The effect of community consultation on perceptions of a proposed mine: A case study from southeast Australia

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A B S T R A C T

Consultation is the predominant method of community engagement in infrastructure development. Therefore, understanding stakeholder interactions within consultation is critical to acquiring a social licence to operate. While previous research has focused on the factors which contribute to this social licence, little work has been conducted on how mining company consultation strategies influence perception formation. We explore how stakeholder expectations and experience of consultation impact perceptions of proposed mining projects. We undertook a case study of a proposed, large-scale, mineral sands mine in rural Australia using an open and closed-question questionnaire ($n = 32$) and semi-structured interviews ($n = 20$). We find that there are multiple, diverging understandings of the purpose of consultation both within and between stakeholder groups. The community experience of consultation drove negative perceptions of the proposed mine due to procedural and personal factors. We find several overlaps with the renewable energy (RE) literature, including: calls for two-way communication, (mis)trust of professional stakeholders, and the need for consistent and well-timed consultation. Other factors are not as common in the RE literature, and may be more specific to mining, such as stakeholder disenfranchisement misunderstood as apathy, calls for community involvement in agenda setting, the need for careful selection of company representatives, and the importance of meeting stakeholder expectations of consultation.

1. Introduction

Mining continues to be a widespread and economically important activity in many countries. Understanding the factors that shape a community's perception towards proposed mines is critical for countries such as Australia, where stakeholder relations can often be strained. The direct and secondary impacts of mining have been explored for both developing and developed countries (Esteves, 2008; Petkova et al., 2009; Franks et al., 2010; Lawson and Bentil, 2014), as have public perceptions towards established mining projects (Mason et al., 2014; Martín et al., 2014). Much of this existing focus has been on the engagement of indigenous populations (Barber and Jackson, 2012; Fulmer, 2014), the concept of corporate social responsibility for mining (Owen and Kemp, 2014; Kotilainen et al., 2015), and the social licence to operate for mines (Prno, 2013; Holley and Mitcham, 2016). Here we develop this literature further, by exploring how expectations and experience of consultation impact stakeholder perceptions of proposed mining projects.

Within the renewable energy (RE) literature, there have been many

studies on stakeholder perceptions of proposed and existing projects. These studies generally focus on factors such as: communication (Dütschke, 2011); stakeholder remuneration (Miner, 2009); background and context (Jobert et al., 2007); transparency and trust (Siegrist and Cvetkovich, 2000); and, fairness (Ellis, 2004; Booth and Halseth, 2011). Although we can draw from the RE literature, there are distinct differences between mine developments and RE projects which impact perceptions, with the former often having a far greater impact on the soils and landscape, as well as a longer lifecycle (van der Plank et al. 2016). As a result, it is likely that community perceptions and expectations of involvement in mining projects differ from those associated with RE.

A social licence to operate – most simply described as community acceptance of a project – is increasingly recognised as necessary and beneficial to mining and other developments (Paragreen and Woodley, 2013; Prno, 2013). Meaningful consultation helps to ensure a more just social development practice, and helps to accumulate knowledge on how communities want to be involved in infrastructural projects. In the RE literature, community and individual perceptions of their involve-

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ment can affect their acceptance of a project as a whole (Corscadden et al., 2012), with projects risking delay or cancellation due to local opposition (Jobert et al., 2007; Dütschke, 2011).

The relationship between participation and acceptance is relatively straightforward. Public participation in the planning process impacts community perceptions of a project in a largely positive manner (Jobert et al., 2007; Booth and Halseth, 2011; Coleby et al., 2009). Both the means and ends for consultation must be considered, since there are multiple goals and approaches to be considered (Campbell and Marshall, 2000; Vaidya and Mayer, 2014). This makes developing a successful engagement strategy a complex process (Buchy and Race, 2001; Vaidya and Mayer, 2014). Collier and Scott (2010) explored community engagement, focussing on environmental discourse in a mined landscape. They found that while focus groups were effective for gathering data and stimulating discussion, their facilitation and organisation proved difficult. The choice of consultation design is also important (Buchy and Race, 2001; Carr and Halvorsen, 2001), with context, timing, perceived honesty, and fairness all affecting community interpretation of consultation efforts (Smith and McDonough, 2001; Ellis, 2004; Booth and Halseth, 2011). There has been a focus on the need for continued improvement in the area of community engagement (Tang-Lee, 2016), with a special focus on the relationship between corporate governance, firm performance, and the extent and depth of community engagement (Lin et al., 2015). The literature also emphasises that mining companies must reposition themselves to a more central position within mine-stakeholder networks (Dobele et al., 2014).

Despite the emphasis on the importance of stakeholder engagement, to the best of our knowledge there has been no research on the impact of consultation on a community's response to proposed mines. New analytical frameworks for renewable energy (RE) have also largely not been applied to mining research. In this paper, we investigate the influence of community consultation efforts on perceptions of the planning process, the mining company, and the project as a whole. This paper proceeds as follows: first, we review the key factors which impact the acceptance of infrastructural projects; second, we present the methods and data of our case study in rural Victoria, Australia; and finally we present and discuss our results. We will address the following two questions in the course of the paper:

(a) How do stakeholder expectations of involvement compare to their actual experience of consultation for a proposed project?
(b) How did the community consultation strategy affect individual stakeholder perceptions of the proposed mining project?

