UTS UNIVERSITY OF TECHNOLOGY SYDNEY

Examining the role of public participation and design in planning sustainability transitions

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Under the supervision of
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Certificate of original authorship

I, Kimberley Crofts, declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy in the Faculty of Design, Architecture and Building at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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ABSTRACT

This research explores the role of public participation in planning the phase-out of coal mining in the Hunter Valley of New South Wales and uses this inquiry to suggest practical opportunities for designers in supporting participation in sustainability transitions. This thesis argues that without addressing structural barriers to participation, the public will continue to have limited influence over transition agendas, and decisions will continue to be made that benefit status quo actors such as fossil fuel companies.

The research makes several contributions to rectifying this exclusion. First, through experimenting with place-based modes of public participation oriented towards policy, it shows how local knowledge might be integrated with technoscientific expertise to expand the evidence base on which transition decisions are made. Second, it reveals that a sensitivity to the socio-political factors that determine transition pathways is critical for knowing how public contributions can have the most impact. Finally, by field testing roles for designers in transitions, the research builds a practical understanding of how designers can support the growth of civic capacity within regional energy transitions.

Contents

List of publications authored during the candidature v
Reports co-written and designed during the candidature v
List of Tables vi
List of Diagrams, Figures, and Illustrations vii

Preface 1
About Hunter Renewal 6
Acknowledgements 8

1 - Introduction 9

2 – Literature review 16

2.1 – Framing the field of design 17
2.1.1 What is design? 18
2.1.2 Design expertise 20
2.1.3 Fields of design related to this research 22

2.2 – Public participation 43
2.2.1 Rationales for and against public participation 44
2.2.2 Public participation in policy making 48
2.2.3 Public participation in sustainability transitions 54
2.2.4 Public participation in planning 65
2.2.5 Public participation in the NSW planning system 71

3 – Methodology 83
3.1 Ontological foundations 84
3.2 Research design 85
3.3 Methods 93
3.4 Limitations of the study 99

4 – The workshops 101
4.1 Future-proofing the Hunter workshops 102
4.2 Community Restoration Blueprint workshops 111

5 – Discussion 120
5.1 Why is public participation necessary for sustainability transitions? 121
5.2 What factors influence how public participation proceeds in sustainability transitions? 126
5.3 What roles might designers play in supporting public participation in sustainability transitions? 168

6 – Conclusion 202

7 – References 206

8 – Appendices 240
8.1 Research materials 241
8.2 Future-proofing workshop materials 250
8.3 Blueprint workshop materials 257
8.4 Other materials 271

List of publications authored during the candidature

Crofts, K. (2023). *Empowering Voices: Australian Case Studies Unveil the Power of Community in Decision-Making*. Published by Hunter Renewal. https://www.hunterrenewal.org.au/empowering_voices

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List of Tables

Table 1: Comparison of key phases within transition design, design activism, and transition management with a proposed combined model. (page 41).

Table 2: Adapted Trinity of Voice model (page 53).

Table 3: Description of the research cycles and key questions for data analysis (page 89).

Table 4: Overview of methods for fieldwork (page 93).

Table 5: Refinement of recommendations language (page 148).

Table 6: Roles, dominant design practice, key tasks for design activism (page 175).

List of Diagrams, Figures, and Illustrations

Note: **Diagrams** are taken from the research activities or have been created for Hunter Renewal or others during the fieldwork. **Figures** are taken or adapted from other sources. **Illustrations** are my creation to explain concepts or processes.

List of Diagrams

Diagram 1: Three areas for public participation in the NSW Planning System (page 77)

Diagram 2: The ideas for the Future-proofing workshops organised by category (page 104)

Diagram 3: Example of the cards using in the Future-proofing workshops (page 105)

Diagram 4: Sketchnote from the Cessnock workshop (page 108).

Diagram 5: Draft principles for land restoration (page 114).

Diagram 6: Sketched and finished drawings by Jess Harwood (page 118).

Diagram 7: Top concerns from the Future-proofing workshops and survey (page 152).

Diagram 8: Top priorities from the Future-proofing workshops and survey (page 152)

Diagram 9: Covers of the *Future-proofing* and *Blueprint* reports (page 154).

Diagram 10: Stakeholder map created with BZE (page 179).

Diagram 11: Simplified stakeholder map created for Hunter Renewal (page 180).

Diagram 12: Map of the problem space for recruitment of academic panel (page 181).

Diagram 13: Illustrative map of the problem space for community (page 182)

Diagram 14: Timeline of key windows of opportunity for Hunter Renewal (page 183).

Diagram 15: Timeline of Hunter transition events for Hunter Renewal (page 185).

Diagram 16: Draft Action for Ownership Model (page 199).

List of Figures

Figure 1: Mining areas in and near the Hunter River catchment (page 13).

Figure 2: An activist group contemplates the 7,500 pages of an EIS (page 24).

Figure 3: Proposal for the Muswellbrook Coal Pumped Hydro and Solar Farm (page 25).

Figure 4: Muswellbrook Coal open cut coal mine (page 26).

Figure 5: Adapted model of the transition design process (page 35).

Figure 6: The Multi-Level Perspective (page 55).

Figure 7: Transition Management model (page 56).

Figure 8: Arnstein's Ladder of Participation (page 67).

Figure 9: Model of the design process from Bela Bánáthy (page 143).

List of Illustrations

Illustration 1: Fields that shape this study (page 16).

Illustration 2: Mapping of participatory design fields (page 28)

Illustration 3: Comparison of rationales for and against public participation (page 46).

Illustration 4: Trajectory of the research cycles (page 88).

Illustration 5: Thickening the staging for transition decisions (page 122).

Illustration 6: Factors that influence public participation in sustainability transitions (p. 126).

Illustration 7: A framework for design activism in sustainability transitions (page 176).

Preface

On a Thursday afternoon in February of 2017, the then federal treasurer, Scott Morrison, stood to respond to a question in the Australian federal parliament about how the government would maintain a competitive economy. In his right hand he brandished a lump of coal.

> **Mr MORRISON:** This is coal. Do not be afraid. Do not be scared. It will not hurt you.
>
> **The SPEAKER**: The Treasurer knows the rule on props.
>
> **Mr MORRISON:** It is coal. It was dug up by men and women who work and live in the electorates of those who sit opposite—from the Hunter Valley, as the member for Hunter would know. It is coal that has ensured for over 100 years that Australia has enjoyed an energy-competitive advantage that has delivered prosperity to Australian businesses and has ensured that Australian industry has been able to remain competitive in a global market. Those opposite have an ideological, pathological fear of coal. There is no word for 'coalophobia' officially, but that is the malady that afflicts those opposite. It is that malady that is affecting the jobs in the towns and the industries and, indeed, in this country because of the pathological, ideological opposition to coal being an important part of our sustainable and more certain energy future (Commonwealth, 2017, p. 536).

Two years later, with Morrison as Prime Minister, the Liberal/National party (LNP) would win a federal election that some attribute to their support of coal and other fossil fuels (Emerson & Weatherill, 2019; Horn, 2019). Morrison soon stepped away from Australia's commitments to reducing carbon emissions which had been part of the Paris Agreement, signalling that the LNP were firmly wedded to the coal industry.

This background is given to introduce the drivers behind this thesis. Following the 2019 election, I was despondent. Despite high levels of public support for action on climate change at a federal level (Merzian et al., 2019), many regional areas voted overwhelmingly for candidates that supported coal mining (AEC, 2019). From my vantage point, this was incomprehensible. Research shows, however, that support for action on climate change does not necessarily guarantee pro-climate voting behaviour

if individual interests and identities are at risk (Hansen, 2019; Harrahill & Douglas, 2019; Lewandowsky & Oberauer, 2016; Tranter & Foxwell-Norton, 2021). Rebecca Colvin's (2020) research in coal mining regions suggested that to counter perceived attacks on identity and overcome resistance to transitions, action should be directed toward 'place-based, bottom-up initiatives that are congruent with local identity, values, preferences, and priorities' (p. 11). The potential for greater community involvement became clear and is what drove my interest in exploring participatory approaches to sustainability transitions for this PhD.

Positioning statement

The location for my research is the Upper Hunter Valley in the state of New South Wales, a coal mining area where people are coming together to discuss what a sustainability transition may mean to them. Conducting research in a regional community undergoing significant change poses dilemmas for an "outsider". Although I grew up in a regional area and have lived experience with precarious employment, I currently live in a major city surrounded with relative privilege. In situating the approach to my research, I must reflect on my motivations for embarking on this line of inquiry and understand how my outsider position might influence data collection and interpretation (Jacobson & Mustafa, 2019). As one of my supervisors asked me early on in this process, 'what is at stake for you?.'

There are two aspects to this positionality I should attend to. The first is that without critical attention, my interpretations may tend toward the positive because I share some of the lived experience of the people in my study. Second, in calling myself an outsider—despite this shared experience—am I unconsciously demonstrating my ability to escape the effects of this transition? Does the term outsider come with an escape clause?

Positioning myself as a privileged outsider has other challenges. These are related to the colonial roots of the reflexive methodology on which positioning statements such as this are founded. Jasmine Gani and Rabea Khan (2024) note that declarations of privilege were made historically to distinguish the researcher to the disadvantaged "other" under study. The authors challenge researchers to interrogate the unequal power relations inherent in their practices and approach research with a 'commitment to repair' (p. 6). For me this meant a readiness to join in with what was already happening and being prepared to be changed myself.

From the beginning, invitation was a key aspect of how this research proceeded. I offered my design skills before assuming a role as researcher. I trained local facilitators rather than presuming I should host activities. I sought feedback so I could adjust my approach as required. This included checking in with research participants after interviews to ensure my interpretations fitted how they wished to be portrayed. Every relationship was grounded in reciprocity and avoided extraction as much as possible.

My interpretations are also affected by my professional experience. I have worked as a designer for almost 30 years, first as a graphic designer and then later in service and organisational design. Through this work I have significant experience in design-led research, workshop facilitation, and communication of research findings. Along with my design qualifications (Bachelor of Design/Master of Information Design), I also hold a Graduate Certificate in City and Regional Planning and have worked in planning organisations. My broad and practical understanding of design from visual communication through to the design of public spaces will influence how I have interpreted and practiced design situations in this research.

Some notes on terminology and language politics of this thesis

Over the past three years I have worked alongside people in the Hunter Valley in their push for a sustainability transition. This has been through working with a grassroots environmental network, Hunter Renewal. I acknowledge the role of the local Hunter community in the advancement of my insights and honour their contribution through the application of plain language. The writing of this thesis will be of no use to them if the language used is obscure and academic in nature.

In addition, because of the collaborative methodology I have followed, throughout this thesis I intentionally use the first-person plural “we” when talking about the work done with Hunter Renewal. Such inclusive use of language is common within Participatory Action Research (Fals Borda & Rahman, 1991; Reason & Bradbury, 2001), and is both epistemic and political in nature. Through its use I am indicating both a rejection of hierarchical notions of expertise and an embrace of solidarity through language (Pennycook, 1994). At the same time, I am conscious that in using “we” I am implying membership of a community that comes with responsibility toward this community (Carciu, 2009; Íñigo-Mora, 2004). I do not, therefore, use this pronoun lightly. I acknowledge that it is a political choice and that I am signalling a particular language politics with its use.

Here I define other terms used in this paper so that my interpretation and perspective can be clear. The first, and probably most important, is community.

Community

While the term *community* is difficult to define if not completely elusive (Cohen, 1985; DiSalvo, Clement, & Pipek, 2013), one commonality amongst its many definitions is that *community* represents a positive delineation (Bell & Newby, 1972). Uncritical positivity can imply, however, that community represents a universal experience. Such a positioning can obscure difference and lead to the exclusion of anyone who does not conform to a group's stated values and norms (Cameron & Gibson 2005; Gibson-Graham, 2006).

Jean-Luc Nancy (1991, p.4) points out, however, that 'there is no common being, but there is being *in* common,' signalling that community is not about common identity, but rather about how people are in relation to one another and what they do together. In this situation, a community can be made up of diverse individuals who are affected by or concerned about an issue and are brought together through existing or novel organisations to collectively tackle these problems (Dewey, 1988 [1927]; Young, 2000).

For the purposes of this research, *community* is therefore applied to groupings of diverse people who live and work in the Hunter Valley region of New South Wales and who will be affected by a phase-out of coal mining and power generation in the area. Such a definition is made in recognition that *this* community is not the monolithic entity that might be used for political purposes to imply a homogeneity of interests (Graeber, 2007)—as in '*the* community'—but a grouping of people who are affected by transition in different ways, have different capacities and means to address their affectedness, and have come together to collectively address the transition.

In the Hunter Valley, a community (not *the* community) is meeting around kitchen tables to discuss, plan, and distribute knowledge about transitioning away from coal. Throughout the thesis I refer to 'the local community,' 'community members,' or 'the Hunter community' to describe these people who are creating novel organisations like Hunter Renewal to represent their views in parliaments and to campaign for a diverse range of transition strategies. The people who are leading these activities are themselves members of this community. They live, work, and study within the Hunter Valley area and are subject to the same pressures related to transitions as the people they bring together.

The public & public participation

In this thesis I refer to *the public* in reference to the practice of *public participation*, also known as community engagement. Public participation is defined as the purposeful inclusion of non-state actors in decision-making and knowledge production activities regarding specific issues of public concern or institutional policy (Bucchi & Neresini, 2007; Renn, Webler, & Wiedemann, 1995; Rowe & Frewer, 2004). As with my definition of community, in defining *the public* I avoid implying that such a group exists as a homogenous entity. Rather than 'publics-in-general,' I prefer to use 'publics-in-particular' (Michael, 2009, p. 617), who emerge because of their relation or implication with a particular issue (Dewey, 1988[1927]; Einsiedel, 2014). In this case, a *particular public* who are more directly affected by the coal transition as opposed to the *general public* who are less directly impacted. Further examination of the public as an entity is in section 2.2.

Sustainability transitions

Sustainability transitions are changes made to socio-technical systems such as energy supply that encompass a broad range of actors over long durations with the aim of transforming them to more sustainable systems (Geels, 2002; Markard, Raven, & Truffer, 2012). The sustainability transition which is the subject of this thesis is an energy transition. Its key concern is how to enact structural change aimed at eliminating economic and cultural dependence on fossil fuels with view to socio-ecological repair, restoration, and renewal. At times the term *energy transition* is used interchangeably with *sustainability transitions, transitions,* as well as *coal phase-out.*

Knowledge, information, and evidence

Knowledge may be thought of as explicit knowledge that can be transmitted to others, or implicit knowledge which is embodied individually and applied contextually (Braf, 2002). Charlotte Hess and Elinor Ostrom (2006) define knowledge as 'all types of understanding gained through experience or study' (p. 8). This equalising dimension to expertise implies that all forms— explicit and implicit—are valid ways of knowing depending on the context of their use (Schneider & Ingram, 2007). I define knowledge as an understanding developed collaboratively about an issue which will allow for action on that issue in context. *Local knowledge* is the practical understanding that people have of their local conditions based on lived experience (Kinsella, 2004; Yanow, 2003). The situated nature of local knowledge is as critical to policy making as scientific knowledge because contextual detail 'fills gaps, provides information about

context, and offers pragmatic, experience-based insights from those who know a situation firsthand' (Innes & Booher, 2018, p. 164).

Information is not knowledge, but we gain knowledge through situating and using information in ways that create meaning (Healy, 2009). Information is therefore knowledge which can be used in context to develop understanding.

Evidence is generally thought to be information that has been legitimised by a recognised authority and that can be used to prove or disprove a proposition or claim (Upshur, 2001). As this research has a focus on planning an energy transition, evidence is conceived of as information used to make plans and advocate for certain positions regarding these plans.

About Hunter Renewal

My research explores transitions from a community perspective. Although there are other community and civil society organisations I could have used for my study, Hunter Renewal was the most appropriate as their primary aim is to facilitate a collaborative response to the creation of policy settings to enable a sustainable and equitable future.[1] Hunter Renewal (HR) is a project initiated in 2017 by the Hunter Central Rivers Alliance and Lock The Gate. They prefer to be labelled as a *grassroots network* rather than a community organisation because they are not formally incorporated as an organisational entity. At times I may use the term *community organisation* to refer to other groups.

Hunter Renewal believe that our democracy functions more ethically, sustainably, and equitably when people are meaningfully involved in shaping their own lives. As such they stage platforms for the active engagement of citizens, so as to demonstrate to political decision-makers the value of collaborative and participatory governance. Their concern with community-wide participation in energy transitions includes fossil fuel workers as a subset of the entire community as opposed to an approach that centres on these workers. In taking this broader view, HR hopes to repair the social fabric of the region by creating opportunities for all, thereby overcoming some of the effects of the so-called "two speed" economy in the Upper Hunter whereby there are

[1] https://www.hunterrenewal.org.au/who_we_are

economic winners (coal miners) and losers (everyone else). HR also views the transition through a region-wide frame that recognises a range of interconnected concerns such as regeneration of mine sites, biodiversity protection, renewable industry development, employment, health, and social equity.

Throughout this thesis you will notice the presence of Dan (Danielle) who is the lead organiser for Hunter Renewal. Dan has been my key liaison during this research and has provided much insight through our reflective sessions, allowing me to sense check my outsider interpretations of what is happening "on the ground" in the Hunter.

Acknowledgement of Country

While I have been living on Gadigal and Bidjigal land in Sydney throughout this PhD, the location of the research was primarily on Wonnarua Country. As a study about coal mining on this land, I must acknowledge the ongoing trauma that colonisation has wrought on Wonnarua peoples and other traditional custodians in this nation. As a white settler to this land, I acknowledge also that my ancestors may have played some role in this dispossession. In 1926 at the Ravensworth Estate in the Upper Hunter, for example, close to 20 Aboriginal people, including children, were massacred by the possessors of the homestead (Hunter Living Histories, 2021). More recently, the Estate has been at the centre of contestation surrounding the expansion of Glencore's Glendell coal mine (Nichols, 2021). This ongoing struggle is representative of the contested nature of sustainability transitions on this continent.

Under colonisation, the rights and access of First Nations' people to their land have been heavily restricted. While there have been some small gestures toward supporting self-determination through employment in mining operations, Indigenous people in the Hunter Valley continue to be marginalised from discussions about the future of development on their lands.

