



The mega-projects paradox and the politics of risk, hope and mistrust: Capturing localised impacts of the boom/bust cycles of Australian mining.

[Link to publication record in Manchester Research Explorer](#)

Citation for published version (APA):

Browne, A., & Buckley, A. L. B. D. S. A. (2009). *The mega-projects paradox and the politics of risk, hope and mistrust: Capturing localised impacts of the boom/bust cycles of Australian mining.* (Sustaining Gondwana Working Paper Series). Curtin University, Research Centre for Stronger Communities.
http://strongercommunities.curtin.edu.au/local/pdf/Working_Paper_21_comb_2010.pdf

Citing this paper

Please note that where the full-text provided on Manchester Research Explorer is the Author Accepted Manuscript or Proof version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version.

General rights

Copyright and moral rights for the publications made accessible in the Research Explorer are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

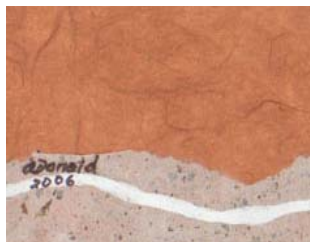
Takedown policy

If you believe that this document breaches copyright please refer to the University of Manchester's Takedown Procedures [<http://man.ac.uk/04Y6Bo>] or contact uml.scholarlycommunications@manchester.ac.uk providing relevant details, so we can investigate your claim.



The mega-projects paradox and the politics of risk, hope and mistrust: Capturing localised impacts of the boom/bust cycles of Australian mining

ALCOA FOUNDATION'S CONSERVATION AND SUSTAINABILITY
FELLOWSHIP PROGRAM



DR ALISON L. BROWNE
PROFESSOR DANIELA STEHLIK
DR AMMA BUCKLEY



Abstract

In a nation that had enjoyed unprecedented economic, mining, infrastructure and development growth over the last two decades, there has been a range of strong responses to the economic downturn of 2008 by industry, business and global corporations operating in Australia. Following the promises made regarding the longevity of mining development in many regions, many state, and local governments, and local communities invested in the anticipated boom in their regions. As a direct result of the global downturn, a range of mines closed or suspended operations at their Australian sites. This paper explores the concept of the mega-project paradox, which captures the circumstances of proposals of large infrastructure and development projects often not fulfilling their promised potential. Taking the recent experience of one residential mining community in south Western Australia, this paper will introduce the multi-scalar impacts associated with mining decline. It will explore the mega-project paradox in an Australian setting, and seeks to understand the concepts of hope, trust, communication and mistrust in the development of relationships in an era of Corporate Social Responsibility, with a specific focus on residential mining. These reflections highlight the need for more accountable and transparent relationships between corporations and non-contractual stakeholders in order to plan for the impacts of (sudden) mine closure.



Dr Alison Browne is a Research Fellow with the Research Centre for Stronger Communities, and has a wide range of multidisciplinary social science interests in the areas of social and environmental sustainability, sustainable agriculture and urban water management.



Daniela Stehlik is one of Australia's leading social scientists working at the intersections of resiliency, human service practice and social cohesion focussing on families and communities in regional/rural Australia.



Amma Buckley is a research fellow with the Alcoa Research Centre for Stronger Communities and has a solid base in a range of qualitative Social Science research methods to engage and strengthen community capacity through local participation.



Introduction

In Australia, many towns can trace their history back to the ‘gold rush’ mine settlements of the 19th century (Davison 2005). Consequently there is a long history of mining communities established exclusively by companies (occupational community) or ‘normalised’ towns in local government areas (LGAs) made up of mining and other residents who live in the geographical area affected by the mining operations (Haslam McKenzie et al. 2009; Yakovleva 2005). As a response to economic reforms and international pressure from the mid-1980s, models of ‘long distance commuting’ known as Fly-In Fly-Out (FIFO) and more recently Drive-In Drive-Out (DIDO) have become the preferred models for mining projects that are geographically isolated, or considered to be short-term sites not warranting infrastructure investment (Chamber of Minerals and Energy 2005). Despite the popularity of the FIFO model, there are still a number of residential mining communities in operation within Australia (Chamber of Minerals and Energy 2005). These place based communities in close proximity to a company’s operations are also known as fenceline communities (Calvano 2008). What distinguishes these two types of mining towns is that place based residential mining communities rely on non-contractual (community, government, interest groups) stakeholder relationships and investments, as well as corporate investment.

A significant Australian industry affected by the global financial upheaval of 2008-2009 was the mining industry, with many mines across Australia choosing to slow, suspend or close down operations. Such practices are common for resource industries during periods of financial upheaval (MMSD 2002) however; the consequences for multiple stakeholders in the wake of this current mining bust have been considerable. These impacts have been particularly significant for towns established in a model of residential mining. This is because the impacts of closure affect not only the contractual stakeholders and shareholders of the mine site, but also those local communities and local governments that have invested in the development of a town and infrastructure to support the mine site and the increasing new population of residential workers.

This paper will reflect upon research undertaken by the authors in a remote part of south Western Australia – the Shire of Ravensthorpe. The Shire contained an open cut nickel-cobalt hydroxide mine and processing facility, located within a small

farming district (BHP Billiton 2005). This mine was the first to suspend operations in Australia after the 2008 crash, less than 9 months into a promised 25 year life of mine operation. In this paper the suspension and closure of this and other mining operations across Australia is likened to the internationally observed phenomenon of the ‘mega-project paradox’. The hallmark of such mega-projects is that they often do not meet their initial promises or fulfil expectations of benefits. This paper will reflect upon current corporate models of stakeholder obligation, including Corporate Social Responsibility (CSR) to understand the range of impacts for the place based communities affected by sudden closure, and the uneven distribution of risks, burdens and benefits from mega-projects, particularly in the context of economic uncertainty.

The mega-projects paradox and corporate social responsibility

Mega-projects, characteristically, are projects of technological complexity that are innovative and often experimental. They are implemented in a complex social and political environment, with a range of relationships between public and private investors and stakeholders (Priemus et al. 2008). Mega-projects in Australia, as in most of the developed world, are often implemented in a model of business-in-community (Lozano et al. 2008). This approach focuses on core business investments in combination with strategic social investments to address specific agendas for community and regional development (Reed & Reed 2009; UN Global Compact 2007). Socially relevant investments take many forms from using public involvement as a competitive edge for marketing, to a model where organisations partner with communities with a focus on establishing a social licence to operate within a community setting (Burke 1999; Lozano et al. 2008). These partnerships are part of the negotiations to establishing a social license, or psychological contract, to operate a residential mining model with acceptance of the local community (Global Mining 2002). As a result, local, place based communities are now often the sites in which multinational and other types of mega-project development (and failure) become contested (Calvano 2008).

There has been substantial reflection on the degree of “underestimated costs, overestimated revenues, undervalued environmental impacts, and overvalued regional development effects” (Flyvbjerg 2005, p. 18) from large scale mega-projects. The paradox of the situation is that in a world becoming more focused on large complex

infrastructure projects to deal with increasingly complex human needs, these very projects increasingly underperform (Flyvbjerg et al. 2003). Embedded in this paradox is that the social and environmental impacts of these projects are often not taken into account or miscalculated when considering project costs. These ‘extraneous’ costs and impacts are often revealed “during the ramp up period, [when] the reality of market estimates and true worth of the project are revealed” (Priemus et al. 2008, p. 6; Miller & Lessard 2000). Historically, the concept of mega-projects paradox has been used to describe the pattern of failures of European and North American infrastructure projects. This paper suggests that concepts of “technological complexity, social complexity, cost overruns, strategic behaviour, [and] contested information” (Priemus et al. 2008, p. 4) that underpin the developments of mega-projects also find applicability in Australian mining contexts. It is a particularly useful framework for critiquing the nature of corporate relationships with community.