2. Community attitudes and consultation of infrastructure projects

2.1. Factors driving attitudes towards developments

Within the RE literature, Jobert et al. (2007) outline two categories of factors that are influential in the formation of attitudes towards wind energy projects: (a) institutional conditions such as regulatory and economic settings; and (b) personal, psychological and contextual site-specific conditions related to place attachment, identity, visual impact, and economic gains (these latter conditions are described further in Devine-Wright, 2007). Here we outline these factors further.

In terms of institutional conditions, trust in regulatory agencies can strongly influence risk and benefit perceptions (Siegrist and Cvetkovich, 2000; Bronfman et al., 2012). Regulatory requirements as to the choice of consultation method and the effectiveness of communication can also impact perception development (Jobert et al., 2007; Dütschke, 2011). For example, public meetings are often used as a participatory tool, yet they rarely achieve their goal of empowering community members in decision making (Adams, 2004). The timing of initial consultations can be similarly crucial in fostering a

positive or negative reception – generally the sooner, the better – and likewise the timing of information releases impact existing opposition to a proposed project (Jobert et al., 2007; Connor et al., 2009; Dütschke, 2011). Economic incentives such as employment and direct community benefits have been found to increase acceptance of RE projects (Devine-Wright, 2007; Tokushige et al., 2007; Badera and Kocoń, 2014). However, the manner in which benefits are offered, such as the timing of the benefits package, as well as the perceived suitability of the persons managing the package, can positively or negatively influence community perception of the benefits (Cass et al., 2010; Cowell et al., 2011; Munday et al., 2011).

In terms of personal, psychological, and contextual conditions, factors such as: context; perceived honesty; and, fairness can affect the public's interpretation of a consultation attempt. These may have a direct influence on both public acceptance and overall outcomes of a specific project (Ellis, 2004; Jobert et al., 2007; Booth and Halseth, 2011). Within personal and psychological factors, place attachment is considered to offer a more accurate and nuanced explanation for local opposition than oversimplified Not In My Back Yard (NIMBY) reasoning (Cass and Walker, 2009; Devine-Wright, 2009). Place attachment is an emotional bond to a place which may include a mix of landscape, social, and cultural values. Trust also appears to be a key factor and negative perceptions can be formed when the community's trust in the planning authorities or companies is low (Moffat and Zhang, 2014). This lack of trust is often caused by a perceived deficit of community involvement, bias towards certain stakeholders, or inequality in benefit distribution (Gross, 2007; Jobert et al., 2007). With an increase in trust, perceptions may be more positive, and risk perceptions of the development can be reduced (Devine-Wright, 2007; Tokushige et al., 2007; Wüstenhagen et al., 2007). Fairness is another key consideration as community members often comment that the benefits of a project go to the few private landholders whose property is directly utilized for the development, while the negative impacts are experienced by the rest of the community (Gross, 2007; Jobert et al., 2007; van der Plank *et al.* 2016).

2.2. The social licence

In the context of energy and mining projects, the approval to operate is often termed a social licence. A social licence to operate can best be described as an informal indication of a community's acceptance of a development, although this may range from "reluctant acceptance to a relationship based on high levels of trust" (Owen and Kemp, 2013, p. 31). Social licences can be granted by various stakeholder groups, and a licence from one group does not translate to approval from all stakeholder groups (Dare et al., 2014). For example, while a wide group of stakeholders, including state government and markets, may find a project acceptable, local government and non-governmental groups, or local businesses and community members, may be less accepting and withhold a social licence (Dare et al., 2014). As described above, various factors influence the granting of this licence. These include context, relationships, sustainability, local benefits and participation, and adaptability (Prno, 2013); they also include power imbalances between stakeholder groups within the planning process, and the process of distributing potential benefits (Paragreen and Woodley, 2013). Owen and Kemp (2013) remain critical of industries' current approach to building and obtaining such licences, pointing out that a greater focus is placed on reducing direct opposition to proposed projects than on truly engaging with communities throughout the lifecycle of the project.

While research on social licences to operate and examinations of corporate social responsibility continue to be investigated, targeted examinations of how communities are engaged in mining operations, and how this engagement influences the formation of perceptions, have received little attention.

2.3. Settings for consultation

The relationship between participation and acceptance is relatively straightforward, meaningful consultation in the planning process tends to impact community perceptions of a project in a largely positive manner (Jobert et al., 2007; Booth and Halseth, 2011; Coleby et al., 2009). Although legislation plays a key role in mandating certain levels of consultation within the planning process, a mining company's specific engagement strategy largely determines to what extent it is able to incorporate community contributions into a proposed mining project.

Prno (2013) highlighted public participation and local benefits as one of five central factors establishing a social licence to operate for mines; the others are (a) context, (b) concern for sustainability, (c) relationships, and (d) adaptability. However, not all participation is the same, and effectiveness will vary per industry and context. Focus groups can be used as exploratory, participative and deliberative tools, but may be affected by the potential biases of facilitators distorting or misrepresenting results, and should therefore be used in combination with other planning tools (Scott, 2011). In contrast, public meetings are good at conveying information to officials for agenda setting, but they do not give citizens an effective opportunity to influence decision-making (Adams, 2004). The success of consultation cannot be solely assessed by measuring the extent to which stakeholder contributions have been incorporated into project design and implementation. For example, it is generally accepted that stakeholders that have been meaningfully consulted in the course of the planning process are more likely to accept process outcomes, even if those outcomes diverge from their own objectives (Gross, 2007). Most important is that an arena for iterative dialogue is created where all stakeholders feel free to contribute and feel heard by those in a more powerful position within the planning process. To achieve these aims, consultation strategies must be carefully designed so that groups cannot bully their members to get desired outcomes (Hopkins, 2010), or that results of participation are not taken into consideration in revised project proposals (Hopkins, 2010; Booth and Halseth, 2011). Both scenarios greatly undermine the purpose and ethos of consultation and may serve as a deterrent for community members to engage in the future.