I acknowledge that in my research I have been unable to sufficiently address the continued dispossession of Aboriginal peoples from their land, nor account for ways in which decisions about what happens on their lands can be more inclusive of their vast knowledge. This is a significant gap in this research and one which I wish I had been able to fill, yet I also note that as a white researcher, my intrusion into Indigenous spaces is not appropriate.

Acknowledgements

My deepest gratitude goes to Dan Coleman from Hunter Renewal for so generously inviting me into her world and work. Without her this research would be nothing. I also wish to thank the people directly involved with Hunter Renewal, the broader community they represent, and the extended grassroots network at the literal coalface of transition. This includes the Hunter Jobs Alliance, Lock the Gate, Hunter Community Alliance, the Hunter Community Environment Centre, and BZE. Special thanks to Pete, George, Erin, Warrick, Nic, Carmel, Steve, Sophie, and Dr Rod. Thank you also to each of my interview participants and every person who attended the workshops we held over these last three years.

Thanks to my supervisors Cameron Tonkinwise and Abby Mellick Lopes for their wise counsel, always delivered with kindness and humour, and to Scott Mater and Kate Sweetapple for their helpful contributions during the final stages. Thank you also to my extended supervisory team starting with Liam Phelan with whom I've shared many insightful and witty chats. Without your help Liam I don't think this research and thesis would be where it is today. And that's a good thing. Thanks also to all those in the Hunter Valley Social Scientists group that welcomed me in despite my complete lack of social science qualifications. Special mention to Hedda Askland and Will Rifkin (the middle child), who have both contributed greatly to my thinking and scholarship.

This PhD would not have begun without the encouragement of the UTS transition design collective that formed in early 2021 and have continued to meet and support one another. Thank you, Juan Garzon, Karina Kalio, Kiran Kashyap, Sam Wearne, Sam Yu, Nina Woodcock, and Monique Potts. The PhD was also kickstarted with help from the Coalition of Everyone. Thank you especially for the first chat Sonia Randhawa, and for the continuing involvement and interest Willow Berzin.

Most of all I wish to thank my husband Tom who listened to my rants, helped shape my early ideas, and pushed me to tackle this PhD in the first place. His generous sacrifice made it possible for me to do this PhD. My parents, too, have always been thoroughly supportive and always happy if I was happy. Thanks also to Moby the dog for dragging me out of the house for walks when I needed to clear my head.

1 - Introduction

Why aren't they planning for the future?

All the steps have been taken,
but nothing happens, nothing happens.

Nothing happens,
because no one's sure how to fix this,
simply.

If I had
a few billion dollars
and a space rocket
we'd be right!
But that's not how it's going to happen,
is it?

It will happen
with a bunch of people
working together to advocate
and then, hopefully
someone listens.[2]

People in the Hunter Valley of New South Wales (NSW) are facing challenging times as changes to global energy systems foreshadow profound shifts to the region's social and economic outlook. Such complex and long-term transformations are known as sustainability transitions (Geels, 2002). These shifts will affect whole communities, and therefore require deft navigation of local conditions, governance frameworks, technoscientific implications, and how an understanding of how solutions might be accepted in a particular location over time (Chilvers & Longhurst, 2016; Fischer, 2000; Hayward, 1995; Hendriks, 2009; Johnstone & Hielscher, 2017; Lawhon & Murphy, 2012; Shove & Walker, 2007; Tangey, 2015). What needs to be known to approach sustainability transitions therefore spans a vast range of knowledges.

The forums in which this knowledge will be used to make decisions are all influenced by power, either directly or indirectly (Dixon, 2016; Turnhout, van Bommel, & Aarts,

[2] A poem constructed from several interview transcripts, inspired by a paper by Michelle Duffy and Sue Whyte (2017) where they created poems from transcripts of interviews with residents of the Latrobe Valley, a coal region in Victoria. They did this to assist with anonymity in a small region where identities might be easily revealed.

2010). Elite actors have more access to these forums and therefore have more power to shape transition agendas to suit their interests (Turnhout, 2024; Turnhout et al., 2020). Some suggest, therefore, that to overcome power imbalances, new models of participatory knowledge production are necessary: ones that are inclusive of community, industry, and government, across multiple social, technical, institutional, and economic systems (Armstrong, 2021; Collins & Ison, 2009; Hyysalo et al., 2019; Macedo et al. 2020; Mauser et al., 2013; Voß, Smith, & Grin, 2009).

Unfortunately, despite a need for an inclusive approach, what we are seeing in Australia is exclusivity. Fossil fuel executives have been appointed to the boards of transition authorities, and policies and legislation have been written to smooth their access (see section 4.1). Protests government support for fossil fuel projects—sometimes the only way that people can voice their dissatisfaction—are met with anti-protest laws to silence civil dissent (Bryson, 2021). By restricting who can participate in civic discussions about transitions, opportunities are lost for communities to collectively explore how they want to live (Della Bosca & Gillespie, 2018; Miller, Iles, & Jones, 2013; Selkirk, Selin, & Felt, 2018; White, 2020). Furthermore, if local people are excluded from conversations about their future, they will feel unsettled and powerless (Martinelli et al., 2016; Sheldon, Junankar, & Pontello, 2018). Resistance to change in coal mining regions is therefore easy to understand. Coal mining regions such as the Upper Hunter Valley will therefore face significant hurdles in transitioning away from fossil fuels without the use of participatory methods that draw on local knowledge to create comprehensive, equitable, and inclusive visions (Evans & Phelan, 2016).

In this thesis I argue for a revived sensibility of public participation in the planning of sustainability transitions: one that embraces community members as valid contributors. There is a role for design here in creating and/or remaking spaces of participation so that community voices are heard, respected, and adopted in planning sustainability transitions. This research explores what these reimagined participatory spaces and processes can look like. For almost three years I worked as a designer with Hunter Renewal, a grassroots environmental advocacy network, joining their campaign to push for the local community to have a greater say in planning their transition away from coal in this region. Over this period, I designed participatory activities, trained others in these methods, conducted research, synthesised data, cowrote accounts of our findings, and designed reports that have launched community voices into parliaments, universities, galleries, and board rooms. I learned a great deal

about design, participation, mine rehabilitation, myself, and more than I ever wanted to know about NSW planning legislation. I am forever indebted to Hunter Renewal and the people of the Hunter Valley who wish for an equitable, sustainable, and thriving future for their region.

1.1 Research objectives and questions

The primary objective of this research is to examine the role of public participation in planning the phase-out of coal mining and power generation in the Hunter Valley, and to use this inquiry to suggest practical opportunities for designers in supporting public participation in sustainability transitions.

The research questions have adapted over time as my understanding of the problem space has deepened (Creswell, 2007). My initial hypothesis was that increasing the numbers of the public involved in transition activities was a key measure of success, and this shaped the research questions. These were:

1. Why is public participation necessary for sustainability transitions?
2. How can public participation be **increased** in sustainability transitions?
3. What roles might designers play in supporting public participation in sustainability transitions?

Following fieldwork and further reading I came to understand that increasing participation is only part of the story. After all, what is the point of more people participating if their presence has little influence over decisions? The second research question was therefore changed to: What factors **influence** how participation proceeds in sustainability transitions? This alteration is reflected in how I have designed the research (section 3.2), including who was recruited for interviews (3.3.4).

To explore the research questions, an action research methodology has been followed, with data collected over three cycles. The first cycle was aimed at understanding what factors support or inhibit public participation in sustainability transitions. Due to findings from this cycle about how the scope of public participation is shaped by legislation, the second cycle explored the literature and other data related to the development of land use legislation within the NSW planning system. The third cycle aimed at gaining deeper insights around how designers can support participation in knowledge creation as an aspect of sustainability transitions. Each cycle built upon the findings of the previous cycles as is standard in an action research process. I created

two reports with Hunter Renewal over these research cycles. These reports were outcomes of the public workshops that were the focus of my fieldwork. These are (i) *Futureproofing the Hunter* and (ii) *The Restoration Blueprint*. These will be referred to throughout as Future-proofing and the Blueprint.

1.2 Significance

Explorations into sustainability transitions do so conventionally from the perspective of industry and government at the regional or national scale. This study is unique in situating the affected community at the centre of the exploration through examination of the practices of a grassroots network located at the heart of a coal mining region. Furthermore, as much of the research surrounding designer roles in sustainability transitions focuses on the design of more sustainable products and services, often in an urban context,[3] this study is also unique in exploring the role of designers in matters related to land use planning in a regional energy transition.

1.3 The Hunter Valley as research site

While I could have chosen other locations in which energy transitions are proceeding such as Gladstone in Queensland or the Latrobe Valley in Victoria, I selected the Hunter Valley as I had existing contacts there from volunteer work.[4] Although the COVID pandemic meant most research was conducted online, geographic proximity from my home in Sydney also played a role in choosing the Hunter Valley. Familiarity with the NSW planning arena was also a factor in my choice.

My initial aim was to pursue practical projects that would assist fossil fuel dependent communities transition to sustainable futures. At the time I began my research there were few government initiatives to investigate because action on transitions has been so slow to start in Australia. Moreover, there was little in the way of research surrounding energy transitions from the perspective of communities or community organisers. The little scholarship I could find suggested that the use of local knowledge was crucial in transitions work (Colvin, 2020; Evans & Phelan, 2016). This led me to seek out organisations with a community focus with whom I carry out my inquiry.

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[3] From a review of 80 papers from the fields of Design for Sustainability Transitions, Transition Design, Ecologically-Engaged Design, and Systems Design. See appendices 8.4.6.

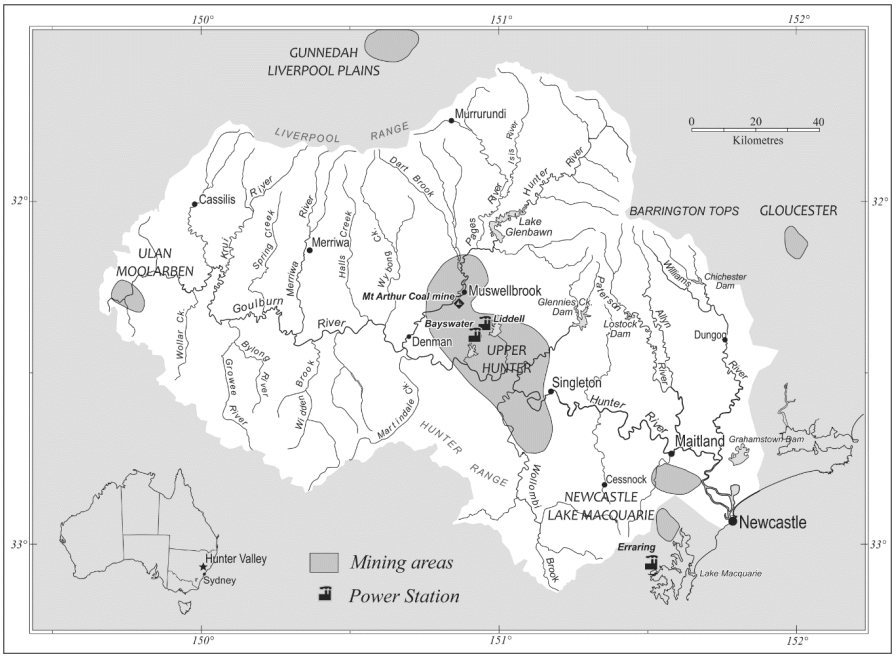
[4] This was a workshop hosted by BZE on regional diversification where I assisted through my role with the Coalition of Everyone. The work contributed to BZE's *Million Jobs Plan* report (Beyond Zero Emissions, 2020).

About the Hunter Valley

The Hunter Valley spans an area of 30,000 km^2 in the Australian state of New South Wales 150 km to the north of Sydney and is home to 291,946 people[5] (ABS, 2021a; Evans, 2008). The Upper Hunter where most of the coal mining is located has a population of 14,229 (ABS, 2021b). Coal mines cover 64 per cent of the Valley floor in this region (Page & Fowler, 2022). See **Figure 1**.

The broader Hunter Valley crosses the traditional lands of the Wonnarua, Worimi, Darkinjung, and Awabakal nations. Before colonisation, First Nations people used coal for cooking and heating and shared stories of its menacing power, suggesting that 'nikkin'—the Awabakal word for 'coal'—should be kept in the ground (Ray, 1993).

Figure 1
Mining areas in and near the Hunter River catchment. Rey-Lescure (2009) in Evans (2008). The Upper Hunter area (shaded, centre) is where most of my research was focused.



Though primarily known for wine growing, the Hunter Valley supports a large range of industries including health care (12% of total jobs) and retail (9.69%) (ABS, 2021a). It also has one of Australia's largest coal mining regions, accounting for over half of the nation's coal exports and providing around 9,288 direct jobs (7%) and 40,000 indirect jobs (ABS, 2021a; Evans and Phelan 2016; Hunter Joint Organisation 2019). Mining in the Hunter is also estimated to be responsible for around $600 million in

[5] This excludes the main city of Newcastle.

annual costs related to associated health damages (Armstrong, 2015). Moreover, in 2022, four operating coal-fired power stations in the Hunter contributed to 33% of total NSW carbon emissions (Department of Climate Change, Energy, the Environment and Water, 2022a; Clean Energy Regulator, 2022).

1.4 The politicisation of transitions in Australia

Coal mining has been the literal bedrock of economic development in the Hunter Valley since colonisation and is deeply embedded in community identities, making any attack on its dominance seem personal (Della Bosca & Gillespie, 2018; Evans, 2008; Evans & Phelan, 2016). Moves toward transition in the Hunter have therefore met with significant resistance, a situation exploited by politicians (Colvin & Przybyszewski, 2022; Emerson & Weatherill, 2019). What is good for coal companies has long been implied as being in the public interest (Evans & Phelan, 2016), and the economic contribution of coal to the region is overstated for political purposes (Bowden, 2018, Campbell, 2014; Pearse, 2009; Richardson & Denniss, 2011).

The area is characterised as the literal powerhouse of the state (Pearse, 2009), yet less than four percent of NSW Government revenue comes from coal royalties (NSW Government, 2023a). Furthermore, profits predominantly flow to overseas companies rather than being held in mining communities or shared with Traditional Owner people who are the traditional custodians of mining lands. Lucas (2016) for example has calculated that of the $30 billion in total income from the coal industry during the 2005–06 financial year, just $9.358 billion was returned to the Australian economy.

These economic fictions are problematic. The ways politicians frame the Hunter's economic reliance on a single industry poses huge risks when global demand for coal is in decline (Nicholas & Gorringe, 2022; Wood, Beauman, & Adams, 2021). For decades, action toward transition has been portrayed by politicians as anti-jobs and anti-development (Butler, 2022; Edwards et al., 2022). This so-called "jobs versus the environment" narrative presents the risks of unemployment through phasing out coal as greater than risks to health and the environment from continued coal mining (Instone, 2015). While there are economic consequences from declining coal exports, the perception that coal is the sole viable economic option significantly narrows the possibilities people can see for their future beyond their status as coal workers (Bailey & Osborne, 2020; Della Bosca & Gillespie, 2018; Lawhon & McCreary, 2020), and this has significantly restricted discourse around transitions in the region.

1.5 The structure of the thesis

This thesis contains six chapters.

Following this introduction, **Chapter 2** is a literature review of relevant theory and concepts regarding design and public participation in policy making, sustainability transitions, and land use planning.

Chapter 3 presents the methodological approach of this research.

Chapter 4 describes observations and findings from the workshops that were the key site of fieldwork.

Chapter 5 discusses the findings in relation to the three research questions regarding rationales for public participation, factors that support participation, and presents roles for designers in supporting public participation in sustainability transitions.

Chapter 6 concludes the thesis, presents the contributions of this thesis, and outlines future areas of research.

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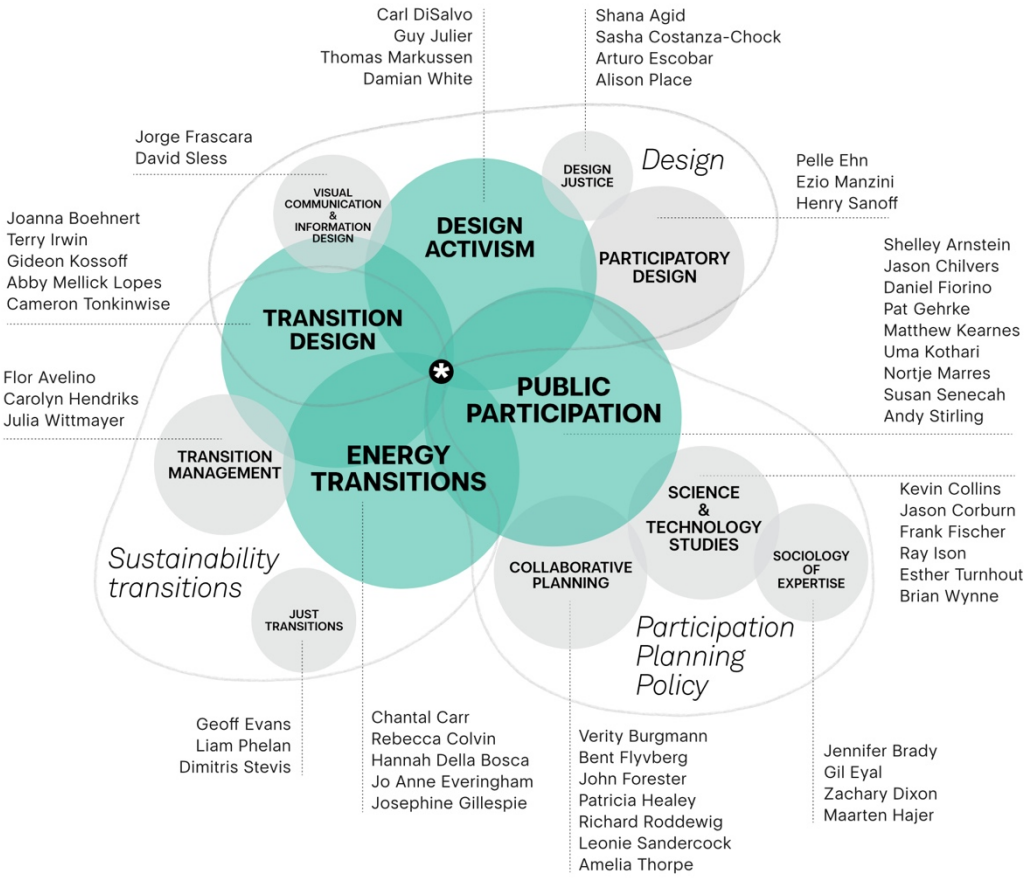
Quotes are used from research participants throughout the text. Each quote is labelled using the role that person played in the participatory activities: facilitator, participant, organiser, academic panellist, or survey respondent. A list of research participants is in the appendices along with copies of the discussion guides from the interviews.