Mega-projects generally fail to retrieve back any significant proportion of investment capital (human/social, financial, environmental) and the impacts of these failed investments are felt at multiple scales (Flyvbjerg 2005). As has been identified, mega-projects characteristically involve formal and informal contracts at multiple-levels of governance, including federal, state and local level players, as well as private companies and corporations (Altshuler & Luberoff 2003; Brousseau 2008; Priemus et al. 2008). Reflecting on stakeholder theory, in this paper we distinguish between contractual and non-contractual stakeholders (Mitchell et al. 1997; Phillips 1999). Contractual stakeholders include employees, contractors, shareholders, formal government relationships and any other entity which has a formal, legally binding business relationship with the company. These are also often known as network (reticular) based relationships (Mason & O’Mahony 2008). Non-contractual stakeholders include local neighbourhood and communities, civil society organisations, local governments and national governments (Usui 2006), with whom there are no legally binding contracts but individual and group psychological contracts which form a social license for the company to operate in that place based community. Non-contractual stakeholders make a range of social, psychological, historical and environmental investments and commitments to ensure success of the mega-project development in their region. Therefore, developing a residential mining community involves establishing both territorial (place based, local) and reticular (network based) legitimacy (Calvano 2008; Mason & O’Mahony 2008).

As contracts in mega-project development can be both formal (reticular, network based, legal) and informal (territorial, place-based, psychological, social), impacts of closure obviously reverberate in and around all of these layers of relationship and governance. Apart from a few exceptions (e.g., Browne et al. 2009; Findlay 1987; Flyvbjerg et al. 2003; Halvaksz 2008; Haney & Shkaratan 2003), much research has focused on the impacts of a failed mega-project for contractual stakeholders (e.g., van Marrewijk et al. 2008; Priemus et al. 2008). Some have drawn the conclusion that “we should see them [mega-project failures] as the result of normal practice of professionals operating with limited knowledge, but influenced dramatically by a range of ambiguous and uncertain external and internal forces” (van Marrewijk et al. 2008, p. 599). It has been identified that closures often allow for a positive change in a company, that is, moving onto new frontiers by allowing for corporate renewal (Halvaksz 2008). This positive outcome of corporate renewal for corporations may be another reason why mega-project failure is also calculated as being a normal part of business practice.

Viewing impacts solely through the perspective of contractual stakeholders and the corporation, and the failure of mega-projects simply as an aspect of normal business practice, is limited (at best), and highlights severe issues regarding business ethics and the accountability and responsibility of CSR initiatives. A major gap in current knowledge is the understanding of failure and closure (particularly sudden closure) for informal, non-contractual stakeholders, and representing the impacts of place based mega-project development as relevant for local communities (CHOCILCO 2002). Similarly, analysis of CSR also focuses on why businesses engage in CSR and the impact of CSR on business, rather than the impact to communities and society (Weyzig 2009). A focus on community and place-based impacts is particularly important in times of economic uncertainty and risk, as companies tend to fall back to traditional corporate governance modes when ‘times are tough’, where the overriding responsibility is to maximise shareholder returns (Mason & O’Mahony 2008).

CSR is generally considered a self-regulatory set of informal rules towards behavioural norms, customs, and self-imposed codes of conduct towards community and non-contractual stakeholders (Lozano et al. 2008; Usui 2006). Although community is often defined as one of the major *stakeholders* of mining activities (Yakovleva 2005), ultimate responsibility lies with the shareholders (Kolstad 2007)

with some arguing that the social responsibility in business is always to increase profits and CSR is a form of investment for corporations (e.g., Friedman 2008; Kolstad 2007; Reed & Reed 2009; Zammit 2003). However, as one of the major stakeholders of mining, communities are involved in creating a range of psychological contracts with the mining communities trying to establish its social license with that community. It is these contracts established with communities that corporations tend to, and legally can, let lapse during times of economic uncertainty. In order to understand the impacts of these failed mega-projects on communities who believe they have an agreed understanding on a social licenses to operate, it becomes important to consider the nature of these psychological contracts.

A psychological contract is a “perception of an exchange agreement between oneself and another party....The *perception* of mutuality, not necessarily mutuality in fact is the heart of the psychological contract” (Rousseau 1998, p. 665-666, italics in original). It is not a specific expectation, but a social tie that extends beyond what is considered to be normal business practice or courtesy to ensure a feeling of security, and is based on a notion of a diffuse, generalised obligation of reciprocity and exchange (Kleinrichert 2008). These contracts can be established at the individual level reflecting an individual’s belief about the terms of the relationship with another party, and at a group level (called a normative psychological contract) where members of a social unit (such as a community) share a similar set of psychological contracts with another party (such as an organisation) (Rousseau 1998).

This normative psychological contract, made up of a number of individual psychological contracts, most closely represents what the mining industry refers to as a social license to operate (Global Mining 2002). A social license to operate refers to the reputation and the acceptance of a company into a place based community through the establishment of relationships based on feelings of trust and reciprocity (Burke 1999; Stehlik 2005). This reputation is built on ‘intangibles’ such as “trust, reliability, quality, consistency, credibility, relationship, transparency” (Cowe & Hopkins 2008, p. 102). This reputation extends to a company being considered a ‘supplier of choice’, ‘employer of choice’ and particularly relevant for residential mining, a ‘neighbour of choice’ (Buckley 2009; Burke 1999).

In the absence of formal contracts, there is no tangible, legally defined obligation to community. As a result, economically and psychologically, many of the true costs of the closure and the breaking of the community-corporate relationship are

borne by the community (McNulty 1987). Community borne costs of failure reinforces even further a main feature of the mega-projects paradox, that is, “inadequate deliberation about risk and lack of accountability in the project decision making process” (Flyvbjerg et al. 2003, p. 6). This inadequate deliberation reflects the power differentials between corporate and community stakeholders, with the former having more control and influence, more options, and more resources to set the conditions with which they engage in, and retreat from CSR (Kleinrichert 2008; Reed & Reed 2009). Establishing residential mining communities, or any other place based initiative, with various types of individual psychological and normative psychological contracts to establish a social licenses to operate, reflects a ‘grey area’ of obligation definition for corporations, and challenges current conceptualisations of corporate responsibility and accountability to non-contractual stakeholders.

Reflecting upon the case study of the sudden mine closure in the Shire of Ravensthorpe will facilitate a discussion of the unforeseen place based implications of engaging with communities in CSR initiatives; highlight the need for a more comprehensive system for communication of uncertainty; and reflect upon the need for planning for closure that goes beyond current conceptualisations of contractual stakeholder and environmental obligations, in the context of increased social, political and economic risk, uncertainty and pressure. The contributions of this paper to the existing literature on mega-projects and CSR are three fold. First, the specific focus of this paper explores the range of impacts of closure for place based communities which are relatively dependent on the development of these mega-projects to support regional economic stability and growth. This focus is unique as the majority of research currently focuses on capturing impacts of mega-project failure for formal shareholders, stakeholders and the company. Increasing the focus on the range and significance of mega-project failure impacts for non-contractual stakeholders is important. Given that so many mega-projects fail, that the social, financial, and environmental investments required from the community are still not included as a final part of the negotiation of this social license and general calculation of project costs, including failure, needs exploring.

Second, current approaches to mining and industrial closure generally focus on the processes for planned closure (e.g., ANZMEC 2000; ICMM 2008; World Bank Group 2002), with forecasting, planning and communicating sudden closure notably absent. This paper highlights the need for adopting a more comprehensive approach to

planning for closure that takes into account both planned and sudden closure. Given the reactivity and volatility of many resource based industries to the financial markets (MMSD 2002), that not adopting a precautionary approach and planning for multiple types of closure when establishing social licenses to operate with communities is surprising, particularly given this is an approach increasingly supported by international organisations (e.g., Pellizzoni & Ylönen 2008; UNEP 2005).

Finally, the previous discussions highlight that uncertainty (which is both internal and external to organisations) is a common feature of mega-project development, success and failure. Uncertainty is always a feature of business investment and development, but often what is communicated to communities to guarantee buy-in is certainty and escalated expectation of benefits to be derived from the projects (Flyvbjerg et al. 2003). Communication of probable uncertainties particularly in the establishment phase of mega-project development needs to be reconsidered. Such an outcome may mitigate the current impacts at a local level from poorly communicated risks and uncertainties in a situation of mega-project failure by establishing more transparent and accountable relationships. The role of communication in the establishment of the social license and psychological contract required to operate in communities is highlighted as one of the mechanisms through which mistrust of mega-projects is developed.