3. Method

3.1. Background to the case study

A proposed mineral sands mine located in a rural area of western Victoria, Australia, was chosen for this research due to the variety of services available in the area, and the large size of the proposed mine. During the fieldwork for this research, the mine was in the planning stage and engaged in the Environmental Effects Statement (EES) process. During this planning phase, community input is sought and stakeholder comments can still affect the design of the project. The EES allows for written comments from members of the public, both on the first draft of scoping requirements, and the final product. An EES also requires the preparation of a consultation plan that demonstrates how the community is being informed and consulted. The mining company released their consultation plan in May 2012.

The planned location is in a rural region which hosts a variety of services, including other mines, agriculture, and tourism in both national and state parks (see Fig. 1). The area of study spreads across the north and south of the Western Highway, the major overland thoroughfare between Melbourne and Adelaide, and lies between the rural town of Stawell and rural city Horsham, the latter of which is an economic and educational hub for the region. This area is located within the Wimmera, a statistical division of the Australian Bureau of Statistics, but also a recognised region extending from the mountainous Grampians in the south to the arid Mallee in the north. Whilst no town lies directly within the radius of the planned mine, Horsham is the nearest major settlement, at 20 km distance west, with a population of 14,285 (Australian Bureau of Statistics, 2016); Melbourne lies 300 km further east. Both the specific area of the planned mine site and the wider Wimmera area are characterised by small, sparsely-spread communities, and is considered the prime Victorian region for grain growing. Other important industries include education and training, retail, manufacturing, tourism, hospitality, transport, and health and professional services (Agriculture Victoria, 2015).

The proposal is for an open-cut mine of a 12,850 ha deposit of mineral sands, with a lifetime of several decades. This mine will have a greater footprint and expected longevity than any previous mine projects in the locality. The same deposit had been subject to exploratory mining in the 1980s and 1990s, but did not proceed to development. The land area affected by the proposal is largely used for agricultural purposes. In terms of other infrastructure, a major highway intersects the deposit, and a chain of manmade lakes for water provision are located in the centre of the proposed mine site. In addition to freshwater, these lakes also provide a habitat for various types of birdlife and represent an important local recreational space.

3.2. Research approach

This study took a mixed methods approach to examine the formation of community perceptions towards the proposed mineral sands mine in rural Victoria. The focus is not only on *what* the perceptions of the project were and *how* they had come about, but also on *expectations* and *experiences* of consultation. Questionnaires were delivered ($n=97$; response rate=32/97) largely through letter-box distribution to those living in the directly affected area and up to a 20 km radius of the proposed mine (see Appendix 1 for the quantitative questions and Appendix 2 for qualitative questions). All households identifiable by the presence of a letterbox and located on a sealed or all-weather road received a questionnaire; this means that some houses with post-boxes in town or those on 4WD roads were not included.

While the sample size of the questionnaire data is small ($n=32$), the area to be affected by the mine is not densely populated and the response rate was satisfying (33%). In view of the small sample, the conclusions drawn from statistical analyses cannot be considered to represent the views of the entire population of the region, but rather provide insights into the views of a subset of this population. The questionnaire asked respondents about their background, their opinions on various aspects of the planned mine, and their expectations and experiences of consultation. In the questionnaire, nine Likert-type questions were included, allowing for a statistical analysis focused on summary statistics and identifying significant relationships. Two main statistical tests for significance were used. The Mann-Whitney Test was applied when comparing the answers of two groups of respondents. For example, to explore whether there was a significant difference in the response between those who had heard of the mining company consultation and those who had not. The Pearson correlation coefficient was used when investigating correlation between two sets of Likert-type questions.