As has already mentioned, but is repeated here for clarity, the labelling of figures, illustrations, and diagrams changes to distinguish authorship. **Diagrams** are those I created for the research activities or have been made for Hunter Renewal or others during the fieldwork. **Figures** are taken or adapted from other sources. **Illustrations** are my creation to explain concepts or processes.

2 – Literature review

This chapter presents a critical review of relevant literature related to design and public participation in policy, sustainability transitions, and planning. The areas of study are mapped below in **Illustration 1**. This mapping shows where there are overlaps in theoretical framings and connects commonly associated theoretical groups. Scholars listed are not necessarily those most associated with the discipline or theory but rather those who have influenced my thinking for this research.

Illustration 1
Fields that shape this study. The asterisk (*) indicates where my research sits, at the intersection between design activism, transition design, public participation, and energy transitions.



2.1 – Framing the field of design

I trained as a designer in a period when designers were parodied as turtleneck sweater-wearing experts who would tell you what you wanted because you couldn't possibly know it yourself. In this milieu, many designers considered themselves as a politically neutral party. Robin Kinross (1985) says this positioning can be traced to the years between the two World Wars when austere design choices reflected society's desire for rationalism and a rejection of the political ideologies from wartime, a stance which is in itself political. Drawing upon Donna Haraway (1991), Lucy Suchman (2002) calls this stance 'design from nowhere,' a position that encourages designers to dissociate what they design from the ensuing consequences. Designers so detached from the consequences of their actions fail to recognise that in making normative claims of how things *ought to be* they are in fact making politically charged value judgements about how a society should function (DiSalvo, 2012).

Alison Place (2023) says this neutral positionality continues to be taught in design schools. Being trained in this neutrality led me to a detachment that I previously framed as humility: never taking credit or wanting to speak of myself as individually responsible for what I had designed. It was always "we" not "me". Through deeper readings as part of this research I've come to realise my humility was masking the consequences of my actions. It can't have been "me" if it was "we". In framing the field of design for this thesis, I therefore reject neutrality to position myself as a deeply implicated designer.

This first section of the literature review sets out how I conceive of design and contains analysis of the design fields that are relevant to this study, namely visual communication, information design, participatory design, transition design, and design activism. I approach the description of all these fields drawing upon their character as political activities that have the power to mediate how we might approach sustainability transitions. Through this exploration I will show that while there are several fields of design I align to, it is design activism is the strongest foundation for this research.

2.1.1 What is design?

Design has significantly broadened its areas of concern from the object-based focus of the early twentieth century to a mode of inquiry that now includes matters of social, political, and environmental concern (Binder et al., 2011; Boehnert, 2018; Fry, 2009; Manzini, 2016; Öztekin & Gaziulusoy, 2019; White, 2020). Design as a mode of inquiry in this sense represents an examination of situations to make them perceptible and available for change (DiSalvo, 2012). If we accept that a transition to sustainable worlds is desirable, then design is a means to envision what might be possible, a crafting of the processes by which we get there, and the materialisation of relevant strategies, tactics, and visions. Through attempting to remake social and environmental conditions, designing can therefore be considered *inquiry for action* (Nelson & Stolterman, 2012).

When we seek to transform systems, laws, organisations, or technologies we are engaging in design just as much when we create a more tangible artefact (Nelson & Stolterman, 2012). In conceiving of these transformations, designers change what people can do and who they can be in the future (Light, 2020). The tools and objects of design are therefore ontological because 'they inaugurate a set of rituals, ways of doing, and modes of being' (Escobar, 2018, p.110). The things we design therefore 'act back on the human agent, modifying desires, expectations, actions and the ground and conditions for interpretation' (Mellick Lopes, 2017, p. 176). Designing in this ontological sense can therefore be conceived beyond the creative act as a powerful, world-shaping practice (Escobar, 2018; Fry, 2009; Light, 2020).

John Forester (1984, p. 17) extends the metaphor to call design 'world-threatening,' perhaps a term more apt given the negative impact designers have had on the planet through manufacturing desire for a whole range of unsustainable products and services like petrol-driven engines and coal-fired power. These world-threatening proclivities have motivated some to question whether design in its current form offers anything more than a means to preserve existing power hierarchies within highly unsustainable economies (Costanza-Chock, 2020; Escobar, 2018; Iskander, 2018). Design's unsustainable reputation as a field was expressed as follows by one organiser from the workshops:

> *Design is so often deployed insincerely to maintain a hegemony that is doing damage to people and the environment.* [Workshop organiser]

If design is practiced ethically, however, care is taken to consider the future impacts of what is designed and to interrogate the influence of the design methods and frameworks applied in the present. In other words, ethically-motivated designers should think about *what* they are designing, *how* it is being designed, *who* is involved in designing it, and *who* benefits from its creation.

Any designer seeking to make change is advised therefore to filter their desire to act through principles of design justice[6], particularly in the choice of *what* issues will be worked upon, and *how* knowledge about these issues is created and represented during the design process (Costanza-Chock, 2020). The methods and tools used in design-led activities are laden with power, privileging those with more experience and comfort in their use (Abdulla, 2014; Thinyane et al., 2020). In my experience these power dynamics are rarely examined. Designers choose the methods, select the participants, set up the collaboration space, orchestrate proceedings, and decide what data is highlighted and distributed. Avoiding acknowledging power dynamics therefore means that designers often fail to interrogate the privilege of being able to control who decides 'what information is useful to create the new world' (Gordon, 2021, para. 27).

Consideration of *who* can participate in sustainable worldmaking therefore requires me as a designer to consider the politics of desiring preferable futures (preferable for whom?), and to interrogate who benefits and who suffers from my design decisions (Valtonen, 2020; White, 2015). This means I should move beyond a cursory consideration of who or what might suffer any unintended consequences to explicitly recognising the power structures that influence both the tools, methods, and frameworks I choose and the impact that my designs have on the world (Place, 2023).[7]

[6] Principles of design justice have been created by the Design Justice Network (2020). The principles aim at helping designers work toward sustainable futures in more community-centred, inclusive, non-exploitative, and collaborative ways.

[7] Although this is a provocation from Alison Place, I chose to make myself the subject of this sentence deliberately as a means to force myself to consider the consequences of my actions as a designer.

2.1.2 Design expertise

John Heskett (2005) compares the word design to that of love because there are many meanings for it depending on 'who is using it, to whom it is applied, and in what context' (p. 25). Many scholars and practitioners draw upon Herbert Simon's (1969) definition of what it means to practice design: 'Everyone designs who devises courses of action aimed at changing existing situations into preferred ones' (p. 55). This definition, though, can be read as an invitation to consider anyone with agency to make change a designer, without recognition of the complexity of the design act itself. Everyone designs (Manzini, 2015), but not everyone can be an expert designer. What then is design expertise and why does it matter to this thesis? Part of my research is to explore the roles that designers might play in supporting public participation in sustainability transitions, and to articulate the conditions that make participation possible. My study should therefore inquire as to what it means to be a designer in this space. Can everyone who designs do this, or does one need to be an "expert designer"? Furthermore, who and what else is involved in making the conditions for participation to take place? I draw on literature from the sociology of expertise for guidance.

The study of expertise is often theorised through examining professional groups and how they compete for jurisdictional claims to skills (Brady, 2018). This area of study is known as the *sociology of professions*, an approach that is incomplete, says Gil Eyal (2013), because it looks only at who has control over how something is done (a task), while ignoring what conditions must be in place for this task to be accomplished. On the other hand, a *sociology of expertise* approach considers expertise as the capacity to complete a task more efficiently and successfully and requires an ability to shape the enabling conditions for the task to be done (Eyal, 2013). All the tools, actors, systems, and mechanisms that play a role in the accomplishment of a task are what needs to be studied, says Eyal, not only the expert. The sociology of expertise approach therefore draws upon concepts from Actor Network Theory.

A definition of expertise as a reliant on a network led me to inquire as to what aspect is the focus in design expertise literature. In their systematic review of 110 papers on design expertise across several fields, Tollestrup, Laursen, and Vesti (2023) found many centred on how the cognitive attributes of individual designers influenced their choice of methods and practices. The authors recorded that few studies inquire as to how design expertise is performed in relation to the broader network of actors and

actants.[8] Pedersen (2020) notes also, that research into the problem-solving skills of designers has been mostly conducted at the level of the individual rather than the group or network. For example, the first edition of Brian Lawson's book *How Designers Think* in 1980 analysed the strategies of individual designers. Later editions (e.g., 2005) signal a change in Lawson's approach, acknowledging the conversations that designers have with their drawings and with others to develop their comprehension of the problem.[9] Nigel Cross (1990; 2004; 2006; 2018) is also widely credited for his work in identifying the key attributes of individual, expert designers, such as their ability to approach ill-defined problems in creative ways to find novel solutions, as well as how design expertise develops over time. Such expertise is represented, for example, by the capacity of expert designers to retrieve suitable strategies from repeated experience.

Petra Falin (2009) proposes that the dominance of studies into the cognitive abilities of individual designers comes from a tendency in design schools for romanticising the 'artisan designer'. This has deemphasised other factors that contribute to design expertise, including how designers work in practice with other actors (human and non-human). Some argue that studies of expertise outside this wider view lack analysis of how power affects the performance of expertise[10] and are therefore unsuitable for understanding how to approach real-world challenges where access to power determines what happens (Brady, 2018; Tan, 2021). While the cognitive attributes that Lawson, Cross, and others have identified are important for approaching complex problems such as energy transitions, following a sociology of expertise approach, I would argue that it is also important to explore how these cognitive attributes assist designers in creating the conditions for the task of public participation. The inquiry in this research is therefore about the performance of design expertise and is why my third research question is about the roles that *designers* might play in supporting public participation in sustainability transitions and not what role *design* might play.

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[8] Actants are the non-human elements in the system that influence a situation by causing an actor 'to do things' (Latour, 2023, p. 55). This is a commonly used term in Actor Network Theory.

[9] This relates to Donald Schön's (1983) concept of design being about a reflective conversation with the material aspects of the situation (originally from Dewey).

[10] Maarten Hajer (2005) considers that expertise is performed because the claims people are permitted to make are controlled by the design of the stagings and settings in which they claim them.

2.1.3 Fields of design related to this research

By using a sociology of expertise approach as explained above, I now inquire as to how designers in different fields create the conditions for public participation to take place in sustainability transitions. The fields are visual communication and information design, participatory design, design activism, and transition design. Throughout the section I will show how designers interact with other actors, artefacts, and conditions in these fields, and what the impact of these interactions are on the task at hand. This section also includes references to fields of design not directly related to this thesis but must be covered to help position this thesis accurately within the scholarship.

2.1.3.1 Visual Communication and Information Design

The act of exploring ideas and communicating information through graphical means is *visual communication* (Buchanan, 1992). *Information design* is concerned with making information clearer for people in the contexts of use (Walker, 2019). These fields are sometimes referred to collectively as *communication design*.

Communication artefacts—reports, plants, proposals—contain a point of view about a subject or groups of subjects. The design of these artefacts is central to my study because material representations of subjects allow for meaning about them to be negotiated as a 'public thing' (Ehn, 2016). Such material negotiation has been essential to my fieldwork. Material representations in this sense have been called 'boundary objects' (Star 2016[1988]). This is because they 'create representations of the system that are meaningful to all stakeholders' (Cooney, et al., 2018, p. 149), even if these meanings are different. Boundary objects therefore create permeable borders where negotiations about problems can occur between groups with divergent views without compromising the values of each group (Nel et al., 2016).

Designers help groups develop shared representations of problems to solve, something that might be difficult without the affordance of a material artefact (Cooney et al., 2018; Cross, 2006). As the use of material objects to mediate discourse modifies what we understand and how we act (Marres, 2012), designers must consider what they design as politically charged objects (Sless, 1998). Two such politically charged objects will now be analysed. They are documents created within and for the NSW planning system. Both are intended to deliver information to the public about a planned land use proposal.

The first example is a written report, the second example is an annotated image. Both are analysed to demonstrate how design can be used to control meaning and therefore how the public might interpret the proposal. The level of understanding people are permitted to develop will affect their capacity to make submissions about the proposal. For example, when information is actively suppressed, people's ability to take part will be lesser than those who have access to this information (Kennedy, Schaefft, & Howard, 2017; Witt, Whitton, & Rifkin, 2018). This shows how designers can create the conditions for projects to be challenged or supported by the public.

Environmental Impact Statements

Proponents of large infrastructure projects in NSW such as coal mines must submit an Environmental Impact Statement (EIS) with their development application so that the potential environmental impacts of their project can be evaluated. The EIS must be put on public exhibition for no less than 30 days.[11] When one considers that the project proponents have had significantly more time to prepare the EIS and their case for development, often years, 30 days seems an insufficient period for others to assess the merits of these large project proposals. The public are given no financial or other support to help them navigate these documents. They are therefore at a significant disadvantage in assessing the merits of a project compared to the professionals who are paid a wage to write or assess them.

The Environmental Defender's Office (EDO, 2019), report that people find it difficult to know how they can participate more generally in these projects. There are, for example, no fewer than seven different documents regarding how public participation should proceed in regard to large scale infrastructure projects in NSW.

As the EIS presents an almost fully formed solution, the public are not afforded a role in negotiating this proposed future (Marres, 2012). The decision-making authority therefore misses out on their knowledge (Fricker, 2007). Moreover, while there are guidelines within the legislation that suggest brevity and clarity (NSW Government, 2022a), EIS documents are highly technical and extraordinarily long (Meissner & Everingham, 2021). See, for example, the photograph below of the reems of paper required to print out the EIS for the Narrabri Gas Project of more than 7,000 pages

[11] *Environmental Planning and Assessment Act 1979* NSW sch.1 sec.9. Accessed 16 August 2023 https://legislation.nsw.gov.au/view/html/inforce/current/act-1979-203#sch.1-sec.9

(**Figure 2**). Such examples constitute information asymmetry, where one party has a distinct advantage over another because of differences in the availability or form of provided information (Daniel & Habsari, 2019).

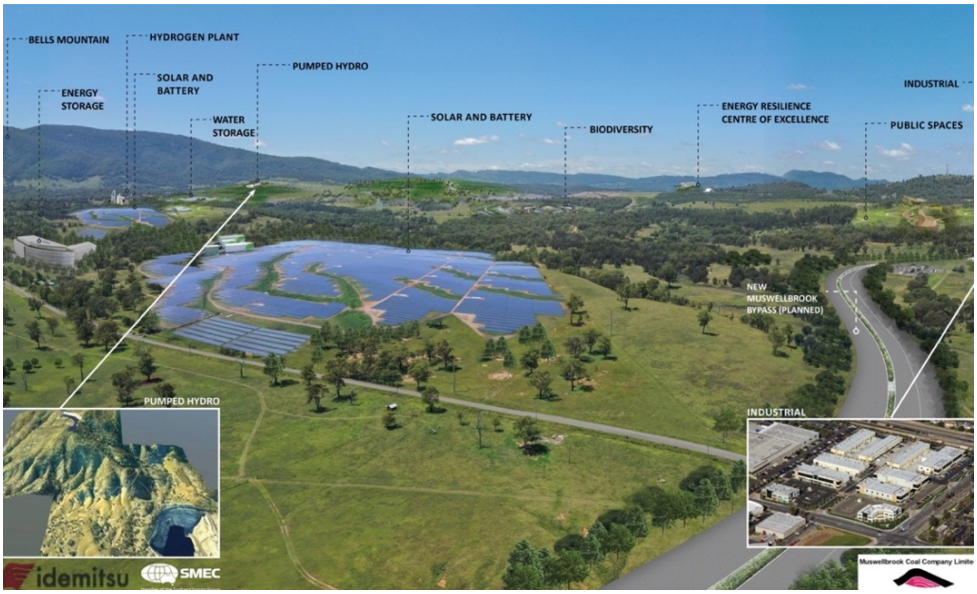
Figure 2
An activist group contemplates the 7,500 pages of an EIS for the Narrabri Gas Project. Photo printed with permission from People for the Plains.

As can be seen by the information asymmetry solidified through the EIS, the political aspects of information design must be a consideration for any designer working within the scope of policy on transitions. Issues may be highlighted, muted, or omitted to produce an entirely distinct message; the volume of materials or language used may restrict adequate comprehension. Through design choices communities may become more (or less) aware of the risks that they face from proposed developments.

The Muswellbrook Coal vision image

Where the EIS document obscures complexity through the sheer weight of information, images like those used by Muswellbrook Coal (**Figure 3** overleaf) to depict the future of their mines after closure achieve a similar effect through a reduction in information. The lack of detail in this image solidifies one pathway to the future but obscures the effort in getting to that future. It shows a fully rehabilitated coal mine, a status which can take decades and significant resources to achieve. As Kari Dahlgren (2022) has said, mining companies promote the potentiality of these sites with the knowledge of their implausibility. In doing so, the mining companies create excitement about a potential future while deferring their responsibility in achieving it. Dahlgren terms this ‘techno-speculative deferral’ (p. 537).

Figure 3
Proposal for the Muswellbrook Coal Pumped Hydro and Solar Farm. Image: Idemitsu.



The constraining of meaning through visual communication in the production of the image could be considered a ‘closing down’ of potential alternative pathways in technoscientific decision-making (Stirling, 2005). An ‘opening up’ approach may instead offer opportunities for broader discussion about the future. As this is the only vision that has been made public,[12] the local and affected community is not presented with alternatives nor invited to play a role in creating them.