Rapid rural appraisal methodology

This paper reflects upon the results from a Rapid Rural Appraisal (RRA) initiated by the Research Centre for Stronger Communities (RCSC) Curtin University, after the closure of the Ravensthorpe Nickel Operation (RNO) in Ravensthorpe, Western Australia in January 2009. The RCSC, through the *Sustaining Gondwana* program in the South Coast Region of Western Australia, had been involved in a number of research and community development activities on a range of social, economic and environmental sustainability and conservation issues in the region since 2005. Many of these activities were focused on the Shire of Ravensthorpe in which the RNO was based. The RRA aimed to develop a 'snapshot' of broad community responses, and the range of impacts, of the closure of RNO.

A 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). As Dunn argues, this approach reveals relevant information more quickly than traditional research methodologies, and enables researchers to interpret responses and transform local knowledge to inform development options. In doing so, the approach provided an opportunity for local people to discuss and describe their awareness and reactions to the closure of RNO, as well as to capture their aspirational views for the future, in light of the changes to lifestyles and livelihoods (McCracken et al. 1988).

The research consisted of a semi-structured interview questionnaire with members of the local community (local businesses and community leaders, community researchers from previous stages of research, education professionals, local government representatives, community groups and volunteers). A forum with farmers from the area directly next to the mine site was also held. Due to the residential nature of the mine, rather than focusing on mine-related employees, a whole-of-community approach to sampling was adopted. In conjunction with the appropriate focus group and survey analyses, a content analysis of media articles was undertaken, as well as a review of the existing literature, reports and studies in the Region and Shire. The RCSC released a working paper soon after the closure of the RNO, detailing the range of impacts captured, reflections on the relationship between the community and RNO and other potential mining companies in the region, and reflections on possibilities for regional development post-RNO. These detailed findings can be found at http://strongercommunities.curtin.edu.au/workingpapers_list.htm .

Sudden mining closure in the context of uncertainty: The case of Ravensthorpe, Hopetoun and Jerdacuttup, Western Australia

The Shire of Ravensthorpe is located 536km south of Perth, Western Australia, 186km west of Esperance 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 for mining during the boom years of the 1960s and 1970s (Ravensthorpe Shire 2009; Mayes & Haslam McKenzie 2008). As is common with many rural communities in Australia, Ravensthorpe's mining history records a series of boom and bust cycles. Physically, the Shire consists of the main drive-through highway

town of Ravensthorpe, the Jerdacuttup farming community, some 35 kms from Ravensthorpe, and a small community by the sea, Hopetoun, some 50 kms south of Ravensthorpe (see Figure 1). The Shire also contains a UNESCO listed biodiversity hotspot, the Fitzgerald River National Park.



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

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 small Jerdacuttup community is therefore the RNO’s closest ‘fenceline neighbour’. Much of the RNO’s promotional material discusses the expectation of producing a mix of nickel and cobalt hydroxide intermediate product for over 25 years (BHP Billiton 2004b). Indeed, the expected mine life of RNO was quoted at 21 years in October 2008 (BHP Billiton 2008b), five months after it opened and only three months before operations were suspended.

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 established in Hopetoun (BHP Billiton 2004a; 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 2004a). A more hybrid strategy of residential and fly-in/fly-out (FIFO) was eventually adopted. Residential workers were based in both Ravensthorpe and Hopetoun, a bus-in/bus-out system from Esperance was established and, following the extension of the Ravensthorpe airport, a FIFO system from Perth (BHP Billiton 2008b).

In 2004, BHP Billiton committed to a locally based residential workforce with the majority of employees being housed in settlements established in Hopetoun (BHP Billiton 2004a; 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 2004a). A more hybrid strategy of residential and fly-in/fly-out (FIFO) was eventually adopted. Residential workers were based in both Ravensthorpe and Hopetoun, a bus-in/bus-out system from Esperance was established 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). Related to this increase in the residential mining community the Australian Bureau of Statistics (ABS) population growth statistics reported Ravensthorpe as the LGA with the fastest increases in growth across the whole of Australia (including urban 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 and socially relevant 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 cost of establishing the mine was quoted as double the original budget allocated (Klinger 2009) which is a common feature of mega-project development (Priemus et al. 2008).

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 in 2008 (Chambers 2009). Subsequent to this announcement, it has been reported that 1800 RNO employees and contractors were dismissed (Tasker 2009). 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.

Understanding impacts in a declining rural Australia: The politics of hope

The true costs of closure —economic, environmental, social costs— are borne by the local communities in which mines are based (McNulty 1987). To understand these true costs, an appreciation of the historical social, economic and political status of

rural Australia is needed. One of the significant factors when exploring closure of mining for communities is the general trend of rural decline in Australia, and the importance of mining for many communities in securing a stable financial trajectory. A number of factors have led to this rural decline (including drought, export prices and restructuring of industries and ageing farm population) and as a result, support for rural communities has diminished strongly in recent years, compounded by grave problems regarding environmental fragility and human activity across Australia (Cheshire 2006; Dibden & Cocklin 2005). This has also resulted in reduced income and employment opportunities, a loss of services in rural Australia, and a range of other social and economic impacts (Hugo 2005).

As the price of nickel increased on international markets, the Shire of Ravensthorpe transformed from one such centre of rural decline, to one of the fastest growing LGAs in Australia by the mid-late 2000s. The Shire had income levels less than State averages, a result of its historical economy base in farming, small scale services and businesses, minimal tourism, and minor mining. The establishment phase of RNO doubled the income levels of the Shire (Buckley & Stehlik 2008) although even with the 'boom' these income levels still remain below the average of the State (ABS 2008b, 2008c). The promise of the life of the mine being for some 25 – 30 years naturally created optimism and hope of raising local standards of living to those which are expected and experienced in the rest of Western Australia. Study participants identified positive impacts of the mine including a significant population increase, higher incomes and greater cash flow in the community, infrastructure improvements, social and recreational aspects and business opportunities. Both short and long-term residents identified being 'more conscious' of lifestyle choices. The normative psychological contract or social license to operate established in this community was based on a politics of hope and potential for a more stable regional future.

One of the common place based impacts of closure identified in the literature is the multiplier effects on localities in terms of economy (McNulty 1987). These can be linkage multiplier effects for private and public sector stakeholders in the community directly connected to supply for the mine, and income multiplier effects impacting upon the purchasing power of people in the community and the revenue impacts for local governments (McNulty 1987). Associated with this income multiplier effect is what we would term an 'altered aspirational' dimension of life

within the Shire. The closure of the mine undermined future possibilities at multiple scales, with one respondent describing it as ‘a loss of expectation’ and reflecting on the reduced opportunities for development and growth. Losing this potential was reason enough for some to leave the community, with others expressing concern that the pre-mine population may also decline. The out-migration of younger people, who were staying for the opportunities afforded by the mine, as well as the loss of small business operators, was seen to be directly linked to the now reduced opportunities in the Shire.

Despite the many opportunities for the Region’s future development, including potential possibilities for other mining infrastructure, the study concluded there was an identified fragility and uncertainty about the future of the Shire. This state of ‘flux’ is best summed up by one respondent’s comment “there is no ‘us’ yet”, reflecting a diminished sense of who, in fact, is ‘the community’. This impacted on the community’s capacity to plan for the future while the population was unstable and that future was less than certain. The social costs, whether having to move to another community or loss of friends/family, can be considered as part of the grief over its closure.

Variations also exist in the impacts and issues over the different geographic and demographically distinct communities within the Shire of Ravensthorpe. As reflected upon earlier in the article it is an isolated Shire with Ravensthorpe town 186km west of Esperance and 293km east of Albany. Hopetoun is 50km further from these regional centres via Ravensthorpe. Hopetoun businesses; people employed as contract workers by RNO or BHP Billiton; Ravensthorpe businesses; school children; homeowners; and people directly employed by RNO were all identified as being significantly impacted groups. Hopetoun businesses were seen 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 in that town (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. 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 Shire. Currently, there are a number of suggested strategies for dealing with the excess housing stock in the Shire (Government of Western Australia 2009).

