

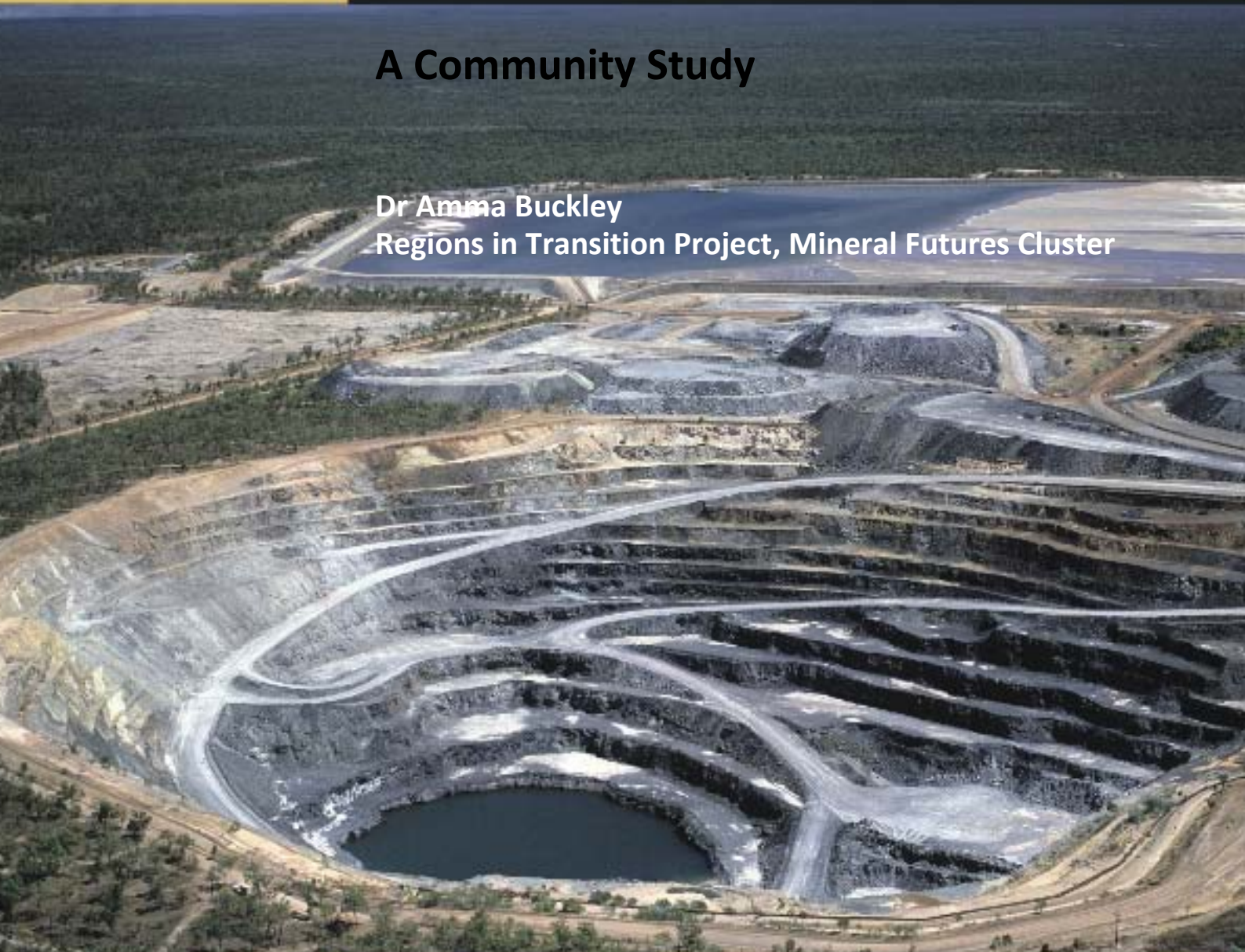
CLUSTER RESEARCH  
REPORT  
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# PROFILING THE SHIRE OF MT MAGNET

## A Community Study

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Regions in Transition Project, Mineral Futures Cluster



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### For:

CSIRO Minerals Down Under National Research Flagship

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Dr Amma Buckley is a Research Fellow within the Division of Humanities at Curtin University. She has been involved in a number of national ARC funded studies, an international fellowship program and has managed a range of research projects. Her major research focus involves investigating the social impacts of land use change/natural resource development through approaches that engage local people in social analysis. During a recent two-year fellowship with the Alcoa International Conservation and Sustainability Foundation, she investigated local people's involvement in environmental management within a UNESCO designated Biosphere Reserve. Currently, Dr Buckley is involved in the Minerals Futures Cluster project and is part of the Curtin team examining community impacts of mining in regional Western Australia.

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Importantly, the invitation by Forum Advocating Cultural and Eco Tourism (FACET) to contribute to the 2009 Regional Tourism Conference and the development of Mt Magnet's Sustainable Tourism Framework has greatly assisted the Regions in Transition project in the Mid West. FACET enabled an important entry into this community fostering broader associations within the region

### The Research Team

The Mt Magnet study informing this publication involved Dr Amma Buckley, Principal Researcher for this aspect of the Regions in Transition, part of the Mineral Futures project, funded by CSIRO National Research Flagship Minerals Down Under.

## EXECUTIVE SUMMARY

This community profile report from the Research Centre for Stronger Communities (RCSC) Curtin University offers a 'snapshot' study of the Shire of Mt Magnet during a time of considerable land use and economic change. This study forms part of a national three year research program funded by Minerals Down Under (CSIRO Research Flagship Cluster) and is part of the Western Australian component of *Regions in Transition*.

Following a request from the organisers of Forum Advocating Cultural and Eco Tourism's (FACET) 2009 Regional Tourism Conference to participate in the development of a Sustainable Tourism Framework, the RCSC proposed undertaking a community study in the Shire of Mt Magnet. A community survey was conducted and information collected about the social, environmental and economic aspects of the Shire with emphasis on tourism and land use change. Surveying the community was undertaken by a group of trained and supported local people, who assisted in its design and delivered the survey during June-July 2009. The findings were subsequently reported as a keynote address at the FACET 2009 Conference, *Outback Tourism – Delivering a Unique Experience* held in October 2009.

With the support of community researchers, surveys were completed by 43 respondents, almost 10 per cent of the Shire's adult population, representing a mix of male and female perspectives, across a broad range of ages, capturing the views of newly arrived through to long term residents living in town and on station properties. The survey sought information from residents of the Shire of Mt Magnet about: connections to the place (past and present); views about the present social, environmental and economic challenges being faced; attitudes about tourism, assessments/suggestions about current and future economic activities and impacts of land use change.

Findings conclude that:

- The most important social challenges facing the Shire were a decline in law and order with increasing disharmony between the Indigenous and non-Indigenous communities.
- A major environmental concern was the untidy/littered appearance of the town of Mt Magnet.
- Another important environmental challenge was the lack of rehabilitation and revegetation of disused mine sites, a legacy of mining in the Shire.
- The greatest economic concern was unemployment and few work opportunities due to the lack of viable industries.
- Tourism within the Shire while largely supported was perceived to be an underdeveloped enterprise requiring greater organisation and promotion.

- The most important tourism activities with the greatest potential for the Shire are seen as Tourist drive trails, Museum, Mining heritage, Aboriginal cultural heritage and Architectural heritage.
- Most survey respondents wanted the inclusion of exit measures in negotiating with new and/or renewed mining in the Shire.

The study also contained an analysis of the Australian Unity Wellbeing Index for the Mt Magnet sample of respondents. These scores indicate that the Shire was below the national average in the domains of 'standard of living', 'health', 'feeling part of community', 'safety' and 'future security.' Scores that are above the national average include 'relationships' and 'life achievements'. The overall or 'whole of life' score for the Shire is also below the national average.

In addition to collecting important baseline data, the Mt Magnet study provided an entry point into the region. Both the Mt Magnet Community Study and the FACET Conference introduced a range of stakeholders to the *Regions in Transition* project and has proven beneficial for subsequent negotiation into other study sites into the Mid West.

In conclusion, while the study's findings will provide important background information for the Sustainable Tourism Framework, it is anticipated that this baseline profile will support the Mt Magnet Shire Council and the community in negotiating changing social, environmental and economic circumstances.

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## 1. INTRODUCTION AND OVERVIEW

### 1.1. BACKGROUND

The Minerals Down Under Flagship aims to unlock Australia's future mineral wealth through transformational exploration, extraction and processing technologies. As the majority of this wealth lies in Australia's fragile and complex regional landscapes, the Regions in Transition project is contributing to a deeper understanding of the social and economic transitions experienced by communities in change. Locations such as the Shire of Mt Magnet provide a unique set of circumstances to study the cessation in 2009 of over 100 years of continuous mining on a remote regional area of Western Australian community.

In 2009, the Research Centre for Stronger Communities, Curtin University of Technology (RCSC) was approached by organisers of the Forum Advocating Cultural and Eco Tourism (FACET) Conference, *Outback Tourism – Delivering a Unique Experience* to assist in developing a Sustainable Tourism Framework for the Shire of Mt Magnet. A community survey was designed with the assistance of local community members to collect a 'snapshot' of opinion investigating the social, environmental and economic landscape of the Shire, with a specific emphasis on tourism and land use change. As well as exploring the impacts of the mining downturn or cessation, the study investigated alternative economic and social opportunities particularly through tourism. Study findings were presented at the FACET Regional Tourism Conference, held in Mt Magnet in October 2009 providing important background information for a tourism framework which was jointly developed by FACET and the Shire Council of Mt Magnet (see FACET 2010). The findings were also widely discussed at a Community Forum held in conjunction with the FACET Conference.

This report provides a selection of findings from the Mt Magnet study relevant to the Regions in Transition project. A full copy of the Mt Magnet report prepared for the FACET is available at [www.strongercommunities.curtin.edu.au](http://www.strongercommunities.curtin.edu.au).

### 1.2. REGIONS IN TRANSITION PROJECT

The Regions in Transition project draws on the experiences in two states, Western Australia and Queensland, both with established intense mining activities, now moving into largely agricultural/pastoral areas, and thus opening up challenges to different communities and stakeholders.

#### The overall project aims to:

- Understand regional sensitivities associated with the exploration and development of future mining operations;
- Investigate how land use changes in affected communities—of interest and of place—have been negotiated, in order to identify how these processes can be improved;
- Develop improved methods for measuring, monitoring and assessing the social and economic impacts of mining at the regional level;
- Develop strategies to enable the delivery of positive social, economic and environmental legacies from future mining operations;

- Identify the appropriate policy and engagement mechanisms for managing land use change at a regional scale and for maximising longer term benefits of mining for regional communities.

### **1.3. REGIONS IN TRANSITION PROJECT STRATEGY**

A case study methodology is a recognised approach in the social sciences. As the key approach for the project it will enable the capturing of variations and complexities in mining developments, as well as ensuring that resulting models and policy recommendations are relevant to on-ground operations. An important focus in the case study approach is developing relationships with site communities in order to facilitate capacity building. Such a dynamic approach has the potential to engage communities in a social cost/benefits appraisal throughout the lifecycle of a mining operation. While particular attention will be paid to locations that feature new or renewed mining, chiefly in longstanding remote communities experiencing changes in traditional land use, the project will investigate the social and economic impacts for communities across the mining lifecycle.

### **1.4. MID WEST CASE STUDY**

The Mid West region of Western Australia, with Geraldton as the major regional centre is considered the 'next Pilbara' and therefore offers a unique 'green fields' opportunity to build a social understandings prior to and at the start of the significant resource development. Currently it is a pastoral heartland with the limited mining largely in the eastern inland. However many pastoral leases are due to expire from 2012 onwards, and what is anticipated is that land use change will favour mining. Resources pressure will impact on Indigenous populations, fragile ecological environments, longstanding communities with poor infrastructure and fragmented local and regional governance. The Mid West is a critical region in terms of Aboriginal sensitivities, established culturally and linguistically diverse communities, a traditional pastoral cohort as well as coastal horticulture and fishing. Importantly, the Mid West also offers working relationships with significant minors – rather than the global or major players in the Pilbara – specifically juniors with international partners.

### **1.5. MOUNT MAGNET STUDY RATIONALE AND OBJECTIVES**

Of the 18 Shires in the Mid West, eight hosted operations at various stages across the mining lifecycle. The request by FACET to undertake a community study provided an ideal pathway into both the Shire of Mount Magnet and into the broader Mid West. The purpose of the Mt Magnet study was to develop an understanding of post mining impacts through a process that engaged members of the community in the research process.

Its major objectives were to:

- contribute to an understanding of the social, environmental and economic aspects of life in the Shire of Mt Magnet;
- seek information from the community on the attitudes and activities associated with tourism/tourists;
- collect information on closure as part of the lifecycle of mining; and



- contribute to the development of a baseline knowledge of communities in the Mid West around social, environmental and economic change.

## 1.6. METHODOLOGY AND METHODS

Drawing on recent experiences with a variety of communities of interest and place, the research methodology, 'Community-as-Researcher' used in the Mt Magnet Community Study is informed by a participatory research framework. The original methodology was designed by the RCSC for an aged care project in Balingup where rural community members took responsibility for the developing and delivering a survey instrument to gather baseline information. Subsequently, this approach has been used with recently arrived refugees and migrants in Mirrabooka, the Aboriginal community in Kwinana, and two rural settings in Western Australia; Bremer Bay/ Jerramungup and Ravensthorpe (pre- and post-mine closure). The focus of these studies has included ageing in place, children under 5 years, environmental values and management and land use change. Each project has required some adjustment to the original model due to the specificities of culture and place.

As part of a contract between Curtin University and community researchers, local people, recruited and supported by a local facilitator, agreed to be involved in a two-month process involving:

- attending community researcher training; and
- administering and returning completed surveys.

In exchange, Curtin provided:

- An honorarium to recompense for participation (due to a small grant from Crosslands @Heart Community Support Program);
- Acknowledgement of participation (certificate);
- Correspondence acknowledging involvement in the process (letter of reference); and
- Public release of the findings and acknowledgement of the researchers.

The first training session established a broad knowledge framework including an overview of the statistics and reported social dimension established through a desk top study. This included ABS statistic (population and SEIFA) as well as social indicators from national, state and regional sources. In addition to orienting community researchers to the process and timeframe, the first workshop encouraged exchange and group discussion about local issues, providing important background information for the survey instrument. From this process, the research instrument was drafted by the Principal Researcher and broader consultation was sought, including with members of FACET. At the second session, the draft survey questionnaire was tested and critiqued by the community researchers. This session also covered aspects of administering a research instrument and ethical considerations. Following the second workshop, the survey was finalised and community researchers were provided with a survey kit containing the requisite forms and information to undertake data collection.

Returned data was analysed by the Principal Researcher and forms the basis of this report. The timescale for the delivery of the project was approximately three months, with community surveying undertaken during June/July 2009. It is important to note that the type of social or 'respondent-driven' sampling (Salganik & Heckathorn 2004) used in this study offers a 'temperature take' or snapshot of community opinion, rather than a representative view. In order to strengthen the rigor of the process, a member checking process is imbedded in the

Community-as-Researcher or Balingup Model (see Stehlik & Buckley 2008). A discussion session was held with community researchers prior to release of survey results at the FACET conference, providing the opportunity to gain additional local knowledge about particular findings.

## Methods

The community survey was designed to seek information on a range of demographic characteristics and included a series of general and specific questions related to:

- Connections to the place (past and present);
- Attitudes about tourism;
- Industry viability and land use change; and
- Wellbeing.

Below is a discussion about the rationale for inclusion of wellbeing as a community indicator.

### Wellbeing Research and Community Studies

Notions of happiness and satisfaction with life are increasing concerns in a wide range of disciplines including economics, social sciences, medicine and public policy. There remain acute differences in the way that the construct of wellbeing is defined and conceptualised across these professions. Economists view wellbeing in terms of wealth—objective and tangible—and utility (Clark & Gough 2005). The social sciences recognise both the objective and subjective components (McAlister 2005). For medicine, it is the absence of disease (Cummins 2007). Public policy, more mindful of the economic considerations, is less focussed on the wellbeing of individuals and community (van Hoorn 2007). While wellbeing remains an often overlapping and somewhat contradictory concept, it does provide an important avenue for establishing a baseline understanding to measure progress.

Social science, particularly psychology tends to distinguish between happiness and life satisfaction. The first of these concepts is happiness, which is usually related to the more temporal concept of positive affect (i.e. positive mood, feelings of pleasure, joy etc.), while the second, life satisfaction, is a more cognitive appraisal by an individual of their overall life situation (Ryan & Deci 2001). Nevertheless, both the data and the terms happiness and life satisfaction are often used interchangeably. Both life satisfaction and happiness fall under the umbrella term subjective wellbeing (SWB). According to Diener, Suh, Lucas and Smith (1999 p. 106) this concept is “a broad category of phenomena that includes people’s emotional responses, domain satisfactions, and global judgements of life satisfaction”. At the same time, subjective wellbeing complements the more objective aspects of wellbeing that relate to the measurable circumstances and conditions of people’s lives. As an example of this difference, objective conditions measure physical health whereas subjective perceptions gauge satisfaction with health (Cummins 2007).

This overview focuses on the subjective aspect. To date, the most common method used to measure life satisfaction, and indeed happiness, has been the use of survey questions asking people to report on their perceived levels of life satisfaction. While it is generally agreed that life satisfaction and happiness are closely correlated, life satisfaction surveys produce greater variation over time and are the more commonly used (McGregor 2007), with respondents being asked single item ‘how satisfied are you with your life?’ and/or multi-item questions “how satisfied are you with ... e.g. your future security?”.

There are an array of studies and instruments that gather data on life satisfaction. In general, respondents are given a scale (either numeric 0–10 or Likert – strongly agree to strongly disagree) against which to rate their level of satisfaction. Some instruments ask people questions about whether they believe that circumstances have or will improve. Others focus on the concept of domain satisfaction which refers to people’s level of satisfaction with particular aspects of their lives (such as relationships or standard of living) or more global aspects of the society in which they live (such as the economy or the state of the environment) (Newton 2007).

### **Wellbeing Index**

The Australian Unity Wellbeing Index, an initiative involving Australian Unity, Deakin University and the Australian National University, focuses on people’s views on life in Australia and on their own individual wellbeing. The main premise on which the Index is based is that life satisfaction is normally held within a narrow positive range and that this homeostasis or normative range is highly personalised. What this means is that a person will generally answer fairly positively to broader questions around wellbeing, regardless of most events occurring at the time the measurement is taken. At the same time, this narrow positive band or set point is more likely to be maintained for questions about the individual than those about their family or friends or about society in general. On the basis of this theory, questions about specific aspects of society or life in Australia would be more sensitive to external happenings than broad questions about a person’s current level of satisfaction with their own life as a whole (Australian Centre on Quality of Life 2008).

The inclusion of wellbeing in the Mt Magnet study can be seen in the light of an increasing interest in people’s opinions and feelings about their lives while providing the opportunity to make comparisons with national wellbeing averages. Wellbeing questions included in this study are based on the International Wellbeing Group’s (2006) Personal Wellbeing Index (PWI).

## **1.7. ETHICS**

Prior to the commencement of the research, ethics approval was sought and received from Curtin’s Human Research Ethics Committee (HREC). As part of this process, confidentiality and anonymity are maintained throughout this report. As mentioned in the previous section, the importance of ethical standards in conducting research was discussed during both workshops with the community researchers prior to administering surveys. Emphasised was the necessity to maintain ethical conduct and standards as well as confidentiality as part of the Curtin University’s ethics process. In regard to consent, the University’s ethics process stipulates that ‘active’ consent be obtained from research participants, requiring them to sign and return a consent form prior to completing the survey. To assist this approach and ensure consistency in the process and content, the survey contained standardised information, including an introductory statement outlining the background, purpose, timing, and funding of the survey. Each community researcher was provided with a survey kit including a checklist to assist with undertaking the survey.

The following section describes the Shire of Mt Magnet including its geographic features, its history, current statistics and social and economic characteristics.

## 2. BACKGROUND

### 2.1. THE SHIRE OF MOUNT MAGNET

The Shire of Mount (Mt) Magnet is located 341 kilometres east of Geraldton and 570 kilometres north of Perth on the Great Northern Highway. In size, the Shire covers 13,877 square kilometres and is part of the Murchison district of the Mid West (regional map see Figure 1). Its seat of government is the town of Mt Magnet.

Surrounding the town are remnants of old mining operations, and to the north east are significant Aboriginal sites being preserved jointly by the local community and the West Australian Museum. Without significant mining, Mt Magnet is now primarily a service town for the surrounding pastoral district which supports large sheep stations and an increasing 'live export' goat industry.



Figure 1: Map of the Mid West

Source: Department of Regional Development and Land, Govt of WA 2009

### 2.2. DUAL HISTORY: MINING AND PASTORAL

The history of minerals exploration and mining in Mt Magnet can be traced back more than 150 years. In 1854, British surveyor Robert Austin when travelling through the region discovered that an ironstone hill near the present town site of Mt Magnet disrupted his compass readings. So convinced was Austin of the potential of the area, he predicted that Mt Magnet would be “one of the finest goldfields in the world” (Day & Morrissey 1995, p. ix).

Surprisingly Austin's assessment of the area had little influence upon early settlement in the region. It was not until some 40 years later that gold was first discovered in the area.

There are a number of colourful historic accounts about the discovery of gold at Mt Magnet (Day & Morrissey 1995). One such local account involved a prospector, H. Steadman, who when backtracking in search of a lost swag found a gold nugget glistening in the afternoon sun. Steadman marked the site and within days returned to the area with Bill Watson, a member of the first settler family. Together they again searched the area and according to historic accounts within hours found 250 oz of gold lying on the ground. Steadman and Watson managed to keep their discovery quiet, possibly accounting for the oddly named goldfield, Poverty Flats (Day & Morrissey 1995). Yet, it was not until some years later that Watson under duress from fellow prospectors revealed the location of his gold source. Subsequently, this area proved to be one of the richest gold fields in the region where locals literally "dug it up like potatoes" (SMH 2004). Like most of the Murchison, development following the discovery of gold was rapid. The town of Mount Magnet was proclaimed in 1895 and by 1902 it was booming with some 14 hotels and 30 goldmines. Another significant event for the region was the arrival of the rail in 1897. A rail line was built from Mullewa to Mt Magnet, via Yalgoo which took over from the donkey, camel and bullock teams that had supplied the town (SMH 2004). Around this time, the first syndicated mine accessing 'deep gold' at Mt Magnet was producing up to 3000 oz a month and was widely regarded as a mine which would last forever (Day & Morrissey 1995).

Despite its massive gold production, Mt Magnet is also known for its long pastoral industry history. Aside from Austin's assessment of the certainty of gold in Mt Magnet, he described the Murchison as fertile in spite of prevailing drought conditions. From 1879, pastoralists began inhabiting the Mt Magnet area when the Watson family settled on Yoweragabbie Station and soon after the Jones family on Boogardie Station. The town of Mt Magnet continued to progress from the early 1900s into an important service centre. However, World War I brought about a population decline in many Murchison goldfields as young men left mining for the battle fields of Europe. Both the mining and pastoral industry suffered another decline in the 1930s when the Great Depression greatly damaged the global economy. However, by 1934 the prosperous Hill 50 Gold Mine commenced and in 1935 gold prices stabilised, sparking new leases and reopened mines. Mining continued throughout the World War II with reduced manpower (Shire of Mt Magnet 2009).

Both mining and pastoral industries were riding on the boom until the 1960s. By the 1970s, declining wool and gold prices led to a downward spiral in the Shire's economy. The closure of Hill 50 Mine in 1976 drove many residents to other towns and regions to search of employment. In 1978, the lifeline to the region was severed when the railway line was closed down. In the 1980s, large scale open pit mining began and Hill 50 reopened and most of the mining operations were conducted on a fly-in/fly-out basis, assisting in the survival of towns like Mt Magnet. In 2001, the Hill 50 Gold Mine again changed hands and was purchased by Harmony Gold, which was subsequently placed into care and maintenance in late 2007. Despite being the oldest mining community in WA, mining finally ceased in Mt Magnet in 2008 (Shire of Mt Magnet 2009).

### 2.3. STATISTICAL OVERVIEW

According to official population statistics, in 2008, the Shire of Mt Magnet had an Estimate Resident Population of 624 (Australian Bureau of Statistics (ABS) 2010a)<sup>1</sup>. This figure confirms a continuing downward trend in population evident from 2001 (pop. 851) and 2006 (pop. 737) Census data (ABS 2010b). Longitudinal data for Mt Magnet shows a population decline of 32.1 per cent or 274 persons over the last 10 years, despite a substantial growth in the Western Australia population (17.3%). At the time of the Mt Magnet Community Survey (2009), the Shire Council estimated that 580 people lived permanently within the Shire<sup>2</sup>. Population fluctuations are attributed to mining fly-in/fly-out operations and movements among Indigenous people for ceremonial purposes. At the 2006 Census, Indigenous persons accounted for 24.7 per cent of Mt Magnet's population (ABS 2007).

According to the 2006 Census (ABS 2007), there was a higher proportion of males than females in Mt Magnet (113.8 males to every 100 females) compared with the State average (102 males) with 48.1 per cent of the population aged between 25 and 54 years. In comparison with the Western Australian average, Mt Magnet has a slightly younger population with a median age of 35.7 years (ABS 2007). This younger profile was due to almost half of the Shire's Indigenous population being under 18 years of age (45.5%). The Shire recorded an average household size of 2.5 persons on Census night 2006, equal to the Western Australia (2.5). Mobility indicators from the 2006 Census showed that 44.1 per cent of the Shire's population has changed address in the previous five years, a similar proportion to Western Australia (44.4%). The highest level of educational attainment in the Shire was TAFE or further education (Certificate III and IV levels), followed by a Bachelor Degree. At the time of the 2006 Census, the major industries of employment in the Shire were mining, agriculture and public administration.

### 2.4. SOCIO-ECONOMIC/EDUCATIONAL INDEXES

The Socio Economic Indexes for Areas (SEIFA) provides a tool to assess the welfare of Australian communities. It is a measure of relative socio-economic advantage and disadvantage derived from attributes such as income, educational attainment, unemployment, and skilled and unskilled occupations. The base point for the Index of advantage/disadvantage is 1000, with above indicating socio-economic advantage and below disadvantage. The further the deviation away from the base point, the greater the level of advantage or disadvantage.

Using data from the 2006 Census, the SEIFA score for the Murchison District was 914, considerably less than the average score for Australia (1000) and less than country Western Australia (966) (ABS 2008). In ranking all local governments in Western Australia, the Shire of Mt Magnet was the 14<sup>th</sup> most disadvantaged. Despite this low score, it is essential to consider that averages can conceal sub-groups of the population who are relatively better or worse off.

A similar instrument developed for schools, the Index of Community Socio-Educational Advantage (ICSEA), enables comparisons to be made across schools. The variables that make up ICSEA include socio-economic characteristics of the school area, its remoteness and the proportion of Indigenous students enrolled at the school. The ICSEA has been developed

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<sup>1</sup> ABS provides an Estimate Resident Population of Local Government Areas of Australia for 30 June of each year. Totals for 2001 to 2006 are final while estimates for 2007 and 2008 are revised.

<sup>2</sup> Personal dialogue with Mt Magnet Council staff and also identified in *Go Country Scoping Project: Mount Magnet Guidebook 2008* (unpublished and author unknown).

specifically for the *My School*<sup>3</sup> website for the purpose of identifying schools serving similar student populations. Given that the average ICSEA value is 1000 and most schools have an ICSEA score between 900 and 1100, the ICSEA score of 743 for Mt Magnet confirms considerable socio-educational disadvantage.

## 2.5. SOCIAL AND ECONOMIC ISSUES

There is limited published material profiling the social and economic issues of the Shire of Mt Magnet. Relevant information pertaining to the Shire is chiefly found in reports about the Murchison district and the Mid West region. There are almost 4,000 people living in the seven shires of the Murchison district<sup>4</sup>. Distinct statistical characteristics for the Murchison include populations with more males than females and a higher proportion of Indigenous residents who are much younger than the average population, evident also in the Mt Magnet statistical profile.

A continual decline in the population of Mt Magnet is attributed to mining operations (both fly-in/fly-out and cessation) and drought (average annual rainfall less than 200mm). Population reductions have resulted in a decrease in the number of school students, fewer teachers, closure of services and declining community capacity.

In the past decade, a largely fly-in / fly-out mining workforce has resulted in fewer employees and their families resided in towns such as Mt Magnet. More recently, global events have led to the cessation of mining in the Shire. As discussed in the Combined University Centre for Rural Health (CUCRH) report (2008), the January 2008 halt to mining in Mt Magnet led to an exodus of families from the Shire, thereby reducing overall numbers at the local school (P-12) and impacting on teacher numbers and resourcing (Wiley & Larson 2008, see also Hall et al 2007).

Over the past decade, drought has also impact on the pastoral sector within the Shire of Mt Magnet. As Wiley and Larson (2008) report, consecutive poor seasons have significantly impacted on the broader Murchison's economy and individual community's social life. Despite the economic benefits of the resources boom to broader Western Australia, the report concluded that in the Murchison positive impacts have been marginal for local communities, and particularly the Aboriginal community. As concluded by these authors:

*As a final word, we were struck with the challenges facing the Murchison. In the midst of an unprecedented resource boom, these communities are suffering ... . The Aboriginal community has, for the most part, not been able to benefit from the resource boom and are extensively experiencing social and economic problems (2008, p. 45).*

The following section outlines the results of the survey relevant to the larger Minerals Down Under Cluster Project. Commencing with a comparative overview of the demographics, this section of the report summarises finding related to connection to place, tourism, industry viability and landuse change and wellbeing. Details related to specific questions including illustrated figures or tables can be found in Appendix A.

<sup>3</sup> <http://www.myschool.edu.au/Main.aspx?PageId=0&SDRSchoolId=WA%20G0000004142&DEEWRIId=6677&Calendar Year=2009>, data collected July 2010.

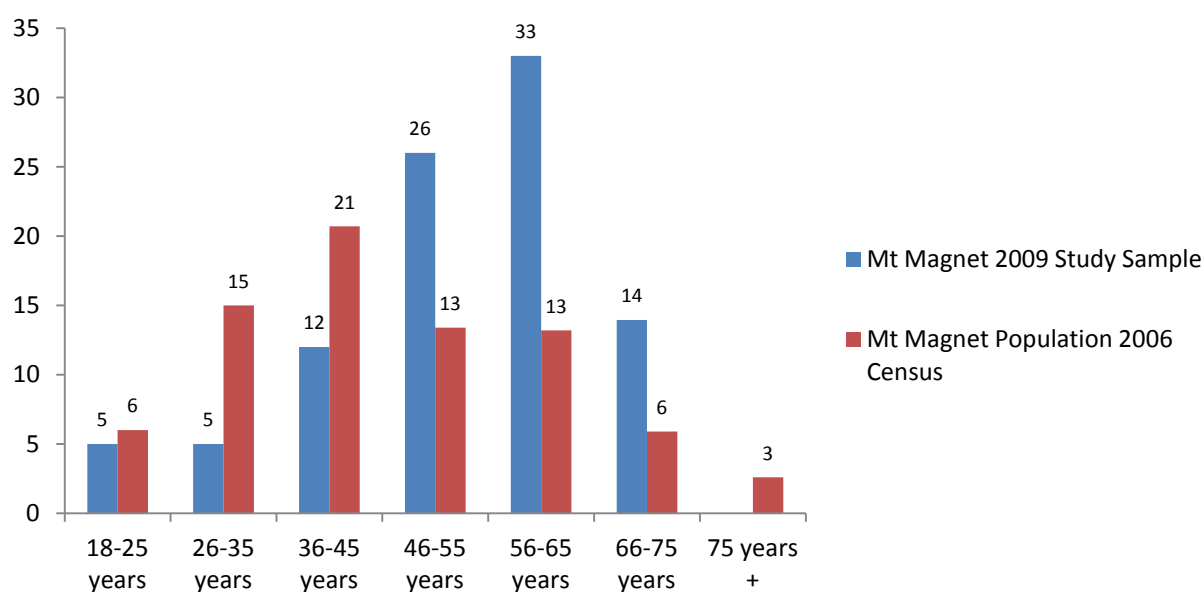
<sup>4</sup> These shires include: Meekatharra, Cue, Mount Magnet, Sandstone, Mullewa, Yalgoo and Wiluna.



### 3. SURVEY RESULTS

#### 3.1. DEMOGRAPHICS

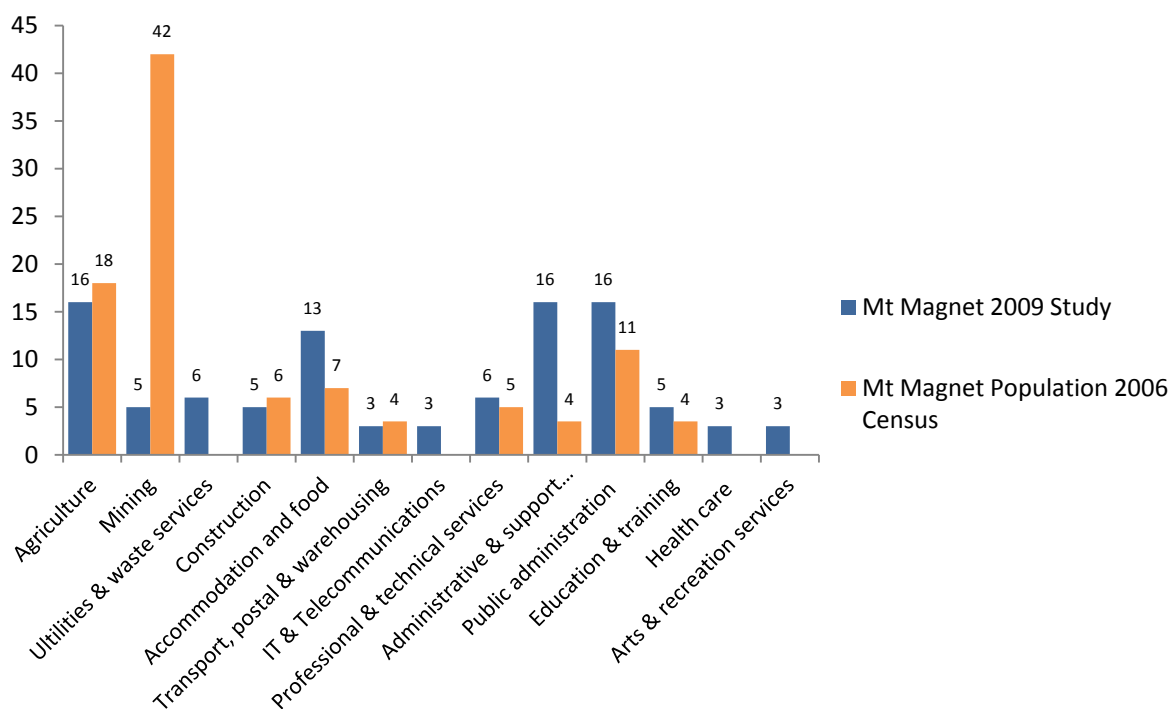
The demographic attributes or profile of Mt Magnet study participants included sex, age, highest level of education achieved and current employment. The number of respondents to this set of questions varied from 39 to 43. In summarising these characteristics, the majority of people completing the survey were female and over 45 years old. As in many regional areas, there are more males than females in the Mt Magnet population. However in the study, female respondents were disproportionately represented 70 per cent of the sample. Overall, the study sample was generally older than the age profile for the Shire, over-representing people aged over 46 years, particularly the 56-65 year age category, while under-representing people aged between 26 and 45 years. This age comparison is illustrated in Figure 2 below.



**Figure 2: Comparison between age of respondents of Mt Magnet Population and Mt Magnet study sample**

Sources: ABS 2008 and Mt Magnet Community 2009 Study

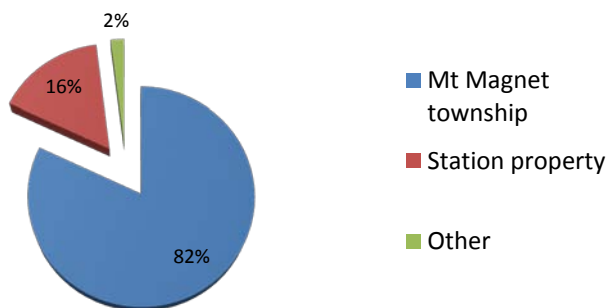
The most reported educational attainment by Mt Magnet study respondents was either Year 12 level or Technical/TAFE qualification, a similar profile to the Mt Magnet population according to 2006 Census (ABS 2007). Survey respondents described themselves as chiefly self employed, followed by an equal proportion employed full and part-time. Three sectors were the predominant employer for survey respondents, these included pastoral industry, public administration and administrative and support services, with the latter two employing sectors, local and state government. As demonstrated in Figure 3 the sample’s employment sectors were largely reflective of the broader population although the mining sector was the dominant employer at the time of 2006 Census.



**Figure 3: Employing Industry for Mt Magnet population compared with Mt Magnet 2009 Study sample**  
 Sources: ABS 2008 and Mt Magnet Community 2009 Survey

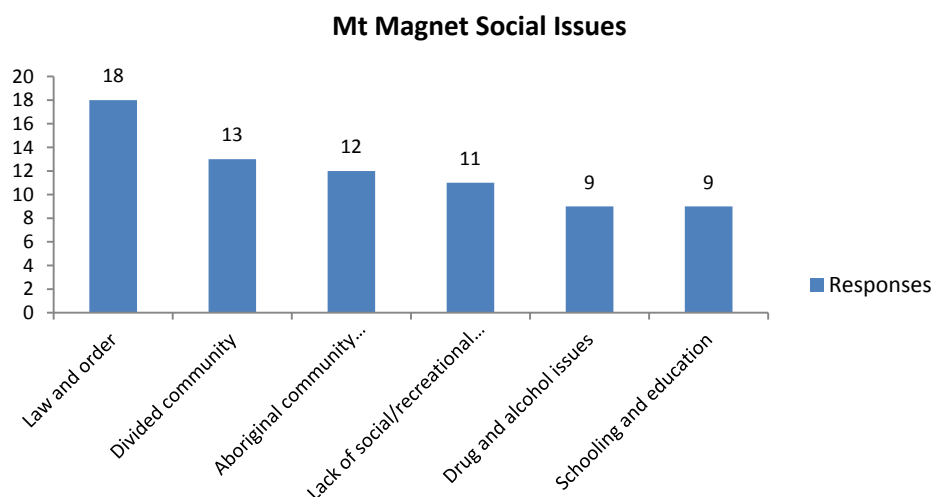
### 3.2. CONNECTION TO PLACE

Most survey respondents came to Mt Magnet for work purposes, followed by family reasons and then to take advantage of affordable land. Of those relocating to the Shire for work—80 per cent of the study sample—the dominant employer was mining followed equally by local government and the pastoral industry. Most of the sample resided in Mt Magnet (80%) with the remainder chiefly living on station properties (Figure 4). Over one-third of the respondents had lived in the Shire for more than 20 years with one-fifth relocating within the past 2 years. This indicates that the study captured the perspectives of longer term residents rather than those recently arrived.



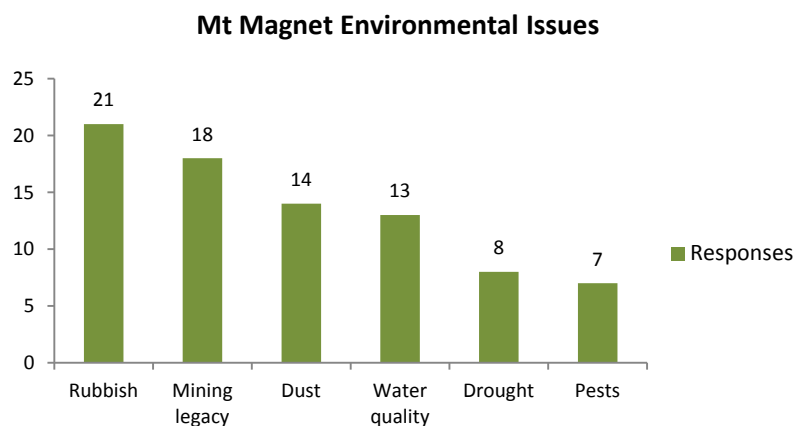
**Figure 4: Usual place of residence**

In developing a deeper understanding of connection to place, the survey posed questions about social, environmental and economic issues in the Mt Magnet Shire. Respondents were asked to list the most important issues within these three areas. The leading social issue for survey respondents was the lack of law and order, manifesting as vandalism, theft and crime and perceptions of an unsafe community. Divisions and increasing disharmony between the Aboriginal and non-Aboriginal population were seen to be aggravated by recent public brawling within the Aboriginal community. This last issue, public fighting, was also considered to have contributed to a generalised sense of ‘lawlessness’ within the Shire. Related social issues included limited social and recreational activities and substance abuse. An assessment of ‘nothing much to do’ were considered by many survey respondents to exacerbate drug and alcohol use and heighten the identified problems within the Shire. Another important issue for survey respondents was schooling and education with two central concerns. The first being the perceived poor quality of education offered in the local school and the second, the practice of children leaving the Shire to be educated elsewhere (Geraldton or Perth) impacting on enrolments at the school and the standard of education. Figure 5 below illustrates the themes identified by study participants.



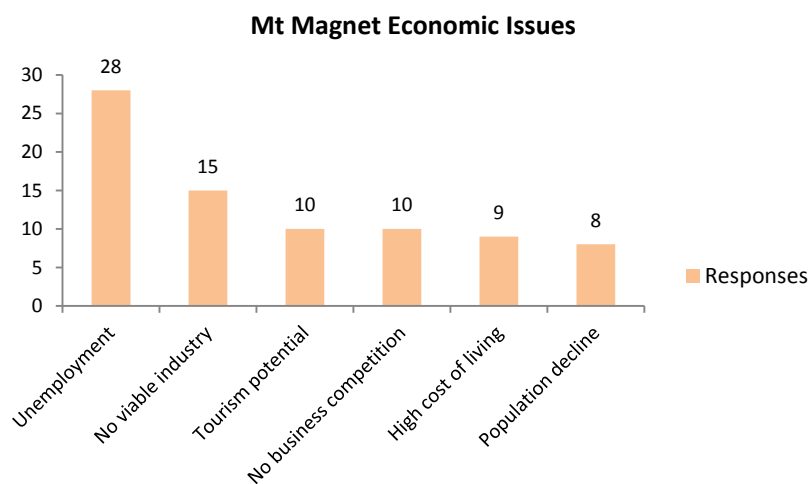
**Figure 5: Identified social issues for the Shire of Mt Magnet**

The greatest environmental concern for sample respondents was rubbish and the untidy appearance of the town of Mt Magnet. Other important environmental matters related to the Shire’s mining legacy were the limited rehabilitation and revegetation of disused mine sites. Dust, associated with both mining mullock heaps and drought conditions, as well as pests (both native and introduced fauna) were also raised as significant environmental issues in the Shire (Figure 6).



**Figure 6: Identified environmental issues for the Shire of Mt Magnet**

The most important economic issues for the respondent sample were unemployment due to limited work opportunities and the lack of viable industries in the Shire with the cessation of mining and the decline in the pastoral industry (Figure 7). While the untapped potential of tourism was recognised, one of the most negative influences on the local economy was population decline. Other important economic issues were the lack of business competition in the Shire and the higher cost of living in regional Western Australia. For some survey respondents, fewer businesses meant reduced quality, choice and generally higher prices for goods/services. This impacted not only on the cost of living, but influenced local spending in the Shire, a set of circumstances familiar to much of regional WA.



**Figure 7: Identified economic issues for the Shire of Mt Magnet**

### 3.3. TOURISM IN MT MAGNET

The survey contained a list of statements and questions about tourism which appear in the Mount Magnet Tourism Framework 2010-2013(FACET 2010) and also available at [www.strongercommunities.curtin.edu.au](http://www.strongercommunities.curtin.edu.au). Tourism survey questions relevant to mining and land use change include investigating mining history as a tourism offering. Of the top five existing or potential tourism activities that were ‘important’ as well as ‘possible’ within the

Shire, mining heritage was ranked third in both categories. Related also to mining was geo-tourism, which was not ranked as a tourism priority.

### **3.4. INDUSTRY VIABILITY AND LAND USE CHANGE**

Declines in viable industries, namely mining and the pastoral industry within the Shire have emphasised the importance of tourism to the local economy. While mining ceased within the Shire in January 2009, at the time of the study there was uncertainty about whether it would return and in what form e.g. as a residential or FIFO operation. For the pastoral industry, successive droughts have led to diversification to increase economic viability.

The survey sought information on the legacies of mining, both positive and negative. Employment of local people was considered the most important legacy of past mining in the Shire. This was closely followed by Mt Magnet's history as one of the oldest gold settlements in the State and this heritage as an important aspect of tourism. After this, the next most identified legacy of mining was its contribution to the local economy. Other aspects included increases in population and housing. The outstanding negative legacy of mining was its impact on the natural environment, specifically the lack of rehabilitation and revegetation and the resultant impacts such as dust and the visual 'blot' on the landscape. Other negative legacies associated with the closure of mining included unemployment, abandoned housing and decline in population.

If mining becomes viable again in the Mt Magnet, the sorts of measures the respondents required included redeploying local people into other industries/employment. Similarly important was rehabilitation of mine sites. Other aspects such as an exit strategy and infrastructure investment were also considered to be important considerations for companies negotiating into the community.

Approaches identified by study respondents adopted by the pastoral industry to increase economic viability included destocking sheep and increased farming of goats, station stays and farm tours, mining leases on station properties and off-farm contracting and income.

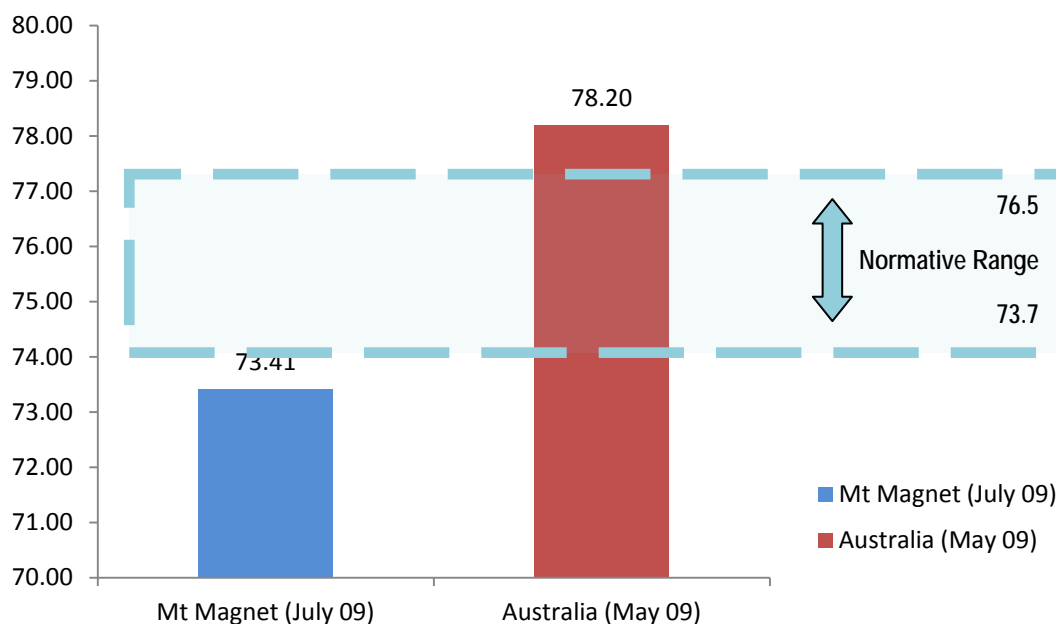
### **3.5. WELLBEING**

Another aspect of the community survey was self-assessed quality of life or wellbeing of the Mt Magnet Shire sample. This form of data provides the opportunity to benchmark study findings against national data.

To provide an overall picture of wellbeing, the results of survey responses (mean scores) were summed and then compared with national Personal Wellbeing Index (PWI) scores collected for the Australian Unity Wellbeing Index (Australian Centre on Quality of Life 2009). National wellbeing averages, determined twice yearly, take into consideration the impact of current Australian political circumstances, economic and social climate, and natural disaster as well as prevailing world events. Quality of life results for this study have been examined in two ways: 1) whole of life or subjective wellbeing and 2) multi-item variables or wellbeing domains.

For the Mt Magnet study sample the 'whole of life' or subjective wellbeing score was 73.41. This score falls below the Australian (May 2009) score of 78.20. In other words, the overall life satisfaction of the survey sample was below that of the Australian population. As data for the

study was analysed as a group mean, this score is referenced to the normal distribution of group means which for Australia ranges from 73.7 – 76.5. The finding that the Mt Magnet subjective wellbeing mean is below (albeit slightly) the normative range indicates a higher propensity for developing depression (Cummings 2007). The normative range is illustrated in Figure 8.

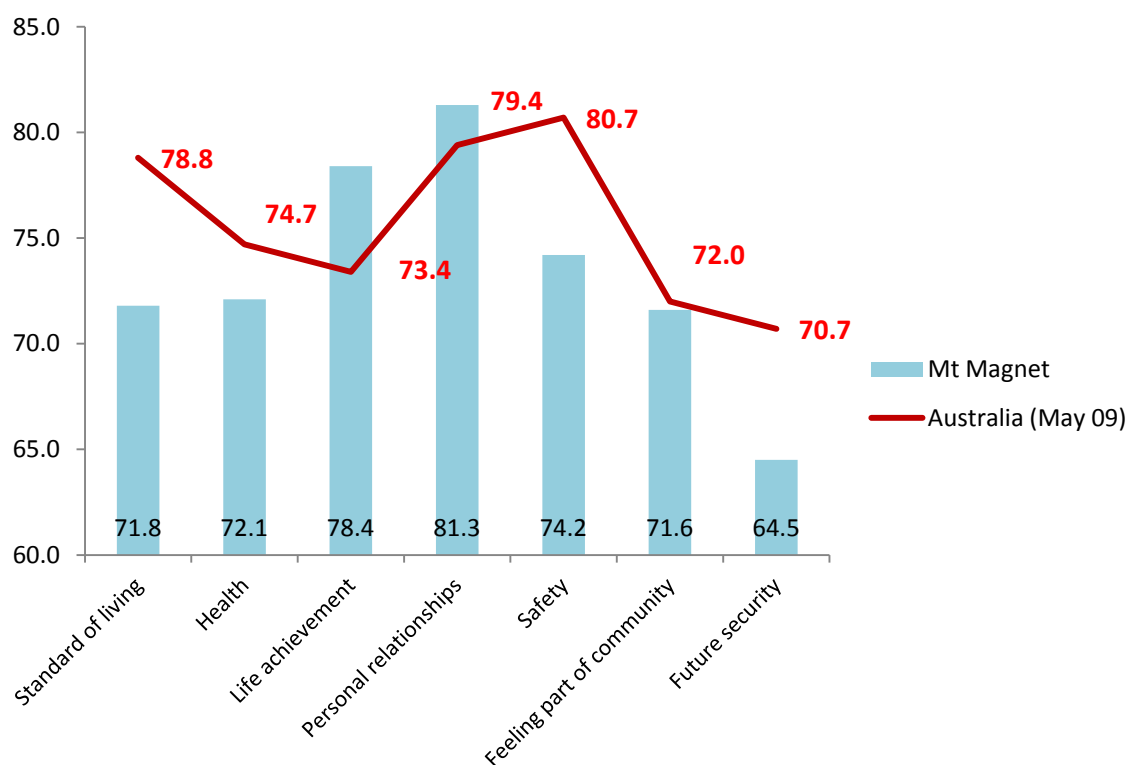


**Figure 8: Subjective wellbeing: Mt Magnet and the Australian average**

Sources: Australian Centre on Quality of Life 2009 and RCSC 2009

When the Mt Magnet sample wellbeing mean scores are analysed as separate or multi-item variables a more specific picture emerges when compared with ‘whole of life’ satisfaction. As shown in Figure 9 (below), Mt Magnet wellbeing averages (blue bar graph) are overlaid with Australian wellbeing averages (red trend line) for the following seven domains:

- Living standard
- Health
- Life achievements
- Personal relationships
- Safety
- Community-connectedness
- Future security



**Figure 9: Personal wellbeing – Mt Magnet sample compared with Australia average**

Sources: Australian Centre on Quality of Life 2009 and RCSC 2009

Analysing Mt Magnet sample wellbeing mean scores as separate or multi-item variables resulted in two wellbeing domains, relationships and life achievement, scoring significantly higher than the Australian average. Certain domains are understood to reflect the capacity that communities have to deal with challenging times. As Cummins, Woerner and Chester (2009) argue, relationships often strengthen and people assess their past more positively in times of crisis. However, the remaining five domains for the Mt Magnet sample, ‘standard of living’, ‘health’, ‘safety’, ‘community connectedness’ and ‘future security’, all fall below the national average with most outside of the normative range (see Table 1 below). As SEIFA data indicates, the Shire of Mt Magnet is the 14<sup>th</sup> most disadvantaged of the 143 LGAs in Western Australia, supporting the lower ‘standard of living’ assessment of survey respondents. This score was outside and below the normative range as was the wellbeing domain ‘health’ for the Mt Magnet sample. Due to the member checking component imbedded in the Community-as-Researcher Model, community researchers considered that the low health satisfaction within the Shire was largely related to a depressed community with an uncertain future. Clearly, progress for individuals is a key dimension of health. A greater sense of community connection and personal safety have been a usual finding from wellbeing data collected in studies conducted in rural/remote WA communities (Browne, Buckley & Stehlik 2009). However there appears to be a connection between the reported social concerns of lawlessness in the Shire and the low assessment of ‘safety’ by survey respondents. Mt Magnet’s score for ‘feeling part of the community’ is also slightly below the national average which according to Cummins et al (2009) is an unusual finding. These authors argue that there are usually high degrees of community connection (social capital) in remote/rural communities when compared with larger more impersonal urban spaces (see also Gittins, 2005). With the cessation of mining in



the Shire, variable commodity prices and drought, it is not surprising that 'future security' for the sample was both below the national average and outside of the normative range.

## 4. IMPLICATIONS AND IMPACTS

The aim of this section of the report is to reflect on the implications for the Shire of Mt Magnet in relation to governance, public policy and communities followed by an outline some of the impacts and limitations of this study.

### 4.1. IMPLICATIONS

#### Governance

The identified disharmony between the Aboriginal and non-Aboriginal community in Mt Magnet presents a significant governance challenge for all levels of government, but in particular for Local Government. Added to this is the perception that Mt Magnet is an 'unsafe' community with a reported decline in law and order. Such assessments may prove detrimental to a community wanting to diversify its industry base and attract people into the Shire as visitors and permanent residents.

#### Public policy

Boom-bust cycles occur in both mining and primary production, the two leading industries in regional Australia. When the 'bust' aspects of these industry cycles coincide, this has serious social and economic impacts on communities such as Mt Magnet. While not all issues identified by Mt Magnet study respondents were causally linked to the mining industry, what is required is greater emphasis in policy and planning on maintaining the social and economic sustainability of resource communities post mining.

#### Communities

Communities in decline often consider that they have little bargaining power when industries such as mining (re)commence operations in their Shire. Study respondents identified that a critical provision if mining was to return to the Shire of Mt Magnet was exit measures. The recent WA example of BHP Billiton in Ravensthorpe highlights the need to factor both entry and exit into negotiations with communities. Provision to safeguard the livelihood of communities, particularly those with mineral-led economies needs greater emphasis within State Government mining approval processes.

### 4.2. IMPACTS

#### Tourism

As tourism—including Indigenous tourism—is considered an important industry in the revitalisation of the economy of the Shire, it is relevant to note that progress has been made in collaborating with the Mt Magnet Aboriginal community to develop Indigenous tourism experiences (Shire of Mt Magnet 2010). Minutes from Shire of Mount Magnet Council confirm

that this is occurring between the Shire, the local Aboriginal Corporation and local Indigenous Elders<sup>5</sup>.

The initial study report has provided an important context for the development of the Mt Magnet Tourism Framework 2010-2013 (FACET 2010). This framework which included the survey findings has subsequently been distributed to a wide range of WA Tourism stakeholders.

### **Health**

Interest generated following the Mt Magnet study resulted in a presentation to the Mid West Combined Health Network (WA Department of Health) as part of the proposed development of Guidelines on Health Impact Assessment for communities associated with mining.

### **Drought**

The Mt Magnet report was requested by the Department of Agriculture Fisheries and Forestry (DAFF) in relation to the WA drought pilot. Due to subsequent discussions, the Shire of Yalgoo has expressed interest in being profiled as part of Regions in Transition.

## **4.3. LIMITATIONS**

An acknowledged strength of the Community-as-Researcher (CAR) Model is its capacity to produce a good survey response rate. However in the Mt Magnet study there were fewer community researchers therefore fewer survey respondents. At the time of the study it proved difficult to attract both a local person to facilitate the process and community researchers due to what was described as an over-commitment to (usually voluntary) community activities. For future community studies in small communities other approaches to data collection will be investigated.

Prior to the commencement of the study, a number of Aboriginal community researchers were recruited. However despite this, there were no Aboriginal respondents to the survey. Again other approaches and possible methods will be investigated for future community surveys.

## **5. CONCLUSION**

The Mt Magnet study encapsulates much of what is essential a profile of the Mid West namely Aboriginal sensitivities, fragile ecological environments, established yet diverse communities, a traditional pastoral cohort and a history of some association with mining.

This study highlights the challenges inherent in closure of a major industry in a remote location and the attendant social, environmental and economic implications for local and regional communities. Mining is characterised as cyclical and often unpredictable in nature, with operations located in rural and remote areas where it is increasingly becoming the dominant

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<sup>5</sup> Council minutes are available at [www.mtmagnet.wa.gov.au](http://www.mtmagnet.wa.gov.au)

industry with the demise of the agricultural sector. As this is particularly the case in regional Western Australia, the Mt Magnet study is essentially a snapshot of the impacts of the cessation of resource industry operations on a community with a long and rich history of mining. For the *Regions in Transition* Mid West case study, the Mt Magnet study commences a process for engaging with communities to develop strategic social impact assessment at a regional scale.

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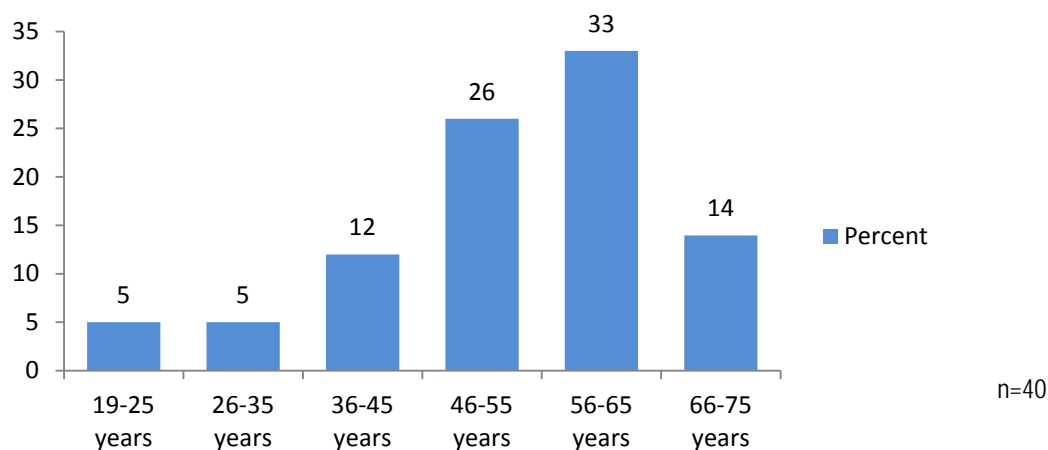
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## APPENDIX A

### 1. What is your sex?

Of the 43 respondents completing this question, 70% are female and 30% are male.

### 2. What is your age?

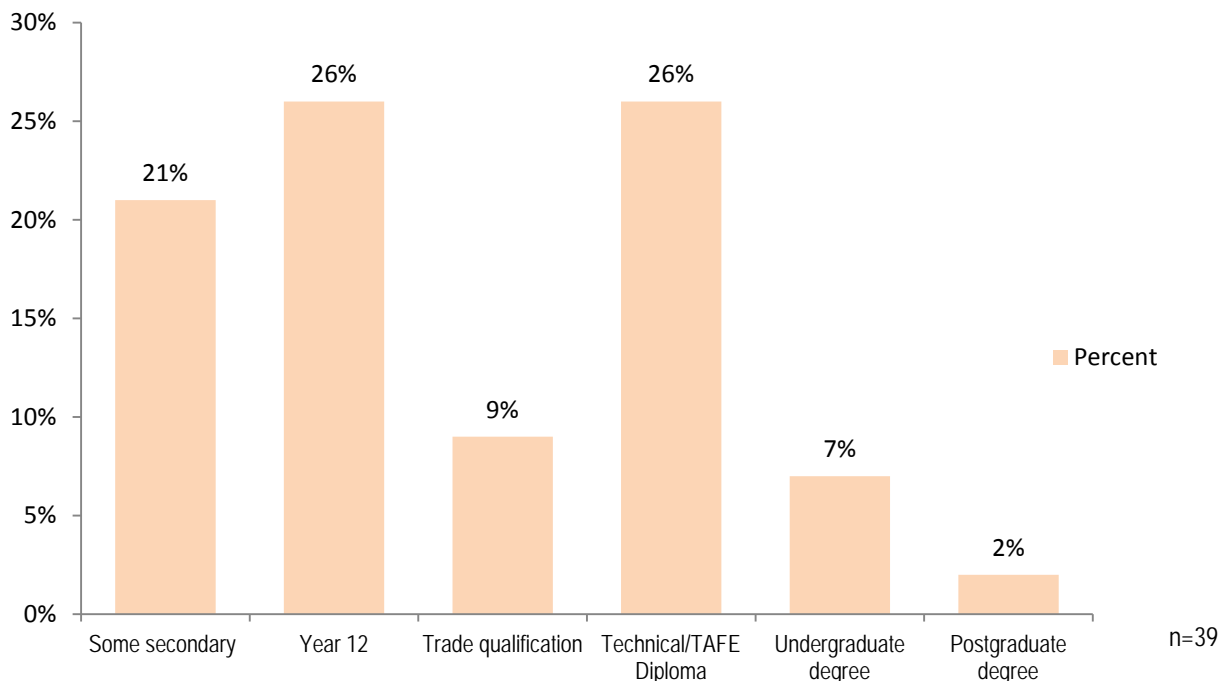


**Figure 10: Age of respondents**

Forty respondents completed the question asking about age. Results included:

- 33% aged 56-65 years;
- 26% aged 46-55 years;
- 14% aged 66-75 years;
- 12% aged 36-45 years; and
- 5% aged 19-25 years and 5% aged 26-35 years.

**3. What is the highest level of education you have completed?**



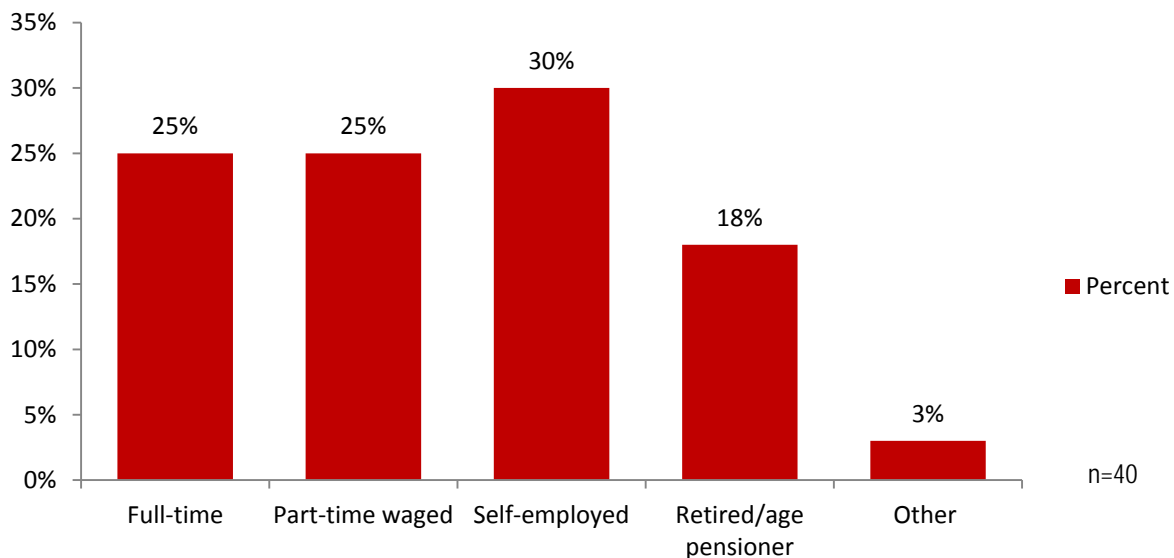
**Figure 11: Highest level of education**

The highest level of education for the study respondents (n = 39) included:

- 26% completed Year 12 as their highest level of education;
- 26% had a Technical or TAFE diploma;
- 21% completed some secondary schooling;
- 9% had a trade qualification;
- 7% possessed an undergraduate degree; and
- 2% held a postgraduate qualification.



15. Which best describes your employment status?



Note: Totals may not equal 100% due to rounding.

Figure 12: Current employment status

Employment status for the study respondents (n = 40) included:

- 30% identified being self employed;
- 25% as full-time and another 25% part-time waged;
- 18% described themselves as retired; and
- 3% specified 'other'.

15. If currently employed, in which industry or sector?

**Table 1: Current employment by sector**

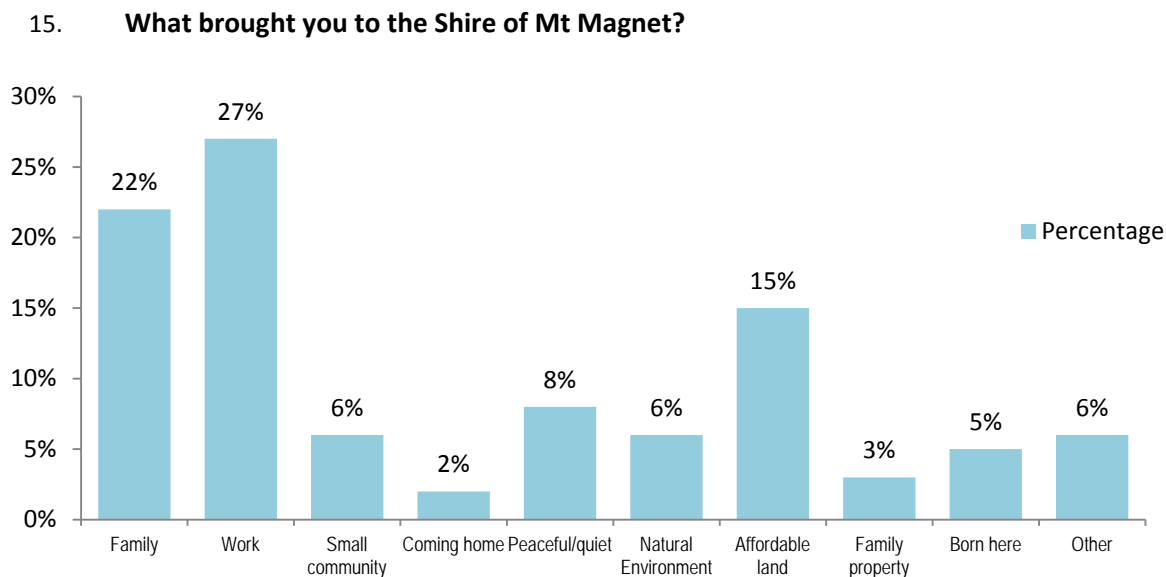
Industry or Sector	Number
Pastoral/Agriculture	6
Local Government	6
State Government	6
Hospitality	5
Tourism	3
Service Industry	3
Trades	3
Education	2
Mining	2
Engineering	2

Sectors most nominated as employing study respondents included:

- Pastoral/Agriculture, Local and State Government (6) were all equally identified. This was followed by Hospitality (5), Tourism, Service Industry and Trades (3). Identified to a lesser extent were Education, Mining and Engineering (2).

**6. Do you personally benefit from tourism e.g. work in or own a business catering for tourists?**

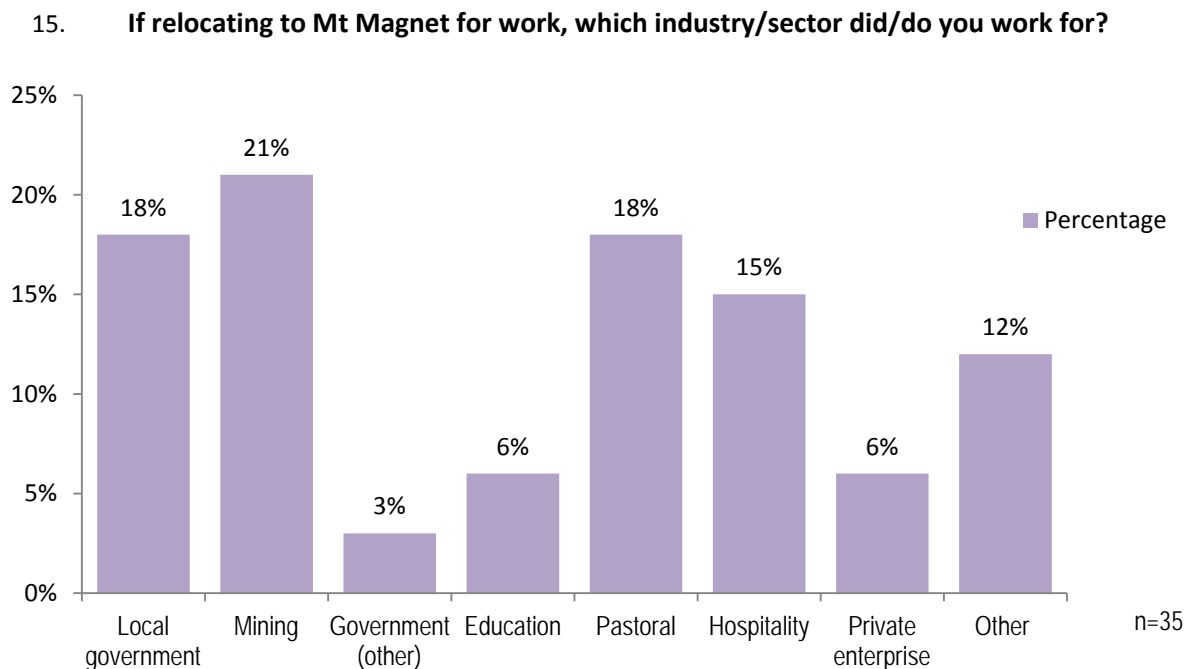
- Half the respondents (50%) indicated that they personally benefitted from tourism.



**Figure 13: Reasons for coming to Mt Magnet**

Survey respondents came to the Shire of Mt Magnet for the following reasons:

- 27% came for **work** purposes;
- 22% for **family reasons**;
- 16% due to **affordable land**;
- 8% because it was **peaceful/quiet**;
- 6% due to **small community** and 6.3% for the **natural environment**;
- 5% were **born here**;
- 3% due to **family property**;
- 1% indicated they were returning or **coming home**; and
- **Other** category (6%) included:
  - due to a relationship; for a challenge; and having no choice in the matter.



Note: Totals may not equal 100% due to rounding.

**Figure 14: Industry/sector employed in post relocating to Mt Magnet**

For the 35 respondents who completed this question:

- 21% were employed in **mining**;
- 18% in both **local government** and 18/2% in **pastoral industry**;
- 15% in **hospitality**;
- 6% in both **private enterprise** and **education**;
- 3% in **government (other)**; and
- 12% **Other** included:
  - Church; building industry; Utilities Company; and retiree.

15. **Where do you usually live?**

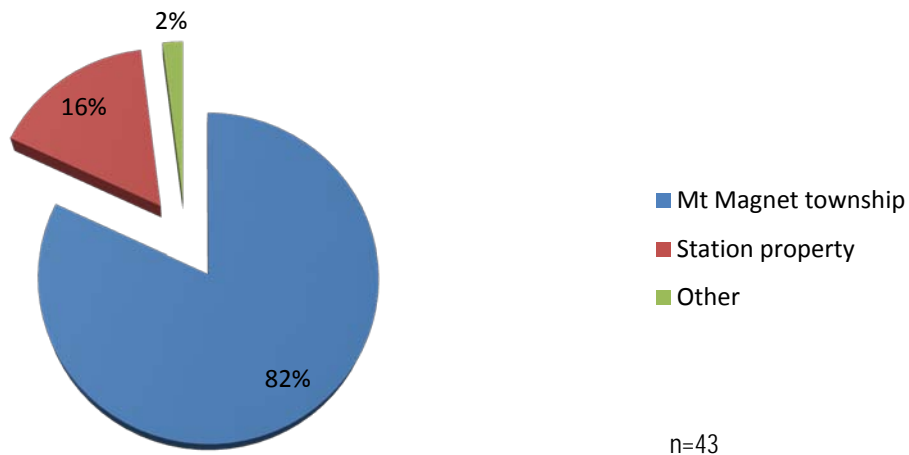
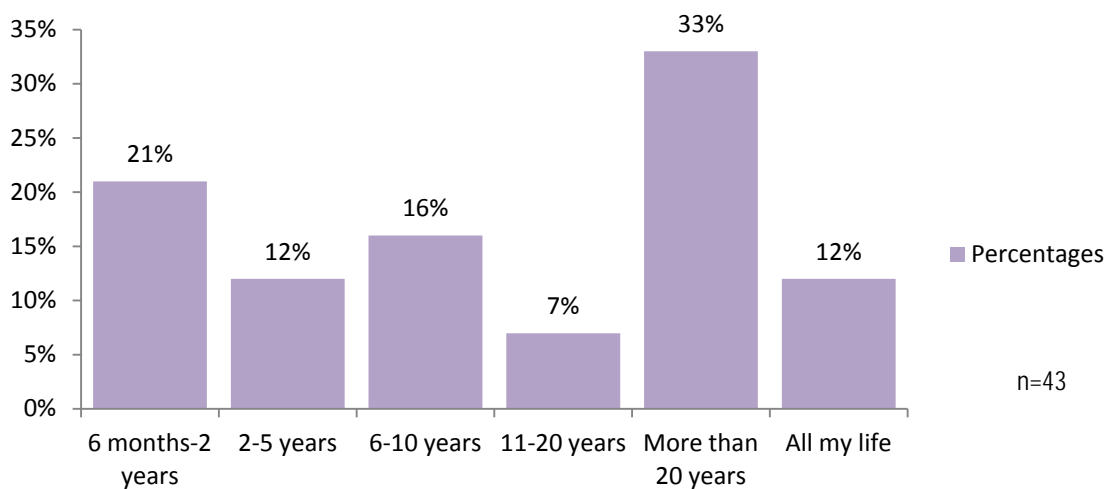


Figure 15: Usual place of residence

Of the 43 respondent answers to this question about usual place of residence:

- 82% live in **Mt Magnet** township;
- 16% on a **station property**;
- 2% live **elsewhere**.

10. **How long have you lived in the Mt Magnet Shire?**



Note: Totals may not equal 100% due to rounding.

**Figure 16: Length of time living in the Shire**

For 43 respondents, the length of time residing in the Mt Magnet Shire included:

- 33% for **more than 20 years**;
- 21% between **6 months and 2 years**;
- 16% for **6 -10 years**;
- 12% lived in Mt Magnet **all their life**;
- 7% for **11- 20 years**.

**11. What do you consider to be the THREE (3) most important social issues in the Shire today?**

The most identified social issues for the Shire included:

- Law and order (18): including theft, vandalism, public brawling, crime, the need for stronger policing;
- Divided Community (13): increasing disharmony and divisions in the Indigenous and non-Indigenous populations;
- Indigenous concerns (12): family feuding, public brawling; contribution to broader social issues for the community;
- Lack of social and recreational activities (11): across all ages, limited social things to do;
- Drug and alcohol issues (9); and
- Schooling and education (9): standard of education/schooling available at Mt Magnet, truancy, poor quality.

**12. What do you consider to be the THREE (3) most important environmental issues in the Shire today?**

The most identified environmental issues for the Shire included:

- Rubbish (21): litter left around town, appearance of the town and the Mt Magnet dump;
- Mining (18): lack of mining rehabilitation and revegetation and ensuing problems;
- Dust (14): associated with drought and mining industry tailings;
- Water quality (13): lack of quality drinking water, water management issues;
- Drought (8); and
- Pests (7): mosquitoes, wild and domestic dogs.

**13. What do you consider to be the THREE (3) most important economic issues in the Shire today?**

The most identified economic issues for the Shire included:

- Unemployment (28): increasing unemployment, decline in work opportunities, few training opportunities or apprenticeships;
- No viable industries (15): closure of mine and lack of pastoral industry viability;
- Tourism development (10): potential new industry although considerable financial and business/community input required;
- No business competition (10): impacts on quality of service and price of goods;
- High cost of living (9): goods and services cost more due to freight/transportation /fuel; and
- Population decline (8): closure of industries led to decline in population.

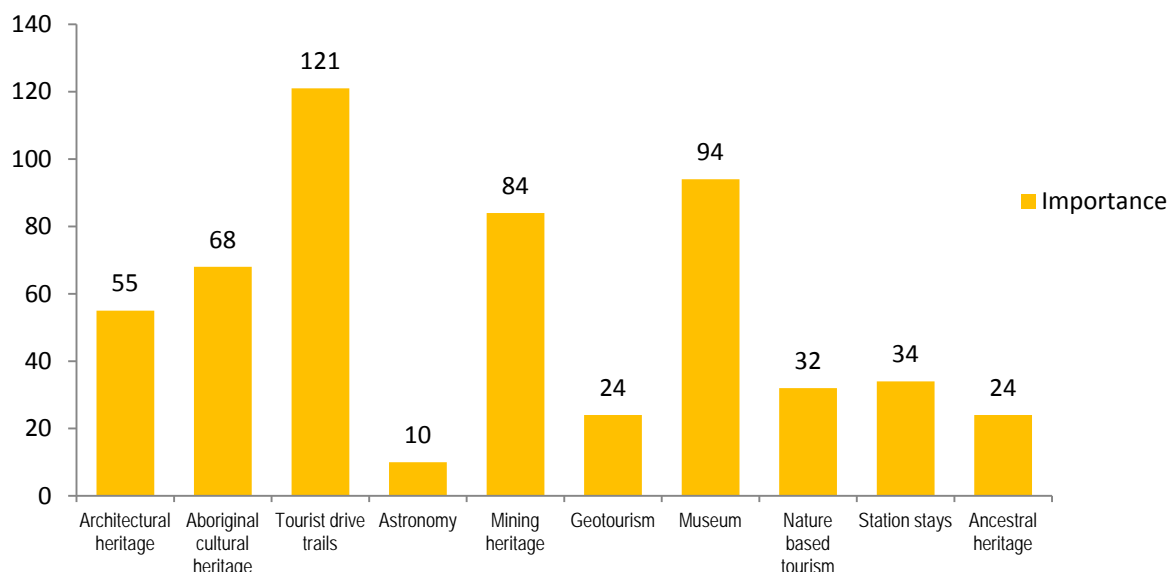
#### **14. What activities/events would you participate in to improve life in Mt Magnet?**

The types of activities that survey respondents suggested to improve the quality of life in Mt Magnet included:

- Sport and recreation (17): including various sporting activities, both as participants and as spectators;
- Community social events (15): organised special events days e.g. Australia Day, festivals, fairs;
- Movies and shows (13): better use of existing facilities for indoor and outdoor movie entertainment;
- Community group/meeting to coordinate and fundraise for social events (7); and
- Town beautification activities (6): community efforts to improve the appearance of the town.



**17.1 Which of the following tourism activities are 1) most important and 2) the most possible for the Shire. Please rank the top five (5) e.g. 1 to 5 with 1 the most important/possible and 5 the least.**

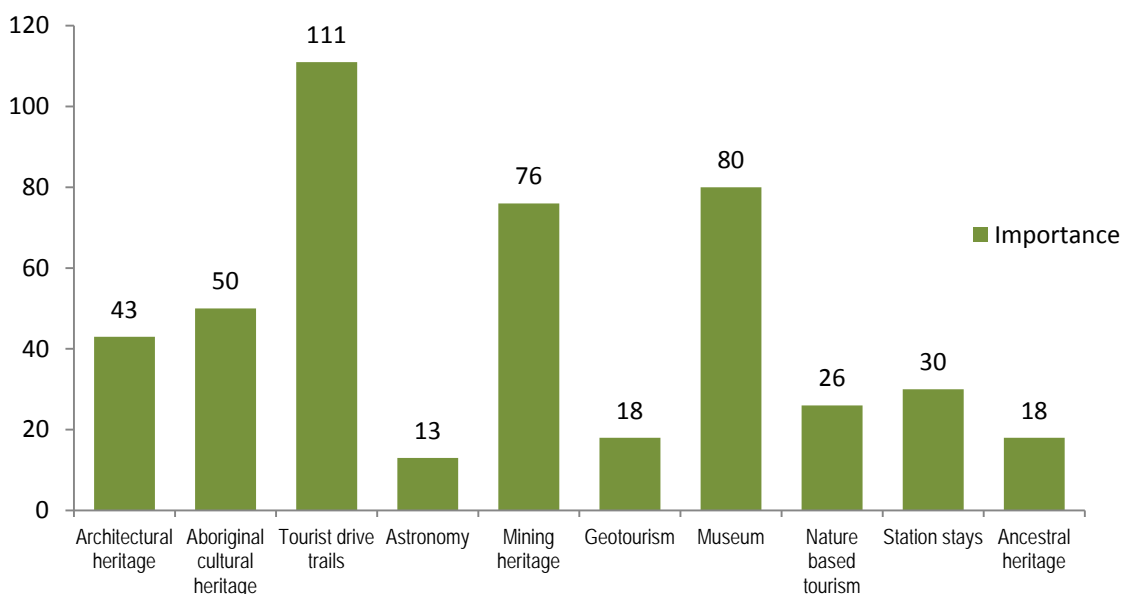


**Figure 16: Importance of tourist activities**

This question is analysed in two parts; the first refers to the most important activities while the second part refers to most possible activities. Responses to the aspect of *Importance* of listed tourist activities were first summed as depicted in Figure 17.

Respondent scores in order of priority included:

- Tourist drive trails (121)
- Museum (94)
- Mining heritage (84)
- Aboriginal cultural heritage (68)
- Architectural heritage (55)
- Station stays (34)
- Nature based tourism (32)
- Geotourism (24)
- Ancestral heritage (24)
- Astronomy (10)

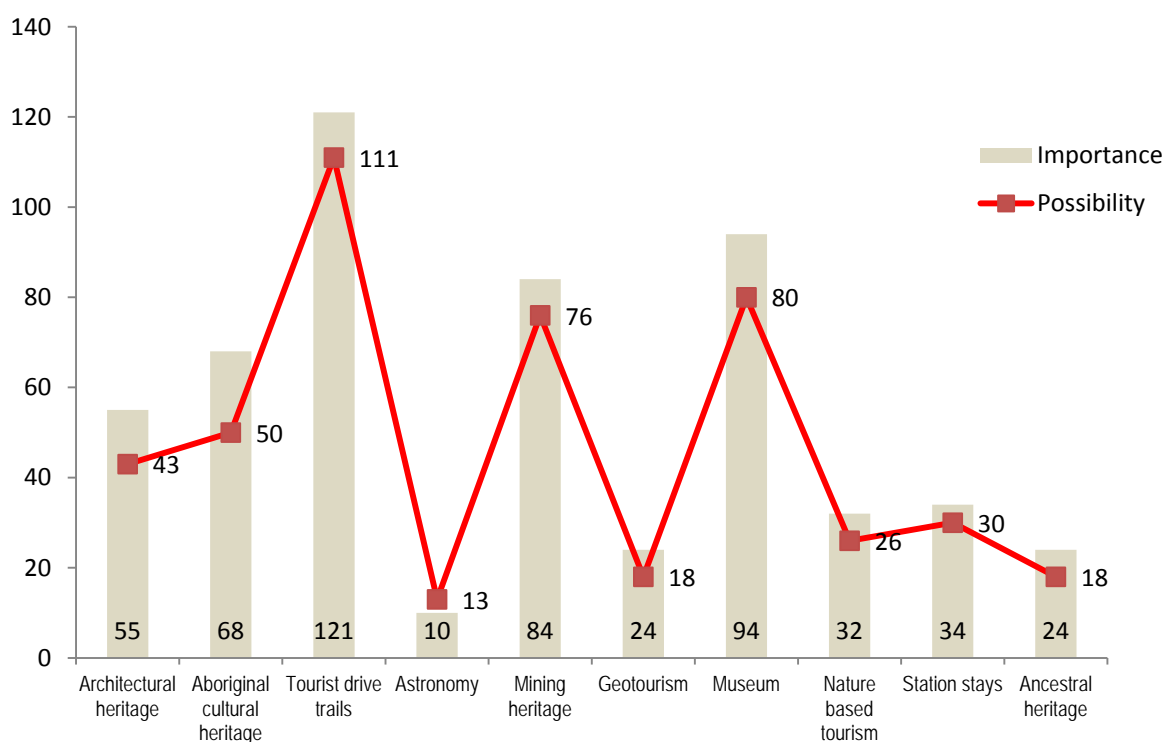


**Figure 17: Possibility of tourist activities**

**17.2** In the second part of this question, responses to the aspect of *Possibility* of listed tourist activities were first summed as illustrated in Figure 18.

**Respondent scores in order of priority included:**

- Tourist drive trails (111)
- Museum (80)
- Mining heritage (76)
- Aboriginal cultural heritage (50)
- Architectural heritage (43)
- Station stays (30)
- Nature based tourism (26)
- Geotourism (18)
- Ancestral heritage (18)
- Astronomy (13)



**Figure 18: Comparison of importance and possibility of tourist activities**

The above illustration represents *Importance* as a bar chart (beige) and *Possibility* as a line graph (red). These are consistent rankings of listed activities between important and possible tourist activities within the Shire of Mt Magnet. The top five preferences for each aspect are set out in Table 2 below:

**Table 2: Top 5 ranked activities by Importance and Possibility**

Tourism Activities	Ranking for Importance	Ranking for Possibility
Tourist drive trails	1	1
Museum	2	2
Mining heritage	3	3
Aboriginal cultural heritage	4	4
Architectural heritage	5	5

**25. What are the legacies (results) of mining in the Shire?**

This survey question sought information on positive and negative mining legacies.

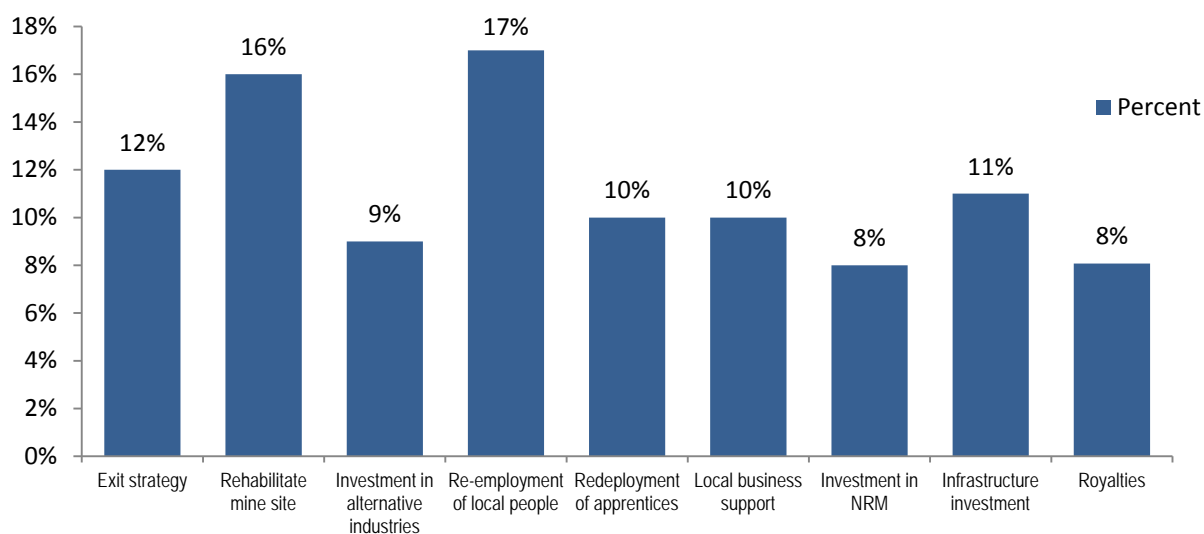
**Positive legacies**

- Employment (12): major source of local jobs and training;
- History (11): important aspect of local history, long term mining community;
- Local economy (10) key industry for local economy, important for viability of local businesses;
- Population (9): increases population, bringing more families into the area, flow on effect for school, business and local community;
- Housing (7): increased housing stock in town; and
- Tourism (6): mining heritage and associated activities important for tourism.

**Negative legacies**

- Environmental impact (39): 'holes in the ground', mullock heaps, dust, little rehabilitation or revegetation;
- Unemployment (5): closure has removed an important employment source for local people;
- FIFO (4): had detrimental effects on local economy;
- Limited access to mining sites (4): restriction on access due to safety issues;
- Little return to the community (4): more costs than benefits to the local community;
- Housing (4): houses abandoned, vandalised and not maintained; and
- Population decline (4).

**26. If mining returns to the Shire, which of the following measures could protect the community from the adverse impacts of future mine closure?**



**Figure 19: Considerations for future mining**

Survey respondents provided information on a range of possible measures to put into place if mining returns to mining in the Shire. These included:

- 17% Redeployment of local people;
- 16% Rehabilitate mine site;
- 12% Exit strategy;
- 11% Infrastructure investment;
- 10% Redeployment of apprentices and 10% local business support;
- 9% Investment in alternative industries; and
- 8% Investment in natural resource management (NRM) and 8% provision for royalties.

**27. How has the pastoral industry diversified to increase its economic viability in the Shire?**

- Station stays;
- Goat farming;
- Off farm contracting and income;
- Eco and station tours; and
- Destocking sheep.

**28. How satisfied are you with ... (the following)? Where 1= 'completely unsatisfied' and 10 = 'completely satisfied'.**

This question asked survey respondents to self-assess their level of life satisfaction based on the annual Australian Unity Wellbeing Study across the following domains:

- Standard of living
- Health
- Life achievement
- Relationships
- Safety
- Feeling part of the community
- Future security

**Table 3: Normative range of individual wellbeing for Australia and Mt Magnet average**

Domain	Australian Normative Range	Mt Magnet Average	Standard Deviation
Standard of living	74.8 – 79.0	71.8	15.90
Health	73.1 – 75.7	72.1	17.64
Life achievements	72.3 – 75.1	78.4	15.42
Personal relationships	77.1 – 81.3	81.3	13.36
Safety	74.3 – 81.0	74.2	14.41
Feeling part of community	68.6 – 72.5	71.6	20.45
Future security	67.4 – 73.1	64.5	15.47

## **NOTES**