Those in power can choose what counts as knowledge through the selection of what information is published, thereby constraining reality to suit their interests (Flybjerg, 1998). By deliberately narrowing the complexity of this image, meaning is constrained to what the authors of the image wish us to see: a verdant and productive landscape. In telling us what to think, Teal (2014) says that images like this condition us to not think past the visual itself. The declared content (Easterling, 2014) hides what the proponents do not wish us to see: the work involved in getting from the current state—an open cut coal mine—to this manufactured future. For example, the photograph below (**Figure 4** overleaf) was taken in March of 2022 and is used to illustrate the gap from the current state to the vision image displayed in **Figure 3**.

[12] Hunter Renewal received a more updated and detailed version in November 2023 after submitting a freedom of information request, or a GIPA as it is known in NSW based on the *Government Information (Public Access) Act 2009* (the 'GIPA Act').

Figure 4
Muswellbrook Coal open cut coal mine. Photo by Jonathan Carroll © Newcastle Herald/ACM

As a publicity image it is intended to provoke positive reactions in the viewer about a single future scenario. Comments on a public version of this image have generated positive reactions such as 'this is what a just transition looks like' and 'this is exactly the type of projects that are needed, not vague technology promises coming from the Federal Government'.[13] These comments indicate that the image is achieving its aim for the company to harness public support for its proposal.

Designers of visualisations like this seek to effectively convey a message (Kelly, 2015). The image depicts a future possible landscape that the owner of this coal mine wish us— the viewers—to imagine. The image 'speaks of the future' (Berger, 1972, p 130), and invites the viewer through a top-down perspective to sit alongside the creators of this image as objective, god-like, and full of power to shape the future (Kress & van Leeuwen, 2006). What is not depicted in this image is as much of interest as what is depicted. In analysing this image, I referred to around 15 documents, news articles, and websites. This analysis took me approximately two hours (see notes in appendices 8.4.2). The average time an ordinary viewer might spend on this image is likely to be significantly less, as confirmed in an interview with one Hunter resident who said they had a 'cursory glance' only. The average viewer's interpretation of this image will therefore be underdeveloped without further explanation and engagement.

[13] From the Facebook page of Hunter Jobs Alliance (2021a).

The examples analysed above—the EIS document and the Muswellbrook Coal vision image—sit at either end of a spectrum of information density, yet both achieve the same effect of constraining meaning. What they demonstrate is that the publicity of land use development is a highly orchestrated affair. They also demonstrate the power of visual communication and information design as fields to persuade and to restrict participation in the development of potential futures to those who have the capacity to develop understanding.

2.1.3.2 Participatory Design

Participatory design is practiced across many design-related fields including architecture, planning, technology development, and product design. Although there are many different forms of what is considered participatory design in these fields, they are all grounded by the same value-centred philosophy: that design outcomes are more successful if the people for whom a design is intended are involved in its creation (Sanoff, 2022; van der Velden & Mörtberg, 2015). In other words, they are approaches that use participation as a framework.

Within the fields listed above, participation might be considered as taking two paths: 'user as subject' or 'user as partner' (Sanders & Stappers, 2008). The *user as subject* approach is where design researchers observe the practices of people using something—often technology—and conceive interventions based on an interpretation of user need (ibid.). This approach is common in technology development and product design through the practice of user-centered design or user experience design (commonly known through the abbreviation UX).

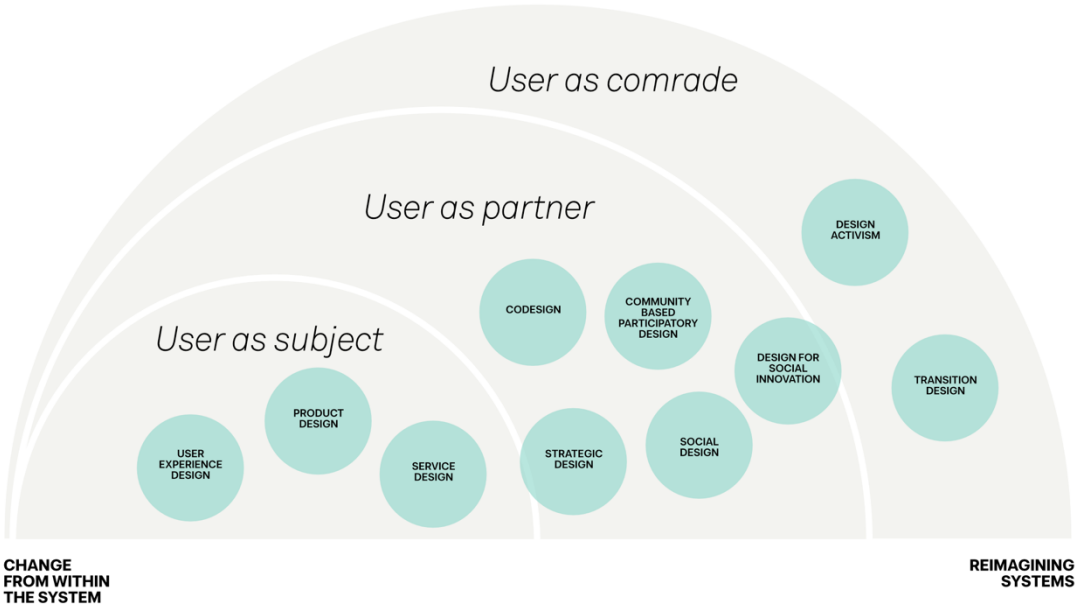
A *user as partner* approach to is described by Sanders and Stappers (2014, p. 25) as 'a move from the designing of things to interactions to systems, and from designing *for* people to designing *with* and *by* people' (emphasis in original), a change from design researcher as translator of people's needs to facilitator of these people within the process of codesign[14] (Sanders & Stappers, 2008). The "co" in codesign not only facilitates the co-llective assembled of expert and non-expert designers, but also the facilitation of co-operation between different team members. Non-expert designers

[14] See also section on codesign below.

are involved as active members of a design team, utilised for their knowledge, skills, and experience of the problem (Hasdell, 2016).

The 'user as subject' and 'user as partner' approaches are mapped in **Figure 2** below along with fields of design most reflective of those approaches and related to this study. If participatory design is considered an umbrella term of design fields which utilise participation of non-expert designers in some form, this diagram indicates how these non-experts are treated within the practice of designing: as *subject* (user experience, product, service design), as *partner* (codesign, strategic design, community based participatory design, social design, design for social innovation), and as *comrade* (design activism, transition design). The *user as comrade* is when non-experts become not only partners, but active collaborators in dismantling and building new systems (see more in the following sections on Design Activism and Transition Design as two fields where active systems change and solidarity are more apparent).

Illustration 2
Mapping the territory of Participatory Design. Fields of design related to this study are mapped according to how target users are treated along with the level of systems change.



Another way to map the broad terrain of participation design is considering how power is treated. In Sanders and Stappers' *user as subject* category, power manifests through the expert-led 'empowerment' of user needs of a piece of technology (Kensing & Greenbaum, 2013). A *user as partner* approach is directed more often toward overcoming exploitation in work. With roots in Scandinavian worker struggles of the 1960s, this form of participatory design was conceived politically to give factory

workers more of a role in the design of their work and the technologies they used, so that they could examine how the insertion of new technologies might impact their working lives (Braa & Sahay, 2013; DiSalvo, 2022; Ehn, 2008; 2016; Kensing & Greenbaum, 2012; Light, 2015; Robertson & Simonsen, 2013). Participatory design in this form, for example, led to the creation of legislation in Norway which would enshrine worker rights to take part in decisions that would affect them (Kensing & Greenbaum, 2013).

While drawing heavily on the political motivations of traditional participatory design, rather than a single workplace or organisation, my research targets a geographically distinct cohort facing several structural changes of social and economic systems. This research therefore aligns more to *community based participatory design* because 'it foregrounds the social constructs and relations of groups in settings that include, but go well beyond, the formal organisational structures commonly foregrounded in more traditional workplace studies' (DiSalvo et al., 2013, p. 183). Its broadened scope addresses some of Kensing and Blomberg's (1998) concerns that participatory designers often fail to address the political and organisational arenas where meaningful and lasting change can be confronted.

Participatory design is sometimes called social design or codesign, but I will show here why these terms are not suitable for my research. Tonkinwise (2019) says that conceptually at least, all design is *social design* because it is directed at the systems that support social needs. Danah Abdulla (2014), however, questions if designers have any right to concern themselves with the social issues of others, especially if the relationship with the affected community is more distant than immersive and could therefore be characterised as exploitation. Abdulla calls this design *at* rather than design *with* (ibid. p.245). Manzini (2014) in this sense calls on social designers to consider where change comes from. For example, within so-called 'policy labs' that are embedded within government departments (Armstrong et al., 2014; Kimbell, 2016). Where does change come from when government is the one paying the bills? Without sufficient attention to this question, social designers working for government can simply enable the support of the very systems which caused the social problems in the first place (Tuck & Yang, 2012; von Busch & Palmås, 2023; Williams, 2019).

Manzini and Rizzo (2011) suggest that participatory design is extended from user-centred design to 'the interaction of active groups of citizens with open and articulated

processes in the direction of socio-technical changes'. (p.199) within the field of *design for social innovation* — a 'constellation of design initiatives geared toward making social innovation more probable, effective, long-lasting, and apt to spread' (Manzini, 2014, p. 65). At its best, design for social innovation attempts to imagine alternative systems beyond existing capitalist market-based economics (Tonkinwise, 2014). As with social design more broadly, concerns have been raised of how naïve social innovation designers can be in conceiving of inappropriate solutions for communities of which they have insufficient understanding (Ceschin & Gaziulusoy, 2016; Hillgren, Seravalli, & Emilson, 2011).

Although I am working on the inside with a community group at their invitation, I would still caution labelling this research as social or social innovation design. Though I might have ambitions to use design to help collaboratively shape social and other structures into more sustainable forms, I know very well that I have neither the right nor power to do so, and I should not be agnostic to these realities. Otto von Busch and Karl Palmås (2023), also give me pause to call this work social design. They suggest that many social designers lack humility when they claim to have the power to shape societal culture: treating social worlds as a material like any other they might choose to manipulate. Without sufficient care, they suggest, social designers can disrupt relationships that cause 'social wounds' that someone else will be left to clean up (ibid. p. 113). These wounds are often inflicted by social designers who overlook the political structures responsible for the social issues they seek to address (Agid, 2011).

Some might also see my research as aligning to *codesign.* If practised well, codesign is an inclusive, careful, and collaborative approach to designing that includes the people for whom the outcome is intended as designers of the outcome itself. While my research has proceeded alongside community members at their invitation, this has not been done in the deeply emancipatory way that is embraced by expert codesign practitioners. For example, in their practice, KA McKercher approaches codesign through highly participatory and relational activities that share power and seek to develop design skills in all team members depending on their preferences and capacities (McKercher, 2020). Blomkamp (2018) also puts forward a mode of codesigning for policy, where people are embraced as creative thinkers, expert in their own lives and therefore well suited to involvement with designing policy initiatives to better meet their needs. I do not consider what I am doing as codesign because I am not working on a single policy or service. Moreover, engaging citizens in codesign

practice is difficult because the extended temporal boundaries of the work make it difficult to understand who the codesign team should be. It is also highly presumptuous to think I should define these publics if not already formed.

2.1.3.3 Design Activism

Design activism is the application of design methods to generate positive social, environmental, or institutional change (Fuad-Luke, 2009). Design activists therefore exist in any arena where change is demanded, acting as active conduits for confronting, exposing, and intervening in social, environmental, or political issues (Julier, 2013; Julier & Kimbell, 2019). By linking aspects of social justice to community engagement (Cintio, 2018), design activists provide their design skills to social and environmental justice advocates working on issues relevant to their shared communities (Boehnert, 2018).

Lorella di Cintio (2018) suggests that design activism has been underexplored and that much of what is championed as design activism is no more than a promotion of the work of individual practitioners through mostly pro-bono projects.[15] Such a practice offers designers and educators little in the way of guidance for how to develop design activism as a field. Highlighting only the work of individual designers also misses an opportunity to explore how designers work together with others and what they can learn from established activist practices and practitioners. Moreover, as many people in activist networks may be using design processes to affect change without naming them as such (Fuad-Luke, 2009), these practices might never be surfaced for others to learn from as examples of design activism. Dan from Hunter Renewal, for example, uses 'designerly' methods (Cross, 2006) but would not call herself a designer.

While design activism implies an intent to act on a situation (Julier, 2013), taking an activist position does not mean only adopting methods such as strikes, protests, and boycotts (as some may consider the main tools of the activist), but using design methods to subvert power, raise consciousness of unsustainable practices, and to create spaces where radical change can happen (Julier, 2013; Markussen, 2013; Thorpe & Gamman, 2011). Design activism therefore borrows from well-established practices and tactics of activism which have not previously been claimed by design — 'design by

[15] They reference the 2007 exhibition at the Cooper Hewitt in New York titled 'Design for the Other 90%' which contained work which has subsequently been criticised for being well-meaning but out of touch (Stairs, 2007).

other names,' perhaps (Salazar & Borrero, 2017). Other tactics are analysed in section 5.2 in describing the factors that influence public participation in sustainability transitions, the second of my research questions.

Thomas Markussen (2013) says design activism 'reorients perceptual space' and can therefore be considered an aesthetically disruptive practice. He draws here upon Rancière's (2013) concept of aesthetics as a political posture because aesthetic change alters what is 'visible and invisible… of what is seen and can be said about it' (p. 8). Markussen sees these disruptive aesthetic practices as one of the defining characteristics of design activism. Design activists help people see differently so they may find capacity and motivation to be involved in social, environmental, and political change. This is a response which does not seek simplifications and easy solutions to complex problems, but rather looks for places where designers might 'stir up debate, interrupt what we are doing, disturb thinking patterns, and trouble the story in order to change it' (Place, 2023).[16]

Markussen (2019) differentiates design activism from social design, social innovation, and social entrepreneurship which he sees as practices still bound to logics of unsustainable economic growth. He wants to motivate design activists to rupture these capitalist logics, even just for short moments, to offer spaces where established practices become 'malleable' and made available for renegotiation. Markussen calls these temporary ruptures moments of *dissensus* that disrupt consensus and reveal 'a gap between what people do and how they feel about and are affected by this doing' (ibid. p. 45). Dissensus asks, is this the way that this thing should be done? During interviews, for example, one person commented that:

> *It is not a normal, standardised part of community life to have these spaces for engagement, which is sad. Maybe we would be a bit further it along in the transition if we normalised coming together to discuss these things and got better at collaborating*. [Workshop facilitator]

[16] Though not speaking directly about design activism, Alison Place here draws upon Donna Haraway's concept of 'staying with the trouble' to propose a feminist way of designing that explores the plurality of responses and experiences of people related to an issue rather than jumping quickly to find neat solutions to abstracted pain points as with much western contemporary design. She says that designers have for too long sought to reduce complexity which 'robs us of possibility' (p. 144).

Critical to this study, Markussen (2019) positions design activism as responsible for creating alternative spaces where new identities can be practiced, formed, and adopted. In these spaces, once 'silenced subjects can make themselves be heard' (ibid. p. 55). Returning to the mapping of Participatory Design territory (**Illustration 2** above), users are comrades to design activists. Design activists approach change through solidarity with an ethics of reciprocal practice in the centre (see the framework for design activism in 5.3.3).

Design activism supports the idea that the public have more expansive roles to play in civic life than authorities give them opportunity for under current legislation where opposition is the only permissible subject position (see section 2.2.5). During the workshops, for example, people who were invited as local experts were given space to comment broadly on personal challenges related to the transition (lay expert) and offer relevant technical and historical knowledge (technical expert). In these spaces, their identities were supported to be malleable. Facilitators allowed them space to perform their expertise in all its dimensions and not just stick to a predetermined role of objector, consumer, or concerned resident. Through design activism, room is made for people to show up in whichever identity (or identities) they are attending to at that time. The boundaries of who is permitted to take part in civic debate are therefore expanded through design activism when people are given a space to experiment with new roles in working toward sustainability transitions (Hölscher et al., 2019).

When design methods are used to stimulate debate—ideally by slowing down reasoning so an audience has time to think critically about the themes presented in the work[17]—it can be called *critical design* (Malpass, 2015; 2017). Rather than the domestic product focus of much of what is positioned as critical design (sometimes referred to as speculative design), my research engages a form known as 'speculative civics,' which encompass collaborative and generative exploration of 'the structures, practices, and experiences of public life' (DiSalvo, Jenkins, & Lodato, 2016, p. 4979). Speculative civics are anything but abstract rehearsals (DiSalvo, 2022)—as with some critical design—because the practice weaves together experimental and concrete action. The workshops Hunter Renewal conducted (see 4.1 and 4.2) for example, were

[17] I'm inspired here by Isabelle Stengers (2005) who said that in the knowledge economy no one has time to wait for answers, but that in the rush to produce, we lose an opportunity to arouse awareness of other possibilities. She proposes a 'slowing down' of knowledge making so that ordinary people can take part. This slowing down can allow for greater time to be devoted to answering questions about whether we want what is being proposed.

aimed at changing existing legislative structures that are holding back transition through the iterative experimentation with different civic practices. The workshops gave community a malleable space in which to both practice and perform their expertise, space that is not ordinarily granted to them in civic life. They were not just rehearsing this in the abstract, though, as the workshops were aimed at concrete policy and legislative change. The active nature of these 'democratic design experiments' (Binder et al., 2015), make it possible for the engaged citizen to play a role in producing working alternatives. This is a strategy distinct from the look-but-don't-touch critical design mode where certain publics are invited to be provoked by a future but not necessarily engage with directing it (Tonkinwise, 2015; 2024).