The economic impact on the contractors and small to medium enterprise businesses has a resultant impact on the decline of infrastructure, services and social services. There was a particularly strong concern expressed during the study, regarding the future of health services, with the only doctor leaving town, and the single pharmacist in Ravensthorpe also considering closing his business. This concern for a future lack of health care services is exacerbated by the large distances between the Shire and other major regional centres that have health care services. Our research showed that systemic healthcare issues are negatively impacting upon community wellbeing and health (Browne et al. 2009).

Understanding place based impacts as environmental change: Solastalgia, risks and myths

The natural environment is considered a major attractor of, and valuable asset to, the Region by local residents (Stehlik et al. 2008) and issues related to the environment remain of importance to the Shire (Browne et al. 2009). A range of environmental impacts were identified as a result of the mine closure, and these included both positive and negative impacts resulting from population decline and less financial investment in the Region. A number of respondents discussed potential positive environmental impacts from a reduced population and reduced mine activity such as less stress on the environment and beaches. An important issue is the degree of environmental change in the Shire as a result of the mine, and the social aspects of ongoing environmental management of the 'mothballed' site, which sits amongst national parks and a UNESCO listed biodiversity hotspot.

The issues of environmental change intersect with the discussion of psychological contracts and non-contractual investments in this case study. The social and environmental investments and sacrifices in establishing a psychological contract with a mine with a projected life of 25 years had a negative outcome, particularly for the fenceline farming community of Jerdacuttup. It was a consistent theme in the study, particularly for the people in Jerdacuttup, that the mine has decimated much of Bandalup Hill (see figure 1) a major landscape feature from which the ore was being

mined. This environmental legacy has now left people remembering the physical landscape 'the way that it used to be'. In the face of profound environmental change people can feel great distress, and a nostalgia for 'the way things were', even though they may still be in the same physical location or home environment. Albrecht uses the term 'solastalgia' – "the loss of or inability to derive solace from, the present state of one's home environment" (Albrecht 2006, p. 35; Albrecht et al. 2007) to characterise this feeling. There has been both a 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. It is often forgotten that a mine has a physical presence, which can have many interpretations; it has physical "landscapes of a particular kind; ones that the best practices of closure will find hard to erase. Mines are not merely extracting minerals, but are also marking time and space with their appearances" (Halvaksz 2008, p. 21). This was certainly the experience of many of the residents of Ravensthorpe and Hopetoun, despite being used to the many failed experimental mines which dot the landscape, or previously closed down sites which now are remembered by the tailings mounds left behind.

As a result of the closure, issues (as well as some confusion regarding legal responsibilities) of the environmental rehabilitation of the RNO site have gathered increasing attention in the media (e.g., Banks 2009) as well as in the broader community. The RRA 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. There was concern regarding the care and maintenance of the site now that it has been mothballed. There were also substantial 'myths' operating in the community regarding potential asbestos fibres (white mineral fibres) in the ore body and about the health risks and long-term issues related to managing dust drift from the mine into their community. Whether there is truth to the risks identified by the community regarding the long-term impact on quality of life, livelihoods and health at the closure of this mine is not the point. These pervasive community concerns post-closure speak to issues of inadequate communication with the community, particularly regarding environmental obligation and maintenance; and therefore the myth embodies a truth about the community's suspicions of environmental risks (see Dake 1992).

Mining and deindustrialisation should be seen as shaping the landscape and social histories of place (Rollwagen 2007; Jones 2008; Whitebread-Abrutat 2004). As Halvaksz (2008) suggests where mining is part of the social fabric of the town, it becomes a part of the landscapes social history. Although a mining company has left, the mining or the prospect for mining still continues as part of the potential regional identity and part of the future mix for a more stable economy (Halvaksz 2008). Also given the severity of the impact of the mine on Bandalup Hill, the “closure neither finalizes relations between all resident populations and mined spaces, nor does it end the desires instilled during the production. Recovered, replanted, and refilled, mines remain important sites for imaginative engagement, for contestation, and for multiple understandings of their creation and dissolution long after the company has left” (Halvaksz 2008, p. 29). As Collier and Scott (2009) highlight, “the lack of long-term policies for the after-use of scarred landscapes has created a vacuum that may give rise to conflict when planning eventually begins” (p. 276). The investment that the Shire of Ravensthorpe communities will need to make to re-imagine a future without the active mine and contemplating new regional futures, while still living next door to a yet another closed site is significant.

Understanding place-based impacts as a function of communication: The development of mistrust

RNO gained traction and a social license to operate based on the hope instilled in the community regarding what this promised development would bring to the region for the next 20-30 years. This hope was not about community greed, but raising the standard of living and income generation in the community to that which is experienced and expected by the rest of Western Australia: that is, a hope to not be in a state of decline with the rest of rural Australia. RNO arrived at a time when this was a region in decline, and it marked the first time that many in the community had negotiated their social license as part of such a large investment. As described previously, the differentials of power between community and corporations (Reed & Reed 2009) meant that many parts of the community identified that they were without the social and financial capital to negotiate the CSR initiative to their benefit in the same degree that RNO could negotiate. RNO in these negotiations communicated an absolute certainty about the mine’s lifespan in the region, creating psychological

contracts with the community based on the longevity of the relationship that it would have with that community – in some sense seducing the community with these promises. They did *not* communicate their expert knowledge of the known and recorded volatility of the resource markets (MMSD 2002), particularly nickel; they also did not communicate the necessarily experimental nature of the mining operation; and nor did they communicate that there was any likelihood that RNO would suspend operations at any early stage.

Certainty, not probable *uncertainty* was used by the company to guarantee buy-in of psychological contracts with individuals in the community, and a normative contract with the general community to invest social, environmental and economic livelihoods in the development of infrastructure to support the mine and its workers. These contracts were based on this premise (promise) of certainty and longevity of operations. In the context of Australian rural decline, the hope attached to large-scale and long-term mining development such as that represented by RNO, particularly economic and social stability for the communities, and the promise of employment for the younger generation of residents involved is significant. In fact, many researchers propose that trust actually is developed and characterised by hope and optimism as features of expectations of community-corporate relationships (White-Cooper et al. 2009).

Conceptually, discussion of mega-project development in European and American settings have included the idea of a ‘politics of mistrust’ where the history of failure of mega-project development has resulted in community and non-contractual stakeholder scepticism regarding large scale projects (Flyvbjerg et al. 2003). While such mistrust did not directly apply to when RNO was established in the region, it has developed over time. While in retrospect, it could be seen that there were some elements of mistrust in sections of the community during the start-up and construction phase, the strength of the ‘politics of hope’ overcame this mistrust at a community level.

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). The majority of respondents to the RRA indicated that the RNO was consistent in its behaviour and created a sense of reliability about its operation across the lifespan of its investment in the Region. This consistency and commitment, the communication of certainty, explains the trust and belief in the time frames and how

the community did not generally perceive it as a ‘threat’ that the mine might not have a long life. The majority of those involved in our research in the region believed, or strongly believed the time frames that they understood to be promoted by RNO (Browne et al. 2009). There was the perception of a mutual agreement between the community and the company of the time frames of operation (Rousseau 1998). The certainty in this long-term relationship with RNO, and the social/cultural/financial investments of people in the community based on this certainty which formed the basis of the companies social license to operate, 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’.*

Reflecting on 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, for it to then become like a quick 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 things settle down, until the giant just quickly stands up and leaves and the bed moves violently again”*.

Earlier we highlighted how one participant described that what had occurred was ‘a loss of expectation’. However, research has consistently demonstrated that a violation of a psychological contract is very different from just a set an unmet expectations (Rousseau 1998). Breaking psychological contracts provokes a much more serious and intense set of (negative) responses than just unmet expectation as there was a greater reliance on the losses that were felt due to the unfulfilled contract terms (Rousseau 1998; see also Robinson & Rousseau 1994; Robinson et al. 1994; Rousseau 1995). The unfulfilled contract terms in the case of RNO, was the length of the mine’s operation reduced to 9 months compared with the 20-30 years agreed to within their social license to operate. The impacts for the community are related to the loss of the ability to capitalise on the social, environmental and financial investments made to secure a more stable regional future that were made based on this agreement.

