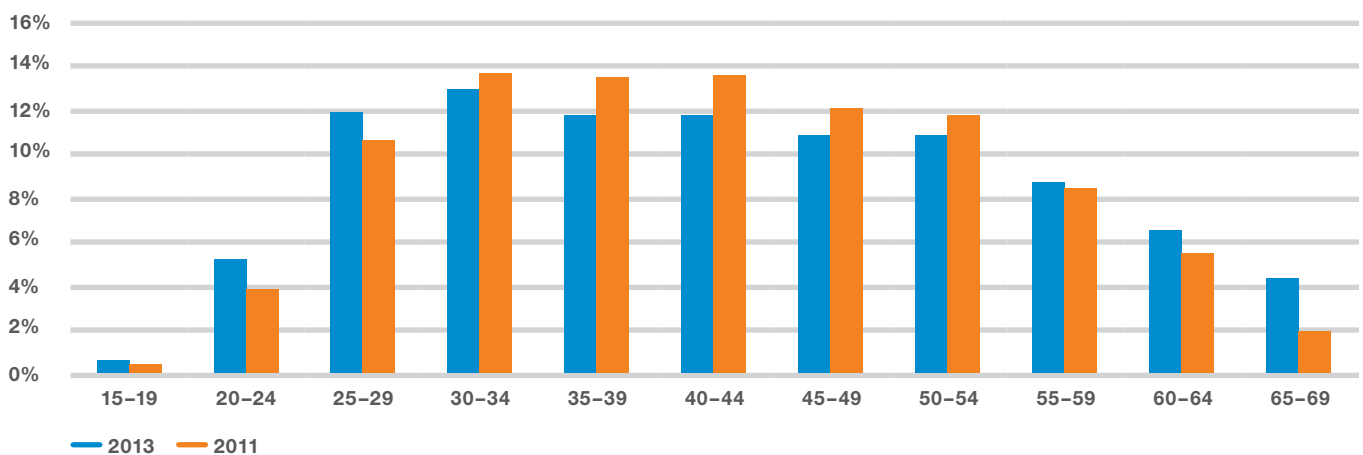
Qualifications

For the first time, the Heartbeat Report 2012-13 explores the skills and qualification framework for employees within the mining sector. Developing the supply of job-ready workers to meet projected growth is a key priority for the industry. The Graduate, Apprentice, Trainee and Cadet pipeline currently represent 5% of the industry's workforce. The breakdown of employees into their highest recorded formal qualification, is detailed below as a comparative between the contractor and non-contractor workforce.

Fifty-nine percent of the mining industry workforce has a Certificate II or below qualification. This group largely consists of semi-skilled and/or ticketed roles including Mobile and Fixed Plant Operators. These roles are more likely to hold specific units of competency and/or have relevant experience as a substitute for formal qualifications. Thirteen percent of the workforce has a Bachelor Degree level or above qualification. The Bachelor Degree level or above group is distinctly higher for the non-contracting workforce at 26%. This profile clearly highlights the challenge to engage all levels of the education sector pipeline (through both formal and informal training) to adequately skill and maintain the current Queensland mining workforce as well as meeting the significant projected sectoral growth.

Education across the internal talent pipeline shows that 48% has a Certificate II or below qualification, and 36% has a Bachelor Degree level or above qualification. Electrical Trades, Engineers, Mechanics and Geoscientists have the highest number of employees in these internal development pipelines. This may be a response to skill shortages as identified in the previous Heartbeat Report.

Table 3: Highest recorded formal qualification level of the mining workforce

	Non-Cont -ractors	Cont -ractors	Total
Bachelor level or above	26.4%	8.6%	**13.1%**
Diploma and advanced diploma	4.8%	–	**1.2%**
Certificate III and Certificate IV	46.8%	19.5%	**26.4%**
Certificate II and below	22.0%	71.9%	**59.3%**

Unplanned Leave

Analysis on unplanned leave is a new to this edition of the Heartbeat Report. This was undertaken at the request of a number of the participants in order to create a benchmark process for the sector and examine the cost of this leave.

The following definition has been adopted for the data collection and used uniformly by the participant companies in the collection of the data. Unplanned leave is the 'absence from work that arises unexpectedly or irregularly, making it difficult to plan, approve or budget for in advance such as Sick Leave, Carer's Leave, Compensation and other miscellaneous leave'.

The National Absence Management Survey is one of the few sources of information on the level of unplanned leave in Australian industry. In 2012, the national average days lost per annum was 70 hours. The Heartbeat Report sample showed an average of 73 hours for the current workforce. However, separating staff on average shows a much higher unplanned leave at 97 hours. Unplanned leave also increases as the age of the employee increases as shown in Table 4.

Table 4: Unplanned leave by age groupings

	<30	30-49	>50
Unplanned leave (hours) on average	58	76	85

The cost of unplanned leave to the industry is significant, and based on the sample an estimation can be made to the annual cost of unplanned leave. On an average hourly wage of $53 (DEEWR) for a mining employee, and a total unplanned leave of the sample of 971,000 hours, the cost to the industry represented by the sample was $51.4 million. As the unplanned leave data represents 58% of the industry, excluding oil and gas extraction and exploration, the total estimated cost to the mining industry of unplanned leave in the year 2012-13 was $97 million. The estimated cost of absence per employee per annum is $3,860.

Aboriginal and Torres Strait Islander Workforce

The participation of Aboriginal and Torres Strait Islander workers is included in the Heartbeat Report sample for the first time. Information from Queensland Treasury has identified mining as a sector that has a high Aboriginal and Torres Strait Islander participation in Queensland. The Heartbeat Report sample has recorded a 2.7% participation rate with a large proportion of workers (37%) under the age of 30.

Key Statistics

Aboriginal and Torres Strait Islander workers:

- Have an average length of service of four years, two years below the average.

- 63% of the workforce are non-resident workers higher than the sample average of 46%.

- 48% of the current employees are FIFO workers.

- Female participation is higher at 21% compared to the 14% for the sample.

- The recruitment rate for Aboriginal and Torres Strait Islander workers (26%) is well above the separation rate at 22%.

- Participation in mining has increased over the past year.

- An average age of 36 is four years below the sector average.

- The resignation rate of 9% is slightly below the sample average of 10%.

- 95% of the Aboriginal and Torres Strait Islander mining employees work in the North West, Fitzroy and Mackay regions.

- Aboriginal and Torres Strait Islander workers are employed in largest numbers as Mobile and Fixed Plant Operators, and are well represented within the Internal Talent Pipeline. The latter result supports the anecdotal and industry case studies that recruitment trends for Aboriginal and Torres Strait Islanders are being increased.

Average Age
35.6

Length of Service (years)*
3.7

Average Working Hours
43.2

Average Unplanned Leave (hours)*
70.5

Recruitment Rate
26.3%

Resignation Rate
9.2%

Retirement Rate
—

Eligible to retire (>60)
2.9%

Turnover Rate
22.2%

Non-Resident
62.6%

Resident
37.4%

Female Employees
20.7%

Age profile

Under 30 years old
36.6%

30–49 years old
49.7%

50 years old and over
13.7%

% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

457 Visa Holders

Skilled migration is increasingly used to fill the gap between skills required by organisations and skills available in the labour market. Although the 457 Visa worker represents just over 1% of the current workforce, the numbers still provide some valuable insights.

Key Statistics

457 Visa Holders workers:

- Have an average length of service of two years lower than the sector average of six years.

- 69% of the workforce are resident workers, much higher than the sample average of 54%.

- 31% of the current employees are FIFO workers.

- An average age of 36 is well below the sector average of 40 years of age.

- Resignation rates of 2% are well below the sample average of 10%.

- 457 Visa mining employees work across four regions South-East Queensland (33%), Mackay (26%), Fitzroy (22%) and the North West (19%).

- 457 Visa mining employees live in South-East Queensland (43%), Mackay (21%), Fitzroy (20%) and the North West (16%).

- 457 Visa workers are predominantly employed as Engineers, Geoscientists and Fitters.

- The 457 worker is predominantly highly educated, with 94% qualified at the Certificate III level or above, and 45% at the Bachelor Degree level or above.

Proportion of Total Sample
1.02%

Average Age
36.1

Length of Service (years)*
1.9

Average Working Hours
41.9

Average Unplanned Leave (hours)*
57.7

Recruitment Rate
25.8%

Resignation Rate
2.0%

Retirement Rate
—

Eligible to retire (>60)
0.8%

Turnover Rate
5.7%

Non-Resident
31.1%

Resident
68.9%

Female Employees
13.1%

Age profile

Under 30 years old
29.2%

30–49 years old
60.9%

50 years old and over
9.9%

% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Job Profiles

Accountants

Observations:

- Accountants remain a relatively small part of the workforce at 0.8% of the industry. Recruitment rates have dropped to 14.5% yet turnover has increased to 21.5%, indicating a decline in employed accountants during the past 12 month period. This is likely impacted by a state-wide shortage of accountants, particularly in remote regions.

- Accountants continue to be a relative younger workforce with an average age of 35.8 years.

- Resignation rate continues to increase (18.5%), signalling ongoing retention issues.

- A significant proportion of employees (69.8%) leave their organisation between one and three years of employment.

- Accountants represent 8.5% of the total internal training pool, showing a strong focus on internal development of new recruits.

- The female portion of the workforce has increased to 56.5%, placing accountants at the second highest job category of female participation after administration (65.1%).

- 79.5% of accountants live in South-East Queensland (SEQ), while 75.3% works in South-East Queensland. In general, 87.6% of accountants live within 100km of their workplace.

- Unplanned leave is well below the sample average at 51.3 hours opposed to 72.8 hours.

- In Queensland, accountants remain in the skill shortage list as employers experience difficulty recruiting intermediate accountants and those with special skills.

- The high resignation rate suggests retention issues for accountants across the industry. A review of career progression and development issues within the industry may provide new insights leading to a potential improvement in retention rates.

- There are no identified Aboriginal and Torres Strait Islander workers in the given sample.

Average Age
35.8   2.3 ⌄

Length of Service (years)*
4.2   0.4 ⌄

Average Working Hours
37.9   1.0 ⌄

Average Unplanned Leave (hours)*
51.3

Female Employees
56.5%   ⌃ 8.6%

Recruitment Rate
14.5%   6.7% ⌄

Resignation Rate
18.5%   ⌃ 2.7%

Retirement Rate
–

Eligible to retire (>60)
1.5%   1.3% ⌄

Turnover Rate
21.5%   ⌃ 4.4%

Non-Resident
12.4%   ⌃ 1.9%

Resident
87.6%   1.9% ⌄

Aboriginal and Torres Strait Islander
–

457 Visa
1.3%

Age profile

Under 30 years old
27.0% ⌃ 9.1%

30–49 years old
65.5% ⌄ 2.1%

50 years old and over
7.5% ⌄ 7.0%

% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Administration

Average Age
38.1 ⌄ 2.4

Length of Service (years)*
4.0 ⌄ 0.8

Average Working Hours
39.3 ⌃ 0.3

Average Unplanned Leave (hours)*
64.4

Female Employees
65.1% ⌃ 2.5%

Recruitment Rate
17.6% ⌄ 12.2%

Resignation Rate
17.5% ⌃ 5.9%

Retirement Rate
0.14% ⌄ 0.36%

Eligible to retire (>60)
3.5% ⌄ 2.1%

Turnover Rate
25.7% ⌃ 5.2%

Non-Resident
25.6% ⌃ 4.7%

Resident
74.4% ⌄ 4.7%

Aboriginal and Torres Strait Islander
1.9%

457 Visa
0.95%

Age profile

Under 30 years old
28.9% ⌃ 8.5%

30–49 years old
52.6% ⌄ 2.3%

50 years old and over
18.5% ⌄ 6.2%

⌄ % increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Observations:

- Administration continues to be comparatively young workforce with a mean age of 38.1 years.

- With an average length of a service at four years, administration personnel tenure is below the industry average, which is not uncommon for the job group.

- The administration workforce has decreased during the past 12 months, with recruitment below turnover, driven by a considerable drop in recruitment of 12.2%, against an increase in turnover of 5.2%. This decrease in the workforce may have been driven by a consolidation of the workforce in the current economic climate.

- Administration continues to have the highest female participation in the workforce of any job role in the industry at 65.1%.

- Turnover in the first year of employment has decreased by nearly 9.3% to 18.0%.

- Three quarters of workers are a resident workforce, residing within 100km of the workplace.

- Administration workers are spread across the State with 40.1% and 41.4% working and living in South-East Queensland, whereas the balance covers the Mackay, Fitzroy and the North West regions.

- Aboriginal and Torres Strait Islander workers account for 1.9%, a figure slightly less than the industry average.

- Unplanned leave for the administration category is below the sample average of 72.8 hours.

- A review of industry career pathways for administrators may highlight opportunities to improve retention of Administration staff.

Blast and Shotfirers

Observations:

- Blast and shotfirers have an average of 4.8 years of service, suggesting stable career pathways across the industry. However, 65.0% of separations still occur within the first three years.

- Total recruitment (29.8%) has exceeded turnover (23.4%) during the past 12 months, indicating a growing workforce and an available supply of labour.

- The resignation rate of 14.6% is almost double the industry average (7.8%), indicating that blast and shotfirers in general leave on their own accord. This suggests there is a high demand for this skill set.

- Blast and shotfirers continue to have a small female participation (4.1%), which has almost doubled compared to the 2010-11 sample, as projected in the 2012 heartbeat report.

- There has been a noticeable reduction of 7.4% in the over 50 age group, which corresponds to an aligned growth in the 30 to 50 age group.

- 57.9% of blast and shotfirers live more than 100km from their place of work, with an overwhelming 48.8% living more than 300km from their place of work. This indicates that this group is a highly transient workforce, which can be expected from a very specific and 'in high demand' skill set.

- The proportion of 457 Visa workers is more than double the industry average at 2.9%.

- The Aboriginal and Torres Strait Islander workers account for 0.7%, a figure less than the sample average.

- Unplanned leave for the category is well below the sample average at 46.0 hours per year.

Average Age
38.9 2.5 ⌄

Length of Service (years)*
4.8 2.0 ⌄

Average Working Hours
39.4 1.0 ⌄

Average Unplanned Leave (hours)*
46.0

Female Employees
4.1% ⌃ 1.9%

Recruitment Rate
29.8% ⌃ 3.9%

Resignation Rate
14.6% ⌃ 5.4%

Retirement Rate
—

Eligible to retire (>60)
4.1% 2.4% ⌄

Turnover Rate
23.4% ⌃ 12.6%

Non-Resident
57.9% ⌃ 45.4%

Resident
42.1% 45.4% ⌄

Aboriginal and Torres Strait Islander
0.69%

457 Visa
2.9%

Age profile

Under 30 years old
14.1% 0.6% ⌄

30–49 years old
69.4% ⌃ 8.0%

50 years old and over
16.5% 7.4% ⌄

⌄% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Deputies

Average Age	**46.3**	2.0 ⌄
Length of Service (years)*	**6.7**	⌃ 0.8
Average Working Hours	**39.7**	0.7 ⌄
Average Unplanned Leave (hours)*	**71.7**	
Female Employees	—	
Recruitment Rate	**0.8%**	22.2% ⌄
Resignation Rate	**4.0%**	15.7% ⌄
Retirement Rate	—	
Eligible to retire (>60)	**11.9%**	⌃ 0.4%
Turnover Rate	**16.7%**	4.6% ⌄
Non-Resident	**30.2%**	17.4% ⌄
Resident	**69.8%**	⌃ 17.4%
Aboriginal and Torres Strait Islander	—	
457 Visa	—	

Age profile

Under 30 years old
6.3% ⌃ 6.3%

30–49 years old
55.6% 0.2% ⌄

50 years old and over
38.1% 6.2% ⌄

% ⌄ increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Observations:

- By comparison with other job roles, Deputies are an older workforce, with an average age of 46.3, with 38.1% of the workforce over 50 years of age. This age profile represents the nature of the role and mandatory statutory experience.

- Deputies have, in general, a long length of service of 6.7 years, higher than the sample average.

- While the workforce is small (0.5% of the sample), there has been a sharp decrease in the recruitment rate by 22.2%, and at the same time the separation rate has dropped by 15.7%. A number of major industry development and qualification processes have been undertaken to internally develop and retain the deputy workforce.

- Significant workforce challenges identified in the previous Heartbeat have eased slightly, yet 11.9% of the group is eligible to retire and imposes a continuing risk.

- Separations in the first 12 months of service are virtually non-existent, but the departure of experienced staff has grown to 81.0%.

- 69.8% of deputies are resident workers (well above the sample average) living within 100km of their place of work. This represents a change in work-travel patterns for this category, and is representative of the internal development programs undertaken.

- Most deputies work and live in the Mackay region (66.2%), while others live and work in Fitzroy (18.5%) and South-East Queensland (12.3%).

- Unplanned leave for the category is consistent with the sample average at 71.7 hours.

- Deputies are represented on the Queensland Skill Shortage list and remain a critical skill based on their small numbers and age profile.

Mining Drillers

Observations:

- Mining Drillers have had a major increase in separations (29.7%), double the recruitment rate (15.2%), which is driven by a downturn in the mining drilling sector.

- A quarter of all separations have occurred in the first 12 months of employment and 41.5% between one and three years. 81.3% of the separations are among FIFO employees, predominantly resignations.

- The separation of experienced staff has decreased by almost 24.7%.

- The current workforce remains very experienced and stable with an average length of service of 7.1 years.

- 19.6% of the workforce is over 50 years of age, a decrease from 31.9% in the last report. Those currently eligible to retire have also decreased to 4.3%.

- 64.9% of Mining Drillers are non-resident workers, living over 100km from their place of work. This represents a major growth in work travel behaviour for this category, with the vast majority (62.5%) living more than 300km away.

- 85.7% of Mining Drillers work, and 41.8% live in Queensland's North West region.

- Unplanned leave for the category is on par with the sample average at 79.8 hours per year.

- 3.3% of Mining Drillers are Aboriginal and Torres Strait Islander, a figure well above the sample average.

- The female participation rate remains traditionally low at 1.4%.

Average Age
39.5 4.8 ⌄

Length of Service (years)*
7.1 3.3 ⌄

Average Working Hours
38.9 1.8 ⌄

Average Unplanned Leave (hours)*
79.8

Female Employees
1.4% 1.9% ⌄

Recruitment Rate
15.2% ⌃ 4.2%

Resignation Rate
13.0% 4.6% ⌄

Retirement Rate
—

Eligible to retire (>60)
4.3% 8.5% ⌄

Turnover Rate
29.7% ⌃ 10.9%

Non-Resident
64.9% ⌃ 52.1%

Resident
35.1% 52.1% ⌄

Aboriginal and Torres Strait Islander
3.6%

457 Visa
—

Age profile

Under 30 years old
20.3% ⌃ 10.2%

30–49 years old
60.1% ⌃ 2.0%

50 years old and over
19.6% ⌄ 12.3%

% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Electrical Trades

Average Age
39.1 3.7 ⌄

**Length of Service (years)*
6.1** 3.3 ⌄

**Average Working Hours
40.7** 0.8 ⌄

**Average Unplanned Leave (hours)*
78.0**

**Female Employees
4.1%** ⌃ 2.3%

**Recruitment Rate
22.4%** ⌃ 12.1%

**Resignation Rate
7.0%** 4.7% ⌄

**Retirement Rate
0.19%** 0.26% ⌄

**Eligible to retire (>60)
4.7%** 0.7% ⌄

**Turnover Rate
10.7%** 4.1% ⌄

**Non-Resident
41.0%** ⌃ 16.3%

**Resident
59.0%** 16.3% ⌄

**Aboriginal and Torres Strait Islander
0.66%**

**457 Visa
0.44%**

Age profile

**Under 30 years old
24.8%** ⌃ 12.9%

**30–49 years old
53.4%** 2.8% ⌄

**50 years old and over
21.8%** 10.1% ⌄

⌄ **% increase or decrease is by comparison with the 2010/11 heartbeat report figures**

* Current staff

Observations:

- Electrical Trades workers continue to have a high length of service of 6.1 years.

- The Electrical Trades workforce increased in 2012-13 to a 10.7% separation rate and a recruitment rate of 22.4%.

- The high resignation rate for Electrical Trades in the last report has fallen to 7.0% and is now less than the sample average of 10.5%.

- 21.8% of current employees continues to be over 50 years of age, and 4.7% of those are over 60 years of age, which signals high potential separation risks.

- A sizeable internal talent pool accounts for 34.2% of apprentices. 82.8% of the internal talent pipeline for the Electrical Trades consists of apprentices, with the remaining 17.2% as graduates.

- The female proportion of the workforce has doubled to 4.1% in the 2012-13 data, but remains well below the sample average of 14.0%.

- 59.0% are resident workers (well above the sample average), living within 100km of their place of work. This however represents a decrease of 16.3% in the resident workforce. A trend balanced by a 15.2% growth in the FIFO workforce, indicates a major shift in the travel pattern.

- Electrical Trades workers are employed across the State, with 48.5% working in the North West region, and the majority of the balance in Mackay (26.5%) and Fitzroy (21.1%).

- Unplanned leave for the category is on par with the sample average at 78.0 hours per year.

- Both the representation of Aboriginal and Torres Strait Islander and 457 Visa workers are well below the sample average.

- The female participation rate remains traditionally low at 4.1%.

Engineers

Observations:

- This category consists of the following disciplines:

  - 26.6% Mining
  - 14.7% Mechanical
  - 9.5% Electrical
  - 6.3% Maintenance
  - 5.1% Planning, Project, and Process
  - 37.8% Other

- Engineering continues to be a relatively young workforce with a mean age of 35, with 33.4% of staff under the age of 30.

- Engineers have had a relatively stable workforce with both recruitments and separations at 17.2%.

- Though still predominantly a resident workforce, with 64.2% living within 100km of work, this figure has dropped by 11.7% from the last sample, indicating a rise in transient workforce.

- Only 10.0% of the current workers are over 50 years of age.

- Separations within the first year of employment have seen a significant increase to 17.4%. Seemingly offset by an almost 19.8% decrease in the more experienced staff departures. This could be a concerning trend in separation patterns.

- A sizeable internal talent pipeline of Engineers makes up 40.8% of the total graduate pool.

- Engineers are employed across the State with 34.1% in Mackay, 21.7% in the North West, 22.5% Fitzroy and 20.6% in South-East Queensland.

- The same workers live further afield with 32.7% in South-East Queensland, 26.0% in Mackay, 19.3% in Fitzroy and 12.7% in the North West.

- Unplanned leave for the category is well below the sample average at 43.7 hours per year.

- Aboriginal and Torres Strait Islander worker participation is below the industry average (0.3%), while a 10.1% female workers participation is below the industry average of 14.0%, and above the State Engineering average of 9.1%.

- 457 Visa workers form 10.4% of the sample workforce.

Average Age
35.1 2.6 ⌄

Length of Service (years)*
4.0 0.7 ⌄

Average Working Hours
39.5 no change

Average Unplanned Leave (hours)*
43.7

Female Employees
10.1% ⌃ 0.5%

Recruitment Rate
17.2% 5.4% ⌄

Resignation Rate
9.8% 3.5% ⌄

Retirement Rate
—

Eligible to retire (>60)
1.5% 1.2% ⌄

Turnover Rate
17.4% ⌃ 2.1%

Non-Resident
35.8% ⌃ 11.7%

Resident
64.2% 11.7% ⌄

Aboriginal and Torres Strait Islander
0.27%

457 Visa
10.4%

Age profile

Under 30 years old
33.4% ⌃ 12.2%

30–49 years old
56.6% 6.9% ⌄

50 years old and over
10.0% 5.3% ⌄

⌄ % increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Fitters

Average Age
37.0 2.6 ⌄

Length of Service (years)*
4.3 1.3 ⌄

Average Working Hours
40.5 1.0 ⌄

Average Unplanned Leave (hours)*
69.6

Female Employees
0.5% ⌃ 0.4%

Recruitment Rate
26.5% ⌃ 8.2%

Resignation Rate
10.6% 1.6% ⌄

Retirement Rate
0.09% no change

Eligible to retire (>60)
2.2% 2.1% ⌄

Turnover Rate
19.9% 2.4% ⌄

Non-Resident
52.1% ⌃ 21.3%

Resident
47.9% 21.3% ⌄

Aboriginal and Torres Strait Islander
1.7%

457 Visa
2.3%

Age profile

Under 30 years old
27.2% ⌃ 9.3%

30–49 years old
59.1% 3.5% ⌄

50 years old and over
13.7% 5.7% ⌄

% ⌄ increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Observations:

- Fitters are a slightly younger workforce with an average age of 37.0 years.

- The proportion of workers under 30 years of age has increased significantly to 27.2% from 9.3%.

- Fitters have a marginally shorter length of service at 4.3 years.

- Total recruitment has increased from 8% to 27% and continues to exceed separations at 19.9%. This suggests growth and a readily available labour supply.

- Fitters have a sizeable internal talent pipeline comprising of 23.7% of the total apprentices.

- 52% are non-resident workers living over 100km from their place of work, with a quarter of the workforce now FIFO employees living more than 300km away from work.

- Fitters are employed across the State with 32.8% in Mackay, 30.3% in the North West, 26.8% Fitzroy.

- Unplanned leave for this category is slightly lower than the sample average at 69.6 hours per year.

- Aboriginal and Torres Strait Islander workers account for 1.68%, below the sample average.

- Female representation is low at 0.5% but has increased steeply since 2011.

- 457 Visa workers account for 2.28% of the workforce.

- Fitters are also represented on the Queensland Skill Shortage.

Fixed Plant Operators

Observations:

- The age of fixed plant operators is slightly older than the sample average, at 42.1 years.

- Recruitment has remained stable at 18.0%, though separations have increased steeply to 29.4%.

- 67.6% of the separations occurred within the first three years of employment.

- 28.0% of current staff are over the age of 50, and 6.7% are eligible to retire. This continues to represent an increased risk of separation in the near future.

- 57.7% of the fixed plant operators are non-resident workers, a 29.9% increase from the last sample. This indicates a major change in work travel behaviour for this category.

- The majority of this increase was accounted for by a 19.9% increase in DIDO employees, living between 100km and 300km away from work.

- The predominant regions of employment across the State are Mackay (50.6%), Fitzroy (25.3%) and the North West (23.2%).

- The predominant regions of residence are more diverse, and are Mackay (39.8%), Fitzroy (17.6%), the North West, (16.7%), South-East Queensland (7.9%) and Townsville (8.4%).

- Unplanned leave for the category is slightly higher than the sample average at 78.1 hours per year.

- Aboriginal and Torres Strait Islander workers account for 6.34%, well above the sample average.

- Female participation has almost doubled to 9.4%.

- 457 Visa workers form 0.8% of the sample workforce.

Average Age
42.1 0.8 ⌄

Length of Service (years)*
5.1 0.9 ⌄

Average Working Hours
42.5 0.3 ⌄

Average Unplanned Leave (hours)*
78.1

Female Employees
9.4% ⌃ 4.8%

Recruitment Rate
18.0% no change

Resignation Rate
12.7% ⌃ 4.2%

Retirement Rate
0.83% ⌃ 0.7%

Eligible to retire (>60)
6.7% 1.7% ⌄

Turnover Rate
24.9% ⌃ 13.8%

Non-Resident
57.7% ⌃ 29.9%

Resident
42.3% 29.9% ⌄

Aboriginal and Torres Strait Islander
6.3%

457 Visa
0.08%

Age profile
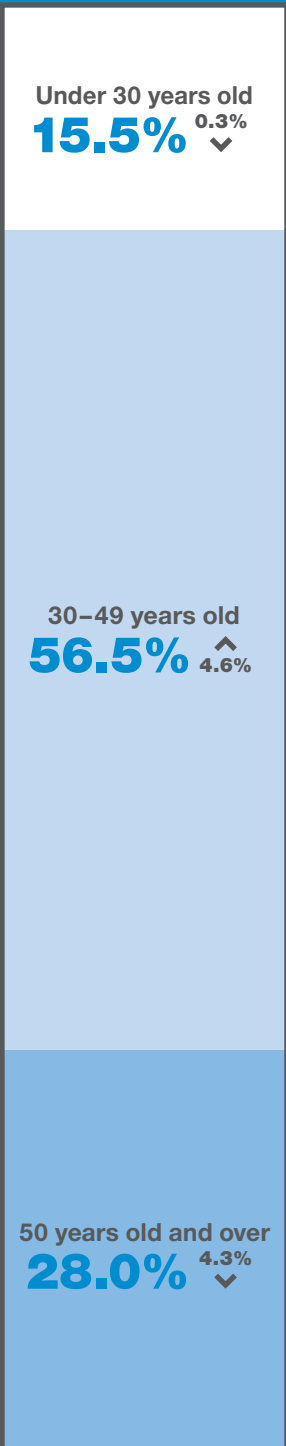
Under 30 years old
15.5% 0.3% ⌄

30–49 years old
56.5% ⌃ 4.6%

50 years old and over
28.0% 4.3% ⌄

% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Geoscientists

Average Age	
35.5	4.0 ⌄
Length of Service (years)*	
3.6	0.1 ⌄
Average Working Hours	
39.5	no change
Average Unplanned Leave (hours)*	
67.1	
Female Employees	
32.8%	⌃ 8.0%
Recruitment Rate	
19.2%	12.7% ⌄
Resignation Rate	
9.2%	13.4% ⌄
Retirement Rate	
—	
Eligible to retire (>60)	
2.2%	2.8% ⌄
Turnover Rate	
15.3%	8.9% ⌄
Non-Resident	
48.7%	⌃ 13.0%
Resident	
51.3%	13.0% ⌄
Aboriginal and Torres Strait Islander	
3.6%	
457 Visa	
16.7%	

Age profile

Under 30 years old
37.6% ⌃ 17.2%

30–49 years old
51.5% 10.0% ⌄

50 years old and over
10.9% 7.2% ⌄

% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Observations:

- Geoscientists continue to have a comparatively young workforce, with an average of 35.5 years. The under 30 age group has grown to 37.6% of the workforce, showing a revitalisation of the workforce.

- Geoscientists have a below average length of service at 3.6 years.

- The Geoscience workforce increased with a recruitment rate of 19.2%, far outpacing the 15.3% separations. Both separations and recruitment were lower compared to the previous sample, indicating a stabilising workforce. Turnover of experienced Geoscientists is high at 51.4%, but has decreased by 19.0%. This suggests that retention remains an issue, yet one that is currently being addressed by the industry.

- A sizeable internal talent pipeline is used to build a future workforce, with Geoscientists representing 9.8% of the graduate pool.

- Geoscientists are more likely to continue their employment beyond the first 12 months, with only 5.7% of separations from new hires.

- 48.7% of geoscientists are non-resident workers, living over 100km from their place of work, with 45.1% accounting for FIFO employees, and only 3.5% DIDO.

- Geoscientists are employed across the State with 34.7% in South-East Queensland, 35.2% the North West, 18.3% in Mackay and 11.4% in Fitzroy.

- The places of residence are, as expected by the FIFO pattern quite different, with almost half of the workforce living in South-East Queensland (49.4%) and the rest living in the North West (13.8%), Fitzroy (12.6%), and Mackay (10.9%).

- Aboriginal and Torres Strait Islanders account for 3.57% of workers.

- 457 Visa workers form 16.67%, a relatively high proportion of the workforce. Both Geologists and Geophysicists are represented on the Queensland and National Skill Shortage list.

- Geoscientists have a high female representation at 32.8%.

Internal Talent Pipeline

Observations:

- The Graduate, Apprentice, Cadet and Trainee category comprises employees in formal skilling programs. The pipeline represents 4.9% of the sample workforce.

- The Internal Talent Pipeline consists of 46.5% Apprentices, 28.2% Graduates, 24.2% Trainees and 1.2% Cadets. This represents a shift of 4.1% from trainees to apprentices when compared to the 2010-11 dataset.

- Electrical Trades (19.5%), Mechanics (22.6%), Engineers (14.0%), Fixed Plant Operators (11.0%) and Fitters (15.2%) represent the majority (82.3%) of the job categories in training.

- Engineers and Geoscientists are the two job roles with the highest percentage of training per employee at 12.1% and 10.9% respectively.

- As can be expected, the average age is young at 25.2.

- The internal talent pipeline remains stable in numbers with minimal chage in numbers for the 2012-13 period.

- 23.0% of all Graduates, Apprentices, Cadets and Trainees are female, a 5.7% increase from 2010-11.

- 60.9% are resident workers, a 15.8% decrease from 2010-11, a major change in work travel behaviour and in line with the 10.5% drop in residential workers for the whole industry.

- 27.4% of this category are FIFO employees, an increase of 11.6%, and now closer aligned to the industry average of 24.5%.

- Unplanned leave for the category is well below the sample average at 44.8 hours per year.

- Aboriginal and Torres Strait Islanders workers account for 11.9%, significantly above the sample average of 2.7%.

- A 40.7% separation rate in the first year (up from 5.2% in 2010-11) represents a major change and requires additional examination.

Average Age
25.2 2.0 ⌄

Length of Service (years)*
1.9 no change

Average Working Hours
41.5 ⌃ 0.4

Average Unplanned Leave (hours)*
44.8

Female Employees
23.0% ⌃ 5.7%

Recruitment Rate
34.7% 2.3% ⌄

Resignation Rate
10.4% 0.4% ⌄

Retirement Rate
0.08% no change

Eligible to retire (>60)
0.3% no change

Turnover Rate
36.9% ⌃ 14.3%

Non-Resident
39.1% ⌃ 15.8%

Resident
60.9% 15.8% ⌄

Aboriginal and Torres Strait Islander
11.9%

457 Visa
1.5%

Age profile

Under 30 years old
82.7% ⌃ 8.0%

30–49 years old
14.9% 6.6% ⌄

50 years old and over
2.3% 1.4% ⌄

% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Maintenance

Metric	Value	Change
Average Age	39.8	3.7 ⌄
Length of Service (years)*	6.4	1.5 ⌄
Average Working Hours	41.1	0.4 ⌄
Average Unplanned Leave (hours)*	68.6	
Female Employees	2.8%	0.1% ⌄
Recruitment Rate	15.5%	0.3% ⌃
Resignation Rate	11.8%	2.3% ⌄
Retirement Rate	0.04%	0.16% ⌄
Eligible to retire (>60)	4.3%	2.5% ⌄
Turnover Rate	18.2%	3.4% ⌄
Non-Resident	54.0%	25.3% ⌃
Resident	46.0%	25.3% ⌄
Aboriginal and Torres Strait Islander	1.0%	
457 Visa	0.35%	

Age profile

Under 30 years old
21.1% ⌃ 12.1%

30–49 years old
56.4% ⌄ 3.9%

50 years old and over
22.5% ⌄ 8.2%

% ⌄ increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Observations:

- Maintenance workers continue to have an above average length of service at 6.4 years, however there is a steep decline recorded which requires further investigation by the industry.

- 22.5% of the current employees are over 50 years of age, and 4.3% are eligible to retire. This is an increase on both measures from the previous sample, and represents an increasing challenge to the industry. The under 30 years of age workforce however, has grown by 12.1%, to 21.1% in part balancing this problem. Within this rejuvenation process the loss of experience continues to be a risk, as 56.6% of separations were experienced workers.

- A second challenge is observed with 11.4% of new employees separating in their first 12 months of employment.

- 54.0% of maintenance workers are non-resident workers. This represents a 25.3% increase from the previous report, and indicates a strong shift in labour mobility in this job category. The majority of this increase is represented by FIFO workers, who increased by 15.2% to 27.3%.

- Unplanned leave is below the sample average at 68.6 hours per year.

- Aboriginal and Torres Strait Islander workers account for 1.0%, well below the sample average of 2.7%.

- Female representation is low, at 2.8%.

Mechanics

Observations:

- Mechanics in the industry have a higher than average length of service at 8.7 years reflecting their comparative experience.

- There continues to be balance between turnover and recruitment at 7.9% and 5.0% respectively.

- 38.8% are non-resident workers which represents a 3.3% increase and a minor change in work travel behaviour for this category.

- 61.2% are resident workers which represents a 3.3% decrease. This pattern varies greatly from other job categories that have a travel behaviour trend towards a non-resident model.

- Unplanned leave for the category is below the sample average at 67.8 hours per year.

- Aboriginal and Torres Strait Islander workers account for 0.8%, well below the sample average.

- The female proportion of the workforce continues to decrease at 0.3%.

- With 4.7% of Mechanics eligible to retire and 23.1% aged over 50, there is a potential loss of experienced staff, especially considering that 76.0% of separations were experienced staff, a predicted increase based on the already aging profile in the previous sample.

Average Age
40.9 2.0 ⌄

Length of Service (years)*
8.7 0.7 ⌄

Average Working Hours
41.5 0.3 ⌄

Average Unplanned Leave (hours)*
67.8

Female Employees
0.3% no change

Recruitment Rate
5.0% 2.5% ⌄

Resignation Rate
3.5% 4.6% ⌄

Retirement Rate
0.0% 0.4% ⌄

Eligible to retire (>60)
4.7% 3.7% ⌄

Turnover Rate
7.9% 4.7% ⌄

Non-Resident
38.8% ⌃ 3.3%

Resident
61.2% 3.3% ⌄

Aboriginal and Torres Strait Islander
0.71%

457 Visa
—

Age profile
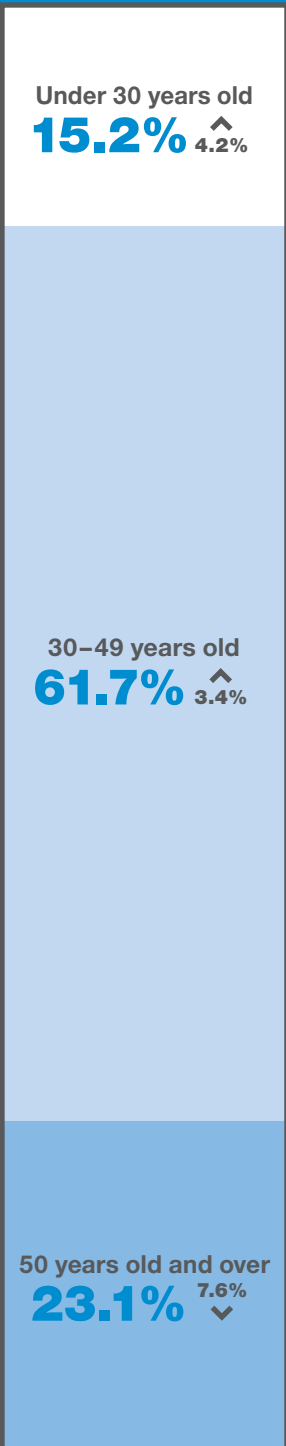
Under 30 years old
15.2% ⌃ 4.2%

30–49 years old
61.7% ⌃ 3.4%

50 years old and over
23.1% ⌄ 7.6%

% ⌄ increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Mobile Operators

Average Age
42.0 2.0 ⌄

Length of Service (years)*
5.6 0.6 ⌄

Average Working Hours
40.8 no change

Average Unplanned Leave (hours)*
78.2

Female Employees
10.1% ⌃ 0.8%

Recruitment Rate
19.9% 5.8% ⌄

Resignation Rate
8.9% 3.0% ⌄

Retirement Rate
0.28% 0.25% ⌄

Eligible to retire (>60)
6.8% 3.2% ⌄

Turnover Rate
19.1% ⌃ 4.1%

Non-Resident
51.9% ⌃ 10.7%

Resident
48.1% 10.7% ⌄

Aboriginal and Torres Strait Islander
2.4%

457 Visa
0.03%

Age profile

Under 30 years old
16.2% ⌃ 5.1%

30–49 years old
54.8% ⌃ 0.3%

50 years old and over
29.1% ⌄ 5.4%

% ⌄ increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Observations:

- The Mobile Operator workforce has been stable with total recruitment and turnover at 19.9% and 19.1% respectively.

- Mobile Operators continue to provide an entry point into the industry. Job-fit issues (turnovers under 12 months of employment) flagged in the last report seem to have been addressed, and have been halved to 11.8%.

- 29.1% of current staff are over the age of 50, with 6.8% eligible to retire. This represents an increased risk of separation in the near future, however, the proportion of the workforce under 30 years of age has increased by 5.1%.

- There has been a 6.8% increase in the organisational turnover for workers with service between one and three years and this trend should be monitored as it may offset the benefit from the decrease in new recruit turnover.

- More than half of the workforce have been identified as non-resident, with 23.6% of those workers FIFO.

- The resident workforce has decreased by 10.7%

- The female participation number for mobile operators has grown to 10.1% and is relatively high compared to other operational staff groups, yet still under the sample average.

- Aboriginal and Torres Strait Islander workforce is consistent with the sample average at 2.4%.

- Unplanned leave results are consistent with the samples result around 78.2 hours.

Open Cut Examiners

Observations:

- Open Cut Examiners (OCE's) remain significantly older and a more experienced workforce with an average age of 48.8 years and an average length of service of 8.0 years.

- A high proportion of current staff (48.2%) are over 50 years of age, and 15.5% are eligible to retire. Both figures are down but still represent a major risk for the industry.

- Half of all new OCE recruits are already aged over 50 years. The under 30 years of age group however shows promising rejuvenation as it has increased from 0% to 4.5%.

- 18.5% of all separations are staff leaving in the first 12 months of employment.

- 56.6% are resident workers, and represents a 14.8% decrease; of which, FIFO workers have increased to 24.5%.

- Unplanned leave is slightly above the sample average at 81.1 hours per year.

- Aboriginal and Torres Strait Islander workers account for 1.3%.

- The female workforce is well below the sample average at 0.9%, and has seen a dramatic drop of 3.1%.

Average Age
48.8 3.3 ⌄

Length of Service (years)*
8.0 2.4 ⌄

Average Working Hours
41.7 ⌃ 0.7

Average Unplanned Leave (hours)*
81.1

Female Employees
0.9% 3.1% ⌄

Recruitment Rate
30.0% ⌃ 16.4%

Resignation Rate
12.7% ⌃ 3.9%

Retirement Rate
0.91% ⌃ 0.11%

Eligible to retire (>60)
15.5% 12.6% ⌄

Turnover Rate
24.5% ⌃ 11.7%

Non-Resident
43.4% ⌃ 14.8%

Resident
56.6% 14.8% ⌄

Aboriginal and Torres Strait Islander
1.3%

457 Visa
—

Age profile

Under 30 years old
4.5% ⌃ 4.5%

30–49 years old
47.3% ⌃ 7.6%

50 years old and over
48.2% 12.1% ⌄

% ⌄ increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Occupational Health and Safety

Average Age
42.0 ⌃ 0.1

Length of Service (years)*
4.9 ⌃ 0.2

Average Working Hours
39.5 ⌃ 0.2

Average Unplanned Leave (hours)*
102.6

Female Employees
33.7% ⌄ 6.9%

Recruitment Rate
20.5% ⌄ 8.8%

Resignation Rate
17.5% ⌄ 3.8%

Retirement Rate
0.34%

Eligible to retire (>60)
5.1% ⌃ 0.6%

Turnover Rate
23.9% ⌃ 1.0%

Non-Resident
51.7% ⌃ 34.9%

Resident
48.3% ⌄ 34.9%

Aboriginal and Torres Strait Islander
3.4%

457 Visa
–

Age profile

Under 30 years old
15.5% ⌃ 1.7%

30–49 years old
59.6% ⌄ 3.6%

50 years old and over
24.9% ⌃ 1.8%

⌄ **% increase or decrease is by comparison with the 2010/11 heartbeat report figures**

* Current staff

Observations:

- The Occupational Health and Safety (OHS) workforce has been stable, with a recruitment rate of 20.5% offset by a separation rate of 23.9% in 2012-13.

- The resignation rate for OHS staff is 17.5% and is above the sample average of 10.5%. This indicates a retention issue.

- A quarter of the workforce is over 50 years of age and 5.1% are eligible to retire. This raises questions of knowledge and experience retention.

- 51.7% are non-resident workers, which represents a 34.9% increase; with FIFO workers increased to 38.2%.

- Unplanned leave for the category is higher than the sample average at 102.6 hours per year.

- Aboriginal and Torres Strait Islander workers account for 3.4%.

- 33.7% of the OHS workforce are female, well above the sample average of 14.0%.

Supervisors

Observations:

- Supervisors as a group have seen some movement within their workforce with separations increasing to 17.7% and recruitment declining to 12.4%.

- Supervisors have a comparatively high length of service that remains at 6.7 years and an average age of 43.5. This represents the experience required for the roles.

- The loss of experienced staff continues to be a risk as 56.4% of separations are from long term employees.

- 27.8% of supervisors are over 50 years of age and 4.6% are currently eligible to retire. Though this age profile is representative of the job role, it does represent a potential risk of skill retention.

- 60.3% are resident workers, a 13.9% decrease from the previous sample. However, FIFO workers make up a quarter of the non-resident workforce.

- Unplanned leave for the category is lower than the sample average at 64.9 hours per year.

- Aboriginal and Torres Strait Islander workers account for 0.8%, well below the sample average.

- 457 Visa holders are above the industry average, at 1.6%.

- 12.7% of supervisors are female, only slightly below the average and trending upwards.

Average Age
43.5 1.9 ⌄

Length of Service (years)*
6.7 1.1 ⌄

Average Working Hours
40.1 ⌃ 0.6

Average Unplanned Leave (hours)*
64.9

Female Employees
12.7% ⌃ 1.1%

Recruitment Rate
12.4% 4.7% ⌄

Resignation Rate
11.0% ⌃ 1.4%

Retirement Rate
0.16% 0.04% ⌄

Eligible to retire (>60)
4.6% 3.0% ⌄

Turnover Rate
17.7% ⌃ 6.2%

Non-Resident
39.7% ⌃ 13.9%

Resident
60.3% 13.9% ⌄

Aboriginal and Torres Strait Islander
0.82%

457 Visa
1.6%

Age profile

Under 30 years old
6.8% ⌃ 3.5%

30–49 years old
65.4% ⌃ 3.2%

50 years old and over
27.8% 6.7% ⌄

⌄ % increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Surveyors

Average Age
39.4 1.7 ⌄

Length of Service (years)*
3.8 1.1 ⌄

Average Working Hours
41.4 ⌃ 1.5

Average Unplanned Leave (hours)*
41.3

Female Employees
—

Recruitment Rate
20.8% 8.8% ⌄

Resignation Rate
10.4% 2.7% ⌄

Retirement Rate
1.9%

Eligible to retire (>60)
4.7% 3.1% ⌄

Turnover Rate
26.4% ⌃ 11.6%

Non-Resident
59.0% ⌃ 11.8%

Resident
41.0% 11.8% ⌄

Aboriginal and Torres Strait Islander
—

457 Visa
3.8%

Age profile

Under 30 years old
22.6% ⌃ 7.0%

30–49 years old
57.5% ⌃ 0.2%

50 years old and over
19.8% 7.1% ⌄

⌄% increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Observations:

- Surveyors represent a marginally younger workforce with almost a quarter of the workers under 30 years of age, an increase of 7.0% on the last sample.

- 19.8% are over the age of 50 and 4.7% are eligible to retire. Both numbers are below the industry average and the risk of loss of knowledge and experience through retirement in this group is less prominent.

- Surveyors are more likely to leave in the first 12 months of employment, with a 26.4% separation rate.

- 59.0% are non-resident workers with the majority of Surveyors being FIFO workers who now represent 46.7%.

- Unplanned leave for the category is much lower than the sample average at 41.3 hours per year.

- 457 Visa workers account for 3.8%, more than double the sample average.

- A sizeable internal talent pipeline remains with almost 4.5% of the Graduate pool are surveyors.

Technicians

Observations:

- Technicians have a length of service of 7.0 years, above the industry average of 5.5 years.

- 64.9% of separations were long term employees, well above separations of less experienced staff, with 9.8% of separations in the first year of employment.

- 25.1% of the workforce is currently over 50 years of age, of which 4.8% are currently eligible to retire, providing potential risk.

- 57.0% are non-resident workers, which represents a 15.8% increase with the main proportion being FIFO workers at 27.3%.

- Unplanned leave for the category is consistent with the sample average at 74.7 hours per year.

- Aboriginal and Torres Strait Islander workers account for 6.7%, almost three times the sample average.

- Only 7.4% of the technician workforce is female, half the industry average, and has decreased by 0.6%.

Average Age
41.1   3.0 ⌄

Length of Service (years)*
7.0   0.5 ⌄

Average Working Hours
42.7   ⌃ 0.4

Average Unplanned Leave (hours)*
74.7

Female Employees
7.4%   0.6% ⌄

Recruitment Rate
7.6%   4.0% ⌄

Resignation Rate
4.8%   1.3% ⌄

Retirement Rate
—

Eligible to retire (>60)
5.3%   4.3% ⌄

Turnover Rate
12.4%   ⌃ 4.2%

Non-Resident
57.0%   ⌃ 15.8%

Resident
43.0%   15.8% ⌄

Aboriginal and Torres Strait Islander
6.7%

457 Visa
0.35%

Age profile
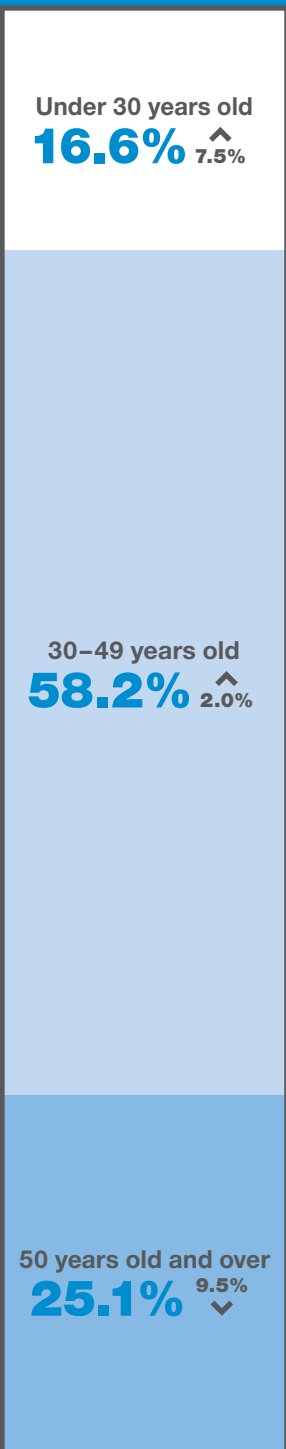
Under 30 years old
16.6% ⌃ 7.5%

30–49 years old
58.2% ⌃ 2.0%

50 years old and over
25.1% ⌄ 9.5%

% ⌄ increase or decrease is by comparison with the 2010/11 heartbeat report figures

* Current staff

Trainers

Average Age
44.3 ∧ 0.1

Length of Service (years)*
4.9 ∧ 0.6

Average Working Hours
40.0 ∧ 0.3

Average Unplanned Leave (hours)*
111.0

Female Employees
33.3% ∧ 4.8%

Recruitment Rate
17.4% ∨ 9.6%

Resignation Rate
19.7% ∧ 2.6%

Retirement Rate
0.47%

Eligible to retire (>60)
6.6% ∧ 1.9%

Turnover Rate
32.4% ∧ 10.1%

Non-Resident
49.8% ∧ 22.7%

Resident
50.2% ∨ 22.7%

Aboriginal and Torres Strait Islander
6.1%

457 Visa
—

Age profile

Under 30 years old
10.9% ∧ 1.0%

30–49 years old
56.4% ∧ 0.1%

50 years old and over
32.7% ∨ 1.2%

% ∨ **increase or decrease is by comparison with the 2010/11 heartbeat report figures**

* Current staff

Observations:

- Trainers continue to be relatively older at 44.3 years of age, with 32.7% of the workforce over 50 years of age and 6.6% eligible to retire. This represents a major risk for skill retention.

- Trainers continue to have a higher than average and increasing resignation rate at 19.7%, signalling potential retention issues.

- 27.5% of experienced employees have left, although this has decreased significantly by 21.3%, the rate is still of concern.

- Half of the Trainers are non-resident workers; with the main proportion being FIFO workers who have increased to 36.7%.

- Aboriginal and Torres Strait Islander workers account for 6%, almost three times the sample average.

- Trainers have a higher than average proportion of female workers 33.3%.

- Unplanned leave is high at 111.0 hours per annum, approximately 50% above average.