The design activist assembles publics (Dewey, 1998 [1927]) to collectively address issues of concern and practice new ways of enacting civic conversations. Through experimenting and promoting less formal civic arenas, DiSalvo (2022) draws upon the work of feminist practitioners such as Jane Addams and Gibson-Graham. They ask us to consider beyond individualistic economic structures focused on constant growth, to embrace collective and pluralistic perspectives on how our lives can be lived. Through these speculative civic experiments, alternative futures are explored as a method of *research through design* (DiSalvo et al., 2016, p. 4980), whereby insights are gained into the object of design during the practice of designing itself (Frayling, 1993; Godin & Zahedi, 2014).[18]

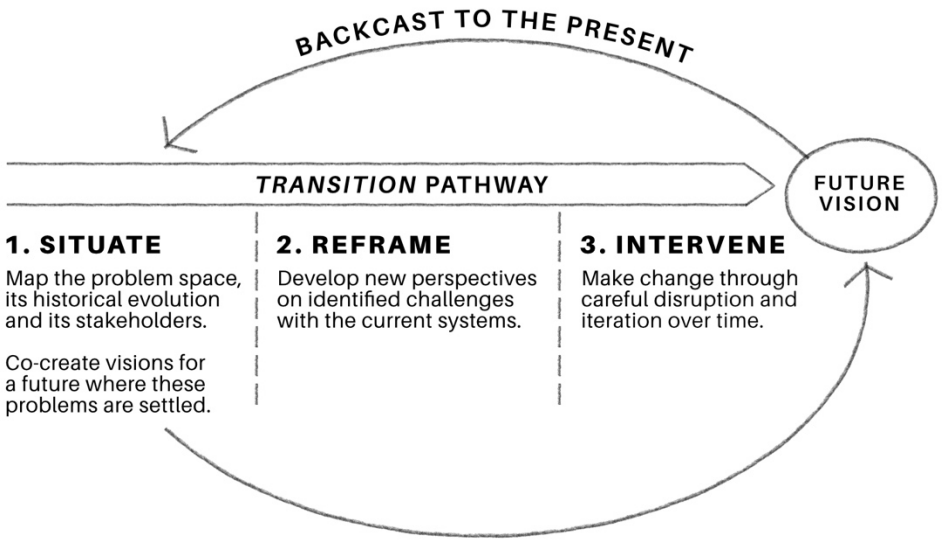
2.1.3.4 Transition Design

As an inquiry into sustainability transitions through design, this research sits within the field of *transition design*, which has emerged in response to the compelling need for developing more sustainable societal systems. Transition design (hereafter TD) integrates multiple knowledge traditions, approaches, and mindsets to generate pathways toward sustainable transformation (Mulder & van Selm, 2019). The tools of TD enable the identification of the drivers of current unsustainable situations, develop long-term visions of the future, and identify the steps to achieve these visions (Irwin, 2019a; Irwin, Kossoff, & Tonkinwise, 2015; Tonkinwise, 2023).

[18] Frayling (1993) and Zimmerman, Forlizzi, and Evenson (2007) have discussed various ways in which research and design interact. *Research in design* is the use of research methods within design practice to discover more about user needs. *Research on design* is the study of designers at work. *Research through design* is, as mentioned, the use of design methods and artefacts to gain insight.

The below schema (**Figure 5**) is an indicative representation of the emerging process of transition design, and is adapted from the work of Terry Irwin, Gideon Kossoff, Cameron Tonkinwise, as well as revisions from Carnegie Mellon doctoral students Sides, Carey, Dorn, and Theriault (2022). This adapted model shows that the creation of future visions (right) is the basis for 'backcasting'—the opposite of forecasting—to the present where problems are mapped and then reframed as projects aimed at iteratively achieving the vision along the transition pathway.

Figure 5:
Adapted model of the transition design process (Irwin & Kossoff, 2024; Sides et al., 2022).



Transition designers consider the approach of problems in the present as steps toward the longer transition vision (Irwin, Kossoff, & Tonkinwise, 2015). Through exploration of the wider and historical contributors to current challenges, transition designers see problems as available for interrogation and redefinition rather than being fixed. Such a 'tactic of tracing' links the development of an issue to the actions that can be taken upon that issue in the future (DiSalvo, 2009), and positions transition design as a strategic design approach.[19]

Through its practical and creative posture, TD can meet one of the challenges of sustainability transitions research, which is the lack of more explicit tools for guiding

[19] Although strategic design has emerged as a distinct field in recent years (Calabretta & Gemser, 2017; Dorst & Watson, 2023; Meroni, 2008), here I am using 'strategic design' to describe the use of strategic approaches in design practice rather than naming it as a discipline. The approach-based definition emerged from Horst Rittel's work on strategic planning and wicked problems in the 1960s (Buchanan, 1992).

and governing transitions (Smith, Stirling, & Berkhout, 2005). The suggested TD tools are ways to envision sustainable futures, articulate the motivations and values of stakeholders, apply relevant theories of change, and develop new mindsets and postures. All tools that should assist designers working with grassroot networks to collectively design and amplify place-based solutions guided by the transition visions (Irwin, Kossoff, & Tonkinwise, 2015; Irwin, Tonkinwise, & Kossoff, 2020).

The initiators of the TD framework—Irwin, Kossoff, and Tonkinwise—call it an emerging process and ask for feedback and suggestions on improvement. In this spirit, scholars have suggested ways to mature its practical toolset. For example, Mulder and van Selm (2019) identified several limitations to the practical tools of TD, some that are relevant to highlight in this thesis. These are a lack of tools to analyse stakeholder relations, insufficient guidance on how to identify suitable points in time to intervene in the system, and a lack of innovative visioning beyond existing paradigms. These limitations are briefly explored below with suggestions from my own research and from the scholarship of others on how they may be alleviated.

Lack of stakeholder analysis tools. Irwin (2018) suggests the use of design-led variations of tools such as stakeholder mapping to help identity connections between stakeholders and their concerns. Yet one of the persistent limitations of the method, as identified by Irwin (ibid.) and Mulder and van Selm (2019), is that these maps do not surface or help to manage tensions between stakeholders. Nor, on the other hand, do they necessarily help to identify any positive relations.

It should be noted that many of the maps from TD available in the public domain tend visually toward rendering the problem in ways that are far less messy than in actuality.[20] While this rendering might be a device to enable easier detection of places to intervene in the system (a later step of the framework), a desire for simplification could also compel novice transition designers to pay more attention to the crafting of the maps and less on addressing the relational problems the maps may identify.[21]

[20] See for example the maps created in a Carnegie Mellon University project looking at a lack of funding for minority entrepreneurs in the United States. This can be viewed through the Miro platform at https://miro.com/app/board/o9J_lwjL4qw=/?invite_link_id=4660134175

[21] This is absolutely a problem in professional service design practice as I have experienced it, where concentration on mapping of service blueprints takes precedence over designing interventions in the service.

Damian White (2015) notes that many of the stakeholder analysis and mapping tools offered in the TD framework are drawn from business schools like Stanford University. When reviewing the early TD framework, White suggested that to offer anything authentic to ecological and sociological transitions, TD must look beyond management theories from business schools because they are predominantly aimed at identifying leverage points for economic growth. An uncritical use of such models, he says, grants capitalist systems exemptions from scrutiny about their contribution to environmental problems. White offers other disciplines from which to draw such as the critical social sciences. Using these models, he says, will better cater for how institutions, politics, and other bureaucratic structures affect relations and possibilities for sustainability transitions.

In this light, an approach I would recommend is Cognitive Redirected Mapping (CRM) a method developed by Tristan Schultz and colleagues. In describing CRM, Schultz and Barnett (2015) say that we should map not only what is already known—who is doing what and is connected to whom—but also aim to 'uncover connections and relations previously unseen as well as realities previously unimagined' (p. 3). CRM as a method moves beyond the colonial centralisation of the human to mark connections between human and non-human entities (Schultz, 2018a). This draws upon Schultz's Indigenous heritage as a Gamilaroi man and Actor Network Theory. Through mapping flows between the past, current, and future, CRM situates relations dynamically, and 'brings forth the appearance of the scenario into the present' (Schultz & Barnett, 2015, p. 3). Schultz (2018b) draws upon the work of Tim Ingold in stressing that the connections between entities do not describe relationships but rather 'the paths along which life is lived.'[22] CRM visualisations therefore bring into view relational qualities and challenges that are lost in the objectiveness and top-down gaze of many western, systems maps. They therefore offer a potential alternative to the stakeholder maps from business schools for TD practice.

Identifying suitable points in time to intervene. Mulder and van Selm (ibid.) have noted some TD practitioners find it difficult to identify suitable points in time to intervene in the system. Tonkinwise also suggests (2023) that transition designers need to develop ways to 'to scan for diverse innovations and find ways in which some

[22] Schultz was inspired by Ingold's 2011 book *Being Alive: Essays on Movement, Knowledge and Description*.

might be strategically linked into a new societal system' (p. 286). How then can transition designers do this? While the TD framework recommends closely collaborating with those directly involved in the work as a means to identify points to intervene, the extent to which this recommendation is followed remains unclear in the literature. If it does, it appears to occur infrequently, and is recorded only at discrete moments when stakeholder workshops are held.

My immersion with Hunter Renewal in the day-to-day operations of their advocacy work gave me visibility of potential intervention points, or political windows of opportunity (see 5.2.3.2). Throughout the engagement I kept a diary of engagement and recorded thoughts in notebooks and on a whiteboard wall in my study. These records of progress represent deliberate acts of reflexivity that helped me be more attuned to when intervention might be required in future engagements. Agid describes these moments are 'practice notations'—points in time where one stops, reflects, and creates notes on what has happened (Agid & Akama, 2020). Making practices explicit and visible as one is 'in motion' for Agid, enables a 'closer read of the shifts that occurred, building on multiple voices and renderings to see how specific dynamics and possibilities emerged from them' (ibid.).

Reflexive pauses can be built into projects of any length. When shared with the groups one is working with, reflections on practice make visible what may otherwise be not visible (Manzini, 2015), and allows attention to be drawn toward what might otherwise be taken-for-granted (Clarke et al., 2021), including suitable times to intervene. As engagement with Hunter Renewal proceeded it became clear that these points are well perceived to them as activists as they form part of the material conditions under which they practice. Such points in time were less visible to me as a design practitioner, yet my visualisation and my reflexivity nature lent a hand in marking these points in time.

Lack of innovative visioning beyond existing paradigms. When researching the current state and attempting to envision a future state, Mulder and van Selm (ibid.) say that participants in transition design workshops can be restricted to their own existing worlds when envisioning the future. Such a situation can be seen in a project hosted by Irwin, Kossoff, Hamilton, and others from Carnegie Mellon University which took place in 2017 in Ojai, California.[23] This project utilised the TD framework to explore

[23] See Irwin, 2015; Irwin & Kossoff, 2017; Irwin, Kossoff, & Hamilton, 2017.

what a future could look like in this water-constrained place. One of the challenges, says Hamilton (2019), was to motivate the technical experts involved in visioning to imagine a water-secure future without linking this future to technologies they themselves were developing in the present.

A similar situation can be seen in the Hunter Valley, where people's inability to think more ambitiously for an energy transition is directly related to how political narratives restrict discussion to the perils of future employment for fossil fuel workers. From what I have observed in my research, until people hear from authorities that there is hope beyond the fossil fuel industry, they will be hesitant to take part in more ambitious or broad imaginings. As this facilitator said in an interview:

> *Community visions are shaped by what's going on around us, and I think if we can ground it in the practical things, the vision and the flair and the art and the poetry will come after that. That is once people can be assured that education and their work and their place of living is going to be stable and balanced, and they know there's a future for their children.* [Workshop facilitator]

If there needs to be more radical thinking beyond existing paradigms as Mulder and van Selm (ibid.) say, and as the quote above suggests, perhaps there should also be a balance toward grounded and actionable projects so that people are given some immediate hope.[24] Radical projects may feel completely implausible for people entangled in a fossil fuel existence. As with the ambitious but unrealistic mine rehabilitation vision discussed in 2.1.3.1, being too radical could do more to delay transition than to accelerate it. Although the TD framework suggests there should be a movement from macro visions to the micro interventions that can meet these visions over time, it is important not to valorise radical interventions at the expense of practical projects located in the here and now. In other words, it might not be that people can't imagine a bolder future, but that they are politically restrained to less demanding visions.

2.1.3.5 Linking transition design and design activism

Sustainability transition scholarship operates from the normative assumption that transformation of existing systems—including energy—will be necessary to achieve sustainable ways of living (Markard, 2020) (see 2.2.3). However, to change the

[24] A finding from the Future-proofing workshops that became one of our key recommendations to government.

unsustainable systems on which our lives have become dependent is no small task. Not the least because it requires significant changes to the deeply embedded social practices, ideologies, and beliefs connected to these systems (Tonkinwise, 2024). It is also no small task because these changes need to be made for us to survive.

Marres (2023) says a return to the everyday situatedness of political debate is perhaps the only way to collectively negotiate about life threatening issues and then act upon them urgently. Debate on transition should no longer be restricted to our parliaments. Such thinking links the frameworks of transition design with design activism in a way that can offer support for public participation in sustainability transitions. *Transition design* involves creating powerful visions of new systems and identification of the steps to get from the current state to the future (Irwin, 2018). Through revealing and creating ruptures in existing systems, *design activism* provides a means to achieve some of these steps through experimentation with new ways of being in the system. In this sense, design activism is a type of prefigurative politics for transition design because it suggests that the redesign of civic life is part of the transformation required to achieve sustainable futures. Through disruption in the usual way of doing politics, design activism prefigures new tactics, practices, and alternative institutional models.

Prefigurative politics is an aspiration for a future society instituted or experimented with in the present (Raekstad & Gradin, 2020). The term was coined by political theorist Carl Boggs in 1977 as 'the embodiment, within the ongoing political practice of a movement, of those forms of social relations, decision-making, culture, and human experience that are the ultimate goal' (p. 100). Prefigurative politics has since come to represent the participatory and direct-action practices of social movements that reflect the ways they wish society to be organised (Biddau, Armenti, & Cottone, 2016). Prefiguration occurs when people conceive of alternative institutional models and then experiment with configurations and practices that represent the values the models represent. In other words, 'doing is believing' (Maeckelbergh, 2011). Yates (2015) says that prefiguration happens at different levels. The macro-political is where protestors actively contest political configurations externally and the micro-political is where power is confronted internally at the social level within the collectives themselves. Participants oscillate between these two levels, Yates says, practising with, learning from, and then building alternative political practices.

Prefigurative politics is not inherently liberatory and can be associated with fascist and totalitarian states. Yates (2015) says, however, that the term is most often associated with left-leaning social movements. Graeber (2007) suggests that differences between the political ontologies of left- and right-leaning movements are that the left use imagination to envision a better world for everyone, whereas the right use violence to maintain the status quo. Both imagine a future, but these futures are very different.

The combination of the design activist and transition design frameworks with the sustainability transitions model of *transition management* (see 2.2.3) offers a way to redesign transition governance activities by broadening who has the power to shape knowledge related to sustainable change. Through alignment of the phases of these frameworks, an idea of these diverse activities emerges (**Table 1**). The combined model suggests an opportunity to conceive of design activism as a partner discipline to transition design in approaching public participation within the overall governance of sustainability transitions.

Table 1
Comparison of key phases within transition design, design activism, and transition management with a proposed combined model.

TRANSITION DESIGN (Irwin, 2018; Irwin et al. 2015; Sides et al., 2022)		
SITUATE Map and situate problems. Develop visions where these problems are overcome.	**REFRAME** Develop new perspectives on identified challenges with the current systems.	**INTERVENE** Make change through careful disruption and iteration over time.
DESIGN ACTIVISM (DiSalvo, 2010; Markussen, 2013)		
REVEAL Reveal existing configurations of practices, institutions, cultures, and society that need changing.	**CONTEST** Contest existing configurations and practices of institutions and society.	**DISSENSUS** Create new practices and modes of being through aesthetic disruption.
TRANSITION MANAGEMENT (Gaziulusoy & Ryan, 2017; Kemp, Loorbach, & Rotmans, 2007)		
PROBLEMATISE Strategic activities to structure problems and set visions.	**SET AGENDA** Coordination between networks to produce tactical agendas to meet the visions.	**EXPERIMENT** Policy-oriented experiments at the niche level to put pressure on regimes.
COMBINED MODEL		
REVEAL Reveal existing practices and systems that need changing.	**CONTEST** Collectively experiment with new practices and systems.	**REDEFINE** Redefine the goals of the system by embedding new practices.

In summary

As a world shaping discipline, design is inherently political because it seeks to answer the question 'what might be?' Designers are politically implicated through how they choose to attend to the situations they seek to reimagine. This political posture is manifest in visual communication and information design in the selection of what is to be promoted or obscured, and how this can change meaning and be a motivating force. Participatory designers grant people more of a role in decision-making about their futures than was previously considered possible or desirable by those in powerful positions. In transition design and design activism, political action is manifest in choosing what issues are raised, who is subject to these issues, and how alternatives are identified and framed. Through directly addressing the political nature of design practice I have shown that the field of design activism provides the most suitable and practical platform through which engagement with a community undergoing change can be amplified and the value of participatory outputs extended.

2.2 – Public participation

> *Public participation is a good thing, but it is useful only if the Government listens to what the people have to say.*
> Max Smith, Liberal member for Pittwater (1979*).*[25]

The appeal for public participation is synonymous with the normative argument that the public should play a role in the decisions of government (Young, 2000). This follows the classical ideal of Athenian democracy of 'rule of the people by means of the maximum participation of all the people' (Pateman, 1973).[26] Yet, as the passage above indicates, because power ultimately rests with government, participation does not necessarily mean that the public will have any influence.

Public participation is used in multiple areas of public life. This section of the literature review concentrates on the fields most relevant to my research: policy making, sustainability transitions, and regional planning. The section begins with an examination of what I mean by 'the public' before moving to general rationales for public participation from the literature. It then looks at how public participation is theorised, designed, and applied in each of the fields.

Who is the public?

When problems arise around issues that people care about, they form groups to try to solve them (Chilvers & Kearnes, 2016; Escobar, 2014). Publics may also be formed when people are under threat from decisions made by outside forces and collective action and responses are required (Dewey, 1988[1927]). In both situations, a public is made up of diverse individuals who are affected by or concerned about an issue and are brought together through existing or novel organisations to discuss and act collectively upon it (Young, 2000). The issue or groups of issues then act to 'forge alliances across difference' (Iveson, 2014, p. 1007).

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[25] Speaking in NSW Parliament at the at the introductory stage of the *Environmental Planning and Assessment Bill (1979).* Via Hansard record of NSW Parliamentary debates (New South Wales Legislative Assembly, 1979).

[26] 'The people' in Athenian democracy were not an entirely inclusive collective, given that it excluded women, foreigners, and enslaved people (Fuchs, 2012).