Although the company demonstrated certainty, predictability and consistency in its communication strategies, community participants reflected upon the difficulty of open and transparent communication with RNO across its lifespan. This perceived lack of open and transparent communication, then became a feature of the

communication of the announcement of the mine's closure. Many participants called for the need for earlier, clearer and more honest communication to the workers, businesses and the community about plans for the RNO operation and suspension. Interestingly, our research found that although the community was unlikely to support BHP Billiton re-establishing RNO, they were still open to the possibility of other 'junior' mining companies setting up in the region. However, based on this experience with RNO, the community identified new ways that it will negotiate in future community-corporate relationships which reflect this legacy of mistrust and precaution developed through the experience with RNO.

Trust is embedded in the unspoken assumptions that underpin normal communication: that a speaker is being truthful, sincere, genuine, and appropriate in what they say (Reynolds & Yuthas 2008). These assumptions were reinforced by the consistency of the corporate message. The development of mistrust then reflects a situation where communities begin to understand that in their communication in or with corporations, the politics of trust that underpin most other rational communications cannot be taken for granted (Reynolds & Yuthas 2008). This is compounded by the realisation that there is a political inequity underpinning these psychological contracts, and a lack of access to decision making results in the unequal distribution of risks, costs, and benefits of mega-projects (Flyvbjerg et al. 2003). True democratic and equal participation of those with differing resources as legitimate stakeholders in business decision making is unlikely, as most corporations fail to provide mechanisms to facilitate that participation of non-contractual stakeholders (Crouch 2004; Crouch & Streeck 2006; Reynolds and Yuthas 2008).

This case study of Shire of Ravensthorpe shows how companies communicate project certainty to gain traction for a social license to operate in a community, and that the impacts of breaking that license are significantly felt, and undercompensated, for those with whom that psychological contract is established. The politics of mistrust that develops between corporations and communities in mega-project development that engaged with multiple stakeholders with different resources and access to power, is essentially an issue of communication, and the embedded issues of ethics that underpin CSR communication.

Conclusions

Stakeholder theory indicates the current levels of accountability and responsibility to contractual and non-contractual stakeholders involved in mega-project development. Essentially corporations' obligations to non-contractual stakeholders still remain secondary to shareholder and contractual stakeholder interests and obligations (Kolstad 2007; Mason & O'Mahony 2008). The implementation of CSR initiatives essentially must maximise shareholder value (Friedman 2008; Mason & O'Mahony 2008). Despite the rhetoric of engagement and social responsibility currently permeating mega-project development, there is still an exclusionary attitude in terms of where and how communities can engage and the distribution of risks, burdens and benefits from projects (Flyvbjerg et al. 2003).

As is reflected from the closure of RNO in the Shire of Ravensthorpe, non-contractual stakeholders are generally kept away from the decision making surrounding mega-projects (Flyvbjerg et al. 2003), and face the burden of social, environmental and psychological costs of failure (McNulty 1987). Focusing on the impacts for community and non-contractual stakeholders in times of economic uncertainty and risk is particularly important given that companies contract back to traditional corporate governance during these times (Mason & O'Mahony 2008).

This unjust aspect of current approaches to CSR and other partnership business initiatives to gain social licenses to operate is often, unfortunately, ignored in the business literature (Reed & Reed 2009). Given current approaches to CSR, and the identified necessity for companies to engage in a series of psychological contracts with people in place based communities in which they want to operate, there needs to be a substantial reworking of the concepts of obligations, accountability and responsibility. Greenwood (2007) has initiated a discussion of corporate *irresponsibility* in the context of stakeholder engagement, a concept that reflects upon the way that stakeholders interests and promised benefits are often not fulfilled in projects that focus on social responsibility.

In rural Australia, the impacts of sudden closure for communities engaged in establishing psychological contracts and social licenses to operate with mining companies go beyond economic impacts (McNulty 1987) to a fundamental underwriting of hope and optimism for a more stable development trajectory for the region, and significant environmental and social losses. The consistency and

predictability of the communication with the RNO about the certainty of its timeframes of operations, led to a high level of community trust of the Company, and therefore a diverse range of social, economic and environmental investments. There is a corporate reliance on this principle of hope, and certainty, to ensure uptake of mega-projects by contractual and non-contractual stakeholders (Flyvbjerg et al. 2003).

The approach to closure currently being promoted by the mining industry is in dealing with the social, environmental and economic outcomes of a community that are bound to change after closure, and to consider closure planning as a part of the core business of mining (ICMM 2008). The planning of closure in a community should acknowledge that communities dependent on the mine for socio-economic development will have a broader set of risks and benefits from mine operation and closure than communities with a broader economic base who are less dependent on the mines operation (ICMM 2008). In practice, companies and governments find legitimacy for their actions by relying on the economic aspects of business decisions, with the intricate social and political implications banished from corporate discourse and effectively ignored, particularly in times of economic uncertainty (Judge & Dickson 1987).

However, as Flyvbjerg, Bruzelius and Rothengatter (2003) describe in great detail, there is an alternative way of dealing with risks involved with mega-projects. There are ‘choices’ even when there appears to be none available—choices of transparency and effective communication, choices regarding levels of responsibility and accountability—that provide much better corporate strategies for companies involved in mega-project development (Flyvbjerg et al. 2003) than the negative publicity received when engaged in corporate practices that embed companies back into the mega-project paradox. What is needed is long term planning for uncertainty, with features of high-trust of democratic processes, and “hard-nosed considerations about risk and democratic accountability” (Flyvbjerg et al. 2003, p. 10).

This is particularly significant in an era where CSR is becoming the practice norm, and communities who are engaged in the ‘boom times’ as partners, in definition as non-contractual stakeholders can be dispensed with in times of ‘bust’. Given a number of issues: first, the likelihood that a majority of large scale infrastructure projects will fail as represented by the mega-projects paradox phenomenon; second, the historical volatility of the resource industry to boom and bust cycles in Australia and worldwide; and finally, increased incorporation of communities into informal

psychological contracts with communities under the guise of CSR; both sudden and longer term closure plans need to be taken into consideration in the establishment of large scale residential mining initiatives. In a society increasingly defined by risks (environmental, social, political, economic) to not take these matters into account in project planning is a likely path towards project failure.

Accounting for the *certainty of failure* involves planning for various types of impact from various types of risk, from a risk assessment approach that includes the possibility of sudden and planned for closure, to a provision of mechanisms for accountability and responsibility at various scales of governance (Flyvbjerg et al. 2003). In the face of sudden closure, non-contractual social, psychological, economic and environmental sacrifices and investments represent an unaccounted for cost from the failure mega-projects. The findings reflected in this article highlights the need for these place based, non-contractual costs to be incorporated into the negotiation of normative psychological contracts and social licenses with community when establishing residential mining. Mega-project development needs to be less focused on community buy-in on these social licenses to operate, and focus more on the responsible communication of risks and uncertainties to less powerful stakeholders. This could have been the real legacy of the Shire of Ravensthorpe's recent history.

References

- ABS 2008a, *Regional population growth 2006-2007*, (ABS 3218.0), Commonwealth of Australia, Canberra, Australia.
- ABS 2008b, *National regional profile: Ravensthorpe (S) (Local Government Area)*, Commonwealth of Australia, Canberra, Australia.
- ABS 2008c, *National regional profile: Western Australia*, Commonwealth of Australia, Canberra, Australia.
- ABS 2009, *Regional population growth 2007-2008*, (ABS 3218.0), Commonwealth of Australia, Canberra, Australia.
- Albrecht, G 2006, 'Solastalgia: Environmental damage has made it possible to be homesick without leaving home', *Alternatives Journal*, vol. 32, pp. 34-36.
- Albrecht, G, Sartore, G-M, Connor, L, Higginbotham, N, Freeman, S, Kelly, B, Stain, H, Tonna, A, & Pollard, G 2007, 'Solastalgia: The distress caused by environmental change', *Australasian Psychiatry*, vol. 15, pp. S95-S98.
- Australian Mining 2006, *Ravensthorpe mine opens*, 26 May, Retrieved from <http://www.miningaustralia.com.au/Article/Ravensthorpe-mine-opens/173086.aspx>
- ANZMEC - Australian and New Zealand Minerals and Energy Council and Minerals Council of Australia 2000, *Strategic framework for mine closure*, ANZMEC, Canberra, Australia. Retrieved from http://www.nswmin.com.au/_data/assets/pdf_file/0011/2162/ANZMEC-MCA_Strategic_Framework_for_Mine_Closure.pdf
- Altshuler, A & Luberoff, D 2003, *Mega-projects: The changing politics of urban investment*, Brookings Institution Press, Washington.
- Banks, A 2009, 'Ravensthorpe closure 'leaves scar on land'', *The West Australian*, 22nd April, p. 11.
- Brousseau, É 2008, 'Contracts: From bilateral sets of incentives to the multi-level governance of relations', in É Brousseau & J-M Glachant (eds), *New institutional economics: A guidebook*, Cambridge University Press, Cambridge pp. 37-66.
- BHP Billiton 2004a, *BHP Billiton commits to residential workforce for Ravensthorpe Nickel Project*, Retrieved from