Appendix 1: Glossary

Data Item	Information Required
Gender	Is the employee male or female?
Date of Birth	When was the employee born?
Home Postcode	What is the postcode where the employee lives?
Hire Date	When did the employee start work with your company?
Separation Date	When did the employee leave your company?
Separation Reason	Why did the employee leave?
Employment Type	Is the employee full time, part time, casual, labour hire or contract?
Education Level	What are the education level requirements for the role?
Total Unplanned Leave	Absence from work that arise unexpectedly or irregularly, making it difficult to plan, approve or budget for in advance i.e. Sick Leave; Carer's Leave; Compensation; and other miscellaneous leave.
Role Number	Identifier for the current position.
Job Title	What is the employee's position title?
Management Flag	Does the employee hold a management role?
Hours per week	How many hours per week does the employee work?
Full Time Equivalent (FTE)	Please identify employees as 1.0 (full time) or equivalent (e.g. 0.8).
Work Postcode	What is the postcode where the employee works?
Work Site Location	Which site does the employee work at?
Type of Mine	Surface/Underground.
Materials Mined	Metalliferous/Coal.
Visa 457	Current 457 Visa holder?

Appendix 2: Job Category Measures

Measures	All of Sample 2013	% Change 2011–13	Accounting 2013	% Change 2011–13	Administration 2013	% Change 2011–13
% of Total Sample	100.0%	-	0.8%	0.2%	5.5%	-0.2%
Average Age	40.1	-2.0	35.8	-2.3	38.1	-2.4
<30	21.2%	5.5%	27.0%	9.1%	28.9%	8.5%
30-49	55.0%	-0.4%	65.5%	-2.1%	52.6%	-2.3%
>50	23.8%	-5.1%	7.5%	-7.0%	18.5%	-6.2%
Length of Service (yrs) current staff	5.5	-0.5	4.2	-0.4	4.0	-0.8
Length of Service (yrs) separations	3.3	0.6	1.6	-0.8	2.4	-0.3
Female Employees	14.0%	1.8%	56.5%	8.6%	65.1%	2.5%
Recruitment Rate	17.9%	-0.2%	14.5%	-6.7%	17.6%	-12.2%
Resignation Rate	10.5%	1.0%	18.5%	2.7%	17.5%	5.9%
Retirement Rate	0.23%	0.06%	-	-	0.14%	-0.36%
Eligible to retire (same as >60)	5.1%	-2.7%	1.5%	-1.3%	3.5%	-2.1%
Turnover Rate	20.5%	-6.8%	21.5%	4.4%	25.7%	5.2%
Turnover <12 mths	15.7%	-2.4%	9.3%	1.3%	17.6%	-9.3%
Turnover >12 and <36	41.7%	0.2%	69.8%	21.8%	37.7%	1.3%
Turnover >36 mths	42.6%	2.1%	20.9%	-23.1%	44.7%	8.0%
Average Unplanned Leave (hrs) current staff	72.8	-	51.3	-	64.4	-
Average Unplanned Leave (hrs) separations	96.6	96.6	91.9	-	60.2	-
FIFO	24.5%	1.5%	11.4%	0.9%	18.0%	7.2%
DIDO	21.7%	9.0%	1.0%	1.0%	7.6%	-2.5%
Non-Resident	46.2%	10.5%	12.4%	1.9%	25.6%	4.7%
Resident	53.8%	-10.5%	87.6%	-1.9%	74.4%	-4.7%
Average Working Hours	40.7	-0.1	37.9	-1.0	39.3	0.3
Aboriginal and Torres Strait Islander workforce	2.69%	-	-	-	1.87%	-
Visa 457	1.25%	-	1.27%	-	0.95%	-

Appendix 2: Job Category Measures

Measures	Blast and Shotfirer 2013	% Change 2011–13	Deputies 2013	% Change 2011–13	Mining Drillers 2013	% Change 2011–13
% of Total Sample	0.7%	-0.1%	0.5%	0.3%	0.5%	-0.2%
Average Age	38.9	-2.5	46.3	-2.0	39.5	-4.8
<30	14.1%	-0.6%	6.3%	6.3%	20.3%	10.2%
30-49	69.4%	8.0%	55.6%	-0.2%	60.1%	2.0%
>50	16.5%	-7.4%	38.1%	-6.2%	19.6%	-12.3%
Length of Service (yrs) current staff	4.8	-2.0	6.7	0.8	7.1	-3.3
Length of Service (yrs) separations	2.5	-3.4	7.4	2.3	4.3	0.4
Female Employees	4.1%	1.9%	-	-	1.4%	-1.9%
Recruitment Rate	29.8%	3.9%	0.8%	-22.2%	15.2%	4.2%
Resignation Rate	14.6%	5.4%	4.0%	-15.7%	13.0%	-4.6%
Retirement Rate	-	-	-	-	-	-
Eligible to retire (same as >60)	4.1%	-2.4%	11.9%	0.4%	4.3%	-8.5%
Turnover Rate	23.4%	12.6%	16.7%	-4.6%	29.7%	10.9%
Turnover <12 mths	27.5%	-	-	-	24.4%	-
Turnover >12 and <36	37.5%	22.5%	19.0%	11.4%	41.5%	0.3%
Turnover >36 mths	35.0%	-50.0%	81.0%	19.4%	34.1%	-24.7%
Average Unplanned Leave (hrs) current staff	46.0		71.7		79.8	
Average Unplanned Leave (hrs) separations	89.8		61.6		86.6	
FIFO	48.8%	36.3%	9.5%	-8.5%	62.7%	58.0%
DIDO	9.1%	9.1%	20.6%	-8.9%	2.2%	-5.9%
Non-Resident	57.9%	45.4%	30.2%	-17.4%	64.9%	52.1%
Resident	42.1%	-45.4%	69.8%	17.4%	35.1%	-52.1%
Average Working Hours	39.4	-1.0	39.7	-0.7	38.9	-1.8
Aboriginal and Torres Strait Islander workforce	0.69%		-		3.60%	
Visa 457	2.91%		-		-	

Appendix 2: Job Category Measures

Measures	Electrical Trades		Engineers		Fitters	
	2013	% Change 2011–13	2013	% Change 2011–13	2013	% Change 2011–13
% of Total Sample	2.1%	0.3%	3.4%	0.6%	4.3%	0.0%
Average Age	39.1	-3.7	35.1	-2.6	37.0	-2.6
<30	24.8%	12.9%	33.4%	12.2%	27.2%	9.3%
30-49	53.4%	-2.8%	56.6%	-6.9%	59.1%	-3.5%
>50	21.8%	-10.1%	10.0%	-5.3%	13.7%	-5.7%
Length of Service (yrs) current staff	6.1	-3.3	4.0	-0.7	4.3	-1.3
Length of Service (yrs) separations	6.8	2.5	3.3	-0.6	4.4	2.7
Female Employees	4.1%	2.3%	10.1%	0.5%	0.5%	0.4%
Recruitment Rate	22.4%	12.1%	17.2%	-5.4%	26.5%	8.2%
Resignation Rate	7.0%	-4.7%	9.8%	-3.5%	10.6%	-1.6%
Retirement Rate	0.19%	-0.26%	-	-	0.09%	0.00%
Eligible to retire (same as >60)	4.7%	-0.7%	1.5%	-1.2%	2.2%	-2.1%
Turnover Rate	10.7%	-4.1%	17.4%	2.1%	19.9%	-2.4%
Turnover <12 mths	22.8%	12.2%	17.9%	15.1%	16.3%	-20.8%
Turnover >12 and <36	28.1%	-6.8%	37.1%	4.7%	45.6%	8.5%
Turnover >36 mths	49.1%	-5.4%	45.0%	-19.8%	38.1%	12.3%
Average Unplanned Leave (hrs) current staff	78.0	-	43.7	-	69.6	-
Average Unplanned Leave (hrs) separations	104.6	-	90.7	-	83.4	-
FIFO	22.9%	15.2%	28.1%	9.9%	26.2%	11.7%
DIDO	18.1%	1.1%	7.7%	1.8%	25.9%	9.6%
Non-Resident	41.0%	16.3%	35.8%	11.7%	52.1%	21.3%
Resident	59.0%	-16.3%	64.2%	-11.7%	47.9%	-21.3%
Average Working Hours	40.7	-0.8	39.5	0.0	40.5	-1.0
Aboriginal and Torres Strait Islander workforce	0.66%	-	0.27%	-	1.68%	-
Visa 457	0.44%	-	10.41%	-	2.28%	-

Appendix 2: Job Category Measures

Measures	Geoscientists 2013	% Change 2011–13	Internal Talent Pipeline 2013	% Change 2011–13	Maintenance 2013	% Change 2011–13
% of Total Sample	0.9%	0.2%	4.9%	0.4%	10.6%	4.4%
Average Age	35.5	-4.0	25.2	-2.0	39.8	-3.7
<30	37.6%	17.2%	82.7%	8.0%	21.1%	12.1%
30-49	51.5%	-10.0%	14.9%	-6.6%	56.4%	-3.9%
>50	10.9%	-7.2%	2.3%	-1.4%	22.5%	-8.2%
Length of Service (yrs) current staff	3.6	-0.1	1.9	0.0	6.4	-1.5
Length of Service (yrs) separations	3.0	-0.7	1.2	-0.8	4.4	1.5
Female Employees	32.8%	8.0%	23.0%	5.7%	2.8%	-0.1%
Recruitment Rate	19.2%	-12.7%	34.7%	-2.3%	15.5%	0.3%
Resignation Rate	9.2%	-13.4%	10.4%	-0.4%	11.8%	-2.3%
Retirement Rate	-	-	0.08%	-	0.04%	-0.16%
Eligible to retire (same as >60)	2.2%	-2.8%	0.3%	0.0%	4.3%	-2.5%
Turnover Rate	15.3%	-8.9%	36.9%	14.3%	18.2%	-3.4%
Turnover <12 mths	5.7%	1.2%	40.7%	35.5%	11.4%	-8.9%
Turnover >12 and <36	42.9%	17.9%	42.8%	2.5%	32.0%	1.0%
Turnover >36 mths	51.4%	-19.0%	16.5%	-38.0%	56.6%	7.8%
Average Unplanned Leave (hrs) current staff	67.1	-	44.8	-	68.6	-
Average Unplanned Leave (hrs) separations	211.8	-	90.7	-	90.7	-
FIFO	45.1%	14.4%	27.4%	11.6%	27.3%	15.2%
DIDO	3.5%	-1.4%	11.7%	4.1%	26.8%	10.1%
Non-Resident	48.7%	13.0%	39.1%	15.8%	54.0%	25.3%
Resident	51.3%	-13.0%	60.9%	-15.8%	46.0%	-25.3%
Average Working Hours	39.5	0.0	41.5	0.4	41.1	-0.4
Aboriginal and Torres Strait Islander workforce	3.57%	-	11.86%	-	1.00%	-
Visa 457	16.67%	-	1.51%	-	0.35%	-

Appendix 2: Job Category Measures

Measures	Mechanics 2013	Mechanics % Change 2011–13	Mobile Operators 2013	Mobile Operators % Change 2011–13	OCE 2013	OCE % Change 2011–13
% of Total Sample	1.3%	-1.0%	32.1%	9.9%	0.4%	-0.1%
Average Age	40.9	-2.0	42.0	-2.0	48.8	-3.3
<30	15.2%	4.2%	16.2%	5.1%	4.5%	4.5%
30-49	61.7%	3.4%	54.8%	0.3%	47.3%	7.6%
>50	23.1%	-7.6%	29.1%	-5.4%	48.2%	-12.1%
Length of Service (yrs) current staff	8.7	-0.7	5.6	-0.6	8.0	-2.4
Length of Service (yrs) separations	8.2	2.5	2.7	1.1	3.7	-7.8
Female Employees	0.3%	-	10.1%	0.8%	0.9%	-3.1%
Recruitment Rate	5.0%	-2.5%	19.9%	-5.8%	30.0%	16.4%
Resignation Rate	3.5%	-4.6%	8.9%	-3.0%	12.7%	3.9%
Retirement Rate	0%	-0.40%	0.28%	0.25%	0.91%	0.11%
Eligible to retire (same as >60)	4.7%	-3.7%	6.8%	-3.2%	15.5%	-12.6%
Turnover Rate	7.9%	-4.7%	19.1%	4.1%	24.5%	11.7%
Turnover <12 mths	8.0%	-6.3%	11.8%	-9.2%	18.5%	12.3%
Turnover >12 and <36	16.0%	-8.3%	53.7%	6.8%	29.6%	-1.6%
Turnover >36 mths	76.0%	14.6%	34.5%	2.4%	51.9%	-10.6%
Average Unplanned Leave (hrs) current staff	67.8	-	78.2	-	81.1	-
Average Unplanned Leave (hrs) separations	76.4	-	107.1	-	50.4	-
FIFO	10.1%	4.4%	23.6%	7.9%	24.5%	17.4%
DIDO	28.7%	-1.1%	28.3%	2.9%	18.9%	-2.6%
Non-Resident	38.8%	3.3%	51.9%	10.7%	43.4%	14.8%
Resident	61.2%	-3.3%	48.1%	-10.7%	56.6%	-14.8%
Average Working Hours	41.5	-0.3	40.8	0.0	41.7	0.7
Aboriginal and Torres Strait Islander workforce	0.71%	-	2.42%	-	1.33%	-
Visa 457	-	-	0.03%	-	-	-

Appendix 2: Job Category Measures

Measures	OHS		Operator Fixed		Supervisors	
	2013	% Change 2011–13	2013	% Change 2011–13	2013	% Change 2011–13
% of Total Sample	1.2%	0.2%	5.2%	2.2%	15.3%	2.8%
Average Age	42.0	0.1	42.1	-0.8	43.5	-1.9
<30	15.5%	1.7%	15.5%	-0.3%	6.8%	3.5%
30-49	59.6%	-3.6%	56.5%	4.6%	65.4%	3.2%
>50	24.9%	1.8%	28.0%	-4.3%	27.8%	-6.7%
Length of Service (yrs) current staff	4.9	0.2	5.1	-0.9	6.7	-1.1
Length of Service (yrs) separations	2.2	-2.9	3.3	-1.5	4.1	-1.3
Female Employees	33.7%	-6.9%	9.4%	4.8%	12.7%	1.1%
Recruitment Rate	20.5%	-8.8%	18.0%	0.0%	12.4%	-4.7%
Resignation Rate	17.5%	-3.8%	12.7%	4.2%	11.0%	1.4%
Retirement Rate	0.34%	-	0.83%	0.70%	0.16%	-0.04%
Eligible to retire (same as >60)	5.1%	0.6%	6.7%	-1.7%	4.6%	-3.0%
Turnover Rate	23.9%	1.0%	24.9%	13.8%	17.7%	6.2%
Turnover <12 mths	14.1%	7.1%	19.7%	-	9.5%	2.4%
Turnover >12 and <36	57.7%	31.4%	47.9%	23.8%	34.1%	-3.6%
Turnover >36 mths	28.2%	-38.5%	32.4%	-43.5%	56.4%	1.1%
Average Unplanned Leave (hrs) current staff	102.6	-	78.1	-	64.9	-
Average Unplanned Leave (hrs) separations	298.2	-	116.7	-	103.1	-
FIFO	38.2%	26.3%	23.2%	10.0%	24.1%	9.4%
DIDO	13.5%	8.6%	34.6%	19.9%	15.7%	4.5%
Non-Resident	51.7%	34.9%	57.7%	29.9%	39.7%	13.9%
Resident	48.3%	-34.9%	42.3%	-29.9%	60.3%	-13.9%
Average Working Hours	39.5	0.2	42.5	-0.3	40.1	0.6
Aboriginal and Torres Strait Islander workforce	3.36%	-	6.34%	-	0.82%	-
Visa 457	-	-	0.08%	-	1.61%	-

Appendix 2: Job Category Measures

Measures	Surveyors 2013	Surveyors % Change 2011–13	Technicians 2013	Technicians % Change 2011–13	Trainers 2013	Trainers % Change 2011–13
% of Total Sample	0.4%	0.0%	6.2%	-3.3%	0.8%	0.1%
Average Age	39.4	-1.7	41.1	-3.0	44.3	0.1
<30	22.6%	7.0%	16.6%	7.5%	10.9%	1.0%
30-49	57.5%	0.2%	58.2%	2.0%	56.4%	0.1%
>50	19.8%	-7.1%	25.1%	-9.5%	32.7%	-1.2%
Length of Service (yrs) current staff	3.8	-1.1	7.0	-0.5	4.9	0.6
Length of Service (yrs) separations	4.1	2.2	5.9	-0.5	2.8	-1.3
Female Employees	-	-	7.4%	-0.6%	33.3%	4.8%
Recruitment Rate	20.8%	-8.8%	7.6%	-4.0%	17.4%	-9.6%
Resignation Rate	10.4%	-2.7%	4.8%	-1.3%	19.7%	2.6%
Retirement Rate	1.89%	-	-	-	0.47%	-
Eligible to retire (same as >60)	4.7%	-3.1%	5.3%	-4.3%	6.6%	1.9%
Turnover Rate	26.4%	11.6%	12.4%	4.2%	32.4%	10.1%
Turnover <12 mths	21.4%	3.8%	9.8%	2.5%	15.9%	9.0%
Turnover >12 and <36	42.9%	25.2%	25.3%	-1.3%	56.5%	12.3%
Turnover >36 mths	35.7%	-29.0%	64.9%	-1.2%	27.5%	-21.3%
Average Unplanned Leave (hrs) current staff	41.3	-	74.7	-	111.0	-
Average Unplanned Leave (hrs) separations	36.9	-	73.1	-	163.9	-
FIFO	46.7%	23.0%	27.3%	11.2%	36.7%	15.5%
DIDO	12.4%	-11.3%	29.7%	4.6%	13.0%	7.2%
Non-Resident	59.0%	11.8%	57.0%	15.8%	49.8%	22.7%
Resident	41.0%	-11.8%	43.0%	-15.8%	50.2%	-22.7%
Average Working Hours	41.4	1.5	42.7	0.4	40.0	0.3
Aboriginal and Torres Strait Islander workforce	-	-	6.70%	-	6.08%	-
Visa 457	3.80%	-	0.35%	-	-	-

energyskills
queensland