Where a public is formed through recruitment by an authority, membership of that public is usually defined by the way the authority frames a person's demographic, geographic, or employment status in relation to the problem. Rarely, then, does the group have anything in common other than these parameters (Gehrke 2014, p. 83). The group are nonetheless tasked with acting as a cohesive unit. Gehrke says these artificially constructed publics better represent the values of the engagement hosts than the people who have been engaged. Renn (2006) suggests that methods that enforce some coherences are relied upon by authorities when publics with differing opinions are brought together. As these methods are often unfamiliar to all but the hosts, a further degree of artificiality is introduced to an already artificial process (Gehrke 2014).

2.2.1 Rationales for and against public participation

Assumptions of a coherent public assume also that there is a universal rationale for participation. Different actors may, however, have different rationales for participation (Bidwell & Schweizer, 2020; Tsouvalis & Waterton, 2012; Webler, Tuler, & Krueger, 2001; Wesslink et al., 2011). This is critical to emphasise, as the adopted rationale will impact the methodological approach that is chosen; including who is invited to participate, the form of participation used, and the value placed on the different contributions from the lay public and technoscientific experts (Bidwell & Schweizer, 2020; Webler et al., 2001). Differences in held rationales can lead to conflict if not made explicit because the expectations of outcomes will also differ (Webler et al., 2001; Wesselink et al., 2011; Wilsdon & Willis, 2004).

From a general perspective, public participation is thought to: add contextual richness to the evidence on which decisions are made; improve public knowledge about issues; grant legitimacy to decision-making processes; reduce political and societal conflict; empower citizens to be involved in decisions that affect them; ensure sustainability of decisions through ownership of these decisions; is thought to lead to solutions better suited to local conditions; and leads to solutions that reflect the true breadth and depth of the target audience's needs and preferences (Bánáthy, 1996; Bidwell & Schweizer, 2020; Fiorino, 1997; Fung, 2015; Hoppe, 2010; Pateman, 1973; Petts & Brooks, 2006; Reed, 2008; Sanoff, 2006; Wesselink et al., 2011).

Much of this literature, however, presents rationales for public participation from the perspective of authorities, resulting in an empirical gap in the literature relating to the public's attitudes to participation (Felt & Fochler, 2008; Wilkinson, Dawson, & Bultitude, 2012). On the rare occasions the public's views are sought, their reasons for participating are commonly related to concerns about an issue (or group of issues) rather than addressing any of the rationales put forward by authorities, such as the democratic value of participation (Leino & Laine, 2012).

Generalised rationales for participation are often categorised as instrumental, substantive, or normative (Fiorino, 1990; Stirling, 2005; 2008). *Instrumental* rationales are that the public will be more supportive of decisions if they are involved in some way in making them, no matter how deeply. That is, the perceived fairness of the process affects how people respond to the resulting decisions (Lawrence, Daniels, & Stankey, 1997). The instrumental rationale is therefore that public participation helps to avoid conflicts in policy creation (Lawrence et al., 1997; Rydin & Pennington, 2000), and grants ongoing legitimacy to policy decisions (Bidwell, 2016; Bidwell & Schweizer, 2020; Fiorino, 1990; Stirling, 2005).

Substantive arguments for participation are that wider inclusion increases the depth of information available as evidence, highlights problems that outside experts may not see, and thereby improves the overall quality of decisions (Bidwell & Schweizer, 2020; Fiorino, 1990; Rogers-Hayden & Pidgeon, 2007). This argument justifies participation of non-experts because they have localised, experiential knowledge that external experts are unlikely to have (Fiorino, 1990; Fischer 2003; Fung, 2015; McGann, Wells, & Blomkamp, 2021; Sanoff, 2006). Some question whether these claims have been adequately tested (Chilvers, 2009; Felt & Fochler, 2008; Reed, 2008). The workshops at the foundation of this research have, however, shown this claim to be true (see 4.1 and 4.2).

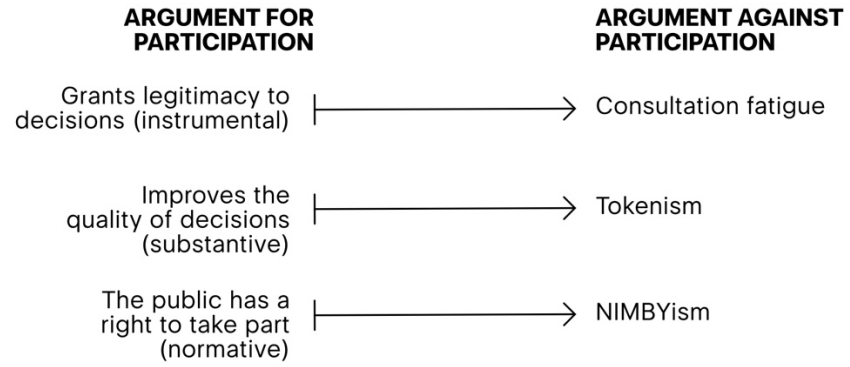
Normative arguments state that public participation is the right thing to do in a democracy because the public should be able to influence decisions that affect them (Bidwell & Schweizer, 2020; Fiorino, 1990; Rogers-Hayden & Pidgeon, 2007; Stirling, 2005; 2008). This is often referred to as the 'principle of all affected interests' (Bidwell & Schweizer, 2020; Fung, 2013; Warren et al., 2015). In a paper examining resident action groups, Kurt Iveson (2014) notes the 'all' of an 'all affected' public refers dually to the entire public and specific subjects within this populace who have been excluded

from decision-making within democratic politics. For example, the disadvantaged, marginalised, or victims of prejudice. Iveson draws on Rancière to name the people denied their rights to participate as the 'part of those who have no part' (p. 11).[27]

Despite the many claims made for public participation, there is disappointment amongst some scholars that the promises of participation have failed to materialise, and that participatory activities have tended more toward exclusion than inclusion (Chilvers, 2009; Chilvers & Kearnes, 2016; Monno & Khakee, 2012; Kinsella, 2004). This widespread scepticism has been noted by Tsouvalis and Waterton (2012) as an unusual situation where those most likely to be supporters of participation are also its greatest critics. Yet this criticism is a worthy exercise, as uncritical acceptance of the legitimacy of decisions made under the guise of public participation may risk 'reproducing hierarchies of knowledge' (Rogers-Hayden and Pidgeon, 2007, pp. 350-351). Participation may not always be an inherent good if despite claims of inclusion, the public's voice is later relegated to a minor role in decisions. Miessen (2010) would call this 'undoing the innocence of participation' (p. 13).

Three rationales introduced above—instrumental, substantive, normative—speak to arguments *for* public participation. **Illustration 3** shows the result of taking each rationale to the extreme. These represent rationales *against* public participation. They are consultation fatigue, tokenism, and NIMBYism.

Illustration 3
Comparison of rationales for and against public participation.



[27] Rancière, J. (1999). *Disagreement: Politics and Philosophy*. Minneapolis: University of Minnesota Press.

Consultation fatigue

Although public participation is legislated in many jurisdictions, as there are few mandatory requirements (see 2.2.5), authorities need only be perceived as inviting people to contribute without having an intention of meaningfully incorporating anything they have said into decisions. This can lead to *consultation fatigue*, because people are invited merely to provide legitimacy to predetermined choices (Escobar, 2014). When promises made to the public in participatory processes are repeatedly broken, mistrust in government authorities grows, and the public may develop even greater fatigue (Doering, 2014; Reed, 2008; Wesselink et al., 2011). I heard this sentiment frequently in the Hunter during fieldwork, where people are simply exhausted from being "consulted" but not feeling that they are ever listened to.

Tokenism

Substantive arguments for participation are that involving citizens can lead to better decisions because they 'can help frame the particular problem in more accurate and viable ways than professionals acting alone' (Fung, 2015). When public decisions may affect identifiable groups of people (geography, culture, age, gender, etc.) it will be politically expedient for authorities to be seen to invite them to participate. Yet, as authorities still hold the power to determine what counts as valid knowledge, there is no guarantee that people's contributions will be incorporated in any meaningful way (Bell & Reed, 2021). Such 'nonperformatives' (Ahmed, 2006) are at the heart of accusations of *tokenism* levelled at many government-led consultation activities (Bell & Reed, 2021; de La Rosa, 2021; Rogers-Hayden & Pidgeon, 2007; Stirling, 2008), where people are invited because of who or what they represent and not for the substantive content of their contributions.

NIMBYism

Although there is an underlying reticence from some to accept that the crafting of public policy should involve the public, the normative argument is that people have the right to take part in decisions that affect them (Bidwell & Schweizer, 2020; Fiorino, 1990). Taken to the extreme, the public may feel their interests should be applied in all decisions. This can manifest in what is known as *NIMBYism* (Not In My Backyard) where people resist changes that do not align to their individual interests. For example, when people argue that their "right" for free parking is more important than reducing car access to towns to make pedestrian-only streets (Wamsler et al., 2020).

2.2.2 Public participation in policy making

Policy making is a government activity whereby problems to be solved are identified, framed, and placed on the public agenda (Theodolou, 2013). To explore public participation in policy making, I draw particularly on the field of Science and Technology Studies (STS) for its exploration of the social and political dimensions of the involvement of the public in scientific and sociotechnical developments. This has relevance for understanding how to support the involvement of the public in socio-technical transitions.

The field of STS emerged in the 1960s at a time when an understanding of the risks of new technologies to the public and the environment began to emerge and coalesce with growing social movements in the United States and Europe (Breyman et al., 2017). For example, it began to be apparent that the risks of nuclear power were known and that decisions had been made to adopt the technology despite this knowledge (Nelkin, 1981). Brian Wynne (2007) notes that such decisions represented a 'blithe lack of recognition on the part of scientific-technological elites that there is any 'public' dimension to their public commitments on behalf of society' (p. 101). Scientists and their political sponsors had until this point rarely (at least publicly) been critically questioned about their decisions (Edge, 2001). Researchers began to argue that science is not neutral because it involves elites making political choices between what issues are chosen to investigate (Chilvers & Kearnes, 2020), a controversial notion because it was bringing politics into a place that was supposedly neutral, that of the scientific lab (Moore, 2010).

While there are many facets to STS,[28] it is this political aspect of policy making related to scientific and technological development which is of most relevance to my research. Chiefly because it concerns *who* is involved in choosing which issues are placed on the public agenda and determining how these issues are subsequently framed.

Public policy issues are commonly addressed through the perspective of expert knowledge (Einfeld et al., 2021; Fischer, 2000; Kinsella, 2002). The belief being that problems of all scales can be solved if experts are left to source, analyse, and execute on available evidence (Kuisel, 1981; Negev & Teschner, 2013). The use of experts in

[28] I note, for example, that I could also have followed Public Understanding of Science (PUS) as a related field, but it is more focused on how science is understood by the public, which is not a focus of my study.

policy making has arisen over the last two decades through an increase in risks related to the pace of technological change, and the corresponding growth in complexity of policy making (Kerr, Cunningham-Bailey, & Tutton, 2007; Krick, 2021). In Australia, the use of what is called evidence-based policy has become popular based on this expert-view, where it is argued that the provision of more reliable and rigorous evidence is essential for making well-informed policy decisions (Head, 2010; 2014). Evidence-based policy comes from a rational tradition that views social challenges as technical problems that may be solved through rational solutions (Lewis, McGann, & Blomkamp, 2020). There are often significant gaps, however, between the normative rhetoric and the actual use of evidence in policy making. In a study from Australia for example, the Blueprint Institute (2022) found that in several cases policy decisions were made without the use of any evidence at all.[29]

As those who hold power can determine what is considered legitimate evidence and control how it is introduced, there are political aspects to evidence-based policy making despite any perceived objectivity (Tangey, 2017). The exposure of the political nature of knowledge production in policy making has led to a call for greater respect for the knowledges of the people impacted by technoscientific decisions (Irwin, 2001; Marres, 2007; Negev & Teschner, 2013); knowledge which is often dismissed as being too emotional, too attached, and insufficiently objective. Such local knowledges are, however, perceived to be essential for understanding the contextual repercussions of technoscientific decisions (Fischer, 2003; Negev & Teschner, 2013).[30] Yet, despite arguments for greater participation of the lay public, there is still a high level of segregation between expert and other knowledges in policy making (Einfeld et al., 2021; Fischer, 2000; Stirling, 2008). Local knowledge is the least heard (Hocking, Brown, & Harris, 2016). This is because it is assumed that expertise rests solely with credentialed scientists and others because their knowledge has been developed objectively through application of rigorous scientific methods in lab settings (Dixon,

[29] The policy decision of greatest significance for this thesis is the *Roads and Crimes Legislation Amendment Bill 2022* which has made it an offence for protestors in NSW to block roads and other major infrastructure. It carries a fine of up to $AU22,000. The Blueprint Institute analysis found there was no evidence, modelling, or stakeholder involvement at all in the development of this Bill.

[30] The knowledge of the lay public is referred to as practical understanding, lived experience, or local knowledge (Fischer, 2000; Kinsella, 2004; Yanow, 2003). See also notes on terminology on page 5.

2016; Head, 2010; Heine & Mieske, 2022). An exploration of the notion of expertise follows, one that expands on the sociology of expertise approach introduced earlier.

As was covered in section 2.1.2, there are two aspects to expertise: the development of skills in individual experts, and the creation of the conditions under which they use these skills to perform their expertise. The expert undertaking of a task does not happen in a vacuum but is reliant on a network of actors and actants through which a task is more effectively accomplished (Eyal, 2013). The ability to perform a task is a broader conception of expertise than conventional descriptions that focus only on who controls a task and not on what arrangements need to be in place for them to accomplish it (Brady, 2018; Eyal, 2013). It is this performance aspect that links expertise with public participation because the enforcement of boundaries around who is considered an expert 'constrains not only *what* publics may contribute (local knowledge and values), but *how* publics can contribute' (Einfeld et al., 2021, p. 2, author emphasis).

Expertise as a term has force because it shapes how we perceive the people to whom it is applied (Gerrard & Holloway, 2023). The attribution of expert status is tightly controlled through mechanisms such as licensing and credentialing to control who may reap the rewards of expert work (Eyal, 2013; Head, 2023). Credentialed experts are granted extraordinary rights and privileges to make claims to, 'extraordinary knowledge in matters of human importance' (Schön, 1983, p. 4). Hartelius (2008) cautions us to consider the motives behind the drawing of these boundaries because it will likely benefit the person defining the boundaries of the claim. In this study I am not looking to construct boundaries around who can make claims of being a legitimate expert, but rather how the knowledge of experts of all kinds might be assembled to produce better outcomes in sustainability transitions. In other words, who should participate based on what is at stake (Irwin, 2014).

Three examples from the literature are now given to frame how technical and lay expertise are treated in policy making. Each focus on the effects of the public being included or excluded from knowledge making activities related to science and technology developments in society.

The first example comes from Brian Wynne's (1992) study of the practices of English sheep farmers following the 1986 nuclear accident in Chernobyl, Ukraine. In this frequently cited example, Wynne found that after the Chernobyl accident, scientific

experts assured farmers in the Cumbrian region of England that they could safely sell their sheep for slaughter after waiting three weeks, because radioactivity contamination in the soils—and therefore the sheep who graze on these lands—would dissipate after this time. Farmers followed this expert advice, only to learn that the modelling was based on assumed existence of a type of soil that was not actually present in this region. Wynne notes (1995) that the scientific experts overlooked local conditions, making predictive models for policy based on what they assumed to be a universal soil type and therefore applicable to every context. With greater respect for the value of using the knowledge of farmers in the region, there may have been less risk of this oversight occurring. Wynne says in this sense that it should not be assumed that there is a deficit of understanding in a non-expert audience but rather a deficit of understanding of the value of different types of knowledges.[31]

The second example comes from Brooklyn in the United States where in the 1980s a study sought to identify links between pollution and the health of residents. Under the guidance of Jason Corburn (2007), scientists from the Environmental Protection Agency (EPA) employed a situated, community-based approach to research, something they did not ordinarily apply in their policy work. Through conversations with residents, the scientists learned they were unaware of place-specific social practices that might increase risks of exposure to hazards in the air, soil, water, and in food sources. On walks around their neighbourhood, local experts helped the scientific experts to see that diets in Brooklyn were more diverse than those on which the public health officials had based their modelling. Furthermore, the scientists learned that many residents supplemented their meals with fish caught in the river. Without these situated research sessions, the risks to people from polluted fish would not have been known as the scientists did not know about the fishing and the fishers had also wrongly assumed they could identify poisoned fish. There was a two-way exchange of knowledge, with each expert group (lay or scientific) being recognised for their value to the overall aim of improving public nutrition and health. The project team subsequently worked with the local Brooklyn community to build community gardens and rezone land to help smaller food providers start businesses and give the people access to more healthy food at reasonable prices.

[31] Wynne coined the term ‘deficit model’ to explain how some consider that the public is ignorant of scientific facts and need only to be informed of them to accept the risks of new scientific or technological developments.

The third example comes from Zachary Dixon (2016) who analysed the development and recognition of expertise in two fisheries programmes in the United States. In one programme, anglers were asked to add their support to an email campaign asking the authorities for more sustainable choices around fisheries policy. The campaign gathered over 3500 names from anglers in the area but was ultimately unsuccessful. The other programme engaged anglers as citizen scientists, collecting data in their daily work and recording their process in detail to create a compelling case for fisheries conservation. This programme was successful. Dixon attributes success to differences in how expertise was portrayed. The email campaign asked anglers only to add their names to a pre-existing form letter which offered authorities no way to understand how (or if) these anglers had developed expertise about this subject. In contrast, the second programme specifically recorded the significant experience of the anglers and their methodology in the citizen science project. Evidence of the construction of expertise was compelling enough for authorities to change their policy to incorporate the sustainability concerns of the anglers.

All three examples demonstrate that the integration of local knowledges with expert knowledges is essential to ensure that the 'facts of the situation' encompass the breadth of dimensions necessary to make good decisions (Fischer, 2000; Kinsella, 2004). The examples suggest a need to rethink how the participation of the public in policy making is characterised, performed, and materialised so it has the potential to influence change for the better. Wynne's example demonstrates that local knowledge should be valued for the contextually relevant contributions it can bring to technical decisions. Corburn shows us how this local knowledge might be gathered and integrated with other expert knowledges. Dixon suggests that the utilisation of public knowledge in policy relies greatly on how the expertise of the public is portrayed.