Respondents to the questionnaire were asked if they would be available for interview; 20 responded positively. Qualitative, semi-structured interviews were conducted with all 20 individuals. All interviews were conducted in December 2014 to January 2015; 18 were face-to-face interviews in homes and work places, one was by phone, and one respondent was unavailable for meeting and emailed their responses. The purpose of the interviews was to understand the deeper, underlying explanations for their responses to both the consultation process and the proposed mine itself. Further, the interviews provided a space to discuss their understanding of consultation and the execution of stakeholder consultation in the mining project in more depth. Representatives of all relevant stakeholder groups were interviewed and coded per stakeholder group (the code and number of interviewees are in parentheses): mining company (MC; 1), community
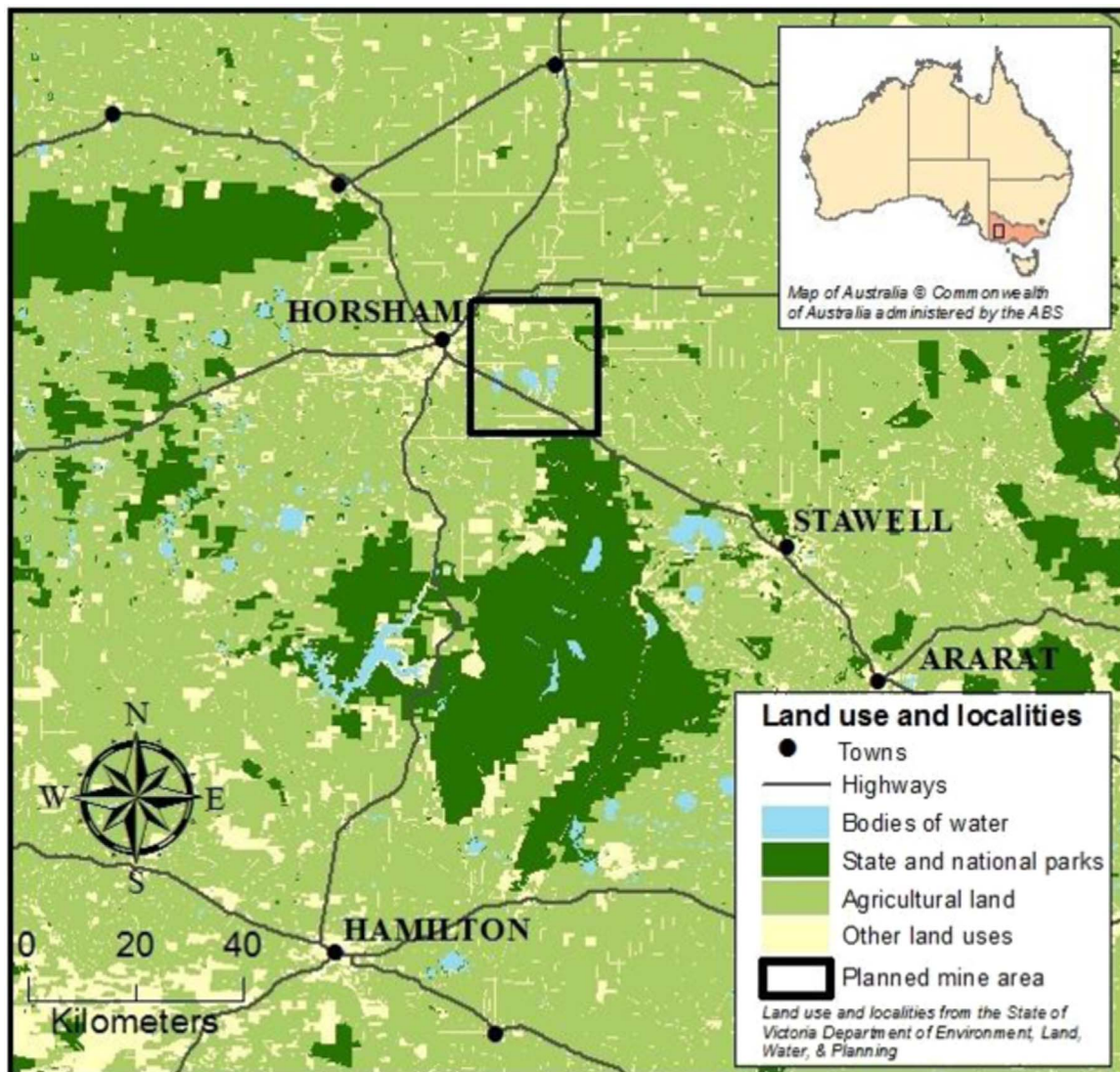
Fig. 1. Map of proposed mine site and surrounding area (165 km by 200 km). State and national parks are marked in dark green. Light green represents land used for various forms of agriculture. White areas represent all other land uses. Blue represents bodies of water. Large significant urban centres are marked by black circles. The area within which the mine is planned is marked by a black polygon. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

members (CM; 9), Victorian government (VG; 3), local government (LG; 3), local management authorities (LM; 1), emergency services (ES; 1), and business groups and utilities (BGU; 2). All individual stakeholder groups were asked the same set of questions. The interviews examined their (a) interpretations of participation, (b) consultation in the process, (c) perception of the project, and (d) future expectations. All interviews were transcribed and coded. All responses were kept anonymous, with only the response group (community member, local government employee etc.) used as an identity marker.

4. Results

Descriptions of the mining company's consultation practices were largely consistent across all stakeholders, and included public meetings, news items in local media, personal meetings with affected landowners, establishment of an information office in the local town, and employment at least one public relations professional. Some expressed satisfaction regarding the quantity and quality of community meetings; for others there had been too few or the meetings had not been conducted in the manner they had expected. Despite differing perceptions on the adequacy of these practices, the mining company had satisfied the consultation requirements of the Victorian

Government at the time this research was conducted. The results show that meeting community and other stakeholders' expectations is more complex than fulfilling engagement guidelines set by the relevant authorities. The following sections discuss stakeholder expectations and experiences of consultation in more detail.

4.1. Definitions and expectations of consultation

Interviewees were asked (a) how they would define 'community consultation', (b) the purpose of such consultation, and (c) what actions they considered necessary for successful consultation. The responses were diverse, in terms of stakeholder expectations and experiences of consultation, and we found that opinions were varied both between and within stakeholder groups. It is important to note that although community involvement in the planning process was considered important by all, the boundaries of their community were not agreed upon. For example, several were critical of whether the community should include the consideration of potential mining impacts on future generations and their occupational opportunities (BGU2).

