

A Rapid Rural Appraisal of the Closure of the Ravensthorpe Nickel Operation:

**A focus on the social, environmental and economic impacts for
Ravensthorpe, Hopetoun and Jerdacuttup, Western Australia.**

Dr Alison L. Browne
Dr Amma Buckley
Professor Daniela Stehlik

Research Centre for Stronger Communities,
Curtin University of Technology,
Western Australia.

May 2009

A Rapid Rural Appraisal of the Closure of the Ravensthorpe Nickel Operation:

**A focus on the social, environmental and economic impacts for
Ravensthorpe, Hopetoun and Jerdacuttup, Western Australia.**

Dr Alison L. Browne
Dr Amma Buckley
Professor Daniela Stehlik

Research Centre for Stronger Communities,
Curtin University of Technology,
Western Australia.

May 2009

The Research Centre for Stronger Communities

The Research Centre for Stronger Communities is a social science research centre established in 2003 at Curtin University of Technology, Western Australia. It is a constituent centre with the Australian Sustainable Development Institute. The Centre houses a team of social scientists working with State, Federal and local government, industry, business and NGOs on sustainability and conservation issues across Australia. Full details of all previous research conducted by the Centre and a PDF copy of this report can be found at www.strongercommunities.curtin.edu.au.

Acknowledgements

We would like to extend our sincere thanks to the residents of the Shire of Ravensthorpe who assisted in the development of the research project and who gave their time and support to participate in the research.

Research Team

This report was edited by Professor Daniela Stehlik, who takes full responsibility for its contents. The project team involved in the Rapid Rural Appraisal, analysis of the data, and construction of this report were as follows:

Dr Alison Browne is a Research Fellow at the Research Centre for Stronger Communities. Having worked on numerous research projects through Curtin University, CSIRO Land and Water, and CSIRO Sustainable Ecosystems, she has a wide range of multidisciplinary social science interests in the areas of social and environmental sustainability, natural resource management, sustainable agriculture, land rights and urban water management.

Dr Amma Buckley is a Research Fellow at the Research Centre for Stronger Communities. She possesses well developed research skills, having worked across a number of ARC industry, collaborative and a diverse range of research projects. Her research knowledge base includes rural social work practice, community engagement, community development, social/income security, volunteering and the not-for-profit sector, disability, genetic technologies and ethics, and mining.

Professor Daniela Stehlik is a Professor in Stronger Communities at Curtin University of Technology and Director, Research Centre for Stronger Communities. Daniela is one of Australia's leading social scientists, regularly advising Federal and State government and their agencies, focussing on families and communities, sustainability and conservation in regional/rural Australia.

Executive Summary

This Rapid Rural Appraisal report from the Research Centre for Stronger Communities at Curtin University offers a 'snapshot' study of the community response to the closure, on January 21st 2009, of the BHP Billiton Ravensthorpe Nickel Operation (RNO) in Western Australia. This study forms part of an ongoing 5 year research program in the South Coast of Western Australia – *Sustaining Gondwana*.

Findings reported on provide locally informed baseline information to assist in the development of future strategies for the Region. Focusing on the Ravensthorpe, Hopetoun and Jerdacuttup communities within the Shire of Ravensthorpe, this study provides an overview of the range of social impacts of the RNO closure on: the community; perspectives on environmental impact; information flow post-closure; comparative measures of wellbeing; and community perspectives on opportunities for future regional development. The Report has been prepared with a triple-bottom-line structure: social, environmental and economic impacts.

In conducting a rapid study, using a Rapid Rural Appraisal method, findings reflect upon: associated lifestyles and livelihood changes for the local residents; on the perspective of a sample of the local community to the closure; and on its consequences, from the perspective of local residents. Findings conclude that:

- Those identified by participants as most impacted by the closure were Hopetoun businesses, BHP Billiton contractors, and Ravensthorpe businesses.
- The resultant growth of a diverse, young and economically active population in the community was seen as positive for the Region and there was concern for this lost opportunity.
- The major common impact across the Shire and the Region is population decline, and the resulting decline of infrastructure, businesses and services. Given the timing of the closure (global economic crisis), there was increased anxiety as to the future of vacant housing stock, and the impacts on businesses and employment.
- Environmental impacts of the closure of RNO are mixed between positive (e.g., less people = less impact) and negative impacts (e.g., site maintenance, less funding for environment projects).
- The Shire is currently a 'community in flux', with the adjustment and recovery of the community to the closure of the RNO being something that will happen gradually.
- There is a recognition that a viable regional future needs to have a more integrated economic framework, including tourism and other mining and industry options.
- People were not overly negative about the experience while the Company was in the community, and felt a sense of reliability and consistency in RNO operations across the lifespan. However, there was a perception that they had not been accountable for their actions across the lifespan of operation.

- The Ravensthorpe Shire community strongly 'bought-into' the certainty that was communicated throughout RNO's implementation and operation regarding the longevity of the relationship between the community and RNO being 25 years.
- There is resentment about the way that the Company managed the communication of the departure from the community.
- Most agree that mining has to be a part of a future 'economic mix' for Shire development.
- There is agreement that the overall experience is one that should inform future government policy and planning for other ventures, and for leaders of other communities impacted on by mining companies.

This study also contains an analysis of the Deakin University Wellbeing Index, also known as the Australian Unity Wellbeing Index (Australian Centre on Quality of Life, 2008) for the Ravensthorpe Shire community. These scores have been compared to previous wellbeing research undertaken by the Research Centre for Stronger Communities in the Region and with national averages. These show that the Shire scores below the national average *and* below the pre-RNO closure average in the domains of health and future security. Scores that were above the national average *and* the pre-RNO closure average were life-achievements, personal relationships, safety and community connectedness. The overall wellbeing Index Score was also slightly higher than the previous recorded Ravensthorpe average and the national average.

Finally, the study concludes that each of the place-based communities (Ravensthorpe, Hopetoun, Jerdacuttup) have experienced the impact differently: Ravensthorpe as the regional centre; Jerdacuttup as the 'fence-line' neighbour of the RNO; and Hopetoun as the small coastal settlement that was transformed into a residential community for RNO workers.

Table of Contents

Executive Summary	3
Table of Contents	5
Figures	6
Abbreviations	6
Background and Context.....	7
<i>Ravensthorpe Shire and the Establishment of RNO</i>	<i>7</i>
<i>The Decision to Close RNO</i>	<i>9</i>
Methodology	9
<i>A Rapid Rural Appraisal Study.....</i>	<i>9</i>
Methods	10
Findings.....	11
Social Impacts.....	11
Personal impacts	13
Impacts on women	13
Impacts for the ‘fence-line’ neighbours in Jerdacuttup.....	14
Exploring wellbeing pre- and post-RNO closure	15
Communication.....	17
Reflecting on community capacity	19
Environmental Impacts.....	20
Economic and Business Impacts	22
Future regional development.....	23
Key Issues for Future Development	27
Conclusions.....	27

Figures

- Figure 1. Map of Ravensthorpe-Hopetoun District
- Figure 2. Comparison between Ravensthorpe Shire and Australian Averages for Wellbeing across Seven Domains Pre- and Post-RNO Closure Sources
- Figure 3. Comparison of Australian Personal Wellbeing Index between Ravensthorpe Shire
- Figure 4. Levels of support for the UNESCO Interpretation Centre for the Fitzgerald River National Park
- Figure 5. Levels of support for the 'Other Mining' options (e.g., Galaxy lithium mine) for the Region
- Figure 6. Levels of support for a road across the Ravensthorpe Range
- Figure 7. Levels of support for a harbour for Hopetoun

Abbreviations

ABS	Australian Bureau of Statistics
ASX	Australian Stock Exchange
FIFO	Fly-in/Fly-out
FRNP	Fitzgerald River National Park
JRWG	Jerdacuttup RNO Working Group
LGA	Local Government Area
NGO	Non-Government Organisations
PWI	Personal Wellbeing Index
RAAF	Royal Australian Air Force
RCSC	Research Centre for Stronger Communities
RNO	Ravensthorpe Nickel Operation
RRA	Rapid Rural Appraisal
'the Company'	BHP Billiton
tpa	tonnes per annum
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Background and Context

Ravensthorpe Shire and the Establishment of RNO

The Shire of Ravensthorpe is located 536km south of Perth (via Hyden), 186km west of Esperance (via South Coast Highway) and 293km east of Albany (Government of Western Australia, 2009, see Figure 1). It has a history as a gold and copper mining town, as well as a farming history in cropping and grazing. Some of the agricultural land was opened up during the boom years of the 1960s and 1970s (Ravensthorpe Shire, 2009; Mayes & Haslam McKenzie, 2008). In common with many other small rural communities, its mining history records a series of boom and bust cycles.

The Ravensthorpe Nickel Operation (RNO) was established by BHP Billiton as an open-cut mine with a hydrometallurgical process plant of estimated processing capacity of up to 50,000 tonnes per annum (tpa) of contained nickel and 1,400 tpa of cobalt (BHP Billiton, 2006). It is located within the small farming district of Jerdacuttup on Bandalup Hill, 35km outside of Ravensthorpe town (Department of Industry, Tourism and Resources, 2006). The RNO was expected to produce a mix of nickel and cobalt hydroxide intermediate product over 25 years (BHP Billiton, 2004). The expected mine life of RNO was quoted at 21 years as recently as October 2008 (BHP Billiton 2008b).

Pre-feasibility studies for the RNO had commenced in 2002 (BHP Billiton, 2005; DITR, 2006) with negotiations with local, State and Federal governments from 2000 (Australian Mining, 2006). The RNO was formally approved in March 2004 (BHP Billiton, 2008a), with agreements of contributions from the State Government (\$18m), Federal Government (\$9.8m) and BHP Billiton (\$9.5m) to develop multi-user infrastructure contingent on the workforce being residential (Department of Industry and Resources, 2008). The RNO was officially opened in May 2008 (BHP Billiton, 2008a).

In 2004, BHP Billiton committed to a locally based residential workforce with the majority of employees being housed in settlements in Hopetoun (BHP Billiton, 2004). This commitment to a residential workforce was based on the projected operational life of 25 years, with the residential workforce being established in the coastal town of Hopetoun (BHP Billiton, 2005). At that time, the residential workforce directly employed by BHP Billiton was estimated at 300 workers (plus their families), with hundreds more to be indirectly employed on the project (BHP Billiton, 2004). A more hybrid strategy of residential and fly-in/fly-out (FIFO) was eventually adopted, with residential workers based in both Ravensthorpe and Hopetoun, a bus-in/bus-out system from Esperance, and, following the extension of the Ravensthorpe airport, a FIFO system from Perth (BHP Billiton 2008b). As at mid-2008, the estimated long-term locally based residential workforce stood at 650 people (plus families), with more than 300 families reportedly resident in the community, and an estimated 450 families moving into the Region by the end of 2008 (Department of Industry and Resources, 2008).

Ravensthorpe Hopetoun District



Figure 1. Map of Ravensthorpe-Hopetoun District. (Retrieved 22nd April 2009 from <http://www.ravensthorpe.wa.gov.au/maps/maprav/view>)

This increase in the residential mining community is reflected in the Australian Bureau of Statistics (ABS) population growth statistics. The ABS reported Ravensthorpe as the Local Government Area (LGA) with the fastest increases in growth across the whole of Australia in 2006-2007 (ABS, 2008a). Although growth had slowed marginally in 2007-2008 (from 10.8 per cent growth in 2006-2007 to 9.1 per cent growth in 2007-2008), Ravensthorpe was still identified as the second fastest growth LGA across the whole of Australia, just below that of the Perth metropolitan area (ABS, 2009).

In parallel with the investment in mining infrastructure to establish the site, RNO also partnered with Western Australian and Commonwealth governments to establish and provide multi-user infrastructure, such as schools, housing, entertainments centres, an airport and roads (Australian Mining, 2006; BHP Billiton, 2009c; Department of Industry, Tourism and Resources, 2006). Before the opening of RNO, in order to prepare for the expected influx of new employees and their families, business initiatives in the Region were actively encouraged. The company financially supported the 'start-up' of a number of businesses in order to provide local goods and services for large contractors from outside the Region, and the expanding residential mining community (BHP Billiton, 2009c; Burrell, 2009; Department of Industry, Tourism and Resources, 2006). Given the range of mining and multi-user infrastructure investments, the RNO has been reported as the biggest investment in BHP Billiton's history (Australian Mining, 2006).

The Decision to Close RNO

The decision to 'ramp-down' and indefinitely suspend activities at the RNO was publicly announced on 21st January 2009 through the Australian Stock Exchange (ASX) (BHP Billiton, 2009a, 2009b). RNO staff members were notified at an onsite meeting held that morning (BHP Billiton, 2009a, 2009b). The RNO has since been cited by financial analysts as mostly responsible for BHP Billiton's \$US1.5 billion after-tax first-half write-down (Chambers, 2009). Subsequent to this announcement, it has been reported that 1800 RNO employees and contractors were dismissed (SBS, 2009)¹.

Since then, there has been much attention on the closure and the impacts for the Region in state, national and international media. In addition, a number of studies (variously funded) have been reported as being initiated in the Region, including: a review of the housing investment (Phillips, 2009); a review by the Western Australian office of the Commonwealth Workplace Ombudsman (SBS, 2009; Spencer, 2009b; L. Quealy - Workplace Ombudsman, personal communication, 9th April 2009); a Ravensthorpe Shire Council tourism review (Bowling, 2009); and a review by Tourism WA (Government of Western Australia, 2009).

Methodology

A Rapid Rural Appraisal Study

In the context of its previous research and community development activities within the South Coast Region, the Research Centre for Stronger Communities (herein RCSC) at Curtin University of Technology initiated this project to explore the range of impacts on the community within the Ravensthorpe Shire. A 'snapshot' of general community response can assist in the development of a locally informed baseline of information for future planning and strategic development in the Region, as well as providing an historical baseline document.

The research methodology adopted was influenced by the ongoing connections between communities in the Ravensthorpe Shire and the RCSC established since 2005. Previous research conducted by RCSC in the South Coast Region of Western Australia has focused on a range of social, economic and environmental sustainability and conservation issues. For more information see: <http://www.strongercommunities.curtin.edu.au>.

A 'Rapid Rural Appraisal' (RRA) approach complements previous research undertakings, as well as adding to baseline data previously collected. The RRA is a survey methodology conducted by multidisciplinary teams to capture insights from a purposeful sample of participants on a particular issue within a specific context (Dunn, 1994). The RRA approach reveals relevant information more quickly², which then enables researchers to interpret responses and transform local knowledge to inform development options (Dunn, 1994; SEAGA, 2001). The approach also provides an opportunity for the local people in the Shire to discuss and describe their

¹ This includes both the 300+ employees directly employed by BHP Billiton (Department of Industry and Resources, 2008) and others indirectly employed, for example, contractors to the RNO.

² RRA contrasts traditional, time intensive research methodologies in that it "does not attempt to collect a statistically valid sample" (SEAGA, 2001, p. 15), but seeks to reveal contextually based and relevant information rigorously but quickly.

awareness and reactions to closure of the RNO, as well as to capture their aspirational views of a very different future — one without large scale mining (SEAGA, 2001). The study enables findings from community responses to an immediate situation to inform future regional development, as well as contributing information to other communities faced with mine closures (Neil, Tykkäinen & Bradbury, 1992).

The RRA method collected information with a focus on the impacts of change to development activities in the Region. The approach included interviews, focus discussions, in-depth conversations, as well as monitoring of reporting and media commentary. The study drew on this evidence to enable 'information on changes in lifestyles, livelihoods, level of independence, contact with other areas, and also on the opinions of those affected' (McCracken, Pretty & Conway, 1988, p. 71). Experience has highlighted this as a particularly useful approach when there is an established relationship of involvement in the Region, as understandings of previous research results can be refreshed and reinterpreted on the basis of the current context and social climate.

In a commitment to research transparency, and to enable an opportunity for involvement in the study to residents of the Shire, the RCSC prepared a range of media releases targeting the local paper (*The Community Spirit*), State and regional ABC radio (ABC News, 2009; Rynne, 2009) and other State media. These media releases introduced the research project and its purpose, and highlighted opportunities for local people to participate in the project.³ The study had ethical approval from the Human Ethics Committee at Curtin University (RD30-07). All media releases were also approved by Curtin.

Methods

A respondent sample was established to reflect a broad range of perspectives of the closure of the mine for community in the localities of Ravensthorpe, Hopetoun and Jerdacuttup. Given the diversity of residential and farming communities within the Region, the research team took two approaches to empirical data collection, using purposive sampling for both⁴.

(1) Short, semi-structured interviews (completing a questionnaire) were undertaken with members of the community.⁵ Local businesses⁶ and community leaders, previous community researchers⁷, education professionals, local government representatives, and others were approached. Individuals were sent a letter of invitation to participate and were subsequently contacted to organise a suitable time for an interview. The

³ Research findings will be communicated back to the community in the same way, and copies of this report will be sent to those participants who requested one.

⁴ Purposive sampling gathers participants for research by targeting a particular group(s) of people based on the purpose of the research project. In this study, members of the business community, local community leaders, previous community researchers and other key community informants were targeted.

⁵ It should be noted that RRA does not attempt to collect statistically valid samples, or achieve large participant numbers to ensure valid 'power' and statistical validation; rather the purpose is to recruit a selection of participants based on the project context and needs.

⁶ All local businesses - with a residential/postal address listed in the local Chambers of Commerce web-based directory and the business directory located in the community paper (the *Community Spirit*) were invited to participate in the research.

⁷ The community researchers were members of the local community who assisted in a survey in the Ravensthorpe Shire and Region in 2007/08 (Williams et al., 2008). See <http://www.strongercommunities.curtin.edu.au> for more detail on the Community-as-Researchers approach.

research team visited the Region on 30th and 31st March, 2009 to undertake face to face discussions. Some interviews were also conducted by telephone.

(2) A farmers' forum with participants from the Jerdacuttup region was held as this area can be considered as 'fence-line' neighbour to the RNO site⁸ and has therefore had a long history of involvement with the mine. A local facilitator was engaged to coordinate the event and participants were recruited through purposive sampling techniques. The forum was held on the evening of 30th March 2009 at the Jerdacuttup Hall. A number of the participants from the farmers' focus discussion also completed the survey questionnaire.

Both data collection instruments sought information from study participants about the impacts of the closure of the RNO. In addition, the survey questionnaire included Australian Unity Wellbeing Index questions. This Index establishes a means of measuring life satisfaction and comparing individual and group wellbeing scores with national wellbeing averages. It provides an important comparison of life satisfaction in the Shire with national wellbeing measures.

Finally, in conjunction with the focus group and survey, a content analysis of media articles was undertaken, as well as a review of existing literature, including a number of reports and studies of the Region and the Shire.

Findings

The report summarises the impacts for the Ravensthorpe Shire community as a whole, as well as recording a range of impacts for different localities and groups within the Shire. It also contains reflections on environment and environmental impact. Findings also report on communication issues with the Company and within the Region; reflections on: community capacity; and future issues and options identified for regional development. This section is divided into three parts: social, environmental and economic impacts.

Social Impacts

A key finding from this study—two months post-closure—is an identified fragility and uncertainty about the future of the Shire, despite the many opportunities for the Region's future development. At the time of the study (March 2009), respondents noted that not everyone who intended to leave the Shire (both from the mining and pre-mining community) had done so. Although many families directly associated with the mine moved from the area within weeks of the closure announcement, some delayed their departure until after the end of the first school term in order to minimise the disruption in their children's lives. Respondents also expressed concern that the pre-mine population may also decline, specifically those involved in the small business sector and younger people.

There was a pervasive view that it was not possible to plan for the future of the Shire or Region while the community population remained this unstable. This state of 'flux' is best summed up by one respondent's comment "there is no 'us' yet", reflecting a

⁸ Figure 1 provides a visual understanding of the 'fence-line' neighbours' relationship between the RNO and the Jerdacuttup farming community. The RNO site is located on Bandalup Hill in Jerdacuttup as part of the Ravensthorpe Shire.

diminished sense of who, in fact, is 'the community'. Therefore population decline and instability were consistently identified as significant impacts arising from the closure. The social costs, whether having to move to another community or loss of friends/family, should also not be overlooked. The 'population decline' identified as a significant issue for the Shire and the Region has a real connection to people's personal support systems and lives.

Among some of the benefits of the RNO identified by study participants was a significant population increase, higher incomes and greater cash flow in the community, as well as more lifestyle opportunities, both on a personal and community level. Associated with subsequent population decline, was what could be termed an 'altered aspirational' dimension of life within the Shire. Prior to recent mining, Ravensthorpe Shire income levels were significantly lower than the State average (ABS, 2008b, 2008c). Although figures indicate that income levels are still below the State average (ABS, 2008b, 2008c), there has been a doubling of income levels for Shire residents in the past five years (Buckley & Stehlik, 2008).

The closure of the mine had undermined the scale of future possibilities, with one respondent describing what had occurred as "a loss of expectation". Both short and long-term residents identified being 'more conscious' of the lifestyle choices accompanying the advent of mining, including infrastructure improvements, social and recreational aspects and business opportunities. The opinion was that losing this potential was reason enough for some to leave the community. Out-migration of younger people, and potentially small business operators, was seen to be directly linked to the now reduced opportunities for business and employment in the Shire.

At a personal level, the most significant impacts for many have been financial and personal stress, often related to business, reduced income (and in some cases failing businesses), and diminished opportunity.⁹ There is recognition by many of the new conditions and limitations for business development and growth or, if not self-employed, the now significantly reduced opportunities for career development. This is further exacerbated by a paucity of childcare services in the Region. Employment, business and development opportunity decline was also identified as a significant regional issue.

There are a range of impacts for the Shire due to the closure of the RNO that are viewed as having a 'ripple effect' to the broader region, including Albany, Esperance and Jerramungup. It is important to identify that given the range of these impacts, and the legacy of the closure of the RNO in terms of people's livelihoods and futures, the adjustment of the community to the closure of the RNO will take time, and recovery will not be immediate.

Box 1. Personal Impacts

- increased personal/family stress;
- family impacts (e.g., impacts on school, concerns for families future);
- a range of social impacts (e.g., loss of friends and family, a net loss of people from the region, reduced community and social based lifestyle, loss of residential mining lifestyle);
- a need for some to relocate their family from the Shire;
- a loss of services (both public services such as health care and other business services);
- financial consequences (e.g., loss of income, cash flow changes, inability to repay loans);
- employment impacts (e.g., lost employment, reduced employment opportunities, or employment now restricted to agriculture/small business);
- personal business impacts (e.g., reduction and/or closure of their business, lost income, decreased financial equity);
- housing impacts (e.g., destruction of equity of properties, depressed housing market);
- regional development negatively impacting on personal lives (e.g., uncertain future, lost opportunities).

⁹ It should be noted that there were also a number respondents who reported that there were no direct impacts of the closure of the RNO on their personal lives.

Personal impacts

The range of personal impacts focused mostly on issues associated with personal, familial and financial stress. Box 1 highlights the range of personal impacts identified by participants, with impacts for community and service groups listed in Box 2.¹⁰ Some more positive impacts were also identified, including a return to a 'sleepy town' and a reduction of traffic. Previous research predicted that one of the impacts of the establishment of RNO and the changing demographic was the possibility for fragmentation between miners and non-miners, particularly in regards to income differentials (Centre for Social Responsibility in Mining, 2007). This current study has highlighted that, on reflection, some of the positive impacts related to a 'balancing' of these differentials between people in the community.

Impacts on women

A significant theme which emerged was the specific impact the closure had on women in the Region, particularly regarding the lack of future opportunities for their participation in the workforce. The study identified that this could be viewed from two perspectives.

First, those women who came into the Shire as newcomers and whose husbands had perhaps previously been FIFO miners, had been keen to relocate to Hopetoun for the opportunity for a residential lifestyle. Given the availability of childcare in the Hopetoun community, this model of residential mining allowed for both a balanced family life and women's potential participation in the local workforce. Previous research has revealed the increased availability and accessibility of mine-related jobs for both long-term and newly arrived female residents of the Ravensthorpe Shire (Mayes & McKenzie, 2008) during both the construction and the start-up phase. The RCSC study has confirmed this as a lost opportunity.

Second, there is now less opportunity for women remaining in the community to become involved in careers and workplace participation, as there are increasingly limited opportunities for employment due to the reduced number of businesses. Those women who were, to various degrees, self-employed, were challenged by needing to remain in paid work, with the reduction of the business viability due to a decreased population. While this was also confirmed in the discussions of the impacts for the business sector, there is a different and perhaps greater impact for women. There is currently significantly less opportunity in future for women's involvement due to a lack of child-care availability within the Shire. It was suggested by a number of participants that this

Box 2. Impacts for Community and Service Groups

- loss of volunteers (e.g., clubs losing volunteers, identified as particularly important for Hopetoun);
- impact on sporting, art and recreation club memberships (funds for clubs also affected);
- loss of potential sponsorships for NGO and volunteer groups;
- more stress on volunteers and services (e.g., emergency services);
- positive impact of infrastructure improvements (e.g., less accidents in the community, less requirement for emergency services);
- negative impact on health care provision and medical services (i.e., hospital and hospital auxiliary, loss of doctor from area, potentially losing chemist);
- potential opportunity for donation of buildings for a small childcare centre in Ravensthorpe;
- no or negligible impact on some sporting and community groups (e.g., some groups not affected, and/or some groups will be back to pre-mine operation levels).

¹⁰ Participants were asked to identify the three top consequences or outcomes of the closure of the mine for themselves, their business (or place of employment), any community groups they are a part of, for the Shire, for the Region, and for the environment. The information contained in boxes 1-6 are the issues raised by participants across these categories. These findings were analysed using NVivo qualitative analysis program to identify the main themes and issues identified by participants. This analysis revealed a wide range of themes in regards to most significant impacts for themselves, business and community groups, the Shire and Region, and the environment.

will result in increased isolation and a reversion to a more 'traditional' rural family structure and roles.¹¹

Impacts for the 'fence-line' neighbours in Jerdacuttup

The consequences of the RNO have been experienced differently by the Jerdacuttup community, given their proximity to the RNO and their involvement in negotiations as 'fence line' neighbours early in the mine's establishment. For this community, their sense of 'loss' began when friends and families moved off neighbouring farms to 'make way' for the RNO. Both the process leading up to and then the actual mine opening, created some divisions, leaving some in the community feeling hurt, disjointed, fragmented and divided from others. The loss of vibrancy in their community as people who were long term friends and families left the area, and others became employed in areas other than agriculture, was highlighted. Participants in the focus discussion commented that although it positively influenced the availability of job opportunities in the Region, it also divided the community as people became less available for volunteering and sporting commitments.¹²

As a result, this group felt Jerdacuttup was now at a different stage of 'mourning' than the general Ravensthorpe Shire Community, which was only beginning to grapple with loss. They felt that they have already experienced their grief regarding losses of friends and family before the mine opened, compared with the broader community who are only now dealing with more immediate, social network losses since the closure. Jerdacuttup participants also described that much of the broader Ravensthorpe Shire community had benefited more broadly in terms of the new residents and vitality it brought into the Region, and thus the impact of the shock of the closure was greater for them.

It was a consistent theme in the study that as the mine has decimated much of Bandalup Hill and it has now left people remembering the physical landscape 'the way that it used to be'. Forum participants commented on how the bright lights from the mine lit up the night sky, and the way the mine is viewed from their homes as a significant visual change and impact. Participants identified the loss of the natural environment (and the historic relationship with the natural environment of these farmers) *and* a loss of relationships with people who historically have been a part of that environment. That is, there has been a loss of both place and people.

The farmers at the Jerdacuttup confirmed that they were at a different stage of grief (resolution) than the broader community, because their 'losses' occurred when the mine was negotiated and constructed. As a result, they also confirmed that they were in a different position to contemplate their (and the Jerdacuttup community's) future, compared to the rest of the Ravensthorpe Region.

They positively and collectively identified the significant cultural investments (including change and loss) that have been made due to the mine being their immediate neighbour. They were also consistent in articulating the investment the Jerdacuttup community will need to make to re-imagine a future without the active mine, while still living next door to a closed site. There was some hope expressed that (some of) the vitality of the Jerdacuttup community that existed before the mine

¹¹ These findings of constraints of lack of access to child-care systems and the traditional role of women in rural families support the findings of Mayes & Haslam McKenzie (2008).

¹² This confirms findings by Mayes & Haslam McKenzie (2008) and the Centre for Social Responsibility in Mining (2007).

was opened could now be revived. Two positive legacies identified were: (1) that the large social divide between miners 'with money' and the rest of the community could now be better tempered¹³; and (2) an improved infrastructure such as better bitumen roads.

Finally, the participants also identified some specific issues related to the management and maintenance of the suspended mine for those in the Jerdacuttup vicinity, as will be discussed in the 'environmental impacts' section.

Exploring wellbeing pre- and post-RNO closure

In the previous research undertaken in the Shire, a well-being analysis was included and replicated in this RRA study. The comparison between wellbeing in the Ravensthorpe Shire pre- and post-RNO closure (see Figure 2), also compares wellbeing according to national averages.¹⁴ Figure 3 provides an indication of the subjective wellbeing in the Region.

In previous reports (e.g., Stehlik et al., 2008; Williams et al., 2008), analysis showed that there were some wellbeing domains in the Shire of Ravensthorpe below the Australian average. This RRA analysis identified scores below the national average *and* below the pre-RNO closure average in the domains of health and future security. Scores that were above the national average *and* the pre-RNO closure average were life-achievements, personal relationships, safety and community connectedness.

Previous research in the Ravensthorpe Shire identified that health was well below the Australian average.¹⁵ This lower-than average score for health is a component of a national trend of lower health scores in regional and remote Western Australia (Stehlik et al., 2008; Buckley, 2006). However, what is concerning is that this already very low health score in Ravensthorpe (December 2007) has now reduced even further (March 2009). Figure 2 shows the decline in health scores across this time period and the comparison to the Australian average. This significant decline could be attributed to a number of factors: the closure of the RNO; the impacts of the closure on increased personal, family and financial stress; increased uncertainty, for example about the global financial crisis and the Region's future; and other issues relating to stress within people's personal lives.

A further critical factor that may be influencing this score is that many participants reported on (the reducing) availability of health care services in the Ravensthorpe Shire. As indicated previously in this report, this includes the actual loss of the local GP service (with the nearest medical treatment now 1.5 - 2.5 hours away in Esperance or Albany), and the potential loss of the dentist and pharmacy in the Shire (Burrell, 2009). The lower reporting of future security also can be explained by these financial and community contexts, uncertainty as to the future of the mine, and the

¹³ This fragmentation of the community due to the establishment of RNO and differentials in income has been reflected in previous research (Centre for Social Responsibility in Mining, 2007).

¹⁴ To assess well-being within the Ravensthorpe Shire and other localities for projects in RCSC, the Deakin University Wellbeing Index, also known as the Australian Unity Wellbeing Index (Australian Centre on Quality of Life, 2008) was used. This Index has been used consistently across the *Sustaining Gondwana* research program to enable comparisons across time in the South Coast Region. It should be noted, however, that the cohorts that responded to the Ravensthorpe Range (Dec 07) and RRA (March 09) surveys are different. Therefore, any interpretations of the data are generalised reflections on community well-being, and are not specifically representative of the well-being of any person or group within the community. Also given the nature of RRA, the sample sizes used for the analysis will also prohibit a 'generalising' of the results to the broader Ravensthorpe population. See <http://www.australianunity.com.au/au/info/wellbeingindex> for more information on the Wellbeing Index.

¹⁵ This health score is a self-reported indication of health, including mental and physical health.

future of other economic/development options for the Region. The impact of these layers of stress and uncertainty can also be reflected in the reduced wellbeing score for 'future security' which is below the Australian and the Ravensthorpe December 2007 averages for wellbeing.

Analysis from this study highlights increases in mean wellbeing scores in the areas of personal relationships, life achievements, safety and community connectedness (see Figure 2). These scores can be seen to reflect the capacity that communities have to deal with a particular challenge or crisis. Regional and remote communities generally report a higher sense of safety and community connectedness (Buckley, 2006). This positive aspect to interpersonal relationships and community connectedness is reflected in other uses of the Wellbeing Index in times of disaster and stress. For example, recently a measure of well-being was taken after the Victorian bushfires and the Queensland floods. There was a reported increase of national well-being in particular a strengthened sense of community, despite or perhaps because of, the extreme circumstances (Cummins, Woerner & Chester, 2009). This can be linked to external threats creating a situation where people are more socially cohesive (Australian Unity, 2009). However, it should also be noted that previous studies have highlighted a drop in this measure as the long-term impacts of changes are absorbed.

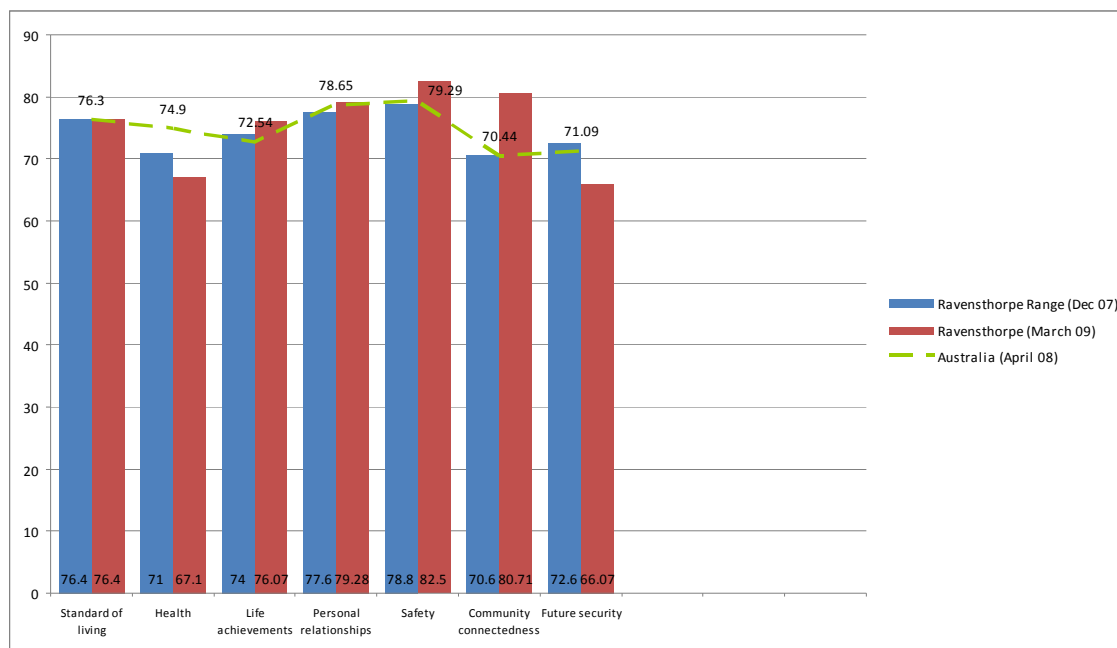


Figure 2: Comparison between Ravensthorpe Shire and Australian Averages for Wellbeing Across Seven Domains Pre- and Post-RNO Closure Sources: (Blue) Ravensthorpe Range (SCNRM Community Values Study) (Red) RRA (Green) Australian Wellbeing Index. (Retrieved April 2008 <http://www.australianunity.com.au/wellbeingindex/#glance>)

This increasing sense of wellbeing in the domains of safety, achievement, personal relationships and community connectedness are reflected in the overall picture of wellbeing for the Ravensthorpe Shire. The overall wellbeing score is slightly higher than the Australian average, and higher than the average documented by the RCSC in December 2007 (see Figure 3). These scores, despite being higher, are still within the normative range for personal wellbeing scores.

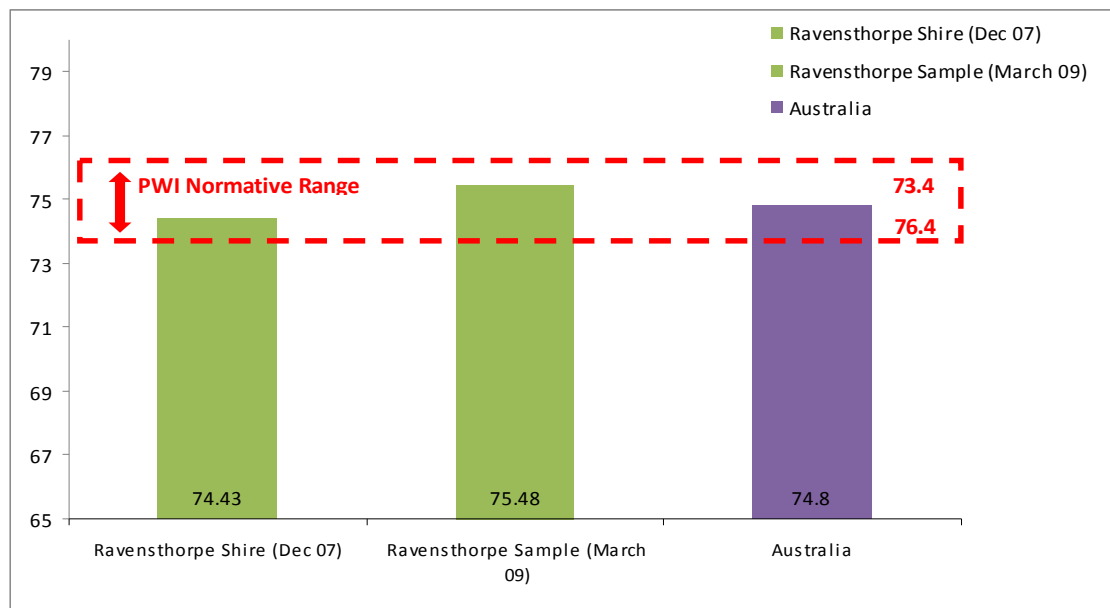


Figure 3. Comparison of Australian Personal Wellbeing Index (PWI) between Ravensthorpe Shire (December 2007; March 2009) and Australian Subjective Wellbeing Score.

Communication

One area of important focus of the RRA was an understanding of community perceptions about information and communication, particularly the management of the 'arrival' and 'departure' of the RNO. A great deal of publicity associated with the 'arrival' and the planning for infrastructure, housing and regional development for the RNO, focussed on the anticipated longevity of the mine's operations in the Region (BHP Billiton, 2004, 2005, 2008b; Department of Industry and Resources, 2008). The majority of those who completed the questionnaire believed, or strongly believed, the time frames that they understood to be promoted by the RNO, namely a 20-30 year operation life span.

Predictability and consistency is generally seen to be a factor that reduces perceived level of threats and results in a greater sense of safety about behaviour (Vodicka, 2006). Nearly 80 per cent of respondents indicated that the RNO was consistent in its behaviour and had created a sense of reliability about its operations across the lifespan of its investment in the Region. This consistency and commitment across the lifespan of operation could explain why there was trust and belief in the time frames suggested by the RNO, and how the community did not generally perceive it as a 'threat' that the mine might not have a 25 year life.

The RNO was viewed to have moderately shown concern and compassion in dealing with the community (64.29 per cent of respondents agreeing/strongly agreeing). However, only half respondents agreed/strongly agreed that the RNO provided avenues for open communication and information sharing. Many respondents indicated that although there were formal feedback and communication strategies from the RNO (e.g., newsletters), when trying to elicit open interpersonal communication with the Company they personally found it difficult.

Respondents were divided in their perceptions of the accountability of the RNO for its decisions across the lifespan of operation. Just over 42 per cent agreed that RNO

were not accountable, 25 per cent neutral and 25 per cent agreed that the RNO had been accountable. This analysis highlights the disparity between the high scores related to RNOs consistency and how this does not translate to perceptions of accountability.

Respondents recalled being aware of changes to RNO operations prior to formal announcement of the mine's closure. For example, at the Jerdacuttup forum it was recalled that mention had been made in the Jerdacuttup RNO Working Group (JRWG) of the possibility of mine closure in October 2008, in line with the commencement of the global financial crisis. Other respondents recalled that there had been reports on ABC radio two weeks before closure about the possibility and that there were rumours in both Hopetoun and Ravensthorpe circulating. This recollection is consistent with speculation reported on in the media and from financial analysts. For example, media searches undertaken for the study show suggestions from analysts as early as November 2008 that there was a possibility of closing the RNO (McHugh, 2008). However, according to other media reports (Burrell, 2009; Klinger, 2009) definitive answers regarding the closure were not forthcoming from the Company even on the day before the announcement.

Although many people that participated in the interviews and the forum indicated that they had heard rumours about the possibility of the RNO 'ramping down', most reported that they officially heard about the closure on the day of the formal announcement (21st January). From those reporting such rumours, many reflected hearing that the RNO could be scaling back rather than a complete suspension of the operations.

This discussion regarding perceptions of consistency and reliability of RNO provides a context for understanding the significance of the financial and social investments of individuals, businesses and the Shire community, and the pervasive and significant impacts of its closure. The certainty in this long-term relationship with RNO, and the social/cultural/financial investments of community based on this certainty, is reflected in these comments by a local businessman:

BHP said 'we will be here for 25 years'. They didn't say 'there is a possibility we might not be here for 25 years' ...They sold the message 'commit because we are committed' (cited in Burrell, 2009).

On reflection of the nature of the relationship with RNO since the announcement of the mine's closure, one participant said:

We had been courted by BHP for years, and then it just became a one night stand.

Another described the influence that the Company has had on the community as similar to:

... the ripple effect of being on a water bed and a big giant comes and sits on the bed with you, and then it sits there for a little while, and then the giant just quickly stands up and leaves.

These comments reflect a belief in the long-term nature of the relationship with RNO. The aggrieved nature of community members' responses to the severing and termination of the assumed 'long-term partnership' between the Ravensthorpe Shire community and the Company is evident in such comments. Participants reflected on the difficulty of open and transparent communication with RNO across its lifespan,

which also then became a feature of the communication of its closure. Many participants called for the need for earlier, clearer and more honest communication to the workers, businesses and the community about plans for its operation/suspension.

Communication issues with other agencies, the government and other groups within the Shire, particularly opportunities for engagement after the RNO closure, was another focus of the study. Some 75 per cent of study respondents indicated that they had attended at least one of the many community forums held in the Region since the closure. Some participants confirmed that there have been a considerable number of meetings and forums which may have put pressure on people's time and energy. For others, the lack of invitations to such community meetings had left them feeling excluded. In general, the majority of respondents considered that the community had ample opportunities to have a say about the issues (64.29 per cent). Overall, people agreed that State government and Federal government agencies were most responsive to the needs of the Ravensthorpe Shire community.

Reflecting on community capacity

The study invited respondents to consider how potential capacity within the Region has been increased through the (albeit brief) experience of having RNO as a neighbour. For example, members of the JRWG explained the positive impact of the experience and the subsequent learnings from the process which, they believe, will give them strength and capacity in any future negotiations with large companies. They reflected that they had lacked the necessary resources when the Company first came to the community to fully participate in such high-level negotiations. It had been both difficult and costly to secure the appropriate information necessary for such negotiation. The commitment the RNO had made to the JRWG, and the resourcing of that consultation process, was identified as having left a positive legacy of skills and knowledge.

Another theme that emerged regarding capacity was the positive experience of an increasingly culturally diverse community as a result of the influx of population, much sourced from overseas.¹⁶ This opportunity for economic and cultural diversity was viewed as a potentially important legacy for the Shire. The recognition of the richness of this experience meant that the closure of RNO resulted in a sense of lost potential, as the majority of these 'new' families have now moved on. A number of participants reflected on the way that a small remote community can become insular, and that this experience in connecting with the international world had pushed the community to be more accepting and flexible in a positive way. It has also meant that the increase in population had given both sporting and voluntary organisations an additional boost.

Finally, in the discussion on capacity, a further important theme which emerged from interviews, survey analysis and forum discussion was concern that the community in the Ravensthorpe Shire should not be held responsible for the closure of the mine. As the study found, many respondents confirmed that they felt the decision to close

¹⁶ This reflects research findings from the Centre for Social Responsibility for Mining (2007).

RNO was based on factors not associated with either the capacity of the community to offer an environment for residential workforce or any other regionally based issues, such as infrastructure. Respondents confirmed that they felt that the reasons given by the Company for the closure of the mine were: the falling nickel price¹⁷, issues regarding engineering design flaws and/or the complexities associated with processing by pressure acid leaching and that this did not include a perceived lack of capacity of the Ravensthorpe Shire community to engage with the Company. This distinction is important for a number of reasons. First, different reasons cited for the closure will directly influence future perceptions of the current and potential capacity of the Ravensthorpe, Hopetoun and Jerdacuttup communities to engage with industry. Second, if public perception was to shift towards the RNO operation being confirmed as a failure of residential mining, this in turn could influence future attitudes towards such communities and consequent decision-making and expectations. Study respondents were concerned to ensure that the Ravensthorpe Shire experience is not held up as an exemplar to support decisions not to commit to residential mining instead of considering the important political, site specific processing/engineering issues and financial factors associated with commodity prices in a volatile global market that, in combination, lead to the closure.

Environmental Impacts

A range of environmental impacts were identified, and these included both positive and negative impacts resulting from population decline and less financial investment in the Region. The environmental impacts identified by participants are captured in the text boxes (Box 3) on this and the following page. A number of respondents discussed potential positive environmental impacts, including reduced lights at night, less noise from the mine, and less stress on the environment and beaches now the population has declined.

Previous research undertaken by the RCSC highlighted that the natural environment was considered a major attractor of, and valuable asset to, the Region by local residents (Stehlik et al., 2008). Issues related to the environment remain of importance to the Shire and the Region more broadly, and have been of regular interest in both the community media (*Community Spirit*) and the state media (e.g., Banks, 2009).

One environmental concern in the Region is the ongoing management of the Fitzgerald River National Park (FRNP). Post-RNO closure, the suggestion of a road through this Park, joining Hopetoun with Bremer Bay to the west, added a further layer of contention to the future of FRNP management. This issue emerged as a proposed Hopetoun/Bremer Bay road was publicised as an option for the economic development in the Ravensthorpe Shire by the Western Australia Premier Colin Barnett (*Kalgoorlie Miner*, 2009b). The study highlighted the controversial nature of this in the community, with a

Box 3. Environmental Impacts

- positive impact of fewer people in Shire (e.g., less visitors results in less impact on local environment, FRNP, beaches etc; quad bikes less of an issue; reduced noise, emissions, pollution);
- positive community response (e.g., active and vocal concerns about dust from the RNO site, more people now interested in the environment – greater awareness);
- the ongoing 'industrialisation' of Ravensthorpe now reducing;
- Hopetoun identified as potentially becoming a 'green town' (e.g., becoming plastic bag free);
- negative impact of closure of RNO (e.g., housing developments already destroyed natural environment, negative effect due to lack of future funding, less tourism and lack of focus on area results in less environmental awareness, loss of funds for the environment);
- future rehabilitation of the mine site remains vague (e.g., questions regarding legal parameters of BHP Billiton regarding revegetation of site, the bare Bandalup Hill and need for maintenance, potential increases in weeds and feral animals on RNO site);
- *environmental impacts continued on next page....*

¹⁷ See http://www.lme.co.uk/nickel_graphs.asp for an overview of the status of the nickel price over the last financial year(s).

relatively equal division of support/non-support for such a future proposal.

Respondents reported that an idea of a road through FRNP has been 'floating around' the community for a number of years before the Premier's recent announcement. Apart from Tourism WA's Report (Government of Western Australia, 2009), no scoping studies completed which have explored this idea in a detailed manner have been identified. Also importantly, given that the road would cut through the UNESCO Biosphere Reserve within the FRNP, there appears to be no evidence of any Environmental Impact Assessment having been commissioned. The Tourism WA Report concludes that while such a road may have some tourism merit, it also identifies a number of major impediments (such as cost, environmental impact and the difficulty of indicating road benefits beyond socio-economic benefits of tourism) to the idea offering a viable short or mid-term option for future development (Government of Western Australia, 2009). Respondents highlighted that infrastructure that compromised the natural amenity of the environment (for example, road proposals through the FRNP, the Hopetoun Harbour and others) created community division in levels of support. This is discussed further in the economic section.

Issues (as well as some confusion regarding legal responsibilities) of environmental rehabilitation of the RNO site have gathered increasing attention in the media (e.g., Banks, 2009) as well as in the broader community. Respondents were asked to consider options for rehabilitation and environmental management of the site. Analysis highlights that the majority did not agree that the site should be immediately revegetated for *aesthetic* purposes (64.28% disagree/strongly disagree), while 60.71% agreed that it should be immediately revegetated for *environmental* purposes. The responses to whether the whole site should be dismantled were evenly divided between support, non-support and neutral opinions.

The study identified that the local environment around the mine site is now viewed as a potential physical health risk, and a source of stress and concern for much of the community. For the farmers, there were also specific 'on-farm' issues raised regarding the management of weeds and feral animals due to the site being heavily cleared and now unused. Concerns over the future maintenance of the site can be seen as having longer-term impacts on people's quality of life and livelihoods.

Discussion at the farmers' focus group highlighted continuing concern as to the care and maintenance of the site now that it has been 'mothballed' and also to the specific impacts for the Jerdacuttup 'fence-line' community. These concerns focussed on the maintenance of the site in regard to weed, water course, pest, and dust management. Respondents discussed their concerns regarding the potential of asbestos fibres (white mineral fibres) in the orebody and about the health risks and long-term issues related to managing dust drift from the mine into their community, and that mitigation was dependent on the continuation of formal 'wetting' procedures. They also pointed out that such dust could potentially impact on other areas in the Ravensthorpe Shire, depending on prevailing wind patterns.

Box 3 continued. Environmental Impacts

- negative site specific issues (e.g., rumours of BHP Billiton burying goods at the mine, mineral fibres and dust problems, erosion, impact of the mine on flora and fauna, tailings dam issues, wastage and environmental impact of concrete powder going down water courses);
- environmental aesthetics - there was a negative perception of the environmental aesthetics of the site (e.g., destruction of the hill, scar on landscape, revegetation may occur but hill destroyed, an ongoing eyesore);
- environment seen to be 'safer' now BHP Billiton has left the region.

Box 4. Economic Impacts

- impacts on business, industry and employment (e.g., contractors and businesses in these areas that relied on RNO and workers' business);
- regional growth and development decline (e.g., loss of opportunity, decline in investments and development);
- heightened awareness of the area (e.g., due to mine closure, linkage with other tourism investments such as Australia's Golden Outback);
- impact on social and human capital (e.g., population decline, new and young people now leaving);
- impact on housing and land values;
- legacy and learnings (e.g., roads fixed as a legacy, distrust of big companies, loss of opportunity, identity and future).

Economic and Business Impacts

Impacts were similar at the Shire and regional levels, particularly regarding the impacts on development, housing stocks and population decline, which were also identified. Respondents highlighted the potential of a 'ripple effect' of the closure of the RNO for the broader region (Albany, Esperance and Jerramungup). Specific economic and business impacts identified by participants are highlighted in Box 4 and Box 5.

Although there are some similarities in impacts across the Shire, variations exist in the impacts and issues over these different geographic and demographically distinct communities. For example, respondents were asked which groups they considered the most impacted upon by the closure of the RNO. In order of most identified impact these were: Hopetoun businesses; people employed as contract workers by RNO or BHP Billiton; and Ravensthorpe businesses. Other frequently cited groups (one third of respondents or more) were school children, homeowners, and people directly employed by RNO.

Hopetoun businesses were cited by respondents as significantly affected by the closure of the RNO, due to establishment of new business and concomitant establishment costs. Respondents reported that businesses were encouraged to establish in Hopetoun to service the increasing residential population (BHP Billiton, 2009c). Other issues raised specific to Hopetoun were: housing; childcare; loss of community vitality; and loss of sporting groups and other community associations due to population decline.

Ravensthorpe businesses, while identified as bearing some of the impact, were considered less impacted than Hopetoun businesses. However, Ravensthorpe businesses were identified in the top three groups impacted.

A number of respondents noted the impact on housing prices and infrastructure in the Region, with homeowners being identified as one of the most affected groups within the Ravensthorpe Shire. This was also considered to also have some bearing on the housing market in Esperance (the base for a bus-in/bus-out system for RNO workers) (BHP Billiton, 2008b). Currently, there are a number of suggested strategies for dealing with the excess housing stock in the Shire (Government of Western Australia, 2009). The topic of housing options will be discussed further in the 'future regional development' section of these findings.

A major identified impact for the Ravensthorpe Shire and the broader region was a loss and decline of infrastructure, businesses and services. There was a particularly strong concern regarding the future of health services, with the doctor leaving town, and the pharmacist also considering closing his business. This concern for a future lack of health care services is exacerbated by the large distances between the

Box 5. Business Impacts

- staff job losses (in mining, but also in other services and industries);
- impact on finances (e.g., loss of income);
- need to close or relocate;
- changed roles or emphasis of business/employment (e.g., people's job role changing due to changing and increased support needs of people in the community);
- impact on goods and services (e.g., excess stock due to expansion of businesses);
- reduced funding for services or service options (e.g., less facilities, lack of numbers for volunteers, lack of capacity for breadth of services);
- increased isolation (due to inability to participate in workplace, particularly for women);
- a positive impact for some of now being able to secure labour for trades related jobs (e.g., now able to get contractors, farm workers etc);
- positive legacies for business (e.g., new infrastructure, new services);
- negative legacies for business (e.g., loss of Bendigo bank opportunity, loss of expertise in community, different business options now no longer viable);
- some businesses indicated they were not affected (e.g., agribusinesses).

Shire and other major regional centres that have health care services¹⁸. Although this is a community wide issue, the lack of health care services was seen to be a particular issue for elderly people and families with younger children. As was reported earlier, these systemic healthcare issues are negatively impacting upon community wellbeing and health.

Future regional development

There were a range of organisation and future management impacts identified for the Shire that focused on the decline of population, businesses and services, including infrastructure provision and maintenance. These impacts are identified in Box 6.

Tourism WA commissioned a Tourism Asset Assessment of the Region in February 2009 (Government of Western Australia, 2009). This explored the viability of a number of tourism options for the Ravensthorpe-Hopetoun Region, in the context of tourism being one of the economic drivers to offset the closure of the RNO (Government of Western Australia). The RCSC study similarly explored perceptions of tourism options for the Region in the context of other economic and development options for Ravensthorpe and Hopetoun that had been suggested in the media, by politicians and by local business and community leaders.

Analysis identifies that respondents showed overwhelming support for biodiversity based tourism (UNESCO Interpretation centre) and 'green' development options (e.g., alternative power etc). Significantly, findings confirm that the Ravensthorpe Shire community continues to be open and supportive of a range of opportunities to establish a stable trajectory for the Region's future.

Most respondents agreed with the statement "I love tourists, they are great for the Ravensthorpe Shire", with others saying that they "tolerate tourists and the minor inconveniences they cause because they are good for the community"¹⁹. There was recognition of the positive impact of tourism on the Ravensthorpe Shire (89.29 per cent indicated tourism influenced the Shire somewhat positively, positively or very positively). All those who completed the survey had had some level of contact with tourists, with most interacting with tourists as part of their job and/or meeting them around town and talking to them; while others reported having contact with tourists when they ask for directions or making friends with tourists during their stay in the Shire. The survey asked: "when you think of tourism in the Ravensthorpe Shire, what words first come to your mind". The main responses can be grouped into the themes found in Box 7.

Box 6. Impacts for Organisation and Management of Shire of Ravensthorpe

- population, businesses and services decline and impact on potential resources;
- direct impacts on Shire Council (e.g., Council consists of volunteers, increased workloads for both Shire president and councillors; potential stress as Shire Council deals with closure 'fall-out');
- that Council now has responsibility for upkeep and maintenance of new infrastructure;
- managing the location specific impacts for Hopetoun into the future (e.g., major impact was for Hopetoun community, loss of 'vibe' from Hopetoun community; impact of development on aesthetics of Hopetoun);
- future considerations of the impact upon development (e.g., more land has been released than before.);
- the imperative of a lack of employment and 'future', particularly for younger people (e.g., employment options for young people);¹
- dealing with the economy of the Shire (e.g., revenue impacts, financial and community distress).

¹⁸ Ravensthorpe is 186km west of Esperance and 293km east of Albany. Hopetoun is 50km further from these regional centres via Ravensthorpe.

¹⁹ Most of the tourism questions for the survey were based on questions which have been applied in various locations in Queensland, Victoria and Tasmania. (see Hughes, M., Deery, M., Wood, D., Fredline, L., Whitely, Z., & Lockwood, M. (2009). *Estimating the economic, social and environmental value of tourism to protected areas*. Report for Sustainable Tourism CRC, Gold Coast, Australia) for more detail.

The most supported development options in the Region were: increasing tourism infrastructure, encouraging other mining options, and supporting 'green' options for tourism and energy.^{20 21} A UNESCO Interpretation Centre for the Fitzgerald River National Park (see Figure 4), other mining options such as encouraging junior mining companies (see Figure 5), and 'green options' such as the wave-power plant for desalination, an eco-resort at Hopetoun and a mallee-based biomass power plant were all strongly supported by respondents.^{22 23} An Interpretation Centre for the FRNP and the development of mid-range holiday accommodation through acquiring the Seaview Eco Village as accommodation for the Region were highly recommended tourism options by Tourism WA (Government of Western Australia, 2009).

Despite the closure of RNO, there remains strong support for other mining options, such as Galaxy and Tectonic²⁴. The community showed a high level of support for junior mining companies wanting to invest in the Region comparative to the level of support for the RNO re-establishing its operations. In addition, there remains strong support for consideration of options for other industries and tourism ventures for the Region. Respondents identified that there should be an economic 'mix' of opportunities, rather than expectations relying on one single industry.

Other opportunities for the Region's future created more division in responses, indicating a relatively even division in the community for support/non-support of the following options: the Fitzgerald River National Park road, a harbour for Hopetoun, or a road through the Ravensthorpe Range (see Figure 6).²⁵ For example, the road through the Fitzgerald River National Park had just over half of the people surveyed indicating support/strong support for this option.

²⁰ The economic and tourism options included as part of the survey were created through a media analysis and compiling the options reported in the media and other public sources. Therefore, a number of options identified by Tourism WA, such as the focus on Hamersley Inlet, were not included, as the Tourism Asset Assessment report was not available at the time the Stronger Communities survey was undertaken.

²¹ The options identified as priorities by Tourism WA in the Region are: the acquisition of the Hopetoun Seaview Eco Village from BHP Billiton to convert into mid-range tourism accommodation; extending the Breakwater at Hopetoun Jetty, including extra boat moorings and another boat ramp; maintaining empty buildings and infrastructure to manage any sense of 'emptiness'; sealing Hamersley Drive to East Mount Barron and Hamersley Inlet, and upgrading accommodation and visitor facilities at Hamersley Inlet; and developing 'recreational' tours such as walking, hiking, canoeing, kayaking, and seasonal botanical/wildflower tours (Government of Western Australia, 2009).

²² Percentages of support for these options are as follows: the UNESCO Interpretation Centre (92.9 per cent support/strongly support,); other mining options (89.3% support/strongly support,); Eco-Resort (78.6 per cent support/strongly support); wave-power plant for desalination (82.1 per cent support/strongly support); mallee-based Biomass power plant (64.3 per cent support/strongly support).

²³ The suggestion of a biomass plant (grain stubble and oil mallee) to fuel a 12 mW station is under consideration for AUD\$57m in Federal funding, to which the WA State government is still to commit (Cannon, 2009)

²⁴ Galaxy Resources Ltd signed a Memorandum of Understanding with the Esperance Port Authority to evaluate the export of lithium from a mine 2 kms north of Ravensthorpe (*Kalgoorlie Miner*, 2009b; Spencer, 2009a). Tectonic Resources have also been exploring the opportunities for a goldmine in the Region (*Kalgoorlie Miner*, 2009a; Spencer, 2009a)

²⁵ Percentages of support for those options are as follows: Road through the Fitzgerald River National Park (53.6 per cent support/strongly support); harbour for Hopetoun (57.1 per cent support/strongly support); Ravensthorpe Range (57 per cent not support/strongly not support).

Box 7.
Thoughts about tourism in the Ravensthorpe Shire

- limitations (e.g., isolation, unknown region, tourism not the only answer, inadequate infrastructure for tourists, slow not dynamic industry, difficult to quantify benefits of tourism);
- missed opportunities (e.g., tourists just drive through, limited, disorganised, limited);
- natural assets (e.g., wilderness, natural vegetation, scenic, nature based, flora and wildflowers, geology, untouched, remote, beautiful beaches, camping, hiking, whales etc);
- places (e.g., Fitzgerald River National Park, Hopetoun, national park, Biosphere, aesthetics Ravensthorpe);
- poor services and accommodation (e.g., tourists pass through due to lack of services, now less services, lack of accommodation);
- potential (e.g., immense potential, a lot of work and planning to make it proper tourist destination);
- tourism types (seasonal);
- tourist types (seen as mostly 'grey nomads').

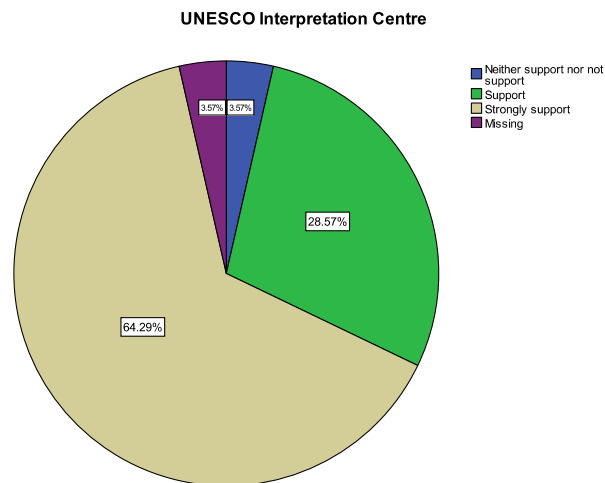


Figure 4. Levels of support for the UNESCO Interpretation Centre for the Fitzgerald River National Park.

The FRNP road option has not been identified by Tourism WA as a viable short-term option but is seen as a holistic strategy for long-term development due to a number of impediments, including environmental impact (Government of Western Australia, 2009). There was relatively strong support for the harbour for Hopetoun (see Figure 7). The suggestion by Tourism WA for this harbour involves extending the breakwater at Hopetoun Jetty, plus constructing extra boat moorings and another boat ramp. The suggestion of a road through the Ravensthorpe Range was not supported (57% not support/strongly not support).

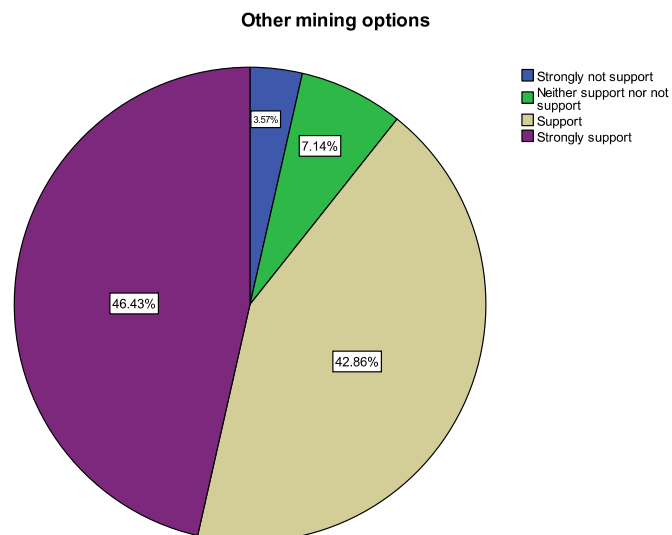


Figure 5. Levels of support for the 'Other Mining' options (e.g., Galaxy lithium mine) for the Region.

Participants were also given the opportunity to suggest other options for the Region's future (some of which had been discussed in local media) and these responses included: an RAAF Chinese Flying School; a regional prison; the development of an aquaculture industry; wind power infrastructure to sell to the grid; tourism events and promotions; an environment study centre; and the funding of a regional strategy.

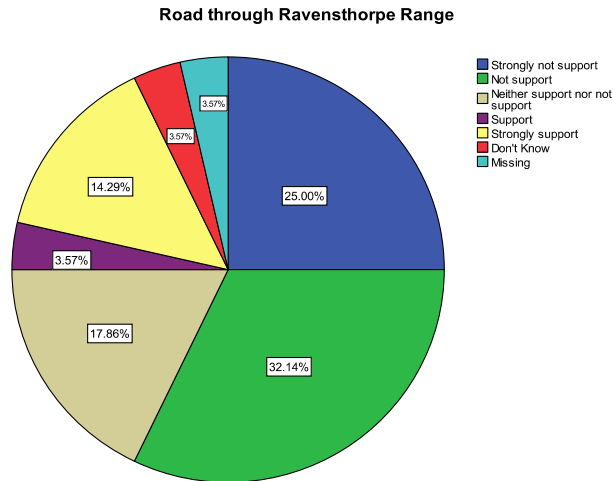


Figure 6. Levels of support for a road across the Ravensthorpe Range.

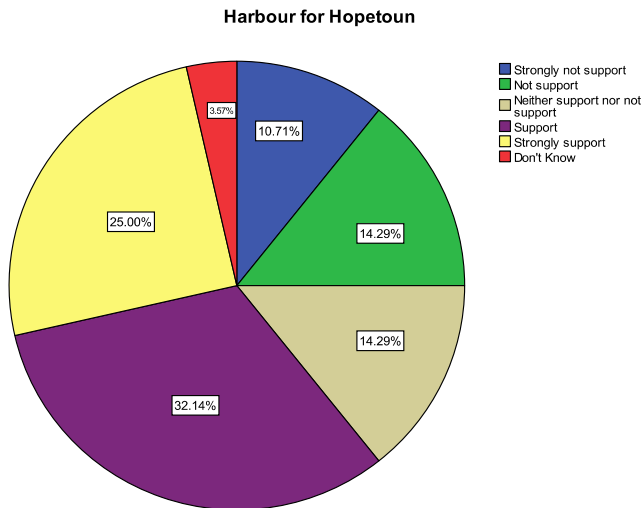


Figure 7. Levels of support for a harbour for Hopetoun.

Key Issues for Future Development

This section highlights a number of key issues that the community considers necessary to achieve future development in the Region. The study sought comment on where leadership for the Region should be sourced in order to achieve future goals and development. The majority of respondents indicated support for leadership from the State government, local business leaders (including the Chamber of Commerce), and other local community leaders. There was also a view that leadership should come from the local government. Most respondents were less inclined to the view that leadership from the Region's future would come from the Federal government, established farming families, other mining companies or from the Progress Associations. Participants were asked to suggest other opportunities to contribute to future decision making for the community and a range of themes that emerged from this question. These opportunities are identified in Box 8.

Participants highlighted that when contemplating options for the Region's future, the changed cultural landscape in the Shire of Ravensthorpe needs to be considered. That is, the possibilities and expectations associated with a growth community and economy due to the RNO have now been offered to the community. Although many participants indicated that the community 'will now go back to the way things were', others identified that this was an unlikely scenario. This is not necessarily negative, just that the expectations and opportunities for increased quality of life have been raised and realised for many in the community. Both the cultural and social losses (e.g., friends and family leaving the community etc), and the cultural, social and financial gains (e.g., greater access to employment opportunities and community vibrancy) have influenced and have changed the community. Any future development options would need to be considered and implemented in light of these reflections.

Conclusions

This RCSC study has provided a range of evidence-based reflections on the range of impacts for individuals, businesses, community groups, the Shire, the broader region, and the environment. It has also captured issues of communication with large corporations. Lessons learnt, legacies, and increased capacity for the community in partnering with industry and mining in the future have been documented.

The study identified that there are a range of impacts of the closure of the mine for different groups of people in the community. The impacts associated with the mine closure have been different depending on geographic locality. Those identified by participants as most impacted by the closure were Hopetoun businesses, BHP Billiton contractors, and Ravensthorpe businesses. The major common impact across the Shire and the Region is population decline, and the resulting decline of infrastructure, businesses and services. There was a general sense of anxiety as to the future of vacant housing stock, and the impacts of the

Box 8. Opportunities for Future Decision Making in the Shire of Ravensthorpe

- community consultation mechanisms (e.g., need for dialogue with community of 'big business' not just with the community leaders, opportunities for public voicing of concern, meetings not to be held 'behind closed doors');
- legacies and learnings from the process (e.g., not opening a business on the basis of promises, learning from warnings from stock market, need for businesses to have a longer window of warning of closure of large industry);
- features of the mining lifecycle to be better communicated (e.g., exit strategies need to be articulated, be open with community and slowly ramp down rather than non-communicated exit, more information needed prior to the closure);
- progressive processes for the community development;
- Shire and regional planning (e.g., regional think-tank needed, following up with existing regional plans, basic infrastructure improvement for water and electricity needed);
- the community needs time to consolidate (e.g., time needs to be taken for the community to settle, the impact hasn't been immediate - businesses will struggle as more people leave);
- tourism and other solutions seen as important.

closure on businesses and employment. The loss of opportunity for a diverse, economically active and young population in the community was of significant concern. The closing down of the medical and health care services available to the community has created a high level of anxiety in the community regarding health. The need to address systemic health care issues for the community in regards to medical related services is evident.

Environmental impacts of the closure of RNO are mixed between positive impacts, where less people result in less impact on the environment, and negative, such as less funding for the environment and concerns about RNO site maintenance. Overall, there is overwhelming support for biodiversity based development such as the UNESCO interpretation centre for the FRNP, and 'green' development options, such as alternative power. Infrastructure and development that compromises the natural amenity of the environment creates community division in support.

As well as biodiversity tourism and green development, there is a range of tourism and other economic options (including other mining and other industry) that the community views as positive steps forward for the community. It is recognised that a viable regional future requires an integrated economic framework. The overall experience of the closure of RNO is considered to be one that should inform future government policy and planning for other ventures, and for leaders of other communities impacted on by mining companies.

The Shire is currently a 'community in flux', with the adjustment and recovery of the community to the closure of the RNO being something that will happen gradually. However, there are opportunities and mechanisms that can be adopted to assist the community in directing their future towards development options. Participants considered it important for any future regional decision making include: open community consultation mechanisms; effective Shire and regional planning; and time to consider and consolidate development futures. While the Ravensthorpe Shire community is open to a range of development options, any future opportunities will need to have more inbuilt reassurances and 'exit plans' embedded into communication and negotiation with the community.

References

- ABS (2009). *Regional population growth 2007-2008*. [ABS 3218.0]. Canberra, Australia: Commonwealth of Australia.
- ABS (2008a). *Regional population growth 2006-2007*. [ABS 3218.0]. Canberra, Australia: Commonwealth of Australia.
- ABS (2008b). *National regional profile: Ravensthorpe (S) (Local Government Area)*. Canberra, Australia: Commonwealth of Australia.
- ABS (2008c). *National regional profile: Western Australia*. Canberra, Australia: Commonwealth of Australia.
- ABC News (19th March 2009). Study to examine nickel closure fallout. [Radio transcript]. ABC News, Australia. Retrieved 20th March 2009 from <http://www.abc.net.au/news/stories/2009/03/19/2520619.htm>
- Australian Centre on Quality of Life (2008). *The Australian Unity Wellbeing Index*. Retrieved 22nd April 2008 from <http://www.australianunity.com.au/au/info/wellbeingindex>
- Australian Mining (26th May 2006). *Ravensthorpe mine opens*. Retrieved 9th April 2009 from <http://www.miningaustralia.com.au/Article/Ravensthorpe-mine-opens/173086.aspx>
- Australian Unity (2009). *Wellbeing monitor* (April 2009). Retrieved 6th May 2009 from <http://www.australianunity.com.au/wellbeingindex/>
- Banks, A. (2009). Ravensthorpe closure 'leaves scar on land'. *The West Australian*, 22nd April 2009.
- BHP Billiton (2004). *BHP Billiton commits to residential workforce for Ravensthorpe Nickel Project*. Retrieved 9th April 2009 from <http://www.bhpbilliton.com/bb/investorsMedia/news/2004/bhpBillitonCommitsToResidentialWorkforceForRavensthorpeNickelProject.jsp>
- BHP Billiton (2004). *The Ravensthorpe Nickel Project and the Yabulu Refinery Expansion: Overview*. Retrieved 6th May 2009 from <http://www.bhpbilliton.com/bbContentRepository/News/RelatedContent/RYINOverviewPaper.pdf>
- BHP Billiton (2005). *Relationship building is key to managing socio-economic impacts of the Ravensthorpe Nickel Project. Socio-Economic Case Study*. Retrieved 9th April 2009 from <http://sustainability.bhpbilliton.com/2005/repository/socioEconomic/caseStudies/caseStudies39.asp>
- BHP Billiton (2006). *BHP Billiton approves revised costs for Ravensthorpe Nickel Project*. Retrieved 4th May 2009 from <http://www.bhpbilliton.com/bb/investorsMedia/news/2006/bhpBillitonApprovesRevisedCostsForRavensthorpeNickelProject.jsp>
- BHP Billiton (2008b). *Australian Site Tour Ravensthorpe Nickel Operation*. Retrieved 9th April 2009 from <http://www.bhpbilliton.com/bbContentRepository/docs/ravensthorpeSitePresentation08.pdf>
- BHP Billiton (2008a). *Resourcing the future: Annual report 2008*. BHP Billiton: Melbourne, Australia.
- BHP Billiton (2009a). *BHP Billiton Results for the half-year ended 31 December 2008*. BHP Billiton: Melbourne, Australia. Retrieved 6th April 2009 from <http://www.bhpbilliton.com/bb/investorsMedia/news/2009/bhpBillitonResultsForTheHalfYearEnded31December2008.jsp>
- BHP Billiton (2009b). *Changes to BHP Billiton's nickel business*. [Press Release]. Retrieved 6th April 2009 from <http://www.mining-journal.com/company-news/bhp-billiton/changes-to-bhp-billitons-nickel-business>
- BHP Billiton (2009c). *Support for Ravensthorpe employees and communities*. [Press release]. BHP Billiton: Melbourne, Australia.

- Bowling, B. (2009). \$40k for tourism study. *Kalgoorlie Miner*, 28th March 2009
- Buckley, A. (2006). *Baseline survey report: South Coast Biodiversity Awareness Project*. Perth: Alcoa Research Centre for Stronger Communities, Curtin University of Technology.
- Buckley, A., & Stehlik, D. (2008). *Technical Report: Social Impact Assessment of Mount Cattlin project in Ravensthorpe Shire, Western Australia*. Perth, Western Australia: Research Centre for Stronger Communities, Curtin University of Technology. (unpublished).
- Burrell, A. (2009). The town that BHP killed. *The Australian*, 18-19th January 2009.
- Cannon, A. (2009). Biomass plant could light up Ravensthorpe. *Albany Advertiser*, 21st April 2009
- Centre for Social Responsibility in Mining (2007). *Monitoring the contribution of Ravensthorpe Nickel-Nickel West to the regional community*. Australia: Centre for Social Responsibility in Mining, University of Queensland.
- Chambers, M. (2009). Analysts chop BHP forecast. *The Australian*, 20th January 2009. Retrieved 15th March 2009 from <http://www.theaustralian.news.com.au/business/story/0,,24934748-36418,00.html>
- Cummins, R.A., Woerner, J & Chester, M. (2009). *The wellbeing of Australians – The effects of fires in Victoria and floods in Queensland*. Australian Centre on Quality of Life, Deakin University: Victoria, Australia. Retrieved 6th May 2009 from <http://www.australianunity.com.au/wellbeingindex/>
- Department of Industry, Tourism and Resources (2006). *Leading Practice Sustainable Development Program for the Mining Industry: Community engagement and development*. Commonwealth of Australia: Canberra.
- Department of Industry and Resources (2008). *Prospect: Western Australia's International Resources Development Magazine, June-August*. Retrieved 6th May 2009 from [http://www.dmp.wa.gov.au/documents/Prospect_JUN08\(1\).pdf](http://www.dmp.wa.gov.au/documents/Prospect_JUN08(1).pdf)
- Dunn, T. (1994). Rapid Rural Appraisal: A description of the methodology and its application in teaching and research at Charles Sturt University. *Rural Society*, 4. [Electronic Version]. Retrieved 6th March 2009 from <http://www.csu.edu.au/research/crsr/ruralsoc/v4n3p30.htm>
- Government of Western Australia (2009). *Hopetoun-Ravensthorpe Tourism Asset Assessment. Industry Development*. Tourism WA, Government of Western Australia: Western Australia.
- Hughes, M., Deery, M., Wood, D., Fredline, L., Whitely, Z., & Lockwood, M. (2009). *Estimating the economic, social and environmental value of tourism to protected areas*. Report for Sustainable Tourism CRC, Gold Coast, Australia.
- Kalgoorlie Miner (2009a). Tectonic keeps an eye on the wind. *Kalgoorlie Miner*, 26th February 2009.
- Kalgoorlie Miner (2009b). Support for Coast Road. *Kalgoorlie Miner*, 13th March 2009.
- Kalgoorlie Miner (2009c). Galaxy expands lithium tenements. *Kalgoorlie Miner*, 2nd April 2009.
- Klinger, P. (2009). BHP mine call puts public cash at risk. *The West Australian*, 20th January 2009.
- McHugh, B. (2008). *BHP Billiton no longer wants Rio and could shut its Ravensthorpe mine*. [ABC Radio National Broadcast, 26th November 2008]. Transcript retrieved 17th April 2009 from <http://www.abc.net.au/rural/wa/content/2006/s2430516.htm>
- Mining Journal (21st January 2009). BHPB cuts workforce and closes Ravensthorpe. *Mining Journal*. Retrieved 9th April 2009 from <http://www.mining-journal.com/production-and-markets/bhpb-cuts-workforce-and-closes-ravensthorpe>.

- McCracken, J.A., Pretty, J.N., & Conway, G.R. (1988). *An introduction to Rapid Rural Appraisal for agricultural development*. U.K.: International Institute for Environment and Development.
- Phillips, Y. (2009). BHP selling 10 Hopetoun Homes. *The West Australian*, 25th March 2009.
- Ravensthorpe Shire (2009). *Mining* [Electronic Resource]. Retrieved 9th April 2009 from <http://www.ravensthorpe.wa.gov.au/mining>
- Rynne, N. (2009). Legal action ongoing. *Kalgoorlie Miner*, 6th April 2009.
- Socio-Economic and Gender Analysis (SEAGA, 2001). *SEAGA Field Handbook*. [Electronic Resource]. Italy: United Nations. Retrieved 26th March 2009 from <http://www.gdnonline.org/resources/seaga-field-handbook.pdf>
- Spencer, B. (2009a). Hopes and dreams go down with BHP mine. *The West Australian*, 28th February 2009.
- Spencer, B. (2009b). Federal probe into BHP mine sackings. *The West Australian*, 3rd April 2009.
- Stehlik, D., Buckley, A., Williams, C., Majer, J., & Harris, R. (2008). *Towards convergence: Technical report on biodiversity and resource use stakeholder values for the Ravensthorpe Range*. (Final Report for Project 04SC1-06i). Perth, Western Australia: Research Centre for Stronger Communities, Curtin University of Technology
- Neil, C., Tykkilainen, M., & Bradbury, J. (Eds). (1992). *Coping with closure: An international comparison of mine town experiences*. London: Routledge.
- Vodicka, D. (2006). *The four elements of trust*. [Electronic Resource]. pp. 27-30. Retrieved 6th May 2009 from <http://www.plcWASHINGTON.org/trust/resources/4-elements-of-trust.pdf>.
- Williams, C., Buckley, A., Stehlik, D., Majer, J., & Harris, R. (2008). *Milestone report No. 2. Community stakeholders' values and resource use attitudes and perceptions*. (Second Report Project No. 04SC1.06i). Perth, Western Australia: Research Centre for Stronger Communities, Curtin University of Technology.