One more brief but important contribution from the literature is now given before we move on. Although it might be successfully argued that crafting policy that will work technically and in context requires both specialised technical knowledge and contributions from the lay public, it does not mean that local knowledge will be used. In looking at environmental decision-making in the United States, Susan Senecah (2004) found that the promises made through legislation about influence were not aligning to the actual experiences of the public. People wanted to be involved to make a difference but were not being listened to. She conceived the *Trinity of Voice* model (ToV) which has been essential to my research analysis.

The ToV model contains heuristics for evaluating the success of participatory events and designing more effective participation (**Table 2**). Senecah calls these heuristics the 'grammars' of effective participation. These are *access* (the potential to be heard), *standing* (the respect for knowledge), and *influence* (the potential to affect change). These grammars are interdependent. Having influence, for example, is highly dependent on whether someone has access to participate and that their contributions are respected as valid. The ToV model was adapted and used to analyse data from my research regarding the factors that influence public participation.

Table 2
Adapted from the Trinity of Voice model (Senecah, 2004). The grammars in **bold** text are those which have carried through in my interpretations (section 5.2).

ACCESS **Supporting the potential to be heard**	**STANDING** **Supporting respect of all knowledges**	**INFLUENCE** **Supporting the potential to influence change**
Attitude of collaboration Adequate and widely disseminated notice Activities held at convenient times and places Information about the event and topics are readily available Multiple opportunities to gain a basic grasp of the issues Early public involvement	**Opportunities for dialogue and deliberation** **Collaborative room arrangements** Active listening as well as courtesy of an absence of discounting verbal or non-verbal behaviour Early and ongoing voice **Clear parameters for authority of participation and investment** Genuine empathy for the concerns of others	**Meaningful decision space** Transparent process that considers all alternatives Opportunities to meaningfully scope alternatives Opportunities to inform the decision criteria Thoughtful response to stakeholder concerns and ideas

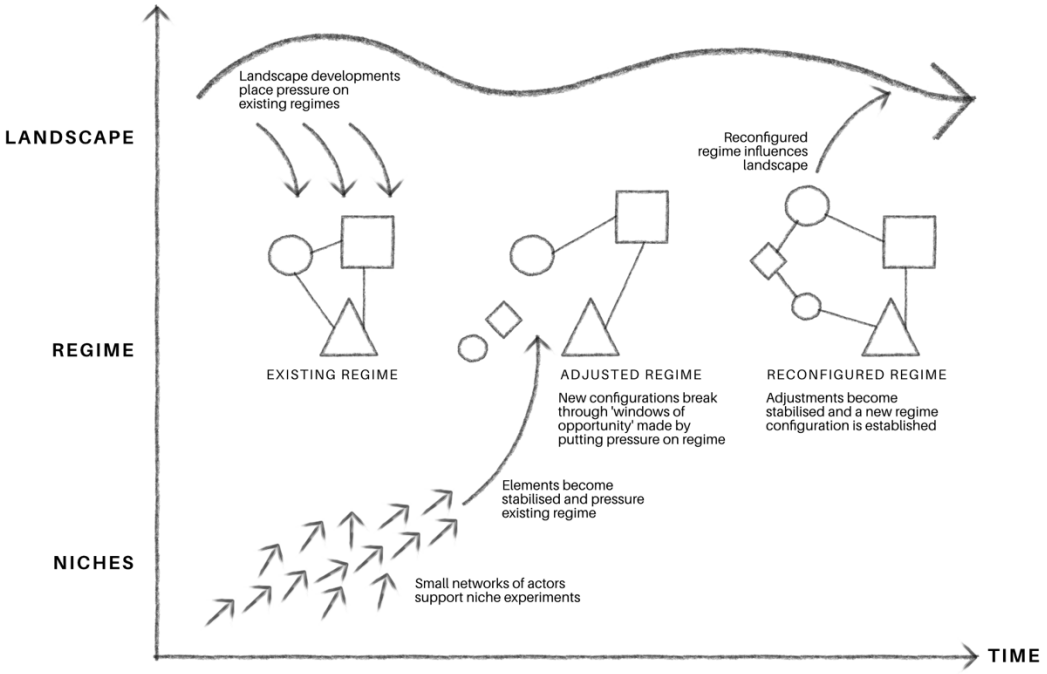
2.2.3 Public participation in sustainability transitions

This research is a study of the participatory endeavours of an environmental advocacy network in a regional area pushing for the cessation of both coal mining and coal-fired power generation and for regeneration of the land on which these industries are currently located. Such a concern relates this study to the sustainability transitions frameworks of transition management and just transitions.

Sustainability transitions are long-term processes aimed at steering structural systems toward more ecological practices and away from unsustainable growth (Gaziulusoy & Houtbeckers, 2018; Loorbach, 2010). Sustainability transitions differ from other historical transformations like the industrial revolution because they are purposive rather than emergent (Lopes, Fam, & Williams, 2012). Meaning we need to purposefully and urgently bring forth these transformations to mitigate the worse effects of anthropogenic climate change. At the centre of sustainability transitions theory is the normative assumption that transformation to more sustainable practices across these sectors is desirable and necessary (Geels et al., 2017; Markard, 2020).

Research on sustainability transitions emerged in northern Europe in the early 2000s to help analyse, describe, and orchestrate systems change in socio-technical domains such as energy, water, agriculture, transport, and waste (Chilvers & Longhurst, 2016; Köhler et al. 2019). **The Multi-Level Perspective (MLP)** has become a dominant framework in sustainability transition theory for identifying points of leverage where practices might be shifted to be more sustainable (Geels & Schot 2007; Sovacool et al. 2020). The MLP states that sustainability transitions come about through interactions at three levels (**Figure 6** overleaf): landscapes, regimes, and niches (Geels, 2002; Geels & Schot, 2007). *Landscapes* are the macro-level structural elements and patterns in society that change very slowly over time, such as demographics (Tomai, Ramani, & Papachristos, 2024; Voß et al., 2009). *Regimes* are the relatively stable and established rules of activity in scientific, technical, and market domains which, for example, determine how production and consumption occur (Gaziulusoy & Ryan, 2017). *Niches* are domains in which innovations can occur without pressure from existing regimes (Markard et al., 2012). Niches are generally perceived in transitions theory as the key location for innovation (Jørgensen, 2012), because of the difficulties in making changes at the regime or landscape levels (Tomai et al., 2024).

Figure 6
The Multi-Level Perspective. Adapted from Geels (2002), and the European Environment Agency (2019).



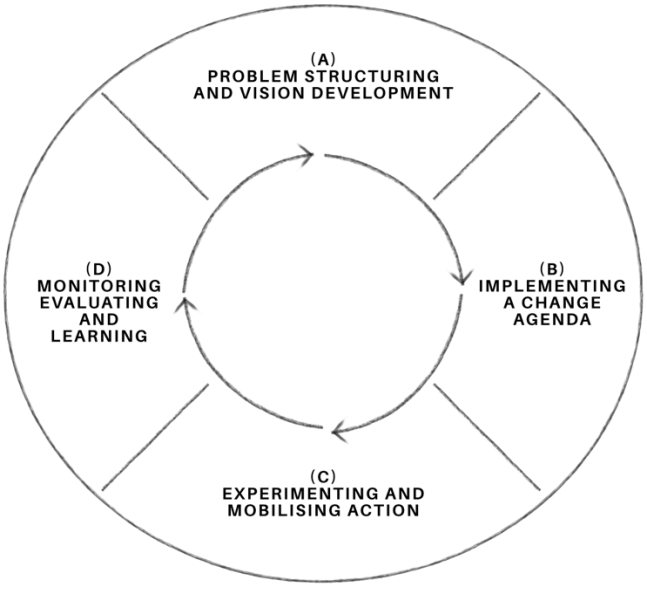
Beyond the theoretical models such as the MLP, practical activities that are aimed at steering sustainability transitions are called transition governance. One such governance model is **transition management** (TM), which is an iterative, reflexive, and experimental approach to the governance of long-term structural change in society (Jhagroe & Loorbach, 2015; Loorbach, 2010; Schäpke et al., 2017; Wittmayer et al., 2016). The TM framework was introduced in the Netherlands in response to a need for new types of governance to deal with structural change in complex policy environments (Kemp et al., 2007). Transition management uses societal challenges as a starting point. For example, how to adapt and reimagine systems such as energy use, housing, transport, and health care (Geels, 2011).

Building on complexity science and governance studies, TM operates at the regime and niche level of the MLP and seeks to identify and support niche experiments through a policy-orientation (Köhler et al. 2019; Voß et al., 2009). Its concern with how practices outside policy arenas can still lead to policy change is one aspect of transition management that makes it suitable to draw upon for this research.

The commonly applied model of TM defines four clusters of activities that are approached cyclically through iterative steps steered toward accomplishing a desired vision (Kemp & Loorbach, 2005; Öztekin & Gaziulusoy, 2020; Veldhuizen, 2020).

These activities are shown in **Figure 7** below. The process of TM begins (A) when actors are brought together to develop a shared understanding of the problems to be addressed and the challenges they pose (Grin, Rotmans, & Schot, 2010). The structuring of problems and subsequent development of visions are what shapes the long-term trajectory of change. As problems emerge or change, actors work collaboratively to adapt their understanding of these problems.

Figure 7
Transition Management model. Adapted from Loorbach (2007).



Once the desired visions of the future are set, negotiations between coalitions of actors work to implement a change agenda (B). These activities aim to alter the rules, operating structures, and practices of existing institutions to meet the transition vision or create new institutions to meet the stated goals of the assembled actors (Kemp, 2010; Loorbach & Kemp, 2005).

Experiments in transition management (C) aim to test multiple, alternative pathways and then mobilise action toward implementation of successful options and iteration or rejection of less successful ones (Kenis, Bono, & Mathijs, 2016; Kemp & Loorbach, 2005). The collaborative and action-directed nature of TM links it to action research (Wittmayer & Shäptke, 2014). This alignment gains clarity when acknowledging that, since the outcomes of sustainability transitions cannot be known ahead of acting, an experimental approach grounded in collective reasoning enables identification and adaptation to problems as they arise (Kemmis, 2010).

Learning-by-doing is an integral part of the transition management framework so that progress toward goals might be assessed while undertaking the management of the process (Grin et al., 2010; Kemp et al., 2007; Loorbach, 2007; 2010). By integrating opportunities for reflexive monitoring and evaluation at every stage of the transition management framework (D), continual adjustment of pathways toward sustainability goals can be achieved (Loorbach et al., 2015).

A just transition is one where all people affected by structural changes toward sustainability are engaged collaboratively to design a future that is inclusive of all their needs (Farrell, 2012; Sheldon et al., 2018). Proponents of just transitions therefore aim for collaborative dialogue between communities, workers, and others affected by energy transitions to create a vision of the future where people and their environments can thrive (Evans, 2010; Sheldon et al., 2018).

The origin of the term just transitions is generally credited to Tony Mazzocchi, a trade unionist in the United States who collaborated with environmental groups in the 1970s to advocate for worker rights and environmental preservation in a fight against the Shell oil company (Pai, Harrison, & Zerriffi, 2020). Mazzocchi's goal was to empower workers and communities to advocate for themselves through the combined strength of an approach rooted in the wider labour environmentalism movement (Stevis, Morena, and Krause, 2019). Collaborative power manifests in one of the organising concepts of the movement which is 'if workers are placed in the same danger as nature, then industrial societies become increasingly problematic' (Silverman, 2004).

Just transitions have historically included concerns of social and environmental justice and therefore attempt to overcome the 'jobs versus the environment' narrative which has dominated energy transition discourse in politics (Ciplet & Harrison 2010; Evans & Phelan, 2016; Goddard & Farrelly, 2018; Stevis et al., 2019. See also section 1.4). The concept has been adopted across the globe to draw attention to the environmental and social justice aspects of changes in energy and industrial policy (Snell, 2018). In Australia, approaches to just transitions emerged through collaborations between the union and environmental movements starting in the 1970s (Mundey, 1981; Snell, 2018). See for example the Green Bans described in section 2.2.5.

The strength of links between worker justice and environmental justice draws attention to the social implications of climate change (Stevis et al., 2019). The just transitions framework therefore offers a uniquely political position in sustainability

transitions thinking (see section E of the next part of this chapter). Just transitions is rooted in pragmatic and collaborative action for large-scale industrial transformation (White, 2020), which is a key reasons why I have drawn on it for this research.

2.2.3.1 Barriers to participation in transition frameworks

Transition management and just transitions offer practical and ethical approaches to transitions that align to the underlying philosophy of my research. While an in-depth analysis of each of these frameworks is beyond the scope of this thesis, it is critical to address how each framework challenges the ability for the public to participate. The limitations consist of aspects related to participation itself, and how the governance and framing of problems draws boundaries around who is considered expert enough to participate. By studying the limitations, it is possible to learn where adjustments might be made to future transition processes to enhance public participation. The challenges covered here are exclusive participation; unwelcoming engagement spaces; a failure to address the effects of power on participation; unsupportive jurisdictional environments, focusing only on a subset of the local population; a preoccupation with technical innovation; and environmental injustice. These final examples are given as they offer potential guidance for how public participation can be enhanced toward the acceptance and success of sustainability transitions.

A. Exclusive participation

Proponents of transition management recommend a group of elite actors are brought together in transition spaces (called arenas) to develop visionary pathways through collective dialogue, a process that is said to help them agree on framings of an issue (Kemp & Loorbach, 2006; Rotmans & Loorbach, 2009; Voß et al., 2009). A selective approach of inviting only elite actors who share long-term goals and values has been justified as necessary for managing transition processes productively (Jhagroe & Loorbach, 2015; Kenis et al., 2016; Loorbach, 2007; 2010).[32] Transition management activities therefore align toward expert models of knowledge production, where technical and scientific competencies are valorised over other forms of knowledge (Einfeld et al., 2021; Hendriks 2008). Mary Lawhon and James Murphy (2012) contend that because the priorities of elite actors tend to be technical or commercial in nature, they may approach the transition space with a relatively narrow set of preconceived

[32] The political aspects of this are discussed later in this section.

visions and these, in turn, frame how discourse proceeds. In many cases this means the public is overlooked in preference for promoting the interactions of expert stakeholders from industry, government, and academia (Chilvers & Longhurst, 2016; Hendriks, 2009).

When the public are involved, they are often consulted only in their role as consumers due to the heavy dominance of economic market thinking on transitions management (Kenis et al., 2016). There are also no formal mechanisms within the framework to invite a broader range of participants into the process in a fair and inclusive manner (Hendriks, 2008; 2009; Voß et al., 2009). Without the involvement of a broader range of stakeholders, including the public, agendas for transitions might only benefit elite, incumbent players by controlling where public, legislative, and research priorities will be directed (Hendriks, 2009; Wilsdon & Willis, 2004). Dominant players can therefore lock in their preferred pathways for development by controlling funding and influencing the shaping of legislative mechanisms (Herberg et al., 2020). Contending with elitist participation is therefore a crucial concern for any researcher exploring roles for the wider public in transitions.

B. Unwelcoming engagement spaces

Like many areas of public policy making, the arenas in which transition engagements occur can be unwelcoming to those not accustomed to the forms of abstract and technical knowledge that dominate in them (Avelino, 2009; Kenis et al., 2016). If overly formal and unfamiliar engagement formats are used it is less likely that everyday people will wish to be involved. When not present to raise their issues of concern, debate may be restricted to just those topics that people already in power wish to deliberate. Options might therefore be steered in directions that are not acceptable or beneficial to the public (Herberg et al., 2020). Moreover, without the presence of the public, the broader social, cultural, and contextual implications of sustainability transitions will not be as visible (Miller et al., 2013).

C. Failure to address the effects of power on participation

Transition management processes have been criticised for inadequately addressing the power dimensions of sustainability transitions (Meadowcroft, 2009; Shove & Walker, 2007; Smith et al., 2005). The way that people are included or excluded, as well as the way that issues and subjects are framed are all instances of politics in energy transitions according to Chilvers and Longhurst (2016). They have criticised

transition researchers for failing to attend to matters of power and agency regarding non-technical actors, suggesting that more awareness of how exclusions affect issue framing needs to be developed.

Critics contend that the apolitical posture of the transition management approach simplifies or abstracts the messy and politically contested nature of sustainability transitions, implying that choices of one pathway over another is somehow a natural manifestation of the process and not a political choice of the involved actors. In part this is achieved through a preference for methods that protect the interests of the powerful by creating environments that eschew conflict and contestation of ideas (Avelino et al., 2016; Chilvers, 2009; Kenis et al., 2016). It can easily be seen why a sceptical and agonistic public is not welcomed into transition arenas.

Powerful groups in society are more likely to have their issues placed on the public agenda (Birkland, 2007; Schneider & Ingram, 1993). They also have more control over how these issues are framed as problems which determines how they are perceived in society and subsequently addressed in policy making (Weller, 2019). The framing of problems is a tightly held space for several reasons, including to maintain the interests of those in power (Vari, 1995); to direct the nature of the solutions (Birkland, 2007); to reduce problems to a manageable set (Wilsdon & Willis, 2004); to control which aspects of an issue are highlighted and funded (Hoppe, 2010; Wilsdon & Willis, 2004); and to place the burden of change on others (Kingdon, 2014). For example, when the blame for plastic pollution in the environment is placed on consumers and not on the manufacturers of plastic packaging. Esther Turnhout (2024) says:

> *Frames have consequences; they define not only what the problem is, including what items the problem consists of and how they are related, but also what solutions are possible and rational, and what knowledge is relevant.*
> (Turnhout, 2024, p. 2)

More recent transitions scholarship has begun to look at how power structures may impact diverse actor contributions and problem framing, including an acknowledgment that attention to social dynamics are crucial considerations. Avelino (2017) and Avelino and Wittmayer (2016) present a typology to assist in identifying power dynamics within sustainability transitions. Their typology suggests that transitions scholarship could be improved by broadening consideration of who is exercising power, the relations between these actors, and how this power affects the

likelihood of sustainable change. Avelino has extended this framework (2021) to look at how broader social change programmes are subjected to different manifestations of power. Revez et al. (2020) also suggest that an understanding of the way that power is exercised in transitions must come from analysis of relationships between actors and how policy actors contend with decisions related to sustainable change in practice.

D. Unsupportive jurisdictional environments

Policy decisions regarding transitions are ultimately controlled by the governance arrangements through which they occur. As multiple jurisdictions and actors need to interact to approach energy transitions, a multi-level governance structure has been said to be a better environment in which complex decisions can be made (Kallies, 2021; Saurer & Monast, 2021).