All stakeholders (excluding community members) defined the central purpose of consultation as information provision. The goal of consultation was outlined as a way of communicating effectively with

the community and gaining confidence and support for the project (e.g. LG3). However, there were diverging notions of what 'support' is: while some saw it as everyone being taken along for the 'journey' (e.g. ES1), others saw neutrality as a form of support (e,g, VG2). Further, one business group and utility interviewee believed 'support' equated to a community benefiting, understanding, and being a part of the project by ensuring that 'people have the correct information rather than some hearsay that becomes a rumour, that becomes a panic, about this and that' (BGU2). The Victoria Government stakeholders went further in their explanation and added that consultation also allowed for the use of local knowledge, emphasising that it is highly beneficial for reducing local impacts associated with the proposal (VG1 and VG2). Though the majority understood consultation as information provision, a small minority called for communities to have a 'say' in the development process (BGU1). A local government employee emphasised that communities should have a meaningful role in:

'establishing what that context is... ensuring that when it [mining] does occur, it sits within the values that we hold as a community for how we want to live in the area [and] maybe it's not viable to proceed at that scale, in which case, it shouldn't proceed.' (LG2)

None of these definitions suggest the purpose of engagement is to empower the local community during the development process, and the dominant definition was no different, suggesting the goal was to *inform*.

In terms of the methods of consultation, stakeholders (excluding community members) emphasised the importance of providing the information in a format that is readily understandable by all engaged stakeholder groups (ES1 and LG2). Transparency and authenticity, maintained throughout the development, were considered crucial to successful engagement practice (BGU2 and LM1). Clear communication on what is and is not negotiable during the consultation period was also stressed as a key consideration (LG1). It was further highlighted that communication should take place across multiple media platforms (BGU2), with an emphasis on fostering two-way communication avenues (LG1 and LM1) between mining companies/relevant authorities and all other stakeholder groups.

In contrast, the community stakeholders did not share a common vision of the purpose of consultation. While some thought the aim of consultation was to create a situation where community members are comfortable in their arrangement with the proposed mine (CM1), others emphasised that the aim of consultation should be to ensure the best outcome for all (CM2). For others, consultation provided an avenue within which the community could group together and give the proposed mining company something to work with (CM8 and CM9). One interviewee spoke of such forms of consultation as being the antithesis of a situation where individuals are 'bought off' (CM7). The data revealed that community members were unsure of what engagement should be in theory, and what to expect in practice. Nevertheless, as we discuss below, they were able to identify how the consultation strategy of the mining company had met their expectations or not.

4.2. Experiences of consultation

There was general agreement on the community consultation actions, for example interviewees all cited the same public meetings and drop-in sessions. However, interviewees were not in agreement on whether these actions were satisfactory and whether the project was generally positive for individuals or the area. All community responses reflected a perceived lack of power in the development process. Not all considered this necessarily negative, for one community member, having a small part to play in the decision-making was sufficient (CM1). Others emphasised that the community did not have a great amount of power in the development process, with one member highlighting that it was possible to manipulate the consultation process so stakeholders could achieve their own desired outcomes (CM6).

Saying the right things at the right time, for example, could have a 'great effect' (CM6).

Generally, community members felt they were not treated as equals of the mining company. For example, they felt their interests and knowledge of the area were not respected as equal to that of the mining company, with some feeling as though they were being treated as ignorant (CM8). Community members felt their livelihoods and landscapes were being destroyed and felt powerlessness to stop or change the project (CM1; CM3; CM4; CM8). There was also a perception among some community members that the community is a weak stakeholder in a process where the powerful (i.e. mining company) will win out:

'They're taking away everything we've ever worked for, and that's not imaginary, or anything else. They are forcibly coming in and taking away everything we have ever worked for and without any regards to health, emotional...[pause]...they just don't care.' (CM3)

In view of their perceived lack of power, it is understandable many community members were not satisfied with their experience of the company's consultation strategy. Not only was there a feeling of powerlessness, there were concerns about minimal involvement, for example being informed, but not involved in decision-making (CM8). Most interviewees had been to one or more community meetings but there was dissatisfaction regarding their organisation. Often meetings allowed for minimal interaction with mining company representatives and were perceived as a vehicle to inform the community rather than discuss and seek feedback on the plans (CM4, CM6, CM9). This dissatisfaction culminated in either distrust or dislike for the mining company. For example, community members resented visits by mine company representatives, who were seen by some as 'crooks' (CM4). Two community members described how they were comfortable with mining prior to the release of the proposal, but that subsequent interactions with the company quickly eroded their trust in both the company and the project as a whole:

'I was happy to go with the flow, until I realised from that meeting that I was dealing some of the worst people you could ever hope to deal with, and I can prove that almost beyond doubt' (CM4).

While the community was expressing its concerns about the company's efforts to thoroughly consult them, other stakeholders perceived the community as a whole as disinterested. State level government employees generally had little knowledge of the community's involvement and perceptions of the mine development. Local business and government employees thought community members would not be interested in the mine until they saw the physical impacts (BGU1, LG1, LM1). A few community members also recognised some community disinterest, although they emphasised that this came out of protest, rather than disinterest:

'They've had their representatives here, we haven't shunned them, locked them out or anything. I know people who are not taking their calls, not taking their visit, because they don't want to hear about it. It's like sticking your head in the sand.' (CM1).

The community was sometimes blamed for its lack of knowledge about the project, as a local government interviewee states 'if you carried out a survey on the planned mine on the main street of town, most people would not recall or know what you were talking about' (LG2). However, both community members and other stakeholders felt that sufficient information had not been provided by the mining company. Few could explain the lack of engagement from the company in the preceding months, nor were many aware of the next phases in the development process. Complaints about information tied in to broader issues with the format of consultation in general. For example, local government expressed concern that consultations had largely been one-way – from mining company to relevant stakeholders – rather than two-way interactions:

'They had some drop-in session days ... I'm not quite sure what you did if you wanted to have your say, like make a written submission or anything like that. I don't know whether submissions were called for and I don't really know what happens to submissions even if you did make one.' (LG2)

Whereas the majority of community members interviewed were not satisfied with the engagement, other stakeholders thought, despite some of the shortfalls, that the mining company was doing a satisfactory job. Government interviewees explained that the consultation was 'fair' (LG3) and 'thorough' (LG1), and met the baseline legal requirements (VG2, VG3), but were cautious to question the frameworks in place (VG2, VG3). This perception of thoroughness was predicated upon the fact that the consultation strategy included (a) group sessions and one-on-one meetings with community members and other stakeholders, and (b) feedback and changes to the mining plans in line with community concerns (LG1). Others emphasised the scope of the consultation, mentioning 'quite a few hundred people' had been consulted, and a variety of media had been used: 'community information sessions, letters, media articles, advertising, one-on-ones, they're sort of doing the whole thing' (BGU2). Those who were satisfied with the community engagement were also confident that the project could be carried out professionally with benefits for the wider area. That said, the majority of these interviewees expressed neutral rather than enthusiastic sentiments and emphasised that careful management would be necessary to make the project more beneficial than detrimental for the region (LG1, VG1). Not all were overwhelmingly positive, with some saying the engagement had been 'adequate' (BGU1) or was 'getting there' (BGU2), and others were cautious when commenting on their expectations going forward (LM1, LG3, ES1). For example, one local government employee was critical of the mining company's actions to date and questioned whether consultation would ever extend beyond the legal requirements (LG3). In general, local government employees expressed overall neutrality towards the project, demonstrating that even those not fully satisfied with the consultation process were not necessarily negative about the project as a whole. While some argued that consultation had been improving over time (VG1), there were concerns about how the community could be kept engaged throughout the lengthy development process which runs across decades from the planning phase to decommissioning and land rehabilitation (LM1). Furthermore, the information provided about the timing of the project had been sporadic (BGU1, LG2, LM1), and the uncertainties about the future of the development cast similar doubt onto the structure of future consultation (LM1).

The majority of community members held negative perceptions of the consultation process and were not in support of the mining project. Community members' negative perception was heavily influenced by the following factors: (a) an impression that the company had carried out the legally required baseline level of consultation and no more (e.g. CM9), (b) distrust and even dislike of the mining company (CM2; CM3; CM4; CM6; CM8), and (c) previous negative experiences with infrastructural developments which made them wary of the actions of the current mining company (CM2; CM3; CM4; CM8). The engagement experience and expectations of the project were also closely related; there were fears of loss of livelihood, and all interviewees who expressed these fears felt that their concerns had not been adequately listened to, considered, or acted upon.

These interview results are reflected more broadly within the community in the questionnaire data. As Fig. 2 shows, the effect of consultation efforts on community perceptions is largely negative. Negative perceptions range from the support for and opinion of the mine, to the information provision and community involvement in decision making. In some cases, the negativity is perhaps less than the opinions that surfaced during the interviews given that five of the seven effects have a mean perception of 3.5–5 on a 1–10 scale.

In the statistical analysis, multiple significant relationships emerged. Community experience of the consultation strategy negatively impacted stakeholder perceptions of a multitude of processes, including: information provision (Q12); trust to prevent environmental degradation (Q29); and, perceived involvement in planning process (Q17). The perception of information provision (Q17), and the trust in the company to prevent environmental degradation (Q20) was influenced by: expectation differences of consultation (Q18-Q17, p=0.030 and p=0.042 respectively); awareness of consultation actions (Q20, p=0.033 and p=0.048); and, consultation actions with regard to inclusion of relevant public groups and organisations (Q22C, p=0.008 and 0.020). Unsurprisingly, perceptions of involvement in the planning process (Q17) were strongly influenced by awareness of the process (Q20, p=0.01), and whether an invitation to participate in the planning process had been made (Q21, p=0.000).

Trust in the mining company to prevent environmental degradation (Q29) was strongly correlated with: perceived involvement in the planning process (Q18, R=0.71); view on information provision (Q12, R=0.80); view on community involvement (Q13, R=0.69); sufficient amount of consultation actions (Q22a, R=0.69); and sufficient quality of consultation actions (Q22b, R=0.73). All correlations were significant to less than 1%.

These questionnaire results appear to show the same trends exposed through the interviews, showing that the sentiments found in the smaller sample of community member interviewees are shared by the larger sample in the community as a whole.

5. Discussion

We draw upon the framework of Jobert et al. (2007) on local acceptance of renewables to explore the key findings of our case study on consultation and perception formation. While this framework is at the social-licence level of inquiry, the factors outlined therein (i.e. institutional conditions such as regulations and site-specific conditions such as community trust of the developer and local economic activities) are equally applicable to assessing the consultation process in general. We adapt these factors into two categories as follows (a) procedural conditions and (b) personal and contextual site-specific conditions. We will discuss both of these factors in turn. While specific insights discussed below originate predominantly from the interview data, the general conclusions are supported by community-wide survey data.

5.1. Procedural conditions

Non-community stakeholders in general cited the consultation process as fair and comprehensive, and in line with baseline legal requirements. Local and state government stakeholders in particular viewed the consultation process as effective in its dissemination of information about the project. However, community members viewed this as insufficient given a perceived lack of opportunity for dialogue. Even as an information dissemination process, the consultation failed according to many community stakeholders as they felt uninformed and sought information from other sources. This led to several community members interpreting the mining company's history in a negative light, and developing different versions of project benefits and drawbacks.

Adams (2004) argues that the success of a consultation strategy can be measured by the extent to which policy plans take public feedback into account. Local government employees cited the changes made to the project design as signs of a meaningful process. However, community members did not see their contributions reflected in these changes. In general, community stakeholders held higher expectations of engagement. They sought to be involved in setting goals for both the consultation process and for the project as a whole. Thus we observed a disconnect between stakeholder groups (community members vs. other groups) as well as a disconnect between the community's expectations and experience of engagement.
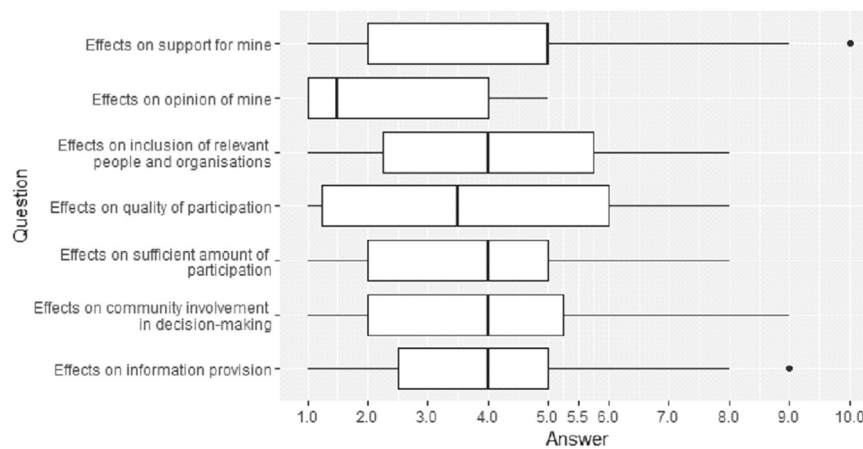
Fig. 2. Community perceptions of the effects of mining company consultation efforts. Likert Scale: 1 represents a 'very negative' opinion, 5 represents a 'neutral' opinion, and 10 represents a 'very positive' opinion. The box edges represent the 25th and 75th percentile (the distance between them is the interquartile range). The median is represented by the central line. The horizontal extending lines show the total range, excluding data points more than 1.5 times the interquartile range away from the 25th and 75th percentile; these outliers are indicated as points.

The timing of consultation is also crucial, our results show that poor communication at the beginning of a mining project can lead to false hopes of community members role in the planning process (Jobert et al., 2007; Connor et al., 2009; Dütschke, 2011). Effective communication cannot be started halfway through a project, but must be present from the start and needs to continue throughout; i.e. from project conception through to decommissioning. For example, at the time of interviewing many stakeholders had not heard from the mining company for months, leading to speculation on project status, and even suggestions this was part of a scheme to avoid community engagement. Such actions are damaging as they block stakeholders from accumulating knowledge, which prevents stakeholders from forming stable perceptions (De Best-Waldhober and Daamen, 2006), and may ultimately lead to distrust of the company.

Community and other stakeholders had a clear vision for how a meaningful consultation process should be structured. Core concepts for the consultation strategy were identified as: information provision in a readily understandable format for all stakeholders; transparency, honesty and authenticity; clear communication on what is negotiable; and, media engagement across multiple platforms. The overall aim was for two-way communication avenues to exist between stakeholder groups. This emphasis on two-way dialogue echoes the RE literature where stakeholders have sought more iterative and transparent processes (Hall et al., 2013; Gross, 2007).

5.2. Personal and contextual site-specific conditions

Community trust in the planning authorities and companies is central to the formation of positive perceptions of a mining project (Moffat and Zhang, 2014). The RE literature suggests that a deficit of community consultation and a bias towards certain stakeholders can cause a lack of trust to develop (Gross, 2007; Jobert et al., 2007). In our case study, many community members expressed distrust in the mining company. In line with the RE literature, this was rooted in their perception of minimal consultation, focused on information dissemination rather than meaningful consultation, as discussed above. Even those who had not been aware of the consultation process expressed distrust in the company.

Community trust in professional actors such as NGOs and industry stakeholders is also important in the formation of positive perceptions (Huijts et al., 2007). In our case study, the opinions of some community members were shifted in a negative way after interactions with mining company representatives. This suggests that companies need to pay closer attention to the selection of individuals that represent them during consultation. Similarly, the RE literature also discusses the importance of individuals, but places more emphasis on the choice of persons to manage the community economic benefits package (Cass et al., 2010; Cowell et al., 2011; Munday et al., 2011), than on the choice of public relations representatives. Other factors of influence include previous negative community experiences of other infrastructural projects which made them wary of future developments.

Experience of the consultation process also influenced trust in the company's ability to prevent environmental degradation. Building trust through the consultation process here would also increase the confidence of the community that environmental and social infrastructure would not be negatively impacted. In this vein, Aitken (2010, p.1839) cautions that building trust within a consultation process should be based on addressing rather than removing concerns, emphasising that we must be careful not to create a situation where "local communities are reassured by the developers and hence do not oppose the development".

Similar to the findings in other studies (Jobert et al., 2007; Booth and Halseth, 2011; Coleby et al., 2009), lack of meaningful consultation was found to negatively influence community perceptions of the mining project. A lack of acceptance appeared to be driven by expectations of involvement, as discussed above. Since the community was unclear on the agenda-setting process and the general purpose of consultation, it already precluded broad acceptance of the project. Lack of acceptance is in some cases extended into community apathy, which was raised multiple times by stakeholders. Community and non-community groups viewed this apathy in opposite ways. Local government and business group employees viewed this as a laziness and disinterest in planning discussions, whereas the community felt disenfranchised and fatigued by the process. Given that consultation involves opportunity costs for the community, it is natural that members who perceive the process poorly would not only report lower acceptance in the project, but may withdraw and become apathetic. Our results show three dominant reasons for this apathetic behavior: a perception of a lost cause borne out of disenfranchisement; a lack of trust in the mining company; and, as a silent protest against mining plans in general.

6. Conclusion

Mining is an important and widespread activity across many countries. Understanding interactions between stakeholder groups when planning mine developments is a core factor in acquiring a social licence to operate. Consultation is the predominant method for community engagement and it can take many different forms and serve many purposes. Previous research has focused on factors that

contribute to social licence acquisition, but little work has been conducted on how the expectation and experience of consultation influences perception formation.

We find that community experience of consultation led to negative perceptions of the proposed mining project due to procedural factors (e.g. timing, consistency in consultation, lack of two-way dialogue) and personal and contextual factors (e.g. mistrust of the company and its representatives, community disenfranchisement, and failure to meet community expectations). There are several overlaps with the RE literature including a call for two-way, transparent and consistent consultation, (mis)trust of professional stakeholders, and the importance of well-timed consultations. There are also clear differences including the call for community involvement in agenda-setting, stakeholder disenfranchisement misunderstood as apathy, selection of the most appropriate company representatives, and the importance of meeting stakeholder expectations of consultation.

The case study revealed multiple diverging understandings of the purpose of consultation both between and within stakeholder groups. As such, there was no common basis for discussion regarding the mining project. This extends to all consultation settings including timing, consistency, and procedural arrangements. Some stakeholders held expectations that were met, while others felt impotent to an extent that resulted in apathy. It is important to realise that little opposition to a project may not equate to a social licence to operate as it can actually result in this apathy which is driven by a lack of trust, feelings of disenfranchisement, or a silent protest. Given this, focus should be placed on how communities respond and act within the current consultation frameworks, otherwise we risk assuming communities are too lazy to get involved, or that the consultation is effective since government employees and stakeholders have no evidence to the contrary.

Appendix 1

Questionnaire: Quantitative Questions

6. Mining

6a. What is your opinion of mining in general terms? [SCALE]

12. To date, what is your view on the mining company actions with regard to information provision about the mine?
13. To date, what is your view on the mining company actions with regard to community involvement in decision-making about the mine? [SCALE]
15. Benefits and drawbacks

15e. Do you think the benefits and drawbacks of the mine will be shared equally throughout the community? [SCALE]

17. How involved do you *feel* in the planning process for the mine development today? [SCALE]
18. How involved would you *like* to be in the planning process for the mining company mining development today? [SCALE]
22. What is your opinion on the participation actions mining company has planned or already carried out?

22a. SUFFICIENT AMOUNT of participation [SCALE]
22b. QUALITY of participation [SCALE]
22c. INCLUSION of relevant people and organisations [SCALE]

24. Do you feel the participation efforts of mining company have influenced your opinion of the mine? [SCALE]
25. Did the participation efforts affect your support of the mine? [SCALE]
27. Do you think the mining company would change their operations

based on feedback you give them? [SCALE]
28. Do you think the mining company cares about your opinion of the mining development? [SCALE]
29. Do you trust the mining company to prevent environmental degradation from occurring? [SCALE]
30. Do you trust the state government regulations to prevent any environmental degradation from occurring? [SCALE]

Appendix 2

Questionnaire: Qualitative Questions

1. What is your postcode and place? (e.g. 3400; Horsham) [OPEN]
2. What is your age? [CLOSED]
3. How long have you lived in the Wimmera area? [CLOSED]
4. Would you consider yourself a "member of the community"? [Y/N OPEN]
5. What is your occupation? [CLOSED OTHER]
6. Mining
     6b. Why do you feel this way about mining? [OPEN]

7. Have you heard of the planned mine between Horsham and Stawell? [Y/N]
8. When did you first hear about plans for the mine? [CLOSED OTHER]
9. From whom did you first hear about the mine plans? [CLOSED OTHER]
10. How were the plans for the mine communicated to you? [CLOSED OTHER]
11. Who has approached you about the mine (to discuss, give information, etc)? Circle ALL options that apply [CLOSED OTHER]
14. What factors have shaped your opinion of the mining proposal? [OPEN]
15. Benefits and drawbacks

15a. What BENEFITS do you personally expect to experience from the mine? [OPEN]
15b. What BENEFITS do you expect the community will receive from the mine? [OPEN]
15c. What DRAWBACKS do you personally expect from the mine? [OPEN]
15d. What DRAWBACKS do you expect the community will experience from the mine? [OPEN]

16. Will the mining operations take place on land you own? [Y/N]
19. Mining regulations in Australia require a certain degree of "participation".
     19a. How would you define "participation"? [OPEN]
     19b. What would you consider necessary for meaningful "participation"? [OPEN]

20. Have you heard of any actions the mining company has planned or already enacted that would allow the community to participate in the planning process of the mine? [Y/N OPEN]
21. Have you been invited to participate in the mining company planning process? [Y/N OPEN]
23. In describing the level of participation the mining company has offered to date, which phrase best describes the relationship between community members and the company? [CLOSED]
26. Do you think everyone in the community is being given the same opportunity to participate? [Y/N OPEN]

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