[http://www.bhpbilliton.com/bb/investorsMedia/news/2004/bhpBillitonCommi
tsToResidentialWorkforceForRavensthorpeNickelProject.jsp](http://www.bhpbilliton.com/bb/investorsMedia/news/2004/bhpBillitonCommi
tsToResidentialWorkforceForRavensthorpeNickelProject.jsp)

BHP Billiton 2004b, *The Ravensthorpe Nickel Project and the Yabulu Refinery Expansion: Overview*, Retrieved from [http://www.bhpbilliton.com/bbContentRepository/News/RelatedContent/RYI
NOverviewPaper.pdf](http://www.bhpbilliton.com/bbContentRepository/News/RelatedContent/RYI
NOverviewPaper.pdf)

BHP Billiton 2005, 'Relationship building is key to managing socio-economic impacts of the Ravensthorpe Nickel Project. Socio-Economic Case Study' in *BHP Billiton Sustainability Report 2005*. Retrieved from [http://sustainability.bhpbilliton.com/2005/repository/socioEconomic/caseStudi
es/caseStudies39.asp](http://sustainability.bhpbilliton.com/2005/repository/socioEconomic/caseStudi
es/caseStudies39.asp)

BHP Billiton 2006, *BHP Billiton approves revised costs for Ravensthorpe Nickel Project*, Retrieved from [http://www.bhpbilliton.com/bb/investorsMedia/news/2006/bhpBillitonApprov
esRevisedCostsForRavensthorpeNickelProject.jsp](http://www.bhpbilliton.com/bb/investorsMedia/news/2006/bhpBillitonApprov
esRevisedCostsForRavensthorpeNickelProject.jsp)

BHP Billiton 2008b, *Australian Site Tour Ravensthorpe Nickel Operation*, Retrieved from [http://www.bhpbilliton.com/bbContentRepository/docs/ravensthorpeSitePrese
ntation08.pdf](http://www.bhpbilliton.com/bbContentRepository/docs/ravensthorpeSitePrese
ntation08.pdf)

BHP Billiton 2008a, *Resourcing the future: Annual report 2008*, BHP Billiton, Melbourne,

BHP Billiton 2009a, *BHP Billiton Results for the half-year ended 31 December 2008*, BHP Billiton, Melbourne. Retrieved from [http://www.bhpbilliton.com/bb/investorsMedia/news/2009/bhpBillitonResults
ForTheHalfYearEnded31December2008.jsp](http://www.bhpbilliton.com/bb/investorsMedia/news/2009/bhpBillitonResults
ForTheHalfYearEnded31December2008.jsp)

BHP Billiton 2009b, *Changes to BHP Billiton's nickel business*, Retrieved from [http://www.mining-journal.com/company-news/bhp-billiton/changes-to-bhp-
billitons-nickel-business](http://www.mining-journal.com/company-news/bhp-billiton/changes-to-bhp-
billitons-nickel-business).

BHP Billiton 2009c, *Support for Ravensthorpe employees and communities*, BHP Billiton, Melbourne, Retrieved from [http://www.bhpbilliton.com/bb/investorsMedia/news/2009/supportForRavenst
horpeEmployeesAndCommunities.jsp](http://www.bhpbilliton.com/bb/investorsMedia/news/2009/supportForRavenst
horpeEmployeesAndCommunities.jsp)

Bowling, B 2009, '\$40k for tourism study', *Kalgoorlie Miner*, 28th March

- Browne, AL, Buckley, A & Stehlik, D 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*. Research Centre for Stronger Communities, Curtin University, Bentley, Western Australia, Retrieved from http://strongercommunities.curtin.edu.au/workingpapers_list.htm
- Buckley, A 2009, *Minerals futures discussion paper: Neighbour of choice partnership model*, Research Centre for Stronger Communities, Curtin University, Bentley, Western Australia, Contact strongercommunities@curtin.edu.au for copies of report.
- Buckley, A & Stehlik, D 2008, *Technical report: Social Impact Assessment of Mount Cattlin project in Ravensthorpe Shire, Western Australia*, Research Centre for Stronger Communities, Curtin University, Bentley, Western Australia, Contact strongercommunities@curtin.edu.au for copies of report.
- Burke, EM 1999, *Corporate community relations: The principle of the neighbour of choice*, Praeger Publishers, Westport, CT.
- Burrell, A 2009, 'The town that BHP killed', *The Australian*, 18-19th January, pp. 22-23.
- Calvano, L 2008, 'Multinational corporations and local communities: A critical analysis of conflict', *Journal of Business Ethics*, vol.82, pp. 793-805.
- Chamber of Minerals and Energy 2005, *Fly in/Fly out: A sustainability perspective. A discussion of the triple bottom line impact of fly in/fly out operations in Western Australia's resource sector*, Chamber of Minerals and Energy, Western Australia, Retrieved from <http://www.cmewa.com.au/UserFiles/File/Publications%20-%20Human%20Resources/FIFO%20Report.pdf>
- Chambers, M 2009, 'Analysts chop BHP forecast', *The Australian*, 20th January, Retrieved from <http://www.theaustralian.news.com.au/business/story/0,,24934748-36418,00.html>
- Cheshire, L 2006, *Governing rural development: Discourses and practices of self-help in Australian rural policy*, Ashgate, U.K.
- CHOCILCO -Chilean Copper Commission 2002, *Research on mine closure policy*, Report 44, Mining, Minerals and Sustainable Development Project of the

- International Institute for Environment and Development, and the World Business Council for Sustainable Development. Retrieved from <http://www.iied.org/pubs/pdfs/G00541.pdf>
- Cocklin, J & Dibden, C (eds) 2005, *Sustainability and change and rural Australia*, University of New South Wales, Sydney.
- Collier, MJ & Scott, M 2009, 'Conflicting rationalities, knowledge and values in scarred landscapes', *Journal of Rural Studies*, vol. 25, pp. 267-277.
- Cowe, R & Hopkins, M 2008, 'The nature of the business case for CSR', in J. Burchell (ed.), *The corporate social responsibility reader* Routledge, U.K., (pp 101-110).
- Crouch, C 2004, *Post-democracy*, Polity Press, Cambridge.
- Crouch, C & Streeck, W (eds) 2006, *The diversity of democracy: Corporatism, social order and political conflict*, Edward Elgar, U.K.
- Dake, K 1992, 'Myths of nature: culture and the social construction of risk', *Journal of Social Issues*, vol. 48, pp. 21-27.
- Davison, G 2005, 'Rural sustainability in historical perspective', in C Cocklin & J Dibden (eds), *Sustainability and change in rural Australia*, University of New South Wales, Sydney, pp. 38-55.
- Department of Industry, Tourism and Resources 2006, *Leading Practice Sustainable Development Program for the Mining Industry: Community engagement and development*. Canberra, Australia: Commonwealth of Australia, Canberra.
- Department of Industry and Resources 2008, *Prospect: Western Australia's International Resources Development Magazine, June-August*, Retrieved 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, Retrieved from <http://www.csu.edu.au/research/csr/ruralsoc/v4n3p30.htm>
- Findlay, P 1987, 'Resistance, restructuring and gender: The Plessey occupation', in T Dickson & D Judge (eds), *The politics of industrial closure*, Macmillan Press, U.K., pp. 70-95.
- Flyvbjerg, B, Bruzelius, N & Rothengatter, W 2003, *Megaprojects and risk: An anatomy of ambition*, Cambridge University Press, Cambridge.
- Flyvbjerg, B 2005, 'Machiavellian megaprojects', *Antipode*, vol. 37, pp. 18-22.