When attempting to apply the transition management framework in an Australian context, it is crucial to recognise that the transition management framework was developed in the Netherlands, where the constitutional, social, and political contexts are vastly different. These differences highlight the need to be wary of wholesale, uncritical transference of models of transition governance from northern Europe to Australia. The multi-level governance environment in the Netherlands is supported by a political system with a strong consensus culture that seeks a balance of views over the interests of single parties, maximises opportunities for participation (albeit selective), and is thought to therefore be more adaptable to rapidly changing circumstances (Andeweg, 2000; Loorbach, 2007; Midden, 1995; Voß et al., 2009).

Australia's political landscape, on the other hand, is adversarial, fragmented, and fraught with uncertainties around jurisdictional responsibilities (Goodman et al., 2020; Kallies, 2021; Weller, 2019). Moreover, Australia's energy policy is not linked to policy around climate and the environment, a situation that Anne Kallies (2021) says is a major impediment to energy transition in this country. It means, for example, that governments can continue to approve coal mines because they do not have to temper their decisions by a need to reduce carbon emissions.

E. Focusing only on a subset of the local population

In countries with large coal mining industries such as Australia, sustainability transitions have been framed by supporters of the fossil fuel industry as choice between jobs or the environment. By cynically placing environmental concerns in

opposition to the rights of people to work, the possibilities that people can see for their future beyond coal are narrowed (Bailey & Osborne, 2020; Della Bosca & Gillespie, 2018; Lawhon & McCreary, 2020). This so called 'jobs versus the environment' narrative presents the risks of individual jobs losses in the future as being more important than the risks to health and biodiversity from mining in the present (Instone, 2015). As a political technique, the use of the jobs versus the environment narrative is not new but has found fertile ground in Australia (Edwards et al., 2022). I have observed that the pervasiveness of the jobs versus environment narrative has seen people in the Hunter refrain from using the word transition lest they be seen to align with "greenie activists" and be accused of being anti-jobs. The lack of public discourse around transitions may make it appear as though the idea of phasing out fossil fuels has less support than it does.

A focus on jobs—sustainable or otherwise—means political discourse on transitions has focused on the futures of fossil fuel workers over the broader communities in which they are a part (Stevis et al., 2019). Policies created under the banner of a just transition are therefore often focused almost exclusively on the replacement of jobs that are traditionally male such as coal mining (Acha, 2016; Stevis & Felli, 2020). The experience of men in de-industrialisation is also more often a topic of academic study than that of women (Taylor & Addison, 2009). This gender imbalance is significant because when transition planning is undertaken without the participation of or concerns for all stakeholders, the needs of other affected populations are ignored (Pearl-Martinez, 2014). If the underlying values behind transition agendas are not interrogated, structural inequalities may persist as the needs of one subset of people will continue to have preference over others (Cerise & Jayasuriya, 2021; Fraune, 2018; Stevis & Felli, 2016). While consideration of the livelihoods of fossil fuel workers is an essential part of achieving a just transition, in allowing fossil fuel jobs to dominate public conversations, the rights of other people and the environment are ignored.

F. A preoccupation with technical innovation

Sustainability transitions involve transformations of dominant technological systems. Scholars have, however, focused more on the role of institutions and technology in driving change, and how technologies develop, and less on how (or if) the public has any role in their development (Chilvers & Longhurst, 2016; Fuenfschilling & Truffer, 2016; Ryghaug & Skjølsvold, 2021). A preoccupation with technology development can mean that transitions are seen only as matters of policy relating to carbon reduction

through technological innovation and not as matters related to the social issues of transition (Johnstone & Hielscher, 2017).

Without consideration of the human elements surrounding the implementation of new technologies—including any replacement for coal in energy generation—there is a risk that debates about how and why we consume so much energy are minimised, not to mention ignoring larger concepts about how we want to live (Della Bosca & Gillespie, 2018; Miller et al., 2013; Selkirk et al., 2018; White, 2020). Due to its focus on the everyday implications of the use of technology in society, the idea of bringing a social practice theory approach to transition management has therefore been suggested by scholars such as Elizabeth Shove and Gordon Walker (2010), Erdoğan Öztekin and İdil Gaziulusoy (2019; 2020), Dena Fam and Abby Mellick Lopes (2015), and Gert Spaargaren (2003).

The focus of sustainability transitions researchers on innovation also means they have not occupied themselves as much with studying the system, technologies, or communities in decline (Berkhout, Smith, & Stirling, 2005; Johnstone & Hielscher, 2017; Jørgensen, 2012; Markard, 2018; Ryghaug & Skjølsvold, 2021; Stirling, 2008). While a key part of transition management is about creating long-term visions of new socio-technical regimes (Meadowcroft, 2009; Tonkinwise, 2023), in a rush to capture the 'new' of sustainability transitions, what is left behind is forgotten or actively ignored, including the communities at the centre of coal phase-outs.

G. Environmental injustice

In a report for the Australia Institute and the Sydney Environment Institute, Dan Cass and collaborators found that while there are obvious benefits to energy transitions, there will nevertheless be winners and losers (Cass et al., 2022). Some have advised, therefore, that there should be a greater embrace of principles of environmental justice in just transitions to rebalance the inequitable distribution of risks and benefits of transition strategies (Evans & Phelan, 2016; Stevis & Felli, 2015). According to Farrell (2012) principles of environmental justice include creating and implementing policies with explicit distributional and social justice mechanisms and engaging with affected communities in meaningful ways right from the beginning and throughout transition processes.

The importance of such ongoing involvement in transitions has been explored by Solman et al. (2021) who positively correlate the acceptance of wind farms, for

example, with the engagement of self-assembled publics. These collectives, they found, take a great interest in the long-term management, maintenance, and even the decommissioning of wind farms. Hall et al. (2020) along with Hill and Connelly (2018), have also found there are benefits for long-term acceptance of renewable energy developments if community are offered financial benefit sharing. Such an approach broadens the framing of economics and employment in transitions from the individual worker to whole communities. Critical to delivering on the promises of shared economic benefits will be the implementation of ongoing and meaningful community engagement (Cass et al., 2022; Larkin, Carr, & Klocker, 2023).

2.2.4 Public participation in planning

The field of planning operates at various scales including cities, towns, and regions. My research is located at the regional scale and is concerned with exploring how to support public participation in land use planning, a discipline focused on how land is allocated for different uses (Adjei-Poku, 2018). The allocation of land use is highly contested in coal mining regions as a range of people are competing for their interests to prevail over others. A working knowledge of the legislative structures that support or constrain participation in these land use allocations is therefore required for understanding how to approach energy transitions. This section of the literature review explores the role of public participation in context of planning arenas. It begins with a brief history of public participation in planning in a western context, followed by an exploration of the NSW planning system as it relates to public participation.

Energy transitions will involve many decisions related to the use of land as we move away from fossil fuel energy production to renewables. For example, when coal mines close in the Hunter, there will be over 130,000 hectares of land available for new uses, much of which will require significant rehabilitation before it can be reused (Hunter Renewal, 2023). Moreover, vast areas of land are required for renewable energy production, which demands careful planning in choosing suitable locations so that conflict between renewable energy developers and residents is minimised. Given the likelihood for these decisions may benefit some more than others, it is worth studying how the shaping of legislation can determine the rules of play, and how inequity can be embedded in legislative infrastructures.[33] This is the goal of this section.

The Planning Institute of Australia defines planning as the 'process of making decisions to guide future action' (Planning Institute of Australia, n/d). Planning is considered instrumentally as governance activities undertaken to ensure communities have the services they need, when and where they need them, in an environment that provides for all (Gleeson & Low, 2000). Planning is also considered more broadly as processes by which we make sense of what is happening and how we as a society might come to agree on a path forward (Allmendinger, 2017).

[33] As has been noted, the so-called "two speed economy" of the Hunter Valley has already embedded inequity through awarding those in the coal industry greater financial rewards than others.

The planning profession began to strongly develop in the west as the combined effects of the Great Depression and World War II brought about the need for large-scale, government-led plans to reconstruct the economy and stitch society back together (Allmendinger & Haughton, 2007; Gleeson & Low, 2000). In Australia at this time, planning was put forward as an enabler of social change and unity (Albrechts, 1999; Gleeson & Low, 2000). An alignment in Australia to the British version of planning with its focus on the development of a welfare state differs from planning in the United States which, according to Kaufmann and Jacobs (1987 cited in Albrechts, 2006) has deeper roots in the private sector.

In studying plans of this era, Diana Maccallum and Diane Hopkins (2011) find that planners in Australia promoted themselves as rational experts through the implication that their visions were based on scientific, quantitative data.[34] Plans such as the 1955 *Stephenson-Hepburn Plan* for Perth were even named after the authors, thus cementing the idea of the all-knowing planning expert working on behalf of 'the community as the passive beneficiary of the planning project' (ibid. p. 495).

According to Leonie Sandercock (2022), the perceived rationality of the planning field stems from the Enlightenment era, a period spanning the late 17th to early 18th century, during which the scientific method was established. She says this embrace of rationality led to planners to develop principles they viewed as universal and therefore applicable to all situations. Planning in this western ideal suggests that through the careful application of scientific knowledge we can improve the lives of many and build a better world. Arturo Escobar (2010) rejects this neutral framing because, though speaking primarily of the negative impacts of planning on the global south, Escobar wants us to see that planning is not a neutral and rational exercise, but one which applies an ideological belief through choices and exclusions that appear inevitable and therefore unquestionable. Such a perspective, or political ontology, shapes what we see as existing, and therefore what is possible (Chambers & Carver, 2008). As Bent Flybjerg (1998) reminds us, power defines what counts as knowledge.

During the political struggles of the 1960s, civil rights and environmental groups in the US, UK, and Europe began to push for greater participation of groups affected by

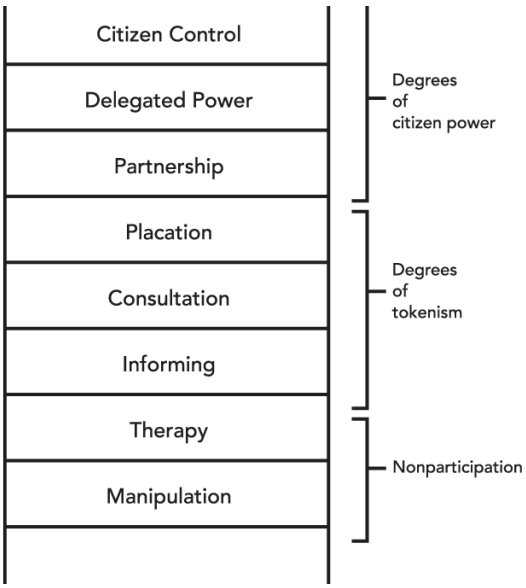
[34] I acknowledge the scholarship from people such as Herbert Simon and Horst Rittel in the field of planning and its relation to design but there is not sufficient space in this thesis for a deep analysis of these histories.

planning decisions (Beder, 1999; Bidwell & Schweizer, 2020; Fischer, 2000; Sanoff, 2000). These groups questioned the motives of planning professionals who seemed to be serving interests at odds with their espoused values of designing in the public interest (Schön, 1983). In this critical environment, some planners began to see they had a moral obligation to better consider the needs of citizens who would be affected by their proposals (Healey, 2006; Schön, 1983), asking questions around who decides, who benefits, and who is impacted by planning decisions (Fischer, 2000; Wilsdon & Willis, 2004).

Experiments with different types of inclusive planning were also becoming popular at the time in the form of local housing groups, community design centres, and study circles (Monno & Khakee, 2012; Sanoff, 2000). The so-called advocacy planners working with communities on these projects, Schön (1983) suggests, were performing multiple roles of acting in the interests of the less powerful, demystifying the strategies of centralised planning, and working out how to make the needs of less powerful more visible to decision-makers. In turn, critiques were generated about the authenticity and inclusiveness of what was passing as public engagement in conventional planning.

Such critique is reflected in Shelley Arnstein's *Ladder of Citizen Participation* (1969). This popular tool for assessing the quality of public participation was created by Arnstein when working on tax and welfare reform as a director of community studies at a research institute in Washington. As part of the growing civic movements of the US in the late 1960s, Arnstein was interested in developing more meaningful methods of participation 'beyond polite handclaps' (ibid. p. 25). To illustrate this, she arranged eight forms of participation in a ladder shape (**Figure 8**), with each rung representing a different degree of power that people had in determining the result of the engagement. The steps are *nonparticipation* (manipulation, therapy), *tokenism* (informing, consultation, placating) and *citizen power* (partnership, delegated power, citizen control). For Arnstein, citizen

Figure 8
Arnstein's Ladder of Participation (1969).



participation was about a redistribution of power and not about merely replacing state power with the will of the people (ibid.). A nuance perhaps missed when viewing the diagrammatic representation of the ladder which implies a desirability hierarchy with citizen control at the top.

While the Ladder is itself useful to assess the power of citizens within a participatory activity, some have criticised practitioners for using it without sufficient interrogation. Leonie Sandercock (1975), for example, suggests that practitioners who were recommending total citizen control in the late 1960s were doing so unrealistically because 'those with power do not give it away' (p. 126). Sandercock said, therefore, that to evaluate participation only on the grounds of power alone would mean every instance would be negatively rated. Collins and Ison (2009) suggest in a similar vein that participation framed in terms of power does not allow for an adaptive and collaborative response using different types of engagement depending on what is required. There may be times, for instance, when an information campaign is all that is needed, and more inclusive forms of participation would do nothing other than unnecessarily stretch the capacities of already busy people. [35]

Shortly after Arnstein's Ladder was launched into the public domain, the economic crises of the 1970s saw the emergence of neoliberal policies and administrations as greater levels of private capital and investment were used to create efficiencies in the delivery of government services and in the building of public infrastructure (Boelens, 2010; Gleeson & Low, 2000; Throgmorton, 1996). In the late 1980s and early 1990s, there were growing reactions in some global north countries against neoliberal influence on planning in favour of more socially embedded and participatory planning processes (Boelens, 2010). During this time, planners began to accept that society was more diverse, complex, and pluralistic than they may have previously admitted (Albrechts, 2006; Allmendinger & Haughton, 2007; Healey, 2004). This in turn fuelled an embrace of collaborative methods to enable wider participation by people with diverse motivations and needs (Allmendinger & Tewdwr-Jones, 2002; Healey, 1992; 2004; 2006).

[35] Many planning professionals now use the International Association for Public Participation (IAP2) *Spectrum of Public Participation,* which is based on Arnstein's Ladder and other similar models (IAP2, n/d). There is not the space nor requirement to delve into this model further in this thesis.

A collaborative tendency in planning is generally known as the 'communicative turn' (Allmendinger & Tewdwr-Jones, 2002; Healey, 1992; 2004; 2006). Allmendinger (2017) proposes that it is the work of Jürgen Habermas on different ways of knowing and communicating beyond technical rationality that has had the greatest impact on collaborative planning theorists. These theorists have suggested that more publicly inclusive planning can achieve more widely accepted and long-lasting outcomes that are more feasible, robust, and just (Healey, 2006; Innes & Booher, 2004).

Aiming for this more democratised planning practice can also help to achieve mutual goals that do not necessarily weaken the overall aims of each individual group (Raynor, Doyon, & Beer, 2017). To achieve this, Patsy Healey (2006) recommends that informal, collaborative planning processes must happen in parallel with formal processes so they may expose the otherwise hidden values and different interpretations that shape planning decisions. In this way, Healey takes a critical realist approach as she suggests that collaborative planning does not seek to replace expert planning and strategy-making but rather operate in partnership.

Healey also says that such processes should deliberately use 'the everyday language of practical life…' (p. 282). As with Frank Fischer (2000), Healey believes that local knowledge expressed through everyday language within informal arenas is not inferior to technical language developed formally, it is just different. Through describing collaborative planning processes Healey therefore exposes a crucial difference between the types of participatory planning events hosted by government and by groups such as Hunter Renewal. Rather than the institutional design enforcing rational behaviours and expressions that are alien to community, the collaborative institutional forms created by community groups for community allow people to interact in ways they are more accustomed to.

Collaborative planning is, however, often less democratic in practice. For example, in the coalmining area of East Kent in England, invitations from authorities to participate in regeneration forums were extended only to people who 'are not worried about the past but are prepared to look forward into the future,' thereby excluding many miners who were not onboard with the regeneration in the way that the authorities deemed appropriate (Doering, 2014, p. 1011). Similarly, in 2021 the regional division of the NSW state planning department, Regional NSW, held what they called 'targeted' information sessions about new mining regulations in the state. Only a few groups

were invited to these sessions. These included Hunter Renewal[36] and mining groups. In making invitations just for these groups and not others, Regional NSW engaged the publics whom they considered were affected by the issues. While it could be argued that this selectiveness was for efficiency purposes, other publics were left out of this process because they were not deemed 'sufficiently implicated' (Marres, 2012). The government drew boundaries around who they think thought affected community was based on how they defined the issues, thus making the public a political state as Dewey would say (1998 [1927]). By not allowing for broader participation, the scope of issues remains restricted, ultimately narrowing the terms of reference for the transition again to jobs (mining groups) and the environment (Hunter Renewal).

In this light, Carolyn Hendriks and John Grin (2007) suggest creating multiple and overlapping spheres of engagement, using different formats and modes that suit different communication preferences. Similarly, the 'ecologies of participation' approach from Chilvers and Kearnes (2016) emphasises the importance of coordination between different groups working separately but interdependently toward shared goals. An ecologies approach highlights all the diverse ways in which participation occurs across different collectives of people. Ecologies consist of a variety of means to participate that are suitable for different people and their varying capacities. In these ecologies, transitions might be considered as spaces of multiple actions supported by a plurality of knowledges and perspectives, across diverse locations, scales, and times (Lawhon & Murphy, 2012; Selkirk et al. 2019; Urquiza et al., 2018). There might be highly formal activities as well as less formal ones, each constructed to appeal to different audiences.

Chilvers and Kearnes suggest that this is not an either/or situation, one doesn't have to choose between practices. Offering different epistemological mechanisms to be used in a complimentary way, they say, will defer the problems inherent in expert-led practices that are isolated from the context of the issue. Success is achