

Victorian Department of Transport, Planning and Local Infrastructure

## Long distance commuting and regional development: a case study of Stawell, Victoria



*Stawell Town Hall. Photo: Lisa Gervasoni*

Spatial Analysis and Research Branch  
Department of Transport, Planning and Local Infrastructure

This report was prepared by Spatial Analysis and Research, a branch in the Department of Transport, Planning and Local Infrastructure  
1 Spring Street Melbourne Victoria 3000  
Telephone (03) 9208 3000

October 2013

© Copyright State of Victoria Department of Transport, Planning and Local Infrastructure 2013

Except for any logos, emblems, trademarks, artwork and photography this document is made available under the terms of the Creative Commons Attribution 3.0 Australian licence

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

Report prepared by Fiona McKenzie  
Fieldwork undertaken by Sam Pendergast, Sou'wester Strategy  
Transcription Services by Pacific Solutions

Email [spatialanalysis.research@dtpli.vic.gov.au](mailto:spatialanalysis.research@dtpli.vic.gov.au)  
[www.dtpli.vic.gov.au/research/urbanandregional](http://www.dtpli.vic.gov.au/research/urbanandregional)

ISBN 978-1-922250-10-0

# EXECUTIVE SUMMARY

## BACKGROUND

### *Reason for the study*

Stawell is a town of 5,737 people located in western Victoria. The local underground gold mine has operated for thirty years employing approximately 350 people at its peak in the last decade. In 2012, the mine's closure was announced because of reduced profitability caused by increased costs and the depth at which the gold needed to be extracted. In response to the impending closure, the opportunity to undertake fly-in fly-out (FIFO) or drive-in drive-out (DIDO) commuting to other mines in Australia was identified. Local business owners and the local council have been heavily involved in pursuing this goal, driven by a desire to: utilise the mining skills base of the local workforce; retain the town's population, and take advantage of the demand for mining skills across Australia. The co-incidental upgrading of the local airport gave an additional boost to the prospects of developing FIFO opportunities from Stawell.

This study follows on from work done in 2012 on industry closures in regional Victoria (McKenzie 2012). Although this case study of Stawell is based around a single Victorian town, it raises broader issues and implications for regional policy. There has been a growing recognition of the importance of place-based approaches to regional development. A single policy applied across different regions and communities may not provide the specific needs nor respond to the specific strengths and weaknesses of a particular location. Understanding local economic and social dynamics is therefore of critical importance in shaping effective and efficient regional policies.

Using qualitative as well as quantitative analysis also provides a much richer set of information for understanding communities. While statistical analysis may indicate that Stawell has lower than average socio-economic status (as measured by SEIFA for example), qualitative analysis reveals an enterprising community with strong leadership across business and local government agencies. The story of trying to develop FIFO in Stawell has been typified by such leadership, however it has also faced various challenges and obstacles which may not be able to be addressed at the local level. This suggests a role for other levels of government or private sector organisations.

### *Objectives of the study*

The objectives of the study were:

1. How did the reverse FIFO proposal come about? Was it led by workers, companies or government (local or state)?
2. Was the proposal a direct response following the announcement of the gold mine closure or was it a trend already occurring among the Stawell workforce?
3. What is the profile of workers who are involved in long distance commuting for work? Is it possible to quantify the numbers?
4. What are the benefits and costs of such commuting? Individual, local economy and community?
5. What adaptive strategies have been used by workers and their families to overcome some of the negative aspects of FIFO (eg. separation from family)?
6. What support role might community or government have in helping to ameliorate negative aspects?
7. Is long distance a viable and sustainable option for the future? What are the constraints and opportunities?

### ***How the study was undertaken***

A series of interviews were undertaken with key informants associated with the Stawell mine closure and FIFO operations. This involved the identification of key informants and the development of an interview schedule based around the project research questions. Identification of informant types was aligned to the types of information needed to answer the research questions and project objectives. The informant types chosen for the fieldwork phase of the project included: local government officers; business owners and operators working directly with FIFO; Workers who are currently involved in FIFO / DIDO commuting or who are considering doing it in the future.

Analysis of quantitative data was also undertaken in order to provide a descriptive profile of the Stawell mining workforce. Additional information from academic, government, industry and media sources was also used. The scope of material selected included Australian studies and inquiries into FIFO and DIDO working arrangements, and information specific to Stawell (both historic and current). The literature was considered alongside the data and interview findings of the study in order to highlight common findings or differences.

## **KEY FINDINGS FROM THE STUDY**

### ***Development of FIFO***

Workforce mobility has been a reality in regional areas for many decades, particularly among groups who undertake seasonal work such as shearing or harvesting. The difference between this type of mobile workforce and those doing long distance commuting (FIFO or DIDO) is that the latter return to their place of residence on a regular basis, often after a block of working time, typically one or two weeks in length.

FIFO practices began in the 1960s with the oil and gas industry. They have become more common in recent decades due to: the costs of building and maintaining remote mining towns; increasingly cost-effective air transport; worker preferences for living in larger centres with more services, and skilled labour shortages forcing employers to hire more widely. While FIFO arrangements are used across many industries, it is in mining that it has become most common with an estimated 25% of the Australian mining workforce undertaking such long distance commuting.

The first direct FIFO arrangement from Stawell began in 2013 with a small crew being flown to and from Cobar. However long distance arrangements (usually a combination of FIFO with DIDO) are more widespread than this recent initiative. The interviews revealed many examples of such commuting across the Northern Grampians community. In many cases road commuting is used to access a more distant airport, and this can lead to quite complex arrangements. Some locals are working in Interstate mines travelling via Adelaide or Melbourne.

### ***Future prospects for FIFO in Stawell***

Stawell has a number of factors which make it suitable for future FIFO expansion. It has an airport capable of running charter flights and a local aviation company willing to expand to meet demand. The local workforce has been involved in the mining industry for decades and the workforce is therefore 'job ready' for many other mining opportunities across Australia. Support for the concept has been gained across various sectors of the local community – business government and local workers. The town itself is an attractive place to live being near the Grampians and being within an hours drive from regional centres like Horsham, Ballarat and Bendigo.

The expansion of FIFO also faces challenges to be fully realised. Stawell is not the only town in Australia vying to be a FIFO source hub. Town representatives have struggled to fully engage with mining companies elsewhere in Australia as most employ recruitment agencies to deal with staffing. Resources in the town are

often limited or stretched thinly so the capacity to pursue interstate opportunities, sell the benefits of Stawell and coordinate the implementation of a FIFO strategy is compromised.

At a more subtle level, Stawell faces some competitive disadvantages. While the Stawell Gold Mine workforce has a range of mining skills and education, the overall profile of occupation and income appears lower than other mining regions in Australia. Better paid professional jobs do exist at the mine but census evidence suggests that these workers may be living in the broader region rather than in the town itself. The effects of this are not conclusive, but this type of polarisation (also seen elsewhere in regional Victoria) may represent a limitation for future development of the town in terms of income levels, population growth and wealth creation. If workers on higher incomes or with higher education levels choose to live outside the town then the long term benefits of FIFO may be dispersed rather than concentrated in the township. Being a FIFO hub may *maintain* rather than grow the town's population and wealth.

With Australian mining becoming more mechanised it is likely that future jobs in the industry (and certainly the higher paid jobs) will be those requiring higher levels of formal education, for example engineering or electronics, rather than being based on manual labour. FIFO alone will not transform the future education levels of the Stawell work force although it will enable exposure of local workers to a more diverse range of mining opportunities. In this regard, it may influence the aspirations of local workers and their families and enable much greater engagement with a globalised mining sector, thus generating future economic opportunities and pathways.

### ***Benefits and costs of FIFO***

Long distance commuting presents many challenges for those involved: separation for periods of time, potential loneliness and isolation and disruption to prior patterns of work and leisure. Nevertheless, it was found that many 'regular' jobs present difficulties through long work shifts or deregulated working hours. Individuals and couples respond differently to such challenges and, while long distance commuting may place destructive levels of stress on some relationships, it tends to exacerbate issues rather than create them on its own. The FIFO lifestyle may suit some people better at some stages of life rather than others, although there are many exceptions here as well. Perhaps one of the most important factors is the detailed nature of the work arrangements. Shorter block rosters such as 8 days on, 6 days off were reported as much more family friendly than arrangements with much longer periods of absence.

Another factor which appears to be important is whether the individual or family enter the FIFO lifestyle fully informed or aware of what it entails. In this respect, the fact that Stawell has a number of people involved in FIFO and DIDO appears to have the benefit of first hand information being available to those who may be considering the lifestyle. Additional support from local Council and regional health care organisations have formalised this process to some degree through the establishment of regular support and information meetings.

### ***Current and potential roles for government***

The local council has been involved in exploring FIFO opportunities, liaising with local businesses, developing partnerships and providing support to those undertaking FIFO and well as those considering it. These initiatives have been seen as positive but they have also taken up significant resources from a local council already struggling under issues such as an aging population, declining employment opportunities and a diminishing rate base.

Apart from the local municipality, it was suggested that other levels of government could have potential roles in areas such as: reducing barriers to FIFO expansion; and, providing assistance for, or facilitation of, the negotiation and coordination of FIFO opportunities.

Aside from government, the wider community was also seen as having a role to play in providing support for those undertaking or considering FIFO. One of the ways in which community networks can assist people considering undertaking FIFO is simply by making information available about the day to day realities of the lifestyle. This is particularly important so that individuals or families can make informed choices about undertaking such work.

### ***FIFO and population retention***

For Council, the opportunity to expand FIFO activities represents a strategy for maintaining existing population numbers and potentially to attract new residents to the town. On the positive side, Stawell does have the potential to retain families and young adults if a diverse range of employment is available. FIFO effectively expands the opportunity to access a wider range of jobs, experience and career pathways than would be possible from the local economy.

Many of the locations in Australia vying to develop as FIFO hubs have high natural amenity values and this is seen as a key attractor to attract population. In Western Australia, Rio Tinto has specifically selected source communities on the basis of attractive natural settings, specifically coastal. Cairns and Hervey Bay have also highlighted their coastal attractiveness in assessing and promoting themselves for FIFO. Stawell does not have the coastal drawcard, but it does have many natural advantages particularly its proximity to the Grampians.

The expansion of FIFO would provide alternative work opportunities for local residents and that could *lessen out-migration* following closure of the local mine (assuming that retrenched workers choose the FIFO alternative). As a FIFO hub, the town could attract a higher number of people to use the airport facility, but many of these people may remain in their home communities outside of Stawell and simply drive to the airport to access the FIFO opportunity. While this can have some peripheral benefits to the Stawell economy through those people purchasing fuel or goods while they pass through town, it is only increasing the temporary population of the town not the resident population.

Of course such people may decide that Stawell would be a good place to live and move there, but this is a zero sum game for the region (both demographically and economically) if they are moving from one local town to another. A more meaningful gain in population could come from being able to attract workers out of the larger cities to relocate in Stawell. This is a challenge which few regional towns have been able to achieve in recent decades.

### ***Labour market flexibility***

One of the problems faced by local government and local businesses in trying to establish FIFO arrangements has been the difficulty in identifying and gaining access to the right people within the mining company structures. Many mining companies hire staff via recruitment contract firms and this adds layers to an already complex system. Maintaining or increasing workforce 'flexibility' was seen as the key driver behind this type of arrangement, especially coming off the peak of the mining boom and seeking to lower costs. While the economic efficiency of workforce flexibility makes sense from a purely financial point of view, it can be at odds with the objectives of stability and sustainability that FIFO source communities are seeking.

Another side to the issue of labour market flexibility concerns the location of FIFO source hubs. The use of capital cities as sources of labour has advantages for mining companies in terms of the size of the labour supply

and the existing aviation infrastructure. The effects of scale enable flexibility around numbers, rosters and flight destinations. While Stawell may not be able to compete with the scale of Melbourne, it does have the advantage of being in a region with access to many people with mining-related skills. Many workers are already commuting across this region to access local or interstate employment. It is therefore not surprising that many in Stawell feel they have a central advantage for servicing this wider region as a FIFO source hub.

Another constraining factor in developing a FIFO hub at Stawell is the “Point of Hire” arrangements used by mining companies. Recruitment is based on a particular source location such as a capital city and it is from this point that FIFO arrangements will be recognised in terms of travel costs, insurance and so forth. This means that many FIFO workers living in regional areas have to travel to the point of hire location first. This is the reason that many FIFO workers in the Stawell region are responsible for this first phase of an interstate commute.

In Western Australia, Rio Tinto has made point of hire arrangements with several locations outside of Perth and this has boosted the role of towns like Busselton as FIFO source communities which are able to have their own local recruitment office in town. Ultimately, this type of arrangement is being sought by a number of regional locations around Australia, for example Cairns. Stawell, too, is aspiring to this type of arrangement with a mining company to enable a much larger volume of workers to participate in direct FIFO to interstate mines in New South Wales and South Australia. However, this will require convincing large mining companies that the option is as good as, or better than, having the capital cities as the only point of hire locations.

### ***Wealth generation***

For most workers, FIFO represented the opportunity to earn more than they could locally and their description of FIFO as affording a “better lifestyle” often referred to this economic fact. Others were attracted by the opportunity to stay within the mining industry and continue using their skills in this area. Almost all of those interviewed were clear in their view that FIFO represented a clear benefit to the Stawell economy through income being brought back to the town.

The perception of the Stawell economy being more prosperous with FIFO is worth considering more critically. Clearly, the retention of workers after retrenchment and their ability to retain access to mining sector employment means that income will not be lost to the town through out-migration or a drop in wage levels. There is little doubt that a worker moving from a non-mining sector job into a mining sector job is likely to have an increase in wages. However, if Stawell residents are moving from a job at the local mine to one in another location, the wages may not be so much higher. What would be needed to significantly alter the economy of Stawell would be an increase in numbers attracted to the town (for example, if the FIFO hub idea expanded beyond the numbers needing to be re-employed from the Stawell Gold Mine). If the lower wage profile of the local mine workers is a reflection of shorter rosters, then FIFO may increase wealth coming into the town simply by extending the work hours of those involved. This issue would need to be examined more closely to fully understand the implications in terms of economic and social costs and benefits.

Another aspect of the mining labour force in the region relates to skills. In this respect, Stawell regards itself as having a unique advantage because of the town’s long history in mining. Despite the existing skills base in Stawell, this may only be a strategic advantage if those skills are competitive (up to date) and transferable to a range of alternative mining opportunities. Longevity of mining workers in a single job can create specialisation but may also constrain the opportunity to move to other types or scales of operation. For example, underground mining operations at Stawell are at a much smaller scale than many mines elsewhere in Australia. Training initiatives in Stawell have been strong in recent years which is enabling many workers to gain, retain or expand their skills base.

However, the expansion of mining employment in Stawell during the 2000s did not have very much impact on local wages within the sector. This wage differential remains of ongoing concern. Compared to the Pilbara or Cobar mining areas Stawell has a lower wage profile for those involved in the mining sector.

One reason for the differential may be that the Stawell mining workforce has a different occupational, and hence income, profile than mining work forces in other parts of Australia like the Pilbara. Mining jobs in engineering or management require higher level tertiary skills. As the mining industry becomes more knowledge intensive, such qualifications are likely to become increasingly important. While other nations may be able to compete on low labour costs, Australia's global competitiveness has increasingly relied on capital-intensive operations and increasing productivity levels. Primary industry sectors like mining have an increasing need for knowledge based skills and tertiary education to boost earning potential and competitiveness.

While the workforce at the Stawell goldmine show a level of qualification comparable or better to some other mining regions, a detailed examination of the resident location of this workforce reveals that those living in the town of Stawell have lower levels of higher education than the Stawell mining workforce overall. This suggests that those with higher education levels are living outside the town – either in the broader region or further afield in regional centres. This limits the amount of wealth currently being spent in the town from the local mine.

Moving to higher ends of the income spectrum may require higher education levels (into management for example) or a shift to less popular rosters (which can have higher individual and social costs). FIFO can actually help in expanding the range of skills and experience open to local workers and this may actually prove to be as valuable as the formal training programs currently in place. Alternatively, Stawell could aim to attract new mining workers into the area from further afield – Melbourne, interstate or overseas. This would involve a much wider strategy of amenity-based migration to capture highly skilled and highly paid FIFO workers.



## ACKNOWLEDGEMENTS

The following people have assisted in the development of this report. Their contribution is acknowledged:

Tim Patton, Director, Spatial Analysis and Research, DTPLI

Halvard Dalheim, Director, State Planning Strategy and Forecasting, DTPLI

Kris Shaw, Senior Research and Policy Officer, Regional Development Victoria, DSDBI

Suzanne Keene, Senior Policy Officer, Regional Development Victoria, DSDBI

Joe McClelland, Business Development Manager, Horsham DSDBI

Keith Jackson, Regional Director, Regional Delivery – Grampians, DTPLI

Ian Dreher, Manager Regional Strategy, Local Government and Community Development – Grampians, DTPLI

Sam Pendergast, Director, Sou'wester Strategy

Amanda Western, Coordinator, Major Projects, Northern Grampians Shire

Justine Linley, CEO, Northern Grampians Shire

Fiona Haslam-McKenzie, Professorial Fellow, Curtin University

Jennifer May, Busselton City Commercial Services Division

# TABLE OF CONTENTS

<i>Executive Summary</i>	<i>i</i>	
<i>Acknowledgements</i>	<i>vii</i>	
<i>Table of Contents</i>	<i>viii</i>	
<i>List of Figures</i>	<i>ix</i>	
<i>List of Tables</i>	<i>ix</i>	
<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>
1.1	Background	1
1.2	Project objectives and research questions	2
1.3	Methods	2
1.4	Structure of the report	4
<b>2</b>	<b>MINING IN STAWELL</b>	<b>5</b>
2.1	History of mining in Stawell	5
2.2	The current situation	6
2.3	Profile of Stawell’s mining workforce	7
<b>3</b>	<b>LONG DISTANCE COMMUTING</b>	<b>11</b>
3.1	The rise of FIFO and DIDO in Australia	11
3.2	Development of FIFO/DIDO in Stawell	13
3.3	FIFO and DIDO arrangements in Stawell	15
<b>4:</b>	<b>BENEFITS AND COSTS OF LONG DISTANCE COMMUTING</b>	<b>18</b>
4.1	Individual benefits and costs	18
4.2	The significance of roster arrangements	22
4.3	Community benefits and costs	23
<b>5</b>	<b>FUTURE PROSPECTS FOR FIFO IN STAWELL</b>	<b>24</b>
5.1	The positives	24
5.2	Challenges and barriers	25
5.3	Roles for government	27
5.4	Roles for the community	28
<b>6</b>	<b>ISSUES, DEBATES AND UNCERTAINTIES</b>	<b>30</b>
6.1	FIFO and population retention	30
6.2	Labour market flexibility	31
6.3	Companies and communities	37
6.4	Wealth generation	38
<b>7</b>	<b>CONCLUSION</b>	<b>39</b>
<i>References</i>	<i>41</i>	
<i>Appendix 1: Interviewee Profile</i>	<i>43</i>	
<i>Appendix 2: Interview Schedule</i>	<i>44</i>	
<i>Appendix 3: A Note on Statistical Analysis</i>	<i>46</i>	

## LIST OF FIGURES

1	Employment in mining as a percentage of total employed, Victorian Local Government Areas 2011	8
2	Sector into which redundant workers moved	10
3	Family type of those employed in mining sector, Stawell region 2011, enumerated population, SA2 geography	10
4	Capital city residents who worked far away (more than 100 kilometres), Australia, 2011	12
5	Number of passengers travelling through Busselton airport 2008 to 2013	26
6	Numbers employed in mining by place of usual residence, SA2 Geography, 2011	32
7	Income and employment in mining sector, Stawell township, 1981 to 2011	33
8	Occupational profile of mining sector workers by place of work, Stawell, Cobar and Pilbara, SA2 geography, 2011	34
9	Income profile of mining sector workers by place of work, Stawell, Cobar and Pilbara, SA2 geography, 2011	34
10	Higher education qualifications of Stawell mining workforce, Township (UCL), Region (SA2) and Place of Work, 2011	35

## LIST OF TABLES

1	History of gold mining in Stawell	5
2	Redundancies at Stawell Gold Mine from 1st July 2012 to 30 June 2013	9
3	FIFO and DIDO arrangements in Stawell region	17
4	Barriers to high educational aspirations and participation in regional areas	35
5	Qualifications of mining workforce, Stawell, Cobar and Pilbara, Proportion of total workforce by place of work, SA2 geography, 2011	36

# 1. INTRODUCTION

## 1.1 Background

The town of Stawell in western Victoria has been a location for gold mining in both the 19<sup>th</sup> century and from the 1980s when gold mining recommenced. Mining is central to the town's identity and the town hall clock reflects this as two mechanical miners strike at the earth with pick axes to the chime of each bell. Like all mining ventures however the resource is finite and in late 2012 the SGM's closure was announced due to reduced profitability caused by increased costs and the depth at which the gold is now being extracted.

Some years earlier, the local government authority had examined such a scenario seeking to explore possible employment alternatives for the town. One option was fly in fly out employment for mine workers, but the concept was not pursued until the 2012 announcement. While Council examined the idea with renewed urgency, other events were coinciding with Council's interest. First was the fact that long distance commuting (via driving or flying) had become a more common occurrence for both mining and non mining sector workers. Some workers had already taken advantage of the Australian mining boom and had found work interstate as far away as the Pilbara, while maintaining Stawell as their home base. The mining experience of many Stawell workers along with business networks in the sector enhanced such opportunities. One such opportunity arose when a local crane hire and rigging company gained a contract with a mine operator in Cobar, New South Wales. Initially commuting was undertaken by driving but, following an extension of the work contract, the owner sought to partner with a local airline business and fly workers direct. At the same time, Council was making contact with the Cobar municipality in order to formally develop FIFO opportunities for Stawell workers, especially those made redundant from the Stawell Gold mine in mid 2012 and a second group expected to be made redundant at the end of 2013.

This case study is of interest from a government research perspective because it raises a range of issues around regional development opportunities, respective roles of different players in the realisation of such opportunities and the potential role of government (local, state and federal) to facilitate positive outcomes which local communities are seeking to enhance their economic and social sustainability. This research project builds upon recent work undertaken by the Department of Primary Industries (now part of the Department of Environment and Primary Industries) and the Department of Planning and Community Development (now part of the Department of Transport, Planning and Local Infrastructure). The research undertaken in 2012 investigated the impact of industry shocks on towns in regional Victoria. The study found that the general preference for workers to commute rather than relocate in order to access new work opportunities. The advantage of commuting over relocation was around social factors – the ability to remain in a home community with the support, security and identity that it provides to workers and their families. While neo-liberal economic theory favours relocation of labour to maximise spatial economic efficiencies, the cost in terms of social cohesion and social capital may be high for small towns that lose key residents (McKenzie 2012; DPI 2013).

In the case of Stawell, the impending closure of the local gold mine has led to a more proactive pursuit of FIFO opportunities. The local Government Authority, Northern Grampians Shire, has initiated talks with mining companies in NSW, Tasmania and South Australia with a view to establishing flights to allow local people to work in those regions' mines (ABC News 28/11/12). There is much policy interest in the nature and consequences of FIFO commuting and the subject has been the topic of inquiry by the House of Representatives (Australian Parliament 2013). While much attention has been given to the impacts of FIFO on receiving communities, the experience of FIFO source communities is relatively new. The parliamentary inquiry recognised this by recommending further research on the economic and social impacts of FIFO and DIDO on source communities.

## 1.2 Project objectives and research questions

This project aims to undertake a qualitative case study of Fly-In-Fly Out (FIFO) and Drive-In Drive-Out (DIDO) opportunities which have recently been formally pursued in Victoria in response to changing economic circumstances, specifically the proposed closure of the Stawell gold mine.

The project aims to address the following questions:

1. How did the reverse FIFO proposal come about? Was it led by workers, companies or government (local or state)?
2. Was the proposal a direct response following the announcement of the gold mine closure or was it a trend already occurring among the Stawell workforce?
3. What is the profile of workers who are involved in long distance commuting for work? Is it possible to quantify the numbers?
4. What are the benefits and costs of such commuting? Individual, local economy and community?
5. What adaptive strategies have been used by workers and their families to overcome some of the negative aspects of FIFO (eg. Separation from family)?
6. What support role might community or government have in helping to ameliorate negative aspects?
7. Is long distance a viable and sustainable option for the future? What are the constraints and opportunities?

## 1.3 Methods

### *Policy input*

During project planning phase, liaison was undertaken with policy officers in Regional Development Victoria and the Department of Business and Innovation (now Department of State Development Business and Innovation) in order to maximise the policy relevance of the project. Discussions with Northern Grampians Shire also took place at the start of the project in order to gain their endorsement for fieldwork to be undertaken in the municipality, and also to gain a local government perspective, again with the view of maximising the policy relevance of the research. During the course of the project, liaison was maintained with all these stakeholders and a briefing on preliminary findings made before the report was finalised. This iterative approach followed the model of Waters, McKenzie et al (2010) to maximise the policy relevance of the qualitative and quantitative findings.

### *Fieldwork*

Following the model used in the Industry Shocks project (DEPI 2013), a series of interviews were undertaken with key informants associated with the Stawell mine closure and FIFO operations. This involved the identification of key informants and the development of an interview schedule based around the project research questions.

Identification of informant types was aligned to the types of information needed to answer the research questions and project objectives. The informant types chosen for the fieldwork phase of the project included:

- local and state government officers who have been involved in regional development initiatives involving FIFO;
- business owners and operators working directly with FIFO, specifically the airline companies involved;
- Workers who are currently using FIFO or long distance DIDO for commuting; and,
- Workers who may be considering using FIFO or long distance DIDO for commuting.

Once the informant list had been developed, a process of contacting initial informants in each location began. The sampling methodology followed a rhizomatic (modified snowballing) approach along the lines of Waters, McKenzie et al 2010. In the case of Stawell, initial contact was made via Northern Grampians Shire who had been briefed on the project as a key stakeholder. The Shire had been actively involved with the mine operators, workers and local businesses involved in FIFO, so the identification of suitable informants was relatively straightforward. Shire officers were able to provide a starting point from which linkages with other informants could be made. A total of 10 interviews were completed during July 2013. These interviews were recorded and transcriptions used for the analysis phase of the project. A profile of those interviewed is provided in Appendix 1. Names have not been used.

The interview schedule reflected the research questions and the type of background information that was required to understand the process of change in Stawell. A copy of the schedule is provided in Appendix 2. This full list was used as a 'menu' from which interviews were customised depending on the type of informant. For example, with local government representatives, greater emphasis was placed on policy responses to the forthcoming closure and concerns around community impacts, whereas FIFO workers were asked more directly about their experience of long distance commuting and business owners about potential opportunities, costs and barriers associated with mining sector changes.

The interviews were also useful as 'fact finding' for information not obtainable from other sources: experience of different shift structures, barriers to the future expansion of FIFO, and ways in which a community may maximise the benefits from economic change. While this information may be subjective or non-representative, it can give insight into factors which may help or hinder economic and social well being within a community.

#### *Data analysis and literature review*

Analysis of quantitative data was undertaken in order to provide a descriptive profile of the Stawell mining workforce. Some of this data came from the ABS Census via the TableBuilder tool, including employment and population characteristics (see Appendix 3 for notes on statistical geography). Other data were obtained directly from Crocodile Gold Corp who operate the Stawell Gold Mine. These data provided an account of worker numbers and the location and labour force characteristics of those who has been retrenched, transferred or retired over the 2012-13 period.

Information reviewed for this project was obtained from academic, government, industry and media sources. The scope of material selected included Australian studies and inquiries into FIFO and DIDO working arrangements, and information specific to Stawell (both historic and current). The study was also informed by work such as the Industry Shocks Project (DEPI 2013) which had reviewed structural adjustment policy contexts and regional economic change within Victoria and Australia. The literature was considered alongside the data and interview findings of the study in order to highlight common findings or differences.

## **1.4 Structure of the report**

This report introduces the town of Stawell and its mining past in Chapter One. The emergence of long distance commuting (FIFO or DIDO) is explored in chapter 2, both in the Australian context and in terms of its development in Stawell. Benefits and costs of the DIDO/FIFO lifestyle are presented in chapter 3, based on interviews with workers, businesses and government agencies in Stawell. Where relevant, these findings are cross-checked against similar research undertaken in Western Australia (Hoath and Haslam McKenzie 2013 forthcoming). Benefits and costs are considered in terms of the individual as well as the wider community. Chapter 5 explores future prospects for FIFO expansion in Stawell and, again, this is based on information gained from the interviews. Chapter six contains a number of themes which are subject to debate or uncertainty, or which present difficult choices for decision makers. The final chapter (chapter 7) aims to summarise key findings and present possible ways forward for consideration by decision makers. These findings can contribute to current national debates on FIFO workforces. As noted in the recommendations of the Federal Government Inquiry into FIFO and DIDO workforces, research on source communities affected by FIFO is currently needed to better inform government policy (Australian Parliament 2013, recommendations 8-11).

## 2. MINING IN STAWELL

### 2.1 History of mining in Stawell

Stawell is located 235 kilometres west of Melbourne and 130 kilometres from Ballarat in Western Victoria. Stawell has been a gold mining town for over 100 years and is located on the far western edge of the goldfields of central Victoria. Alluvial gold was first discovered in the area in 1853. Initial finds were small and the area's isolation meant that few people were initially attracted beyond the main goldfields of Ballarat and Bendigo. However, by 1857 a larger rush was underway leading to the development of underground quartz gold mining. At the height of the rush the population of Stawell was estimated to be 25,000 to 30,000 people.

The quartz reefs provided a stable gold field for underground mining and companies were formed to purchase the machinery required for deep lead mining. The Stawell gold operations produced large amounts of gold with two of the top 10 richest mines in Victoria being located there. Mining activities had slowed by the end of the century and the last of these early mines was closed in 1920 (SHS 2013).

Little mining occurred in Stawell until 1976 when Western Mining was granted an exploration licence. Open cut and then underground mining has occurred since that time, with various changes in ownership being experienced especially during the 2000s (Table 1).

*Table 1: History of gold mining in Stawell*

YEAR	EVENT
1853	First discovery of alluvial gold in Stawell region
1857	Main gold rush at Stawell and development of quartz reef gold mining
1880s-90s	Wind down of gold industry in region
1920	Last of the early gold mines closes
1976	Western Mining Company (WMC) Resources Ltd granted exploration licence
1981	Mining commenced through joint venture WMC and Central Norseman Gold
1992	Mining operation acquired by joint venture - Mining Project Investors (MPI) and Pittston Mineral Ventures (Pittston)
Early 2004	MPI acquired the Pittston share of the project.
Late 2004	de-merger of the MPI gold business - Leviathan Resources Ltd floated.
2007	Perseverance acquired Leviathan Resources Ltd.
2008	Northgate (Canada) acquired Perseverance
2011	AuRico (Canada) acquired Northgate
2012	Crocodile Gold (Canada) acquired Stawell Gold Mines from AuRico

*Source: Crocodile Gold website 2013*

The heritage of mining can be seen in Stawell with the town hall clock incorporating two mine workers in its design. A number of interviewees made reference to Stawell as a mining town, seeing this a source of cultural identity which many did not want to see lost.

*The town hall clock has got miners banging away and everywhere you go is a reminder of mining. It's part of our identity, it's part of our cultural identity. On that basis, for something as significant as mining to then no longer be here, it's like taking - almost like taking the heart out of the town. [Interview 9]*

The connection of many residents with the mine was also regarded as a competitive advantage in terms of the town's skills base.



*... we've had thirty years of continuous modern mining. So a huge number have gone through that mine here, and have families and relationships established. So it's not just the 360 people who are currently working plus any contractors. Mining has permeated this town. There's very few people who don't have a connection at some point in time in their history, with that mine. [Interview 9]*

## 2.2 The current situation

The Stawell Gold Mine has been through a tumultuous period over the last decade. As a relatively small scale mine the operation is exposed to fluctuations in gold prices and as such has changed hands 3 or 4 times in relatively quick succession. The mine is currently operated by Crocodile Gold Corporation, a Canadian gold mining and exploration company. Its Australian operations include three mines located in Northern Territory, Fosterville (central Victoria), and Stawell. In July 2012, the company announced its intention to move towards closure of the Stawell mine due to exhaustion of the ore body. At that stage it was envisaged that underground mining would cease by the end of 2013, with above ground activities such as processing being completed some time after this (*The Wimmera Mail Times*, 17/07/12).

While closure of underground operations is still expected to cease within the next 6 months, the exact timing of the closure and of the remaining redundancies is subject to some uncertainty. This is partly because of additional small-scale discoveries and mining of remaining gold in the mine. Furthermore, ongoing rehabilitation work on the site is likely to extend some job opportunities for the next year.

*We were supposed to be closed now, underground. We've actually found more staff to keep it open until December, so what we're doing is we're doing the salvage and reclamation program. So as we're pulling out we're going back into old workings that weren't viable 10 years ago because the price of gold was down. Now the price of gold's up ... we're going and getting that sort of stuff. We've just hit another patch and we've got an exploration drill rig back in to see and if it could be another ore body. [Interview 1]*

Another source of uncertainty is a new mining proposal currently being evaluated – the Big Hill open cut gold mine. Big Hill is an elevation at the northern end of the township which provides topographical distinctiveness for the town and is a popular lookout over the streets of Stawell and beyond to the Grampians mountain range. This project is not entirely new as a proposal was put forward in 2000 to open up the site. At that time, and following extensive consultation and analysis via an Environmental Effects Statement (EES), the proposal was rejected because of “the potential for various significant environmental effects” (DTPLI 2013). The fact that underground mining was still viable was also reported as having affected this [Interview 1].

A new proposal is now being considered. While also an open cut proposal for Big Hill, there have been changes made to alleviate some of the potential environmental impacts, for example full remediation of the site after mining is completed. In April 2013, a determination was made that this proposal would need to have an EES process (DTPLI 2013). The findings of this process are expected to be released at the end of 2013. Interviewees suggested that the continuation of small scale mining at the underground site was a way to keep skilled labour available should the Big Hill mine go ahead.

*They're trying to keep that going, bopping along to keep the skills, the labour there in the event that this approval comes for Big Hill. [Interview 5]*

*They want to employ locals and with the skill set they've got there now they really probably don't want to lose it ... So they can keep pulling out [the ore] until they get a decision on their Big Hill project ... I think they're just trying to find little bits and pieces just to keep turning it over to hold that skill set. [Interview 2]*

The Big Hill proposal has both supporters and opponents

*There are some people in the community who don't want that open cut for a range of different reasons – there's no one single reason. Some because they live right on the hill which I can I understand that. Others are concerned about health impacts, others are concerned about visual intrusion, and historic landmarks up there. [Interview 9]*

*... there's certainly elements of the community that are terribly concerned about it, but there are also elements of the community that say it has to go ahead for the survival of the town. So you've got both sides being presented. [Interview 5]*

If the Big Hill proposal is rejected, the underground mining operation is expected to be wound up fairly quickly [Interview 5]. The Big Hill mining proposal is expected to offer an additional 5 years of mining in Stawell, after which the site would be rehabilitated [Interviews 1, 9]. For some this represents an additional buffer of time that could be used to expand FIFO opportunities or to see additional mining projects in the Wimmera come to fruition [Interview 9].

The Northern Grampians Shire has already looked to the life of the mine beyond gold exploration and the idea of developing a centre for safety and mining excellence is gaining support.

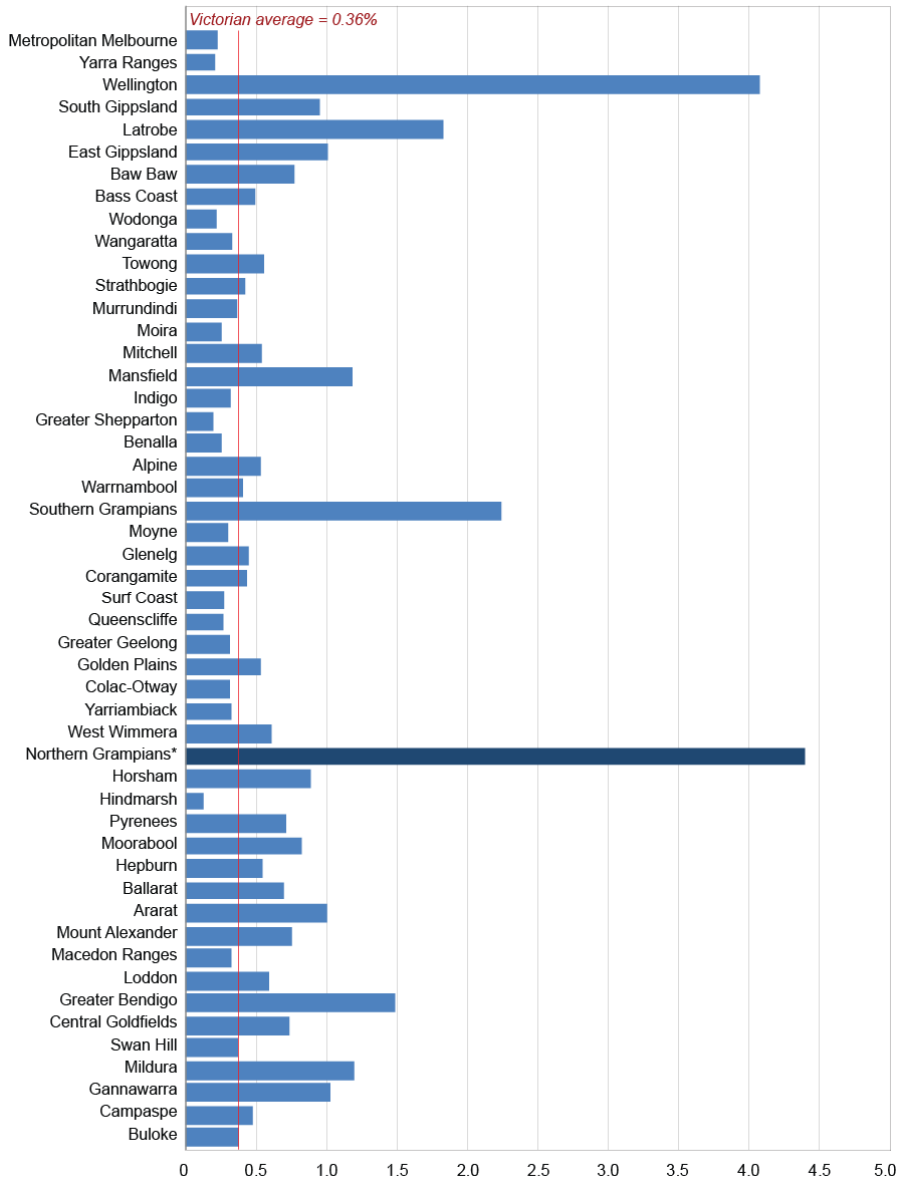
*We're exploring the opportunity of having either emergency management training centre at the goldmine or a mine rescue [training centre] ... Once we've got access to the underground environment we've got a fabulous training environment for closed spaces and so forth, and we've got the skilled workforce. Again, we've got people that have got the capacity to be able to run training programs and so forth. ... We've got a feasibility study underway to look at the opportunities in terms of training. [Interview 5]*

Given the close relationship the town shares with the Federation University mining program this proposal may have the capacity to be supported by a training organisation.

### **2.3 Profile of Stawell's mining workforce**

The Stawell Gold Mine is the longest continuously operating mine in Victoria having been in operation since 1981 and some of the workers have been at the mine for 25 or 30 years [Interview 1]. At the time of the 2011 Census, a total of 213 workers in Stawell were enumerated as being in the mining sector. This represented 9.1 per cent of the town's workforce. ABS data based on place of work put the figure at around 272 which is closer to the number of workers who worked at the Stawell gold mine prior to 2012. In June 2012, the number employed by Stawell Gold Mines was around 282. Managed reduction of workforce numbers began after this time (Crocodile Gold Corp 2013). Comparative data, provided in figure 1, indicate that employment in the mining sector in the wider municipality of Northern Grampians (4.4%) is the highest of any LGA in Victoria.

Figure 1: Employment in mining as a percentage of total employed, Victorian Local Government Areas 2011



Source: ABS Census, 2011, place of usual residence

Crocodile Gold Corporation, which operate the Stawell mine, have collected data on those workers who were made redundant during the 2012-13 financial year. A summary of these data is provided in Table 2. Of the 146 terminations (of which 112 were redundancies), 116 have been successful in finding new jobs (88 permanent and 28 casual). Half of these workers remained within the mining industry following termination (figure 2).

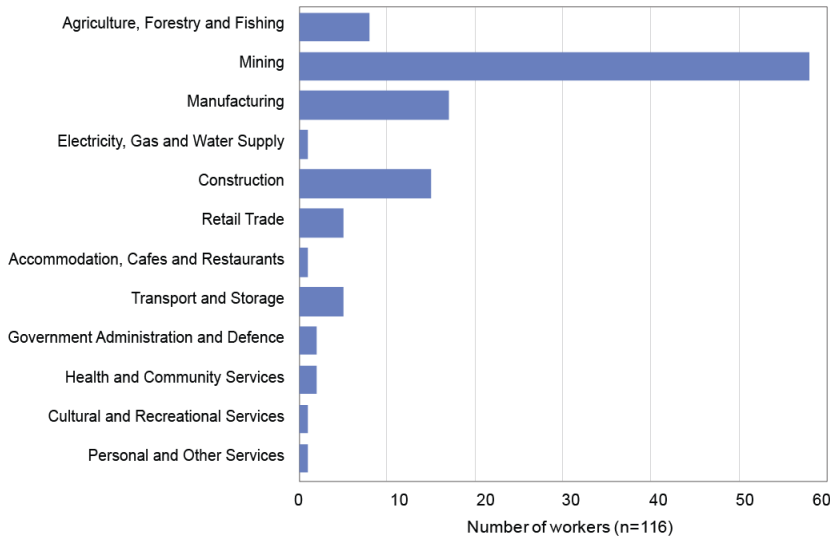
Table 2: Redundancies at Stawell Gold Mine from 1st July 2012 to 30 June 2013

<b>Total number of terminations</b>	146
<b>Current work status of those terminated (n=146)</b>	
Working	116
Unknown	9
Not working	21
<b>Nature of termination (n=146)</b>	
Total resignations	30
Total redundancies	112
Total transfers (to Fosterville gold mine)	4
<b>Prior to redundancies, residential location (n=146)</b>	
Stawell township	75
Within a 1 hour radius from Stawell	56
Outside a 1 hour radius from Stawell	15
<b>Residential location after redundancy of those who had been living in, or within 1 hour of, Stawell, (n=131)</b>	
Remained in Stawell or surrounding area	98
Relocated from Stawell and surrounding area	33
<b>Current work arrangements of those who remained in Stawell and surrounding area (n= 98)</b>	
FIFO	14
DIDO	10
Other	54

Source: Crocodile Gold Corp – Stawell Gold Mines P/L 2013

Most of those terminated had lived in Stawell (58%) or in the surrounding areas (38%). Out of this group of 131 people, 75% remained living in the area following termination, while 25% relocated. For those who remained living in the Stawell region after leaving the local gold mine, the number who subsequently moved into a long distance commuting arrangement numbered 24 and comprised 14 FIFO and 10 DIDO workers.

Figure 2: Sector into which redundant workers moved



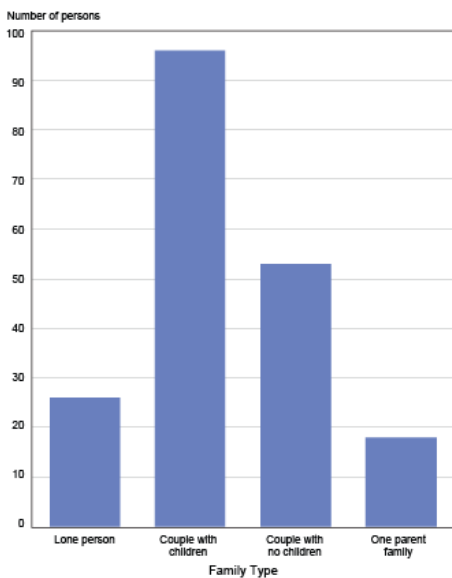
Source: Crocodile Gold Corp – Stawell Gold Mines P/L 2013

While mine workers are often characterised as young single men, the household profile of Stawell’s mining workforce is dominated by people living with partners (figure 4). The interviews highlighted this character of the local workforce including those who are involved in FIFO.

*I reckon the bulk of the blokes that are doing fly in, fly out from town have families. They're my age - like I'm 39, so they're my age and older. [Interview 2]*

*The bulk of them are my age ... most of them have got families I'd say. There's a lot who've just started doing drive in, drive out, to Costerfield, which is half hour - 40 minutes out of Bendigo...they've all got families. There's ... five from Stawell that do that, off the top of my head. [Interview 2]*

Figure3: Family type of those employed in mining sector, Stawell region 2011, enumerated population, SA2 geography



Source: ABS Census 2011 using TableBuilder

### 3. LONG DISTANCE COMMUTING

#### 3.1 The rise of FIFO and DIDO in Australia

Workforce mobility has been a reality in regional areas for many decades, particularly among groups who undertake seasonal work such as shearing or harvesting. The difference between this type of mobile workforce and those doing long distance commuting (FIFO or DIDO) is that the latter return to their place of residence on a regular basis, often after a block of working time, typically one or two weeks in length (Parliament of Australia 2013, p. 12).

FIFO practices began in the 1960s with the oil and gas industry. They have become more common in recent decades for a number of reasons including:

- Increasing costs of building and maintaining remote mining towns
- Availability of cost-effective air transport
- Worker preferences for living in larger centres with a wider array of services
- Tight labour markets and skilled labour shortages

(Parliament of Australia 2013, p. 12-13).

While FIFO arrangements are used across many industries, it is in mining that it has become most commonly used. An estimated 25 percent of the Australian mining workforce undertake long distance commuting – defined as more than 100 kilometres between place of residence and place of work) at the time of the 2011 census (MCA 2013, p. 20). This compares to a rate of 3.4 percent in the construction sector and 2 per cent in Public Administration and Safety. All other sectors had levels below 2 per cent.

The use of FIFO workers is important for short term projects such as the construction phase of a mining operation.

As the construction phase ends, maintaining a population of construction workers at one mine-site becomes redundant. A better use of this workforce is to move it to a new location where construction is being undertaken. FIFO, therefore, is the most practical option for this sector of the workforce. (Skills Australia 2011, p. 6)

Nevertheless, workers involved in this phase can become involved in the operation over the longer term as was the case with the Stawell-based firm now conducting FIFO.

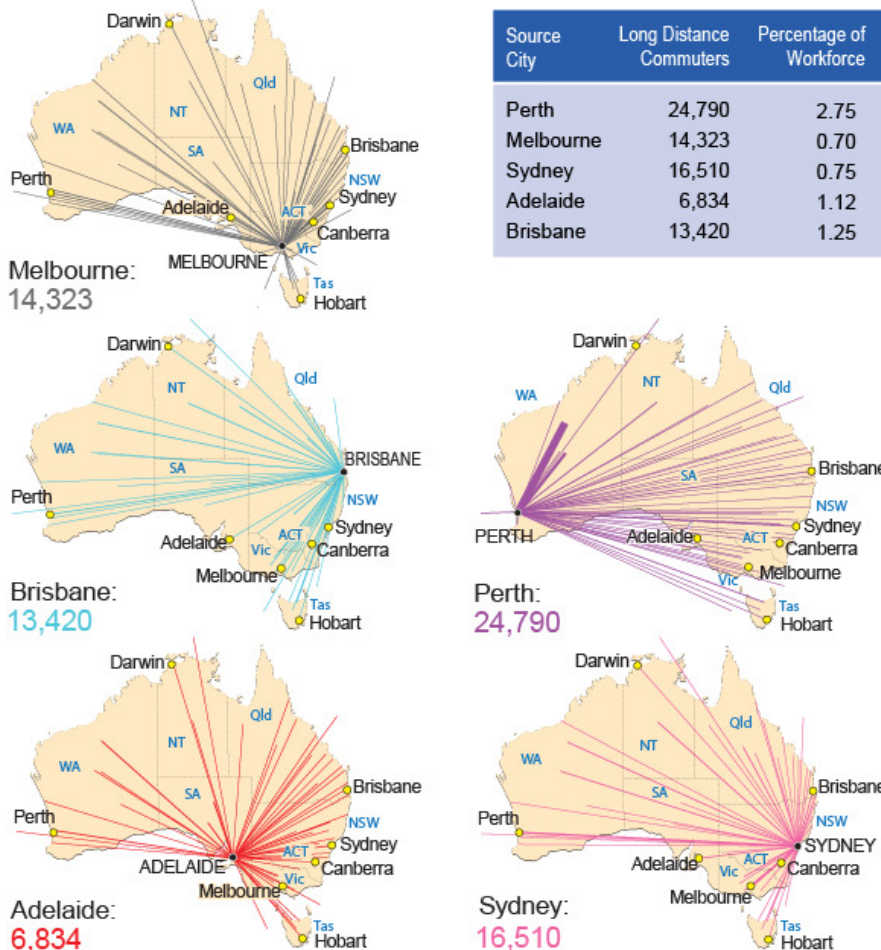
*We got an extension of the job that we'd started. We started building it, this one up at Cobar and then we got an extension and we're still up there now. We finished the construction side of it 30 September 2012. We had a couple of months off and then we got a job ... we got the maintenance. (Interview 3)*

In the operational phase of mining operations FIFO workers are usually employed to fill skills gaps which cannot be easily filled in remote locations. Because of Stawell's experience in mining, this is an area where the local workforce feels confident in being able to expand their involvement in FIFO. FIFO arrangements are not confined to the mining sector however they have become common in that industry. Western Australia and Queensland have the largest mining workforces. Approximately 50 per cent of Western Australia mine workers are long distance commuters and the figure for Queensland is 40 per cent (DIT 2013, p. 155).

Census data show the numbers of capital city residents whose place of work and place of residence were more than 100 kilometres apart (figure 4). The high numbers of workers in Perth who worked a long distance from home is striking – nearly 25,000 or 2.75% of the workforce. All other mainland state capitals except Adelaide had more than 10,000 people working a long distance from their place of residence. Capital cities have become

important hubs for FIFO because of the size of the available labour force and the availability of aviation infrastructure and services.

Figure 4: Capital city residents who worked far away (more than 100 kilometres), Australia, 2011



Source: The Australian 18<sup>th</sup> March 2013, using data from KPMG Demographics

Some non-capital cities have started to become more significant for FIFO services and some regional cities are actively pursuing such activity by promoting themselves as potential FIFO hubs. Stawell is an example of this although it is by no means alone. In Queensland, Cairns has investigated their potential to attract FIFO activity (Cummings Economics 2010) and in Western Australia, Rio Tinto has nominated nine regional towns as source communities for their Iron Ore mining operations in the Pilbara. In Queensland, the Wide Bay-Burnett Regional Development Australia committee has signed a Memorandum of Understanding with two Hancock Company coal mines to source FIFO workers from their area (RDA 2013). There has been a proposal to make Mount Gambier or Portland a fly-in fly-out hub for the Greater Green Triangle region (*Portland Observer* 4/7/12 and 3/8/12). These types of proposals are usually part of a local or regional development strategy aimed at attracting investment and maintaining or increasing population numbers.

### 3.2 Development of FIFO and DIDO in Stawell

The development of FIFO in Stawell contains several converging threads – Council initiatives, business initiatives and the prospect of the closure of the Stawell Gold Mine.

The announcement in late 2012 of the closure of the Stawell Gold Mine prompted action on a number of fronts. The local council, Northern Grampians Shire, began a coordinated exploration of FIFO opportunities, building partnerships with local business people such as the airport operator and local construction firm, the mine owners and an interstate municipality. The aim was to make links with mining regions and establish a FIFO arrangement with them, capitalising on the number of workers becoming available as the Stawell Goldmine phased down its operations. The council's motivation to engage in the initiative is multi-dimensional but ends with a desire to ultimately retain population and a rate base. It is a decision rooted in the town's identity as a mining stronghold and the fact that it possesses within its current population a significant body of mining knowledge built over generations.

*The council are pushing for [FIFO] at the moment. Somebody's got to pay the rates. If they start to move away well schools drop off... you lose your footie teams, you lose your social [activities]. [Interview 7]*

*Retention of population and retention of skill and money. That's really what it was... we could have spent more effort in trying to find different alternative jobs for those people, but that didn't do anything for their sense of worth, for the value [of] people working here for 15, 20, 30 years. You don't want to lose that skill set. [Interview 9]*

These initiatives coincided with those of the local businesses themselves who were able to capitalise on existing networks within the mining industries and contract arrangements with interstate mines.

*So some of the people were going to be available because of the slow down at Stawell, it was just good timing. [Interview 3]*

Two private firms are at the heart of the current FIFO operation – a crane hire and rigging company with a contract in Cobar, and the local airline company based in Stawell which offers charter flights to Cobar. It was through the crane hire company winning the contract in Cobar that the idea first gained traction in the local private sector. Initially, the director of the company was driving his workers between Western Victoria and Cobar on a week-on week-off roster. The seven or eight hour drive would take up the better part of two days considering both the outbound and return trips. Not only did this eat into workers time off, it also exposed workers to the dangers of many hours on the road, sometimes after a full days labour [Interview 3]. Through negotiation between this company and the local airline, the idea for a chartered flight to Cobar was born. The Stawell airport was and still is going through an upgrade and could easily cater to the needs of the charter service.

Both companies see great benefit in the 'source community' proposal and have been active in supporting initiatives to bolster the scheme.

*It's an opportunity that suits our line of business, that's come along without a lot of effort. It's an opportunity to support the community and ... to give it a go. It's one of those things, you know, in 10 years' time we might look back and say well that was a waste of time, wasn't it? Or we might look back - you know a fleet of aircraft and a booming business and a potential buyer for it all and it's been successful. [Interview 4]*

From the Council's point of view, this private enterprise venture has positive spin offs for the community overall.

*[The airline operator] purchased another aircraft in order to do this so he's got business expansion. ... You know, that's investment in the community and that's a tangible result from [this] FIFO endeavour. [Interview 5]*



The airport at Stawell has historically been used for small scale services such as crop dusting. In recent years Council was successful in gaining grants for airport upgrades. On the basis of the investment made, the council was looking for ways to increase the usage of the airport. The idea of using the facility for fly-in fly-out operations was seen as a way, not only of gaining value from the investment they had made, but also in order to enable population and skills to be retained in town [Interview 9]. The idea for FIFO had been raised several years earlier when consideration was given to employment opportunities beyond the life of the mine.

*It wasn't one of the key priorities at that stage then but the intelligence was gathered and so as soon as we were briefed that transition was on the cards now, we went straight back to that research, went through and identified the key projects that looked viable and feasible in this environment and one of them was FIFO ... So I guess FIFO never came out of nowhere, it came out of the understanding that mining was not going to be there forever, that it was a limited resource and we had to start to plan for other things or other opportunities to try to preserve the township. [Interview 5]*

The developing interest in FIFO possibilities resulted in a more formal approach being made to the local government area in which Cobar and its mines were located.

*Our CEO, our mayor, the general manager of the goldmine and a staff member of the State Government flew up to Cobar to meet with the Cobar Shire and the group of mining companies up there as well. So they've forged links up there. [Interview 5]*

The visit to Cobar by council and business leaders using the local airline operator spurred development of FIFO at the individual business level.

*It was a very important trip both in terms of time, in comfort and in knowing that you have good local operator who can provide that service if you need. Now that he's got the ten seater plane it makes it even more affordable. We also looked at the affordability and what the costings were for that type of activity and it's fine. It actually ended up being cheaper than trying to get to Melbourne and get on commercial flights. [Interview 9]*

The wind down of mining operations coincided with the airport improvements and this allowed local businesses to consider the FIFO opportunities as well.

*The upgrading of the airport started off well before the news of the mine closing. But I think that it's been a good opportunity to play the two together in the fact the facility is being upgraded, improved, and so it will actually make Stawell airport very functional for actually moving people in and out. [Interview 4]*

The relationship with Cobar started as a contract arrangement made through professional working networks of a local business manager. Initially, a group of workers travelled from Stawell to Cobar by road for a 14/7 roster arrangement, a situation which proved difficult to sustain.

*... we got the plant going and were asked to come back and do more work and keep it going. I just said well now we're going to fly because it was too hard right. It was too hard. People got too worn out ... You'd work 13 days and drive home. [Interview 3]*

This relationship extended beyond economic interests.

*... there's a friendship city arrangement between the two so that we can continue to explore this. It's not just our council but it's also Grampians Community Health. [Interview 5]*

*... it's about being able to have our civic leaders deal with their civic leaders. We can provide support mechanisms both ways. It's a little bit like that friendship city, sister city relationship stuff. It could be more than just mining that we do exchanges on, it could be some cultural stuff, it could be other community support, other things that we can provide assistance with that they don't have... What can we do to make it a good experience both ends? If our workers who are family-oriented here are in Cobar and they're spending two week shifts on, what is it that we*

*can help facilitate so that they get involved in community life there as well, so that they don't feel as isolated, that they feel that their citizens of two towns not just one. [Interview 9]*

Despite these positive beginnings, the meetings did not succeed in establishing Stawell as a FIFO hub. One of the biggest issues encountered by the delegation who visited Cobar was the difficulty in dealing with multiple contract hire agencies rather than the mining companies who owned the mines. Mining companies use labour hire contractors.

*That was complicated in that the two main employers are contract companies – the mines don't employ directly – and they didn't attend the meeting .... So we're a bit cynical about that or a bit disappointed around that. But again, for particularly the contractors, they're very short-term motivated, so that's a difficulty. [Interview 5]*

*The biggest problem with these companies is you think you're talking to the right bloke but you're not ... we had Cobar blokes come down here at one stage ... We found out later that half of them weren't in the right place. They were just coming down to have a look. "Well mate have you got the power to do it?" "Oh no, I haven't got the power to do it. I've got to take it back to my boss". [Interview 3]*

The easing of the mining boom also changed the labour needs of the mining companies.

*It's just unfortunate that it's coincided with a downturn in the mining economy, so there's not that many opportunities out there now and the mining companies don't need to negotiate at all, really. [Interview 5]*

*Just at the moment with the economics, a lot of the mines are going towards contractors because again, they only need to commit to a month at a time as opposed to a [long-term] workforce, so they're employing contractors to supply their labour. [Interview 5]*

But many regard the downturn as a temporary setback.

*Yeah, this dip isn't like an endless trend that will hit rock bottom, it's a dip. It's like an adjustment that's happening because ... the price of labour pretty much sky rocketed. Organisations like AMMA are predicting that by 2015 the demand for a mining workforce is going to be huge. If that prediction ends up playing out, then I don't know whether we'd even potentially have enough people in Stawell to be able to provide what might be required for FIFO. [Interview 9]*

*It might be 18 months, three years down the track but [the mining sector downturn is] not forever. If the Big Hill enhancement project goes ahead, again, for us at that endpoint, in three or five years' time, it might be a perfect lift-off for us, because we'll keep the mining here in Stawell over that time period, gathering more skills. And then, ... unless they find some more gold somewhere, that will be the end of mining at Stawell ... In three to five years, I believe the mining economy will be strong again and FIFO will really open up to us. [Interview 5]*

### **3.3 FIFO and DIDO arrangements in Stawell**

Long distance commuting (FIFO or DIDO) is not confined to a single arrangement between Stawell and Cobar. The interviews revealed many examples of such commuting across the Northern Grampians community. While the efforts made by the council may have been motivated by the local business-airline alliance, people are engaging in many different types of long distance commuting.

Furthermore, FIFO arrangements cover a variety of commuting arrangements. As one worker noted:

*Every scenario, every fly in, fly out is different, totally different. To me you just can't put a big umbrella over it and say this is what's going to happen. [Interview 3]*

This is echoed in one of the submissions to the parliamentary inquiry into FIFO/DIDO.

In any discussion on FIFO it is important not to stereotype FIFO but rather to acknowledge there is no generic FIFO profile – FIFO practices are diverse and as such different profiles have different impacts on individual, families and communities (Sibbel 2011, p. 1)

In many cases there is a degree of road commuting in order to access an airport, and this can lead to quite complex arrangements (table 3). While a small group of workers fly direct from Stawell to a gold mining site near Cobar in New South Wales, others are currently working in South Australian mines via Adelaide or Melbourne. Melbourne provides a wider range of opportunities to access mines across Australia or to fly to Perth from where a large number of flights serve the north western mines of the Pilbara as well as offshore gas and oil mining.

The other complexity around FIFO and DIDO arrangements is the nature of the rostering. Two types of roster were discussed in the interviews – 14 days on with 7 days break (14/7), or 8 days on with 6 days break (8/6 or 7/7). The difference between these two roster options seems to be significant in terms of impacts on the individual and community, with the 14/7 roster being seen as more difficult to sustain even though it generally has the advantage of higher pay rates. This will be discussed further in section 4.4.

Table 3: FIFO and DIDO arrangements in Stawell region

COMMUTE	TYPE	ROSTER	TRAVEL TIME	INTERVIEW SOURCE	NATURE OF INFORMATION	TYPE OF MINING	NUMBERS INVOLVED
Stawell to Costerfield	DIDO	7-7	2-3 hours	2	second hand	Gold Mine (CGC)	
Horsham to Adelaide to Moomba SA	DIDO/ FIFO	N/R	4-5 hours plus flight	2	second hand	Gas Plant	1
Stawell to Melbourne (Essendon) to Prominent Hill	DIDO/ FIFO	14/7 and 7/7	3 hours plus flight	2, 10	first and second hand	Copper – Gold (OZ Minerals)	c. 4
Avoca to Stawell to Cobar	DIDO/ FIFO	8/6	30 mins plus 2 hour flight	6	first hand	Silver / Gold	1
Ararat to Stawell to Cobar	DIDO/ FIFO	8/6	30 mins plus 2 hour flight	3	second hand	Silver / Gold	1
Hamilton to Stawell to Cobar	DIDO/ FIFO	8/6	1 hour plus 2 hour flight	4, 7	second hand	Silver / Gold	2?
Stawell to Cobar	FIFO	8/6	2 hours	7, 8	first hand	Silver / Gold	4
Stawell to Melbourne to Tasmania	DIDO/ FIFO	N/R	3 hours plus flight	2	second hand	Offshore oil and gas?	2
Stawell to Melbourne to Mackay Qld	DIDO/ FIFO	N/R	3 hours plus flight	2	second hand	Coal	1
Stawell to Melbourne to Perth to Pilbara WA	DIDO/ FIFO	14/7	3 hours plus 4.5 hours plus flight	3, 8	second hand	Iron Ore?	1
Ballarat to Melbourne to Adelaide to Roxby Downs SA	DIDO/ FIFO	14/7	3 hours plus 1 hour plus flight	3	second hand		“a fair few blokes”
Inward commuting to Stawell from Bendigo, Warrnambool, Geelong, Melbourne	DIDO	Daily?	1-3 hours	1	Company statistics	Stawell Gold Mine (CGC)	15

CGC – Crocodile Gold Corporation

N/R – Not reported

Source: Stawell Interviews 2013

## 4. BENEFITS AND COSTS OF LONG DISTANCE COMMUTING

### 4.1 Individual benefits and costs

The concept of living in one region of the country and working in another, either week on/week off or anywhere up to four on/one off may not initially appear as a desirable schedule to build a working life around. Challenges associated with this working lifestyle such as regular periods of distance from loved ones and separation from home community networks are obvious, but for many considering or engaged in FIFO work arrangements the benefits are equally so. For individuals living in areas with limited employment opportunities or for those looking for jobs with higher wages, top level training and upward mobility, FIFO has become a real alternative to job dissatisfaction or unemployment. As noted by de Silva et al (2011, p. 2):

From a long distance commuter's point of view, living in the origin region has many advantages. These include commuters' family preferences regarding work-life balance, the preference to live with the family in a region where there may be relatively better access to amenities and social infrastructure such as schools and proximity to establish friendship, family and social networks.

The lifestyle of FIFO workers, if managed effectively, can be well-balanced and rewarding, often aspired to by those working regular nine-to-five shifts. Much attention is devoted to the difficulties of living away from home in remote areas but a majority of workers engaged in FIFO contracts claimed they valued the lifestyle, particularly the improved income and the block of time spent away from work. Many made the point that while they did miss their families and friends when away, upon returning home they were able to see more of their loved ones than if they worked a regular 6am to 6pm shift in the Stawell Gold Mine.

In research undertaken in Western Australia, it was noted that the attribution of some negative events to the FIFO lifestyle is difficult, as they may have been a range of contributing factors (Hoath and Haslem-McKenzie 2013, p. 53). Likewise, in the Stawell interviews, it was widely acknowledged that occurrences like divorce and unhealthy relationships certainly do not improve with a FIFO working arrangement, but it would be misguided to blame relationship failure squarely on a partner's work schedule. Many respondents could talk of relationship breakdowns they knew of which occurred while a partner was engaged in FIFO but most identified FIFO as exacerbating an already volatile situation rather than causing it.

*I'd be very surprised if [FIFO] impacted too much because people will be always out there to blame [something]. You start flying in and out and within two months you separated, you're divorced. Well fly in, fly out didn't cause that. You would have been in trouble first ... and your separation was going to happen anyway. It [just] might not have happened quite so soon. [Interview 3]*

*If you've got a pretty good home life, you should be alright. [Interview 6]*

On the other hand, FIFO workers sung the praises of their increased incomes and the financial freedoms that this gave them. Even those not working on a FIFO arrangement claimed they would jump at the chance were it offered to them. It seems if the schedule is managed properly and families are willing to take on the challenges of work-life balance together, difficulties associated with FIFO can be overcome just as they are under any other working schedule.

For individuals who had experience of long distance commuting by car, FIFO often represented a much better lifestyle opportunity.

*[FIFO is] easier than I expected. Oh well easier than driving, miles ... because driving - what happened? We hit an emu one night and the boys in another crew hit a kangaroo when driving the utes backwards and forwards so it's just a no brainer really. In the aeroplane and away you go. [Interview 7]*

*[The travel time] gets into ... work health and safety, and duty of care, and that sort of thing ... with these guys coming off shifts, you know working shifts and then having to get on a plane and fly home and then having to drive another three or four hours to get to their final destination after that. [Interview 4]*

For most workers, FIFO represented the opportunity to earn more than they could locally and their description of FIFO as affording a “better lifestyle” often referred to this economic fact.

*The money is the biggest attractor. I went from a low wage, struggling every week to try and pay bills ... I was on ... I think it was \$13 an hour ... Now I'm on ... \$55, \$60 an hour ... the kids will say “oh we'll go to the movies tomorrow”. [With my previous] wages you'd say, “oh maybe wait until next week”, but now “yeah, no worries”. [Interview 2]*

*It's fantastic - well from where I am it's fantastic money. Don't get me wrong - I'm not the highest paid one there, [but] it's a fantastic lifestyle. [Interview 10]*

Others were attracted by the opportunity to stay within the mining industry and continue using their skills in this area.

An interesting perspective on the balance of costs and benefits of FIFO relates to the issue of being absent from family. For some of those interviewed, the time away did not necessarily represent a greater problem than a job with long hours.

*There's a lot of employment opportunities in the country that will take the individual away from home and away from the family during the week, for instance. A lot of people live on the road during the week, when you start looking around, and to my way of thinking [FIFO is] not a lot different to that. You know you get into some of the contracting work that goes on, you know, like harvesting contractors, for instance. Well they live with their headers for six months of the year. [Interview 4]*

*There's always stuff about upsetting families [but this is not true because] we've got an eight and six roster which means there's a person home seven nights and he's away seven nights. I've got people working for me who've got young babies to [newly] retired people ... and they reckon it's great having six days off at home. [Interview 3]*

This finding is similar to that of Hoath and Haslam-McKenzie (2013, p. 63) who note that,

... social norms in contemporary society are under considerable pressure from multiple sources. While the rostered blocks of LDC [Long Distance Commuting] workers create significant pressures, many noted comparable effects associated with the deregulation of trading hours.

In fact the FIFO roster system allowed workers to have blocks of time back home which could be beneficial for family relations.

*... if they're fly in, fly out, when they're home they can actually get up, take the kid to school, be involved with their kids and engage with them and give their partner a break, take over the role of doing things and helping out. So if you actually manage it properly it's something that you can manage and it gives you that bit of space as well, like gives you a bit of breathing space. [Interview 1]*

*You make more when you're away because you're doing longer hours. In seven or eight days you can cram up to 100 hours ... that's what gives you that second week when you come off and have a breather. You're more or less paid for two weeks, but you only work one week. [Interview 6]*

In contrast to this are situations where periods of absence create disruption or adjustment pressures.

*I'd come home and I'd be like right, what's going on here? I'd have to learn to [fit] back in because [my wife] would have parameters for the kids, it's like you're in bed at eight o'clock and I'll be oh no, just a little bit longer. So that way it'd be hard ... Then I'll go away and just leave her with the aftermath. [Interview 2]*

*So you have this person come back in to the house who has [been away] ... There's a period of adjustment. What's their communication style like? How do they actually relate to each other? Are they really solid and stable and can talk about anything and [do] they have an understanding that they need to let each other have their jurisdictions? Or is the partner expecting the other one coming back in to take over everything? What's that role that they're negotiating between each other now? [Interview 11]*

While similar patterns were found by Hoath and Haslam-McKenzie in their Western Australian research they also highlighted the finding, mentioned earlier, that FIFO arrangements can exacerbate existing problems rather than solely cause them.

While not the primary cause, where there was the propensity for personal or relationship problems to manifest, the stresses particular to a LDC lifestyle tend to have a compounding effect (Hoath and McKenzie 2013, p. 53).

When weighing up the positive and negatives of the FIFO lifestyle, most respondents felt the positive aspects outweighed the negative.

*The advantages absolutely outweigh the disadvantages: ...the fact that you have ongoing reasonably well paid employment; you can utilise skills that you've developed over time; your family can still stay; you can have your time off and still be involved in sporting associations and other activities within the town; you can have a good quality of life; you're not actually [in] the middle of Woop Woop and being caught in a town camp somewhere ... and you're family has got nothing to do when they're up there. They're well looked after here [in Stawell]. [Interview 9]*

In choosing to undertake FIFO, many workers have clear aspirations and reasons for choosing the lifestyle.

*One lady, she's over in Northern Territory driving 300 tonne dump trucks. I'm thinking "wow". She only done it solely for the fact that she wanted to pay her house off. Her life goal was to pay that house of hers off. [Interview 2]*

*I know 35 year olds that have built a house and got a mortgage and the money they're earning, they want to keep in that bracket, so they want to keep in the mining industry. They're the ones that'll fly in, fly out and if they can fly in, fly out from Stawell they'd love it compared to going to Melbourne and flying ... If they're set up with families or whatever in Stawell, uprooting a family's probably not the best. [Interview 7]*

This relative advantage (FIFO versus out-migration) highlights that such decisions are complex and involve trade offs. The trade off between FIFO and permanent migration is only one example. Other workers faced a choice between lower local income opportunities versus maintaining their existing wage levels by remaining in the mining industry (via FIFO or DIDO).

*The [local] wages in Stawell wouldn't be as good as what they get at the moment [in mining]. [Interview 7]*

Another important comparison is between a local job with long hours versus a FIFO job with long breaks. For some this enabled periods of time with family that may otherwise have been more constrained.

*I might be away for seven days but I'm home for seven days full days, so it'd be no different. There's no difference ... when I'm on dayshift I don't see [my children] ... I'll leave at six in the morning, half past five in the morning, I'll come home at seven at night ... I might see them, I might not and they're in bed. So I virtually don't see them for the four days. [Interview 2]*

*... we actually work less days than what a teacher does. We work more hours, we actually work more hours but less days. What they like about it [is that] they're home for six days straight or they're home for half the time nearly. [Interview 3]*

Finally, the FIFO workers in Stawell who are travelling to Cobar were able to compare their current arrangement with their previous arrangement of driving to Cobar. The relative advantage of FIFO in this case is undeniable.

*We were driving [previously] which was eight and a half hours ... going up and changing over every fortnight which was fairly tiresome ... But then we started the fly in, fly out and that's an hour and 55 or two hours. We leave at seven, we're there at nine, we're at work at 10 in the morning. The days we come home we work until one o'clock, in the plane at two and home by four so it's just magical, a different set up all together. [Interview 7]*

Conditions at the mining sites was regarded as comfortable, adding to the benefits of the FIFO lifestyle.

*... mining sites these days ... they've got all the comforts of home; they've got a good bed, they've got good meals made for them all the time. They live in good conditions these days. [Interview 4]*

*When you go and work in a camp you're fed, you're clothed, everything's done for you. Well it's like being in a motel. You walk into a canteen, the cafeteria and there's just all this food and it's all for nothing, you just eat. [Interview 1]*

In terms of negative aspects of FIFO, it was interesting that many of those interviewed discussed these problems with reference to others, not themselves. The degree to which such information reflects real problems in the community is therefore difficult to assess. Furthermore, some of the problems raised seemed to be related to longer roster arrangements (14/7) or to situations where long-distance DIDO was combined with FIFO. In other words, the nature of the long distance commuting arrangement is more likely to be a factor in negative outcomes rather than FIFO per se. Direct FIFO on a 8/6 roster seems to gain much wider support and positive feedback than any other arrangement. For this reason, the pursuit of FIFO directly out of Stawell airport would seem to have much greater advantages than any other FIFO or DIDO arrangement currently being undertaken by workers in the district.

*I've heard stories, with other blokes, when they're leaving their missus and kids and stuff. It puts a lot of strain on relationships ... The more people get stuffed around with the travelling, the worse it is at home. [Interview 6]*

*We've got examples in our community of people travelling remotely – like, they're travelling 24 hours to get to work and then they're away for two weeks and then 24 hours to get back home again and they're only home for five days. Families fall apart ... So that model ... can be workable for some people or it can be workable for people that aren't in a family situation. [Interview 5]*

*What some people were telling us was that when their partner – their male partner – went away for FIFO for three weeks or something, they'd always make sure the gate was shut. Whereas when he was home the gate wouldn't be shut. [Interview 11]*

Pressures may arise at either end of the FIFO arrangement. For the person away from home,

*... there's a real risk of whatever's happening in the person's mind about what's happening at home – if there's any insecurities about their relationship or any worries. [Interview 11]*

And for the person left at home:

*... the worry that the person has at home: is he okay, has he met someone else, what's he doing when he has a field break? Is he going to the pub and doing something stupid? [Interview 11]*

Having good telecommunications contact, such as Skype was seen as helping families to overcome some of these issues of separation although the remoteness of many mining projects did not always make this easy [Interview 11].



Most of the interviewees in this study were male workers undertaking FIFO rather than female partners remaining at home. This was intentional in order to focus the study on the emergence of FIFO in Stawell and the characteristics of current arrangements. It was also felt that an exploration of relationship dynamics would be a potentially sensitive area to explore and one which could not be fully investigated given constraints of time and money. However, it is recognised that the limited input from partners may bias the study in some respects. A number of insights gleaned from the study may suggest some issues for further investigation.

*Sure, the partner comes under pressure. The partner more than likely, if they've got people surrounding them, if they've got immediate family, if they've got people around helping them, then they're more likely to succeed. [Interview 1]*

## 4.2 The significance of roster arrangements

A consistent articulation among workers with families arose with regards to the balance of time at work and time at home. A 7-day-on, 7-day-off roster was consistently preferred to 14-day-on, 7-day-off, even though the latter was likely to have higher pay. In fact the 14/7 roster (2 weeks on 1 week off) was often described as having more negative impacts, especially on families.

*[There is] plenty of money on a two and one roster - enormous money. [But it] destroys families, destroys family life ... Destroys yourself in the sense you come home and you just think you're a stranger in your own house. [Interview 10]*

*I've spoken to people and they've said they've done three or four weeks on at a time, and you normally go insane because you're thinking about what's going on at home. It's just too hard on people. [Interview 6]*

*It would be [stressful] if you were going for more than a week I imagine. We used to drive up [to Cobar] for a fortnight and when you get to the last few days, [the morale is low] ... it does catch up with you. [Interview 7]*

This difference between rosters was raised in the 2013 parliamentary inquiry into FIFO and DIDO practices. One submission from a Queensland mining company highlighted the issue:

Carborough Downs [mine] operates a 7-day-on, 7-day-off roster which is seen as being supportive of a FIFO workforce, ... Vale [mining company] considers such rosters, which are employed widely throughout the Queensland industry, to be very family friendly, and would encourage the inquiry to differentiate between these rosters, and rosters that involve significantly longer periods away from home such as those employed widely in Western Australia. (Vale Pty Ltd 2011, p. 4)

A number of interviewees recognised the need for individuals to consider the implications and trade offs of different roster systems and salaries before committing to FIFO. Some workers had decided against the FIFO lifestyle, often after many years of doing it.

*Look, I've been involved in like fly in, fly out ... I was a regional manager for Asia Pacific region where I was always on a plane. The reason I'm sitting here in Stawell is that I've got three young boys. I'm a single parent with three young boys. For me flying all over the world didn't suit my lifestyle with the kids because I was never home, but that was fly in, fly out. [Interview 1]*

## 4.3 Community benefits and costs

While the impacts of FIFO workers on receiving communities has often been reported as negative, the impact on source communities is more likely to be reported as positive (Parliament of Australia 2013, pp. 43, 106).

*I guess the positives are that you're keeping the people in the community basically. Yeah you're keeping the families here, you're keeping the kids at school, you're keeping the supermarkets open, and businesses that are supporting those families are still functioning. I guess that's the - that's a big benefit to the community. [Interview 4]*

Almost all of those interviewed were clear in their view that FIFO represented a clear benefit to the Stawell economy through income being brought back to the town.

*The disposable income's always spent back here. [Interview 1]*

*What it's doing is bringing money ... back into the town. [Interview 3]*

*The biggest benefit I can see is that you're bringing the money back to the town. [Interview 6]*

*Well you're keeping people here ... and they're spending their money here. [Interview 7]*

*Yeah I reckon, there'd be more cash in the town. [Interview 8]*

A benefit observed by many of the workers interviewed is that the income from FIFO and DIDO is spent back in the Stawell community. Limited opportunities to spend at the mine site, and the fact that meals and accommodation are provided, meant that most of the workers spent their money while back in their home town.

*It'd have benefits for the community for local people in and around the area because you can't spend money up there ... they supply your room, your food, everything's all supplied - it doesn't cost you a thing - and you come back home again. So the biggest benefit I can see is that you're bringing the money back to the town. [Interview 6]*

Overall, however, this direct consumption spending may represent a marginal benefit to the local economy given that such workers would presumably have done the same while working locally. The only difference would be the higher pay that may be accessed by FIFO. Obviously, if Stawell increased its role as a FIFO hub it may attract more people driving in from the broader region to access the airport. This however represents a gain to Stawell at the loss of other towns – something that currently seems to occur where DIDO workers commuting via Stawell spend in the town.

Roster arrangements also have implications for communities.

*I have to say the one week on, one week off, sounds a lot more attractive for people and a lot more doable. It means that they could plan - community competitions for example, [football], joining the fire service, I don't know even pool competitions at the local pub - all those things require you to be here regularly. So the connectedness in terms of the things that interest you - the team sports and the team volunteer opportunities - even if you were a one week on, one week off, you're only able to engage fortnightly. That might be enough for some things. [Interview 11]*

It seems to be too early to tell whether wider social issues such as declining club memberships or community participation can be attributed to FIFO. If the larger arrangement aspired to by council is one day achieved these factors may become more apparent.

## 5. FUTURE PROSPECTS FOR FIFO/DIDO IN STAWELL

### 5.1 The positives

The expansion of FIFO opportunities is widely supported across the Stawell community. There has been discussion and consultation between local government, local businesses and existing and potential FIFO workers. FIFO is certainly seen as preferable to DIDO and if, 8 days on, 6 days off rosters were available, many would take up FIFO opportunities, including those with families.

Key assets of the town and its workforce were deemed to be:

- Natural amenity of the town and region

*... Stawell can easily be promoted as a great place to live, it's a great environment as far as weather's concerned and having the Grampians locally and a national park. These are all enormous benefits that are important to the community. [Interview 4]*

- Strong mining-related skills base

*We've certainly got the assets ... we've got about 1400 people in the community that have been through the Stawell goldmines [Interview 5]*

*You've got highly trained mine workers, people who want to continue to have a career in mining, not just because of the dollars attached to it but because they have a pride in the sense of the skill that they've learned ... the best outcome for us would be to try and retain that skill, to retain the knowledge. [Interview 9]*

- Workforce qualities such as loyalty and work ethic

*As a community we realise the asset we've got is very marketable. They're highly skilled. And it's more around the philosophy of the workers. They're really solid, stable people. They don't blow shifts. They know how to work in hard conditions. They've proven it. [Interview 5]*

*They're reliable. I think that's what you've got here. You've got people that are reliable. [Interview 1]*

- Ongoing training of the local workforce

*We've got University of Ballarat<sup>1</sup> Campus here [in Stawell] ... There's not many places around where you can actually do your Certificate 2, 3 and 4 in underground mining. ... We've got people here that have been trained in underground mine rescue .... We've had someone here that went down to the Beaconsfield program. When they [rescued] that guy out of Beaconsfield [mine] they used our underground guys. [Interview 1]*

- Local government support

*You've got a council who's sitting behind [the FIFO families] saying, "we'll bend over backwards to provide support services for you. We'll put networking meetings together, we'll do coffee mornings, we'll have a mothers group, whatever's required", and we've got Grampians Community Health that's there with all the [regional] councils and so forth. It seems a pretty tight model and it's working with [the existing Cobar FIFO] crew. [Interview 5]*

Being a regional hub is also seen as a way to attract workers through Stawell, even if they live in the broader region.

*If you had one central hub where everyone flew in and out of it'd be bloody great, and it's reliable for the town. [Interview 6]*

---

<sup>1</sup> The University of Ballarat has since been renamed Federation University.

*For people who want to live that lifestyle, to me that's very, very appealing. To drive 30 minutes - like you know pick up a radius around here of Horsham, Hamilton, you know St Arnaud, down to Ararat, almost to Ballarat, in that general area. [Interview 4]*

In the short to medium term there is likely to be some expansion of the existing FIFO arrangement with the local crane hire and rigging company.

*We've applied for another job up there that's another extension for another mine not far away from where we are. It's again it's out of Cobar. Now if we happen to get that ... it could be 10 or 15 people. So I'm going to have to find people now. [Interview 3]*

The fact that other Stawell workers are travelling interstate also highlights the potential for flights to destinations other than Cobar.

*[The airline owner is] looking at flying to Roxby ... because there is a lot of people that are working around here at Roxby Downs and Prominent Hill. .. [At] Roxby Downs there's a fair few blokes [from] Ballarat work there. At the moment they go from Melbourne ... to Adelaide then get on a plane to go to Roxby. Well if they come from Ballarat to Stawell you will fly direct to Roxby ... [The airline owner] was going to advertise a bit more, that sort of thing when the terminal happens. [Interview 3]*

The upgrading of the Stawell airport has included runway improvements, lighting, fencing and signage, completed in August 2012 (Ryan and Rich-Phillips 2012), and the construction of a small terminal building which is due for completion in September 2013 (ABC News 9 August 2013).

## **5.2 Challenges and barriers**

### ***Airport infrastructure***

Although the Stawell airport is being upgraded, it will remain without the necessary infrastructure to enable commercial passenger flights to operate. Commercial passenger services would enable individual ticket purchase but it would also require a suite of upgraded facilities such as check in and security. This 'step up' to the next level is a highly expensive one given the increase in operating costs, staffing and the need to meet and maintain rigorous standards around security, quarantine and so forth. For this reason, even with the upgrade to runway and terminal, Stawell airport is limited to chartered flights involving an arrangement whereby the client must rent the entire plane, assuming responsibility for all the passengers aboard. This becomes an issue for profitability and flexibility for the airline operator as they can offer a plane at a single price to a client but cannot offer single seats for sale.

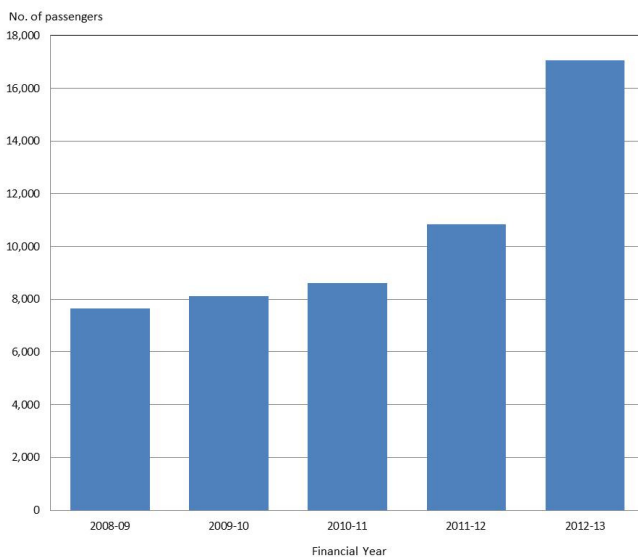
*There's additional security arrangements that you have to put in place. You have to have security fencing or lighting or metal detectors. All sort of stuff starts to come up ... It would be [beyond the capacity of Stawell] at the moment. So if we were to click into a passenger airport the cost of fitting out that airport and operating that airport would dramatically increase, like into the millions of dollars. [Interview 9]*

Current users of the local airline services are very keen to have the Stawell terminal expanded to cater for passenger flights and increase the flexibility of the services offered while reducing the costs associated with taking full responsibility of a charter plane. Conversely the Local Government sees the costs of establishing and maintaining such a terminal as hugely prohibitive and has all but dismissed the idea completely. This has not stopped ongoing discussion around the idea within the Stawell FIFO community and there still exists a strong belief that this is a plausible proposal and that higher levels of government could assist in achieving such a goal, particularly in terms of overcoming perceived or real 'regulatory burden' and 'red tape'.

*I think the role of the government is to make sure that the terminal is up and running. Make it easier for [the airline owner] to be able to get his license, [and] make less red tape so we can charge per seat. [Also, to] assist in trying to program it a bit or advertise a bit. [Interview 3]*

While the future prospects for Stawell to develop into a FIFO hub are uncertain, the experience of Busselton in Western Australia is of interest. In November 2007 a FIFO service commenced from Busselton to the Pilbara. The Busselton airport has since become the second largest FIFO airport in Western Australia, after Perth (BCCI 2013) with numbers of passengers now around 17,000 annually (figure 5). Approximately 88 per cent of these passengers are flying on charter flights as opposed to regular passenger flights, highlighting the significance of FIFO travel arrangements from the airport (City of Busselton 2013). The town recorded a population of around 21,000 at the 2011 census. There is some evidence that people have started to relocate to the town in order to take advantage of the FIFO opportunities. FIFO has also been reported as having been able to assist local workers who have been made redundant from the local timber industry. The local technical training college has also started to introduce courses to meet resource industry needs (BCCI 2013).

Figure 5: Number of passengers travelling through Busselton airport 2008 to 2013



Source: City of Busselton, 2013, unpublished data.

### Achieving critical mass

Airport infrastructure is only one part of making FIFO successful. The actual logistics of organising and aligning rosters and achieving a critical number of workers for a particular mining destination can be one of the biggest challenges in capturing and expanding FIFO opportunities.

*I think [the challenge is] to get that number of blokes to be in the one spot - because your plane, ... it's not going to go and do a drop off here and a drop off there and a drop off there. To make it viable you've got to fly to one spot ... To make it viable for that bloke at the other end paying the bill you've got to have the numbers on the plane to do it ... There are a number of mine sites within Cobar. So you can fly out 10 blokes and they might all work at different sites but as long as they're working the same roster you could do it. [Interview 2]*

*At this stage it's the contractors that are showing the most interest, more so than the actual mining companies ... I think the mining companies are focused above where we're operating. If a mine wants to employ a hundred people and they're drawing 10 out of one community they still have trouble seeing the benefit in working with an operator, such as myself, to actually run those 10 up and back in preference to those 10 travelling to Melbourne, for instance, and going up and back. [Interview 4]*

Nevertheless, with the Stawell mine closing a larger number of workers would become available and this may enable more FIFO opportunities to be realised.

*As they're being retrenched, the numbers are coming out. That's the thing. It's not as though one or two are finishing; it's 10 or 20 at a time. So what I think is really required here at the coalface is someone who can coordinate all of this. [Interview 4]*

### **Coordination and negotiation needs**

The need for coordination and negotiation in this process was recognised by a number of those interviewed and, indeed was seen as a prerequisite for the expansion and success of FIFO in Stawell.

*Where the support needs to be is in that networking and getting everyone together, and making people understand that the skills are here, they're ready to go, and this is how we're going to make it happen. [Interview 4]*

This role was seen as something which needed to be ongoing rather than a one-off initiative.

*You've got to have the right person driving the program, someone that's out there in the mining industry, knocking on doors, making them open because you've got to keep developing. It's got to have continuous business development. [Interview 1]*

The need for coordination was also highlighted in relation to the often ad hoc way in which different individuals find FIFO work opportunities, thus lessening the collective advantage of developing a town-wide strategy.

*At the moment there are a lot of people in the district who are working this fly-in-fly-out lifestyle and, as the mine's closing, more and more people are doing it. But what we're seeing is that they're going off working for mining companies as individuals, which dilutes the benefit of actually having a fly-in-fly-out operation here at Stawell. Because what's happening is you've got a few people going to Tasmania, a few people going to Prominent Hill, a few people going to Queensland. You know they're going all over the place. [Interview 4]*

## **5.3 Roles for government**

Northern Grampians Shire recognised the charter service as a concept which should be supported and over time could possibly be expanded to support a larger worker base, a base which would no doubt require employment opportunities if and when the SGM closed. The shire became highly involved with the FIFO idea, developing relationships with the Cobar City Council and creating a specialised role within the council ranks to represent on this issue. The shire continues to be highly involved in developing relationships with mining companies and contractors in order to maintain the energy created behind this issue and forge new FIFO possibilities into the future. They also continue to be focused on the future of the Stawell Gold Mine itself, whether in its current capacity as an operating mine or the possibility of it becoming a centre for safety training into the future once the mine ceases current operations.

Northern Grampians Shire has made a concerted effort to provide stimulus and direction to the expansion of the FIFO source community concept. They have won praise from the director of the local crane hire and rigging business for their facilitation of relationships between Cobar and Stawell who sees further potential for the council to forge relationships with larger mining firms into the future.

The Shire, in conjunction with Grampians Community Health has initiated an ongoing weekly meeting group for those currently doing or considering FIFO.

*I think [the Monday morning support group is] a response that the Northern Grampian Shire felt was important – to provide that support for people and an opportunity to share ideas and discuss issues ... I have a sense that people had talked - their support for each other is quite considerable. So probably the attendees were more about working out whether they were going to do fly-in fly-out, what the implications were, or they were already doing fly-in fly-out and were happy to go and talk to other people. [Interview 11]*

*[the council has partnerships] with organisations like Grampians Community Health and the hospital and other outreaching community services, to make sure that we've got those connections and that people feel supported. That's where we're having regular coffee meetings or just more casual arrangements so that people feel that they're still part of the community, even though their partner might be working off site. [Interview 9]*

This support role is one that is linked to wider goals such as the retention of population.

*Council has been very active in [providing support for FIFO families]. It might not necessarily be a core role that would normally be something we'd do, but we take that seriously. .. if we don't do that then we can't achieve our ultimate goal of retaining population. [Interview 9]*

The extent to which the council has been involved up to this point has been seen as positive but it has also taken up significant resources from a local council already struggling under endemic country LGA issues including an aging population, declining employment opportunities and a diminishing rate base.

*We're one of those twenty-one councils that are unsustainable ... We've got relatively large land area, and not necessarily a very wealthy community. So our community's capacity to pay for services, to pay rates, to pay all those things is challenged. The only way we're going to be able to shift that around is having at least a stabilisation if not growth in our population ... Our core reason for doing it is to keep people here. The second is to keep skills here. [Interview 9]*

Apart from the local municipality, it was suggested that other levels of government could have potential roles in the following areas:

- Reducing regulatory burden and barriers to FIFO expansion.

*The thing that we're really keen on is to make sure that there aren't any regulatory barriers. So we're very conscious of checking [for] things that may potentially be a show stopper. For example, if there was a major mine open up, whether it was Cobar or in South Australia, that wanted to employ quite a significant number of people, are we going to end up with a regulatory barrier on the number of people we can get out of our airport? [Interview 9]*

- Providing assistance for, or facilitation of, the negotiation and coordination of FIFO opportunities.

*Something that maybe the State Government or the Federal Government can do is assist us with getting into those mines, getting into that space where we can actually talk to the people that make the decisions around employment. The issue we have is that we follow leads and it always comes back to the contractors and the contractors don't want to talk. [The mines are] not all going through contractors, but with fairly limited resources of a very small council, how we can tap into all those projects that are opening up and starting right across Australia? Maybe that's something that another body could assist us with - to open those doors. [Interview 5]*

## **5.4 Roles for the community**

There is a clear understanding around the extent to which the council can force expansion of the present FIFO arrangement. Respondents articulated that council could only do so much insofar as making Stawell look like a receptive candidate for selection by larger mining companies. There was an understanding that relationships could be created, logistical problems minimised and infrastructure provided by government but ultimate decisions to actually make Stawell a FIFO hub would be made by and between private firms. Community engagement and involvement in supporting FIFO was also seen as important.

*I think for it to be successful you need the community to own it. [Interview 11]*

Examples of community support activities were raised in the interviews, for example:

*[One support event was a] ... little barbecue we had for fly in, fly out workers and their family ... People come from everywhere. Some of the people I didn't even know and I've been here forever and ever. Some of the people that actually worked away, I didn't even know they worked away because you'd just see them up the street walking around all the time and you think well you don't work, but they're on their seven off or two weeks off or whatever. It was really good. [Interview 2]*

This type of activity reflects a broader movement of support which is now emerging in the form of web networks who arrange local activities for those involved in FIFO (particularly the families of FIFO workers). The “FIFO Families” website outlines many scheduled activities in all States of Australia and New Zealand ([www.fifofamilies.com.au](http://www.fifofamilies.com.au)).

One of the ways in which networks can assist people considering undertaking FIFO is simply by making information available about the day to day realities of the lifestyle. This is particularly important so that individuals or families can make informed choices about undertaking such work. The weekly support meeting in Stawell is seen as playing this role and it is anticipated that more people will attend as underground mining operations wind down.

*We do think that people may be more likely to attend once the mine's closed and people are forced into making a decision. [Interview 11]*



## 6. ISSUES, DEBATES AND UNCERTAINTIES

### 6.1 FIFO and population retention

For Council, the opportunity to expand FIFO activities represents a strategy for maintaining existing population numbers and potentially to attract new residents to the town.

*Our core activity is really about trying to keep people here. Keeping population, keeping community here, keeping families here ... If we hadn't have put this in place it's almost guaranteed that those people who are currently doing that fly in fly out – would have relocated. [Interview 9]*

This role was also recognised by non-Council interviewees.

*It is more the role of local government to do ... what can be done to keep their population here. [Interview 4]*

*I think the council has a job in maintaining the attractiveness of living in Stawell. Some of it's about being employed and being able to maintain a lifestyle here. [Interview 11]*

The fear of losing population is apparent in many regional towns like Stawell, even without an impending industry closure.

*You know if you want to be an architect, well, you're going to have to leave the district. So they're under threat of their own people leaving all the time as well, and once they're gone they've got the same old story: it's hard to replace them. [Interview 4]*

The process of population loss in western Victoria has been occurring since the 1960s. The reasons for this trend have included: capital intensification of agriculture requiring fewer workers; rationalization of services into larger centres; increased personal mobility allowing people to access goods and services further away; and increasing economic and social attractiveness of urban lifestyles. Because of these factors, towns which are remote from large urban areas face particular challenges in retaining and attracting population. In addition, the populations of regional areas are usually older than those of metropolitan or large regional centres. This creates more challenges for population growth as numbers of births become lower than the number of deaths. In such situations, population growth has to come from inward migration and this, as outlined above, is difficult within the context of economic and social change.

The promises of FIFO expansion needs to be seen within this context. On the positive side, Stawell does have the potential to retain families and young adults if a diverse range of employment is available. FIFO effectively expands the opportunity to access a wider range of jobs, experience and career pathways than would be possible from the local economy.

*Mines are chasing after trades people who do specialised work. They're also screaming out for just ones to actually be able to have licences to drive the vehicles and all that sort of stuff. So it gives you something else to train up people here instead of saying, "oh, you're going to be working in the fish and chip shop two hours a week". [Interview 6]*

Many of the locations in Australia vying to develop as FIFO hubs have high natural amenity values and this is seen as a key attractor to attract population. Stawell has many natural advantages particularly its proximity to the Grampians. It also has services and relatively cheap housing.

*It's a lovely place to live and it's got all the services here. It's got hospitals so it's got everything around here. You can buy a bloody three bedroom house here for under \$200,000. [Interview 1]*

Nevertheless, the 'attraction' of affordable housing is often misunderstood. While cheap housing sounds good from a buyer's point of view, low house prices generally reflect low demand and low demand suggests that

people are *not* beating a pathway to the location. It is very easy for residents to view their own town or region as highly attractive, however its relative attractiveness needs to be considered. Why are current house prices so low? Why have people not moved to the area and created higher demand? Why are other areas attracting people despite having higher prices?

Following on from these questions, the scenario of Stawell becoming a FIFO hub can be explored along with the implications for retaining or attracting population. In the first instance, the expansion of FIFO would provide alternative work opportunities for local residents and that could *lessen out-migration* following closure of the local mine (assuming that retrenched workers choose the FIFO alternative). As a FIFO hub, the town could attract a higher number of people to use the airport facility, but many of these people may remain in their home communities outside of Stawell and simply drive to the airport to access the FIFO opportunity. While this can have some peripheral benefits to the Stawell economy through those people purchasing fuel or goods while they pass through town, it is only increasing the temporary population of the town not the resident population. Of course such people may decide that Stawell would be a good place to live and move there, but this may not result in a net gain to the region (demographically or economically) if they are moving from one local town to another. A more meaningful gain in population could come from being able to attract workers out of the larger cities to relocate in Stawell. This is a challenge which few regional towns have been able to achieve in recent decades.

## 6.2 Labour market flexibility

One of the problems faced by local government and local businesses in trying to establish FIFO arrangements has been the difficulty in identifying and gaining access to the right people within the mining company structures. Many mining companies hire staff via recruitment contract firms and this adds layers to an already complex system.

*The mining companies are saying, "it's not us, we're using contractors". So they're not engaging in the space so much. Again, it's probably more around their economic flexibility than any other reason. There's goodwill, it's not like they're saying, "we're not interested", it's not that. There's goodwill, but it's like "we've outsourced that. We're not in that space... We've got someone else to deal with that that can provide us with our flexible needs". [Interview 5]*

Maintaining or increasing workforce 'flexibility' was seen as the key driver behind this type of arrangement, especially coming off the peak of the mining boom and seeking to lower costs.

*[The mining companies are] remaining very flexible. The capital inflows into that sector are very tight at the moment. I think that that's the main barrier for us. So we've got the skills, we've got the assets and we've got the desire. It's really about finding the need outside of our communities for our skills or for our assets. Really all you'd need is just a couple of mines that require the specialist skills and they can't source them for whatever reason through the normal channels, then we're off. [Interview 5]*

While the economic efficiency of workforce flexibility makes sense from a purely financial point of view, it can be at odds with the objectives of stability and sustainability that FIFO source communities are seeking.

*It's almost that they just want available staff, and major flexibility about being able to employ and drop, employ and drop. One of the fellows applied for a job through one of these contractors and he was going to be employed for a three-week block at a particular mine and he was saying, "am I now contracted to that mine?" "No, no, you'll go anywhere we tell you - you could be working in the Pilbara or Queensland or Tassie or whatever". [Interview 5]*

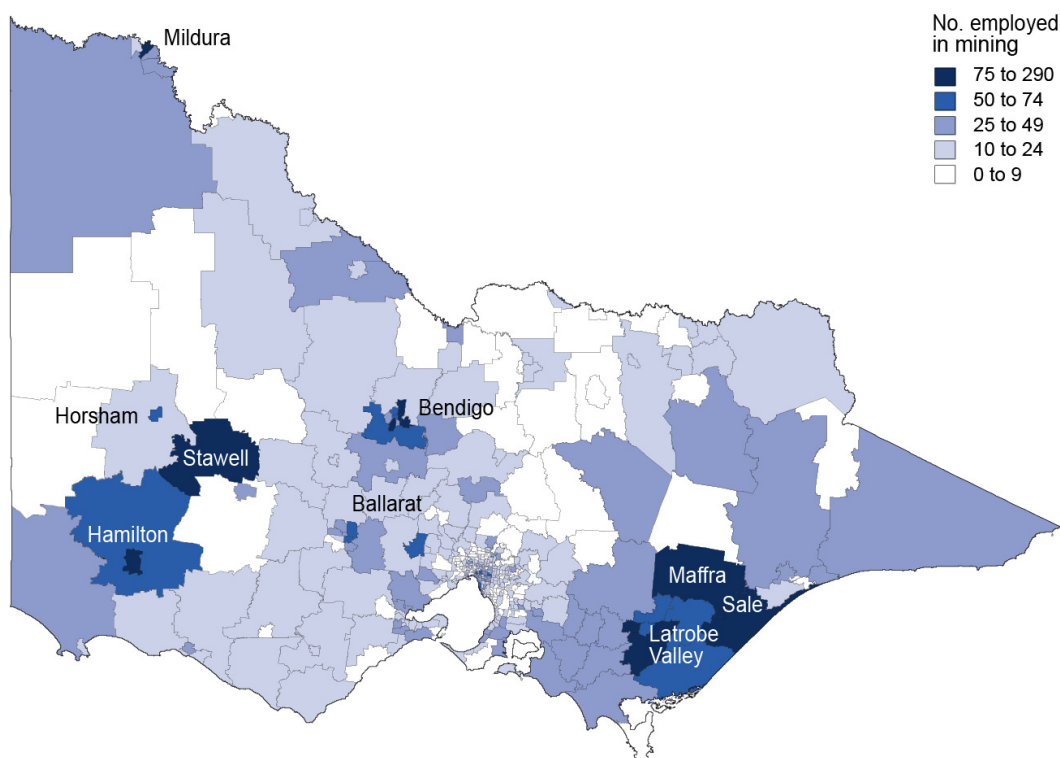
Another side to the issue of labour market flexibility concerns the location of FIFO source hubs. The use of capital cities as sources of labour has advantages for mining companies in terms of the size of the labour supply

and the existing aviation infrastructure. The effects of scale enable flexibility around numbers, rosters and flight destinations.

*You'll go to Melbourne or Essendon and you'll have 10 different flights going 10 different directions. [Interview 2]*

While Stawell may not be able to compete with the scale of Melbourne, it does have the advantage of being in a region with access to many people with mining-related skills. Figure 6 shows the location of workers within the mining sector and concentrations can be seen around Ballarat, Bendigo, Horsham, Mildura and Stawell.

Figure 6: Numbers employed in mining by place of usual residence, SA2 Geography, 2011



Source: ABS Census 2011 using Table Builder

Data from the Stawell Gold Mine and from the interviews indicates that many workers are already commuting across this region to access local or interstate employment. It is therefore not surprising that many in Stawell feel they have a central advantage for servicing this wider region as a FIFO source hub.

*I mean, our goal is not for this just to be a FIFO hub for Stawell but for the whole of the western district. I mean, if you're sitting here in Ballarat, much easier to drive up to Stawell and jump on a plane and go direct to work, than go to Tullamarine, park (with the costs of that) and then flying to Sydney or flying to Adelaide and then catching another plane to wherever. [Interview 5]*

Another aspect of the mining labour force in the region relates to skills. In this respect, Stawell regards itself as having a unique advantage because of the town's long history in mining.

*These people here are in a very good position to find alternative work because they've got the skills. [Interview 1]*

*The skills are here, they're ready to go. [Interview 4]*

*We've got a resident population who have got really good skills. [Interview 9]*

Despite the existing skills base in Stawell, this may only be a strategic advantage if those skills are competitive (up to date) and transferable to a range of alternative mining opportunities. Longevity of mining workers in a single job can create specialisation but may also constrain the opportunity to move to other types or scales of operation. For example, underground mining operations at Stawell are at a much smaller scale than many mines elsewhere in Australia

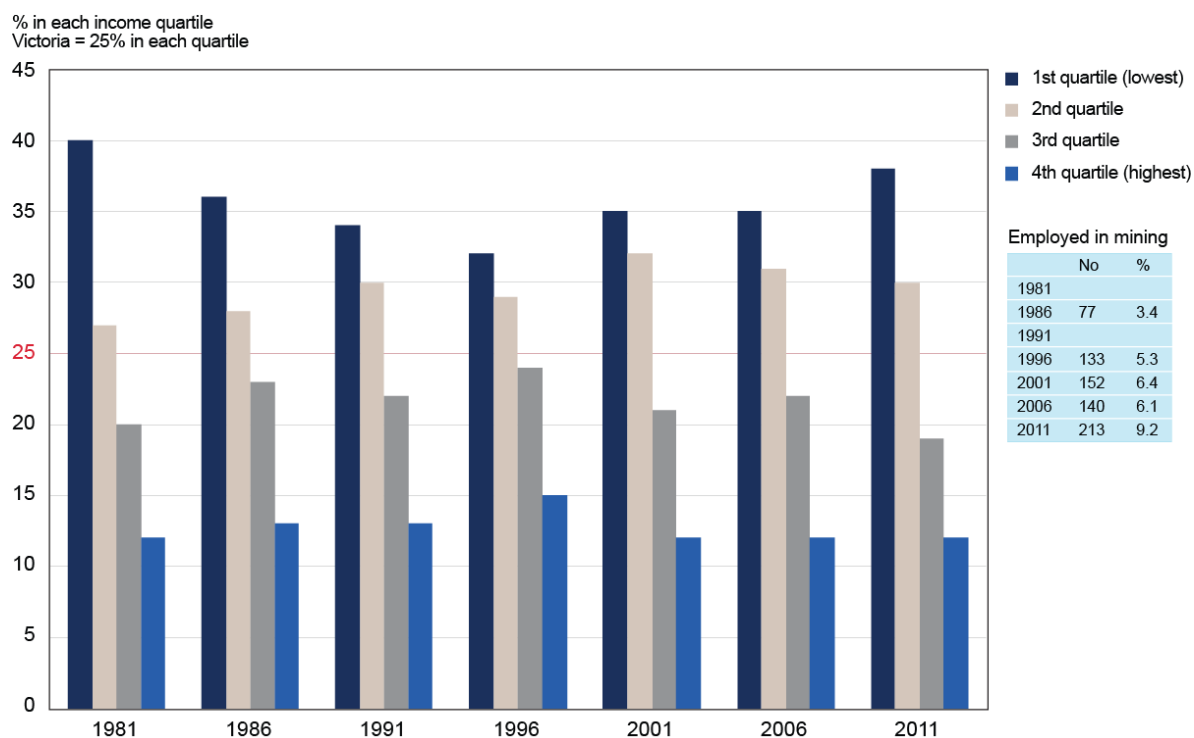
*We pull 100,000 tonnes of ore from underground, a month [at Prominent Hill] ... our target for a week up here [in Stawell] used to be 5,000 tonnes when I was there, so 20,000 tonnes per month. [Interview 10]*

Training initiatives in Stawell have been strong in recent years and this is enabling many workers to gain, retain or expand their skills base.

*We've embraced a nationally recognised training program to help the people. We used to just have people that were Stawell qualified; now they're nationally qualified ... What it's doing for the guys is that, while they're being made redundant, we're still training them flat out. [Interview 1]*

However, the expansion of mining employment in Stawell during the 2000s did not have very much impact on local wages within the sector (figure 7). This wage differential remains of ongoing concern.

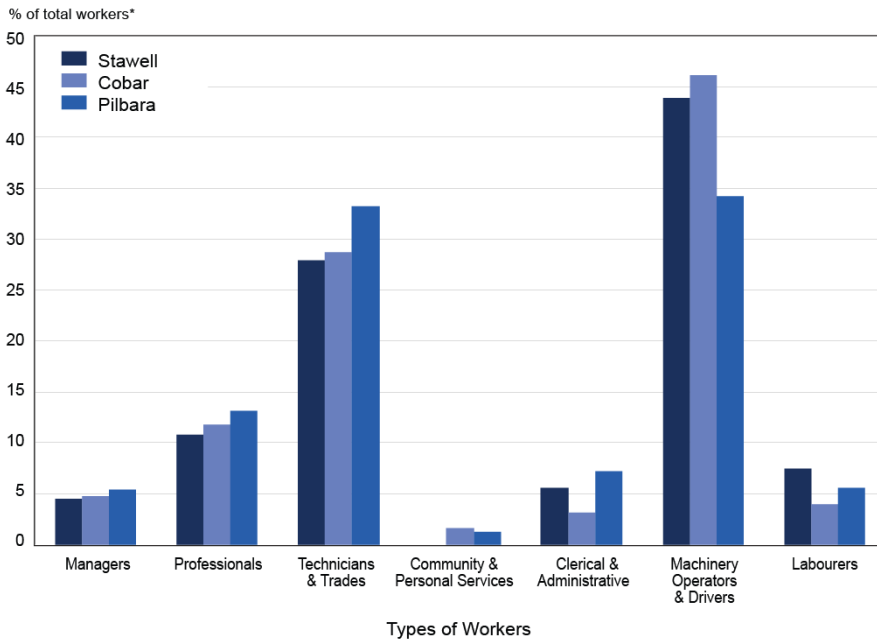
Figure 7: Income and employment in mining sector, Stawell township, 1981 to 2011



Source: DPCD 2013, Towns in Time

One reason for the differential may be that the Stawell mining workforce has a different professional, and hence income, profile than mining work forces in other parts of Australia like the Pilbara (figures 8 and 9).

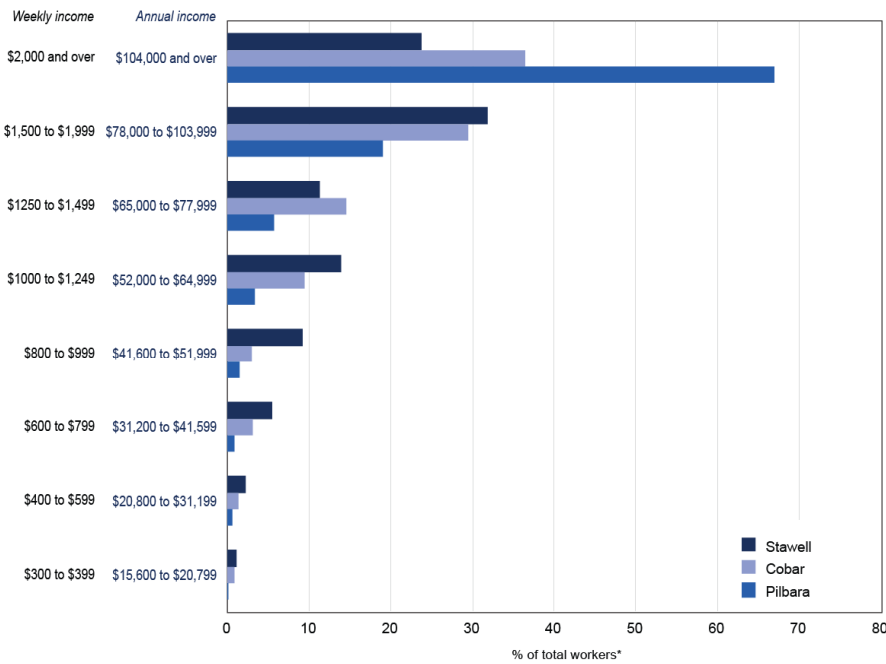
Figure 8: Occupational profile of mining sector workers by place of work, Stawell, Cobar and Pilbara, SA2 geography, 2011



\* Total workers excluding 'not stated', 'not applicable' and 'inadequately described'

Source: ABS Census 2011, using TableBuilder

Figure 9: Income profile of mining sector workers by place of work, Stawell, Cobar and Pilbara, SA2 geography, 2011



\* Total workers excluding 'not stated', 'not applicable' and 'inadequately described'

Source: ABS Census 2011, using TableBuilder

Mining jobs in engineering or management require higher level tertiary skills. As the mining industry becomes more knowledge intensive, such qualifications are likely to become increasingly important. While other nations may be able to compete on low labour costs, Australia’s global competitiveness has increasingly relied on capital-intensive operations and increasing productivity levels. Primary industry sectors like mining or agriculture have an increasing need for knowledge based skills and tertiary education to boost earning potential and competitiveness.

*Look, we've become less labour orientated. We're fully mechanical. Australia is mechanically mining mines. We're mechanical miners. We've taken out all the hard heavy work. [Interview 1]*

While the workforce at the Stawell goldmine show a level of qualification comparable or better to some other mining regions (table 4), a detailed examination of the resident location of this workforce reveals that those living in the town of Stawell have lower levels of higher education that the Stawell mining workforce overall (figure 10). This suggests that those with higher education levels are living outside the town – either in the broader district or further afield in regional centres. This geographical spread was evident in the gold mine workforce data, but what census data add to the picture is the difference in workforce profile between those living in Stawell and those commuting into the mine.

Table 4: Qualifications of mining workforce, Stawell, Cobar and Pilbara, Proportion of total workforce\* by place of work, SA2 geography, 2011

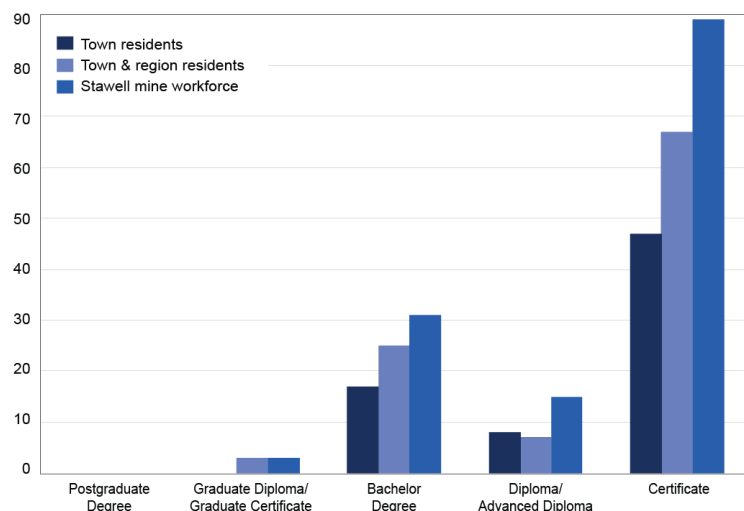
	Stawell	Cobar	Pilbara*
% of total workforce**			
Postgraduate Degree	0.0	2.5	1.8
Graduate Diploma/ Graduate Certificate	1.2	0.4	0.9
Bachelor Degree	12.0	10.0	10.4
Advanced Diploma and Diploma	5.8	3.4	7.5
Certificate	34.4	40.9	44.5
Not applicable	46.7	42.8	34.8
Total	100.0	100.0	100.0

\* combined SA2 regions of Ashburton, East Pilbara, Karratha, Newman, Port Hedland, Roebourne and Sth Hedland

\*\* excluding not stated and inadequately described

Source: ABS Census 2011, using TableBuilder

Figure 10: Higher education qualifications of Stawell mining workforce, Township (UCL), Region (SA2) and Place of Work, 2011



Source: ABS Census 2011, using TableBuilder

Remaining competitive does not just mean you have a set of skills or have had them for a long time – increasing education levels and exposure to global best practice through working in many locations is probably as important to enhancing the skills base of Stawell in the long run. Educational attainment is determined by access to suitable facilities but also to student aspirations – the desire to pursue education in the first place. Regional areas can be disadvantaged in a number of ways with barriers to aspiration and participation in ranging from poor school retention rates through to lack of role models or peer support (table 5). If the more highly educational professional workers are located outside of the town, as shown in the data previously discussed, then it may be more difficult for local youth to interact with these potential role models for higher education.

*Table 5: Barriers to high educational aspirations and participation in regional areas*

Barrier	Components	Regional aspects
Secondary school completion	School retention Student engagement	Lack of skilled support staff in regional schools to introduce retention strategies and support disaffected students to remain in school
Awareness and exposure	Exposure to role models Exposure to experience of tertiary education Access to information	Isolation in regional areas may limit exposure to tertiary education role models and information
Personal characteristics / motivations	Family background Parental educational attainment Community and peer attitude	Many regional areas have a tradition of early workforce participation and on the job training rather than higher education. The need to leave the region (family and friend networks) to pursue tertiary education can also act as a disincentive.
Provision and access	Geographical barriers Lack of public transport Financial and cost concerns	Most post-secondary opportunities are located in Melbourne which makes access more difficult and costs of relocation higher than for metropolitan students who are not forced to move
Transition support and assistance	Isolation and lack of support Comparative latter success	While regional students do as well as metropolitan students once they have entered higher education, the transition process can be difficult and lengthy. Support for students facing this change may be limited in regional areas

*Source: Adapted from RPAC 2013, pp. 29-30*

FIFO can actually help in expanding the range of skills and experience open to local workers and this may actually prove to be as valuable as the training programs currently in place.

*... the work up here at Stawell Mine is so different to everywhere else in Australia ... I'm so glad I went somewhere else to a mine that actually works on ... Western Australian based rules. All mining's basically come from Western Australia [Interview 10].*

### 6.3 Companies and communities

Possibly the key hurdle identified by local government, contractors and workers alike is the difficulty in negotiating with large mining companies. To make an expanded FIFO arrangement out of Stawell work there needs to be more jobs offered at individual mining sites with all workers flying from Stawell starting and ending shifts on the same roster. Flying workers out of larger city centres affords companies greater flexibility in that they provide flights for the beginning and end of shifts from one central location and all workers regardless of where they may live are obliged to make their own way to the airport. This means shift allocation is set in stone and the obligation of flexibility is on the worker to attend his/her own shift.

Respondents were aware of the difficulty in convincing mining companies to tailor shift allocations around particular individuals who may be coming to work from Stawell on limited airline services. This is not to say it couldn't be done but this area was recognised as a place where government negotiation power could be useful.

*They've spoken to [people in Cobar] but my opinion is they went the wrong way about it. They should have started with the crews, like I said, they should have started building a crew first to go up there and then they could have taken the whole crew. I reckon the mine would have been more negotiable then and more interested. [Interview 10]*

Another constraining factor in developing a FIFO hub at Stawell is the "Point of Hire" arrangements used by mining companies. Recruitment is based on a particular source location such as a capital city and it is from this point that FIFO arrangements will be recognised in terms of travel costs, insurance and so forth. This means that many FIFO workers living in regional areas have to travel to the point of hire location first. This is the reason that many FIFO workers in the Stawell region are responsible for this first phase of an interstate commute.

*Stawell could be a point of hire for fly in fly out work forces, rather than it being a recruitment agency based in Melbourne. Which means if it was a recruitment agency based on Melbourne, then if that's the point of hire, then their travel is paid for from Melbourne not from Stawell. If Stawell is a point of hire, it means travel for a worker is paid from Stawell. [Interview 9]*

*The mines themselves can nominate. They can say well look, I will make Stawell the point of hire ... I know there's one woman currently from the mine, who's point of hire is Perth. So she has to somehow get her way across to Perth and then from Perth the mining company pays her to go up to the Pilbara. [Interview 9]*

In Western Australia, Rio Tinto has made point of hire arrangements with several locations outside of Perth and this has boosted the role of towns like Busselton as FIFO source communities which are able to have their own local recruitment office in town (Hoath and Haslam-McKenzie 2013, p. 59). Ultimately, this type of arrangement is being sought by a number of regional locations around Australia, for example Cairns (Cummings 2010, p. 13). Stawell, too, is aspiring to this type of arrangement with a mining company to enable a much larger volume of workers to participate in direct FIFO to interstate mines in New South Wales and South Australia. However, this will require convincing large mining companies that the option is as good as, or better than, having the capital cities as the only point of hire locations.

*[The mining companies are] very reluctant to start new FIFO arrangements, certainly out of capital cities ... They'd much rather do commercial flights and so forth and that the inconvenience be at the worker's expense, basically. We've been trying to sell the fact that if you've got a tight and trained and expert workforce, you're better off getting them to work with the least fuss possible to commence work immediately without having them travelling long distances. [Interview 5]*



## 6.4 Wealth generation

This perception of the Stawell economy being more prosperous with FIFO is worth considering more critically. Clearly, the retention of workers after retrenchment and their ability to retain access to mining sector employment means that income will not be lost to the town through out-migration or a drop in wage levels.

There is little doubt that a worker moving from a non-mining sector job into a mining sector job is likely to have an increase in wages. This was highlighted in a number of interviews

*Well I guess you look at here, the average wage here is about \$100,000. That's an average for just a labourer. You're looking at \$150,000 or \$160,000 for a miner. You come back and get a job at the [abattoirs] and you're on about \$55,000. [Interview 1]*

However, if Stawell residents are moving from a job at the local mine to one in another location, the wages may not be so much higher, especially if they need to undertake retraining, or simply readjustment to a new workplace.

What would be needed to significantly alter the economy of Stawell would be an increase in numbers attracted to the town (for example, if the FIFO hub idea expanded beyond the numbers needing to be re-employed from the Stawell Gold Mine). Any additional workers attracted to the area may simply represent a movement of existing mine sector workers within the region. Evidence from the interviews suggests that the central and western parts of Victoria have a mobile mining workforce who access job opportunities locally, regionally or interstate. Unless these workers are tapping into more highly paid levels of the mining sector, then the overall wealth of the region may not be changing that much.

A comparison of income among the mining work force of Stawell and the Pilbara highlights both a positive and negative aspect of the local workforce. The lower wage profile of Stawell workers may suggest that their skills lie in lower paid mining jobs. Alternatively, the difference may be related more to the different types of roster arrangements involved in the more distant regions of Australia. Stawell is rather unusual in terms of having short roster arrangements – 4 days on and 4 days off. While this is a very 'family friendly' roster arrangement and one attractive to local farmers who are employed at the mine, it limits the income earning potential of individuals. Moving to higher ends of the spectrum may require higher education levels (into management for example) or a shift to less popular rosters (which can have higher individual and social costs). Alternatively, Stawell could aim to attract new mining workers into the area from further afield – Melbourne, interstate or overseas. This would involve a much wider strategy of amenity-based migration to capture highly skilled and highly paid FIFO workers.

On a more positive note, the income differential may suggest that tapping into a wider range of mining jobs across the country could in fact help raise the skill levels of Stawell based mining employees bringing both higher incomes and a wider range of knowledge and skills into the community.

## 7. CONCLUSION

The mobility of labour is an important element within regional economic theory and policy. Such mobility is a mechanism for a flexible and efficient economic system in which workers move to areas of greatest employment and or wage level (Productivity Commission 2013, p. 1). Reality is rarely as simple as this. In fact humans tend to value non-economic factors in their choice of residence – place association, family and friend networks and physical aesthetics – which can prove to be strong anchors which inhibit relocation. For this reason, mobility through commuting may be substituted for mobility through permanent migration. While having its own costs, such mobility has the advantage of allowing workers to remain in a location even after their local job opportunities may have diminished, for example through economic restructuring or industry closure (McKenzie 2012, p. 177-79).

The case study of Stawell represents an interesting extension of this preference for commuting over out-migration in response to an impending industry closure. The opportunities presented through long distance commuting – flying in particular – are being pursued with the aim of retaining the local population even in the face of local employment losses. In an economic sense this may simply be seen as a substitution of one form of mobility for another. Nevertheless, it also highlights the importance of social factors in community wellbeing – the desire to maintain and support a local community which has its own networks and support systems – social capital.

Long distance commuting presents many challenges for those involved: separation for periods of time, potential loneliness and isolation and disruption to prior patterns of work and leisure. Nevertheless, it was found that many ‘regular’ jobs present difficulties through long work shifts or deregulated working hours. Individuals and couples respond differently to such challenges and, while long distance commuting may place destructive levels of stress on some relationships, it tends to exacerbate issues rather than create them on its own. The FIFO lifestyle may suit some people better at some stages of life rather than others, although there are many exceptions here as well. Perhaps one of the most important factors is the detailed nature of the work arrangements. Shorter block rosters such as 8 days on, 6 days off were reported as much more family friendly than arrangements with much longer periods of absence. Another factor which appears to be important is whether the individual or family enter the FIFO lifestyle fully informed or aware of what it entails. In this respect, the fact that Stawell has a number of people involved in FIFO and DIDO appears to have the benefit of first hand information being available to those who may be considering the lifestyle. Additional support from local Council and regional health care organisations have formalised this process to some degree through the establishment of regular support and information meetings.

Stawell has a number of factors which make it suitable for future FIFO expansion. It has an airport capable of running charter flights and a local aviation company willing to expand to meet demand. The local workforce has been involved in the mining industry for decades and the workforce is therefore ‘job ready’ for many other mining opportunities across Australia. Support for the concept has been gained across various sectors of the local community – business government and local workers. The town itself is an attractive place to live being near the Grampians and being within an hours drive from regional centres like Horsham, Ballarat and Bendigo.

The expansion of FIFO also faces challenges to be fully realised. Stawell is not the only town in Australia vying to be a FIFO source hub. Town representatives have struggled to fully engage with mining companies elsewhere in Australia as most employ recruitment agencies to deal with staffing. Resources in the town are often limited or stretched thinly so the capacity to pursue interstate opportunities, sell the benefits of Stawell and coordinate the implementation of a FIFO strategy is compromised.

At a more subtle level, Stawell faces some competitive disadvantages. While the Stawell Gold Mine workforce has a range of mining skills and education, the overall profile of occupation and tertiary qualifications appears lower than other mining regions in Australia.

Detailed examination of the residential location of the Stawell workforce reveals that those living in the town of Stawell have lower levels of higher education than the Stawell mining workforce overall. This suggests that those with higher education levels are living outside the town – either in the broader district or further afield in regional centres. The effects of this are not conclusive, but this type of polarisation (also seen elsewhere in regional Victoria) may represent a limitation for future development of the town in terms of potential income levels, population growth and wealth creation. If workers on higher incomes or with higher education levels choose to live outside the town then the long term benefits of FIFO may be dispersed rather than concentrated in the township. Being a FIFO hub may *maintain* rather than grow the town's population and wealth. With Australian mining becoming more mechanised it is likely that future jobs in the industry (and certainly the higher paid jobs) will be those requiring higher levels of formal education, for example engineering or electronics, rather than being based on manual labour. FIFO alone will not transform the future education levels of the Stawell work force although it will enable exposure of local workers to a more diverse range of mining opportunities. In this regard, it may influence the aspirations of local workers and their families and enable much greater engagement with a globalised mining sector, thus generating future economic opportunities and pathways.

*Fly in, fly out's good, I like fly in, fly out ... You meet new people, you learn new things. [Interview 8]*

## REFERENCES

- ABC News 28<sup>th</sup> November, 2012, “Shire hopes to expand FIFO plans”. [www.abc.net.au/news/2012-11-28/shire-hopes-to-expand-fifo-plans/4396094](http://www.abc.net.au/news/2012-11-28/shire-hopes-to-expand-fifo-plans/4396094)
- ABC News 9<sup>th</sup> August 2013 “Airport terminal revamp already providing benefits”. [www.abc.net.au/news/2013-08-09/airport-terminal-revamp-already-providing-benefits/4875214](http://www.abc.net.au/news/2013-08-09/airport-terminal-revamp-already-providing-benefits/4875214)
- Busselton Chamber of Commerce and Industry (BCCI) 2011, *Submission 41 to The House of Representatives Standing Committee on Regional Australia Inquiry into the Use of Fly in/Fly out (FIFO) and Drive in/Drive out (DIDO) Work Practices in Regional Australia*, Submission received 6<sup>th</sup> October 2011
- City of Busselton 2013, “PAX Numbers Busselton Regional Airport – WA”, unpublished data provided by the manager of commercial services on 17<sup>th</sup> October 2013.
- Crocodile Gold 2013, “Stawell Gold Mine (SGM)” accessed 20<sup>th</sup> August 2013. [www.crocgold.com/operations/state-of-victoria/stawell/default.aspx](http://www.crocgold.com/operations/state-of-victoria/stawell/default.aspx)
- Crocodile Gold Corp – Stawell Gold Mines P/L 2013 (unpublished), “Redundancy data and follow up statistics for Stawell Gold Mines”.
- Cummings Economics 2010, *Mining and Industrial Services Opportunity Study. 2010 Update, Cairns/Far North Queensland*, prepared for the Department of Employment, Economic Development and Innovation, Ref J2288, Cairns.
- De Silva, H. Johnson, L. And Wade, K. 2011, “Long distance commuters in Australia: a socio-economic and demographic profile” *Australasian Transport Research Forum 2011 Proceedings*, 28 to 30 September, Adelaide, Australia.
- Department of Infrastructure and Transport (DIT) 2013, *State of Australian Cities 2013*, Australian Government, Canberra. [www.infrastructure.gov.au/infrastructure/mcu/soac/index.aspx](http://www.infrastructure.gov.au/infrastructure/mcu/soac/index.aspx)
- Department of Planning Transport and Local Infrastructure (DTPLI), 2013, *Reasons For Decision Under Environment Effects Act 1978 - Big Hill Enhanced Development Project*, Public Notice, Referral Number 2013-03. [www.dpcd.vic.gov.au/planning/environment-assessment/projects/big-hill-enhanced-development-project](http://www.dpcd.vic.gov.au/planning/environment-assessment/projects/big-hill-enhanced-development-project)
- Department of Primary Industries (DPI) 2013 (forthcoming), *Localised Industry Shocks: Understanding how rural towns have adapted to the closure of a major processing facility*, report prepared by Fiona McKenzie, (DPCD), Sam Pendergast and Peter Parbery (DPI).
- FIFO Families website, accessed September 2013. [www.fifofamilies.com.au](http://www.fifofamilies.com.au)
- Haslam-McKenzie, F. 2011, “Fly-in fly-out: The challenges of transient populations in rural landscapes”, *Demographic change in Australia's rural landscapes: implications for society and the environment*. pp. 353-374. The Netherlands: Springer.
- Hoath, A. and Haslam-McKenzie, F. 2013 (forthcoming), *The socio-economic impacts of long distance commuting (LDC) on Source Communities*, study funded by Commonwealth Department of Regional Development, Local Government, the Arts and Sport (DRDLGAS) and the Co-operative Research Centre – Remote Economic Participation, Curtin University, Perth.
- McKenzie, F. 2012, “Trajectories of Change: How regional communities adapt to the closure of a major industry” in *Refereed Proceedings of the 36<sup>th</sup> Conference of the Australian and New Zealand Regional Science Association International (ANZRSAI)*, University of Wollongong 4-7 December 2012, edited by Paul Dalziel, Lincoln University New Zealand.

- Minerals Council of Australia 2013, *Analysis of the Long Distance Commuter Workforce across Australia*, prepared by KPMG Demographics, March 2013.
- Parliament of Australia 2013, *Cancer of the bush or salvation for our cities? Fly-in, fly-out and drive-in, drive-out workforce practices in Regional Australia*, House of Representatives Standing Committee on Regional Australia Inquiry.
- Portland Observer* 3<sup>rd</sup> August 2012 “Workers keen on fly-in fly-out” by Huw Cushing  
[www.spec.com.au/blog/2012/08/03/workers-keen-on-fly-in-fly-out/](http://www.spec.com.au/blog/2012/08/03/workers-keen-on-fly-in-fly-out/)
- Portland Observer* 4<sup>th</sup> July 2012, “Fly-in fly-out hubbub” by Huw Cushing,  
[www.spec.com.au/blog/2012/07/04/fly-in-fly-out-hubbub/](http://www.spec.com.au/blog/2012/07/04/fly-in-fly-out-hubbub/)
- Productivity Commission 2013, *Geographical Labour Mobility*, Productivity Commission Issues Paper, July 2013, Melbourne.
- Regional Development Australia (RDA) 2013, “Wide Bay Burnett takes step toward FIFO”,  
<http://rda.gov.au/news/wide-bay-burnett-takes-step-toward-fifo> accessed 2<sup>nd</sup> September 2013
- Regional Policy Advisory Committee (RPAC) 2013, *Research into Educational Aspiration for Regional Victoria*, report prepared by KPMG, commissioned by RDV for the RPAC, Melbourne.
- Ryan, The Hon Peter MP, and Rich-Phillips, the Hon Gordon MLC. 2012, “Stawell Airport cleared for take-off”, Media release, 7 August 2012, Parliament of Victoria, Melbourne.
- Sibbel, A. 2011, *Submission 122 to The House of Representatives Standing Committee on Regional Australia Inquiry into the Use of Fly in/Fly out (FIFO) and Drive in/Drive out (DIDO) Work Practices in Regional Australia*, Submission received 17<sup>th</sup> October 2011
- Skills Australia 2011, *Submission 102 to The House of Representatives Standing Committee on Regional Australia Inquiry into the Use of Fly in/Fly out (FIFO) and Drive in/Drive out (DIDO) Work Practices in Regional Australia*, Submission received 11 October 2011
- Stawell Historical Society (SHS) 2013, “The Early Days of Stawell”, accessed 20<sup>th</sup> August 2013  
<http://home.vicnet.net.au/~shsinc/stawell.html>
- The Australian*, March 18<sup>th</sup>, 2013 “Fly-in fly-out workers spread benefits of boom” by Paige Taylor,  
[www.theaustralian.com.au/national-affairs/industrial-relations/fly-in-fly-out-workers-spread-benefits-of-boom/story-fn59noo3-1226599406440](http://www.theaustralian.com.au/national-affairs/industrial-relations/fly-in-fly-out-workers-spread-benefits-of-boom/story-fn59noo3-1226599406440) accessed March 19<sup>th</sup> 2013.
- The Wimmera Mail Times*, July 17, 2012, “Stawell Gold mine to cease underground mining”, by Cassandra Dagleish, [www.mailtimes.com.au/story/160736/stawell-gold-mine-to-cess-underground-mining/](http://www.mailtimes.com.au/story/160736/stawell-gold-mine-to-cess-underground-mining/) accessed 23<sup>rd</sup> August 2013.
- Vale Pty Ltd 2011, *Submission 87 to The House of Representatives Standing Committee on Regional Australia Inquiry into the Use of Fly in/Fly out (FIFO) and Drive in/Drive out (DIDO) Work Practices in Regional Australia*, Submission received 7<sup>th</sup> October 2011
- Waters, E., McKenzie, F., McCarthy, C. and Pendergast, S. 2010, *The Drying Lake. Lake Boga’s Experience of Change and Uncertainty*, Victorian Government, Department of Planning and Community Development, Melbourne.

## Appendix 1: Interviewee profile

Interviewee	Profile
1	Stawell Gold Mine company representative
2	Miner employed at Stawell Gold Mine considering FIFO post closure
3	Stawell-based business operator contracted to work in Cobar
4	Airline operator
5	Northern Grampians Shire officer
6	FIFO worker commuting to Cobar
7	FIFO worker commuting to Cobar
8	FIFO worker commuting to Cobar
9	Northern Grampians Shire officer
10	FIFO worker, worked previously at Stawell gold mine, now working in remote Australia
11	Regional community health organisation representative

## Appendix 2: Interview Schedule

Research Questions	Interview questions
<i>Introductory/background/context</i>	<p>Tell me about the Stawell gold mining operation (when was it established, how many does it employ, what types of jobs?)</p> <p>When was there talk about the mine closing?</p> <p>What is the current situation in relation to the mine closing? (Is it going to happen? if so, when? if not, why?)</p>
1. How did the reverse FIFO proposal come about? Was it led by workers, companies or government (local or state)	<p>When was FIFO first mentioned in relation to Stawell?</p> <p>Did the idea come from workers, companies or government?</p>
2. Was the proposal a direct response following the announcement of the gold mine closure or was it a trend already occurring among the Stawell workforce?	<p>Was the proposal a direct response to the announcement of the gold mine closure?</p> <p>Was long distance commuting it a trend already occurring among the Stawell workforce?</p> <p>If so, how long had the trend been apparent?</p> <p>Was it mainly DIDO or FIFO?</p> <p>In Stawell, is long-distance commuting more prevalent in the mining industry or is it a trend across other industries as well? Which industries?</p> <p>Are the two types of commuting (DIDO and FIFO) connected? I.e. if the workforce is already doing DIDO are they more accepting and likely to undertake FIFO?</p>
3. What is the profile of workers who are involved in long distance commuting for work? Is it possible to quantify the numbers?	<p><i>Do airline companies or employers have data on this – is it available for our study or are there privacy issues? We are just seeking overall numbers and, if possible, destination-origin information.</i></p> <p>How many people do you know from Stawell who are involved in this type of long distance commuting (separate FIFO and DIDO)?</p> <p>What are the FIFO arrangements (days on/days off)?</p> <p>Are there DIDO arrangements that have days on days off pattern?</p>
4. What are the benefits and costs of such commuting? Individual, local economy and community?	<p>What made you <u>choose</u> / <u>not choose</u> to undertaken FIFO commuting</p> <p>What have been the benefits to <b>you personally</b> from having a FIFO work arrangement? What have been the disadvantages?</p> <p>What do you think are the benefits to <b>the local economy</b> from having a FIFO work arrangement? What have been the disadvantages?</p> <p>What have been the <b>benefits</b> to <b>the Stawell community overall</b> from having a FIFO work arrangement? What have been the disadvantages?</p>

Research Questions	Interview questions
5. What adaptive strategies have been used by workers and their families to overcome some of the negative aspects of FIFO (eg. Separation from family)?	<p>How have people dealt with issues like separation from family?</p> <p>Was it harder / easier than you expected? In what way?</p> <p>How did you adapt to the new lifestyle?</p> <p>Have there been any novel approaches in dealing with such issues or do people rely on traditional support like friends and family?</p> <p>Are some people better able to deal with the FIFO lifestyle (for example, single people, those with strong community ties, men, women, etc)?</p>
6. What support role might community or government have in helping to ameliorate negative aspects?	<p>Is there anything that the broader community might do to help support people living the FIFO lifestyle?</p> <p>Is there a role for government – local, state or federal – in helping support FIFO workers or their communities?</p>
7. Is long distance a viable and sustainable option for the future? What are the constraints and opportunities?	<p>Overall do you feel that the advantages of long distance commuting outweigh the disadvantages? Why/in what way?</p> <p>Would you recommend FIFO/DIDO to others?</p> <p>Do you think it will continue to be a viable option for local workers into the future? Do you think there are additional opportunities for using FIFO/DIDO?</p> <p>Is it an alternative to out-migration or do you think out-migration will occur anyway?</p> <p>What might prevent FIFO from expanding further in this region?</p> <p>Do you think FIFO can strengthen ties between regional towns [like Stawell and Cobar] or do you think it creates rifts? In what ways?</p>
<i>Concluding</i>	<p>Are there any other comments you would like to make in relation to long distance commuting and Stawell?</p> <p><i>Do you have any documentation that you can share with us regarding FIFO (where appropriate)</i></p>

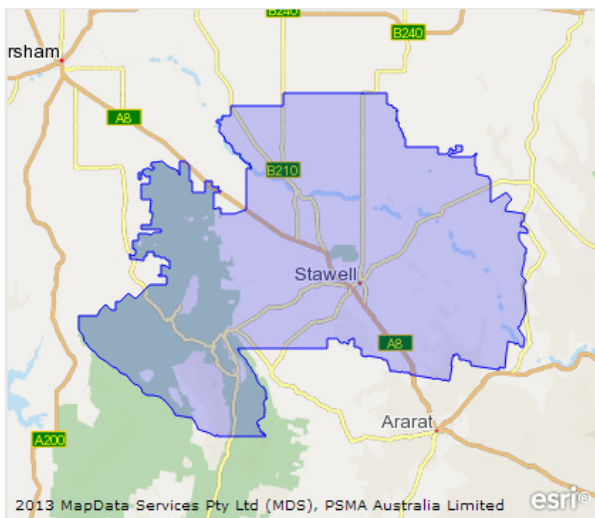


### Appendix 3: A Note on Statistical Analysis

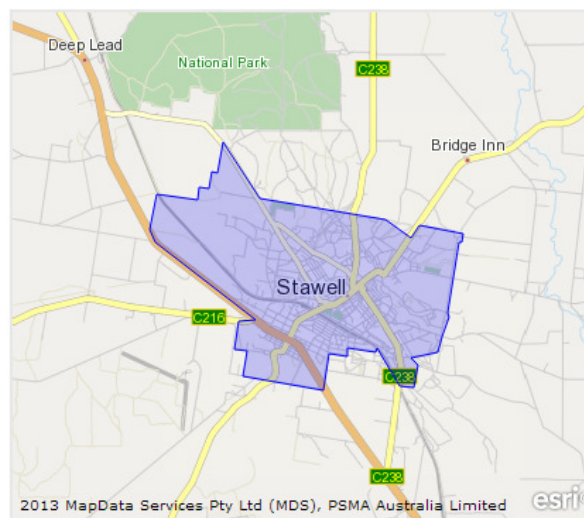
In this report a number of different geographical units are used for presenting statistical analysis. The two most commonly used are the UCL (Urban Centre/Rural Locality) unit and the SA2 (Statistical Analysis Level 2) unit. Both of these are defined by the Australian Bureau of Statistics (ABS) with Census and other data being available at these and other scales.

For Stawell, the SA2 geography includes the township as well as surrounding area (Map A). The UCL boundary is smaller and includes the built up area of Stawell township only (Map B).

Map A: Stawell SA2



Map B: Stawell UCL



Source: ABS website [www.abs.gov.au](http://www.abs.gov.au)

Another important feature of Census data is that it can be presented on the basis of different types of count. The most commonly used count is that of Usual Residence which, as the name suggests is based on where people normally live. Enumerated data are based on where people were on census night, and Place of Work data are based on the location of a person's workplace.