- Friedman, M 2008, 'The social responsibility of business is to increase its profits', in J Burchell (ed.), *The corporate social responsibility reader*, U.K., Routledge, pp. 84-89.
- Global Mining 2002, *Large mines and local communities: Forging partnerships, building sustainability*, World Bank and International Finance Corporation, Washington, Retrieved from <http://siteresources.worldbank.org/INTOGMC/Resources/largemineslocalcommunities.pdf>
- Government of Western Australia 2009, *Hopetoun-Ravensthorpe Tourism Asset Assessment. Industry Development*, Tourism WA, Government of Western Australia, Western Australia.
- Greenwood, M 2007, Stakeholder engagement: Beyond the myth of corporate responsibility. *Journal of Business Ethics*, vol. 74, pp. 315-327.
- Halvaksz, JA 2008, 'Whose closure? Appearances, temporality, and mineral extraction in Papua New Guinea', *Journal of the Royal Anthropological Institute*, vol. 14, pp. 21-37.
- Haney, M & Shkaratan, M 2003, *Mine closure and its impact on the community: Five years after mine closure in Romania, Russia and Ukraine*, Policy Research Working Paper 3083, World Bank, Infrastructure and Energy Services Department, Washington.
- Haslam McKenzie, F, Phillips, R, Rowley, S, Brereton, D, & Birdsall-Jones, C 2009, *Housing market dynamics in resource boom towns*, AHURI Final Report No. 135, Australian Housing and Urban Research Institute – AHURI, Western Australia.
- Hugo, G 2005, 'The state of rural populations', in C Cocklin & J Dibden (eds), *Sustainability and change in rural Australia*, University of New South Wales, Sydney, pp. 56-79.
- ICMM - International Council for Mining and Minerals 2008, *Planning for integrated mine closure: Toolkit*, ICMM, London.
- Jones, H 2008, 'The Eden project: Synopsis around sustainable enterprise', *Journal of Corporate Citizenship*, vol. 30, pp. 133-137.
- Judge, D & Dickson, T 1987, 'The politics of closure', in T Dickson & D Judge (eds), *The politics of industrial closure*, Macmillan Press, U.K, pp 165-186.

- Kleinrichert, D 2008, 'Ethics, power and communities: Corporate Social Responsibility revisited', *Journal of Business Ethics*, vol. 78, pp. 475-485.
- Klinger, P 2009, 'BHP mine call puts public cash at risk', *The West Australian*, 20th January.
- Kolstad, I 2007, 'Why firms should not always maximise profits', *Journal of Business Ethics*, vol. 76, pp. 137-145.
- Lonzano, JM, Albareda, L, Ysa, T, Roscher, H & Marcuccio, M 2008, *Governments and corporate social responsibility: Public policies beyond regulation and voluntary compliance*, Palgrave Macmillan, U.K.
- Mason, M & O'Mahony, J 2008, 'Post-traditional corporate governance', *Journal of Corporate Citizenship*, vol. 31, pp. 1-14.
- Mayes, R & Haslam McKenzie, F 2008, *The Shire of Ravensthorpe: How women experience a rural community in transition*, Working Paper Issue 13, Research Centre for Stronger Communities, Curtin University, Bentley, Western Australia, Retrieved from http://strongercommunities.curtin.edu.au/workingpapers_list.htm
- McCracken, JA, Pretty, JN, & Conway, GR 1988, *An introduction to Rapid Rural Appraisal for agricultural development*, International Institute for Environment and Development, U.K.
- McNulty, D 1987, 'Local dimensions of closure', in T Dickson & D Judge (eds), *The politics of industrial closure*, U.K., Macmillan Press, pp. 35-69.
- Miller, R & Lessard, DR 2000, *The strategic management of large engineering projects: Shaping risks, institutions and governance*, MIT Press, Cambridge, Mass.
- Mitchell, RK, Agle, BR, & Wood, DJ 1997, 'Towards a theory of stakeholder identification and salience: Defining the principle of who and what really counts', *Academy of Management Review*, vol. 22, pp. 853-886.
- MMSD - Mining, Minerals and Sustainable Development 2002, *Mining for the future. Appendix B: Mine closure working paper*, Report No. 34, International Institute for Environment and Development, U.K., Retrieved from http://www.unr.edu/mines/mlc/presentations_pub/Pub_LVW/34_mftf-b.pdf
- Pellizzoni, L & Ylönen, M 2008, 'Responsibility in uncertain times: An institutional perspective on precaution', *Global Environmental Politics*, vol. 8, pp. 51-73.

- Philips, R 1999, 'On stakeholder delimitation', *Business and Society*, vol. 38, pp. 32-34.
- Phillips, Y 2009, 'BHP selling 10 Hopetoun Homes', *The West Australian*, 25th March, p. 7.
- Priemus, H, Flyvbjerg, B & van Wee, B 2008, 'Introduction: Scope of the book', in H Priemus, B Flyvbjerg & B van Wee (eds), *Decision-making on mega-projects: Cost-benefit analysis, planning and innovation*, Edward Elgar, U.K., pp. 1-20.
- Ravensthorpe Shire 2009, *Mining*, Retrieved from <http://www.ravensthorpe.wa.gov.au/mining>
- Reed, AM & Reed, D 2009, 'Partnerships for development: Four models of business involvement', *Journal of Business Ethics*, vol 90, pp. 3-37.
- Reynolds, MA & Yuthas, K 2008, 'Moral discourse and corporate social responsibility reporting', *Journal of Business Ethics*, vol. 78, pp. 47-64.
- Robinson, SL & Rousseau, DM 1994, 'Violating the psychological contract: Not the exception but the norm', *Journal of Organizational Behavior*, vol. 15, pp. 245-259.
- Robinson, SL, Kraatz, MS & Rousseau, DM 1994, 'Changing obligations and the psychological contract: A longitudinal study', *Academy of Management Journal*, vol. 37, pp. 137-152.
- Rollwagen, K 2007, 'When ghosts hovered: Community and crisis in a company town, Britannia Beach, British Columbia, 1957-1965', *Urban History Review* vol. 35, pp. 25-36.
- Rousseau, DM 1995, *Psychological contracts in organizations: Understanding written and unwritten agreements*, Sage, Thousand Oaks, C.A.
- Rousseau, DM 1998, 'The 'problem' of the psychological contract considered', *Journal of Organizational Behavior*, vol. 19, pp. 665-671.
- Spencer, B 2009, 'Federal probe into BHP mine sackings', *The West Australian*, 3rd April, p. 7.
- Stehlik, D 2005, 'Partnering industry to build stronger communities' in T Stehlik & P Carden (eds), *Beyond Communities of Practice*, Post Pressed, Flaxley, Qld, pp. 229-244.
- 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 Project 04SC1-06i, Research

- Centre for Stronger Communities, Curtin University, Bentley, Western Australia. Contact strongercommunities@curtin.edu.au for copies of report.
- Tasker, S-J 2009, 'BHP shelves Ravensthorpe, slashes 1800 jobs', *The Australian*, 21st January.
- UNEP -United Nations Environment Programme 2005, *Mining for closure: Policies and guidelines for sustainable mining practice and closure of mines*, UNEP, UNDP, OSCE, NATO.
- United Nations Global Compact 2007, *Joining forces for change: Demonstrating innovation and impact through un-business partnerships*, United Nations Geneva, Retrieved from <http://www.globalcompactsummit.org/docs/UNGC07-JoiningForcesForChange.pdf>
- Usui, M 2006, 'Business-society interaction towards sustainable development – Corporate social responsibility: The road ahead', in JF Green & WB Chambers (eds), *The politics of participation in sustainable development governance*, United Nations University Press, Tokyo, pp. 62-89.
- van Marrewijk, A, Clegg SR, Pitsis, TS & Veenswijk, M 2008, 'Managing public-private megaprojects: Paradoxes, complexity and project design', *International Journal of Project Management*, vol. 26, pp. 591-600.
- Vodicka, D 2006, *The four elements of trust*, Electronic Resource, pp. 27-30, Retrieved from <http://www.plcwashington.org/trust/resources/4-elements-of-trust.pdf>.
- Weyzig, F 2009, 'Political and economic arguments for Corporate Social Responsibility: Analysis and a proposition regarding the CSR agenda', *Journal of Business Ethics*, vol. 86, pp. 417-428.
- Whitebread-Abrutat, P 2004, 'A radical approach to post-mining regeneration – Case studies from Cornwall U.K.', paper presented at *Sustainable Post-Mining Land Management Conference*, , Kraków, Poland, 4-6th November 2004 Retrieved from <http://www.postmining.org/index.php?page=19>
- White-Cooper, S, Dawkins, NU, Kamin, SL, & Anderson, LA 2009, 'Community-institutional partnerships: Understanding trust among partners', *Health Education and Behavior*, vol. 36, pp. 334-347.
- World Bank Group's and International Finance Corporation Mining Department, 2002, *It's not over when it's over: Mine closure around the world*, International Finance Corporation, Washington.

World Business Council for Sustainable Development 2008, 'Why now?', in J Burchell (ed.), *The corporate social responsibility reader*, Routledge, U.K., pp 98-100.

Yakovleva, N 2005, *Corporate social responsibility in the mining industries*, Ashgate, U.K.

Zammit, A 2003, *Development at risk: Rethinking UN-business partnerships*, UNRISD, Geneva, Retrieved from [http://www.unrisd.org/unrisd/website/document.nsf/\(httpPublications\)/43B9651A57149A14C1256E2400317557?OpenDocument](http://www.unrisd.org/unrisd/website/document.nsf/(httpPublications)/43B9651A57149A14C1256E2400317557?OpenDocument)



ALCOA FOUNDATION'S CONSERVATION AND SUSTAINABILITY PROGRAM

WORKING PAPERS SERIES

1. ALCOA FOUNDATION PARTICIPANT CONTRIBUTES TO FOURTH BRAZILIAN TREE CANOPY COURSE, HELD IN THE ATLANTIC RAINFOREST. (J. D. Majer & S. Pontes Ribeiro).
2. WHOSE SEA CHANGE? SOME REFLECTIONS ON TRANSFORMATIONS IN THE CITY OF ALBANY, W.A. (D.Stehlik).
3. THE THEORY AND PRACTICE OF ECOMIMICRY. (A. Marshall).
4. BEYOND CONCEPTUAL ELEGANCE: LOCAL PARTICIPATION AND THE 'MODEL' FITZGERALD BIOSPHERE RESERVE. (A. Buckley).
5. THE POTENTIAL OF GROUNDWATER RECHARGE PLANTATIONS IN THE LAKE WARDEN CATCHMENT, ESPERANCE, TO ENCOURAGE DIVERSITY OF INVERTEBRATES AND BIRDS.(M.E. Paula De Souza, J.D. Majer, M.J.De Sousa-Majer & F.M. O'Connor).
6. INFLUENCE OF FARMLAND REVEGETATION ON THE ABUNDANCE AND DIVERSITY OF SURFACE-ACTIVE INVERTEBRATES: A CASE STUDY FOR THE GONDWANA LINK INITIATIVE. (J.D. Majer, M.E. Paula De Souza & M.J. De Sousa-Majer).
7. INTERDISCIPLINARY TECHNOLOGIES CONTRIBUTE TO A NEW MODEL OF URBANISATION FOR THE SOUTH COAST OF WESTERN AUSTRALIA. (A.Dunn).
8. TOWARDS A WESTERN AUSTRALIAN MODEL: BUILDING INNOVATION AND CAPACITY IN THE DESIGN AND CRAFT INDUSTRY THROUGH THE DESIGNING FUTURES CLUSTER PROGRAM. (M.Lommerse, R. Eggleston & K. Brakovic).
9. PARTICIPATORY INQUIRY USING A COMMUNITY-AS-RESEARCHER APPROACH: THE BALINGUP MODEL. (D.Stehlik & A.Buckley).
10. CLIMATE VARIABILITY AND SOCIAL VULNERABILITY: A BRIEF STATEMENT OF THE ISSUES. (D.Stehlik & D. Costello).
11. LIVING THE RESOURCES BOOM: TOWARDS SUSTAINABLE RURAL COMMUNITIES. (R. Mayes)
12. RAVENSTHORPE RANGE AND OVERSHOT HILL-AN OVERVIEW OF BIODIVERSITY VALUES, THREATS AND CONSERVATION. (R. J. Harris, J. D. Majer, A. Buckley & D. Stehlik)
13. THE SHIRE OF RAVENSTHORPE: HOW WOMEN EXPERIENCE A RURAL COMMUNITY IN TRANSITION. (R. Mayes & F.M. Haslam McKenzie)
14. THE DEMOGRAPHIC AND ECONOMIC DYNAMICS OF THE GREAT SOUTHERN REGION OF WESTERN AUSTRALIA. (F Haslam McKenzie, M Tonts & A Davies).
15. REGIONAL CAPACITY AND SOCIAL IMPACT EVALUATION PRINCIPLES FOR PRACTICE. (D. Stehlik)
16. COMMUNITY VALUES AND LANDSCAPE CHANGE: THE CASE OF THE RAVENSTHORPE RANGE. (D. Stehlik, A. Buckley, C. Williams, J. Majer & R. Harris)
17. THE ROLE OF TRADITIONAL ECOLOGICAL KNOWLEFGE IN PROTECTED AREA MANAGEMENT: A CASE STUDY OF GUANYINSHAN NATURE RESERVE, SHAANXI, CHINA. (J. Neurauter, X. Liu & C.Liao)
18. COMMUNITY RESILIENCY IN A BOOM AND BUST ECONOMY (F. Haslam Mckenzie)
19. LIMITED RECOVERY OF PLANT AND ANT COMMUNITIES IN A VINEYARD IN THE RAVENSTHORPE RANGE ABANDONED OVER 30 YEARS AGO. (R. Harris, C. Harrison, A. Henry, M. Hobson)
20. SECOND NATURE: A GUIDE TO COMMUNITY IN BIODIVERSITY EDUCATION. (A. Buckley)
21. THE MEGA-PROJECTS PARADOX AND THE POLITICS OF RISK, HOPE AND MISTRUST: CAPTURING LOCALISED IMPACTS OF THE BOOM/BUST CYCLES OF AUSTRALIAN MINING. (A. L. Browne)

ALCOA FOUNDATION'S CONSERVATION AND SUSTAINABILITY PROGRAM

Sustaining Gondwana is a strategic initiative of Curtin University of Technology that has been funded by the Alcoa Foundation's Conservation and Sustainability Fellowship Program and by the University. Its aim is to research conservation and sustainability issues along the south coast of Western Australia, from Walpole to just east of Esperance. The vegetation and fauna of this area is so diverse that it is considered to be one of the world's bio-diversity hotspots. The five year program, which is connected internationally with other Universities and Sustainability Institutes, was launched in November 2005.

The initiative is co-ordinated by three cabinet members, professors Daniela Stehlik, Jonathan Majer and Fiona Haslam McKenzie. Six postdoctoral fellows are being appointed to work on issues related to this region, and their research will be augmented by activities of the cabinet members themselves as well as their graduate students. It is anticipated that the findings will be published in journals, conference proceedings and books. However, there is a need to communicate early findings, data sets and activities of group members in a timely manner so that stakeholders can benefit from outputs as soon as they become available. This is the aim of the *Sustaining Gondwana Working Papers Series*, which will be produced on an occasional basis over the life of the initiative.

The papers are not subject to peer review, but are edited by cabinet members in order to maintain standards and accuracy. Contributions from researchers and practitioners who are active in the region of focus can also be considered for publication in this series.

For further information about Sustaining Gondwana or the program Working Paper Series, please contact: strongercommunities@curtin.edu.au or visit <http://strongercommunities.curtin.edu.au>

For the global program see:

http://www.alcoa.com/global/en/community/info_page/Foundation.asp

ISSN: 1834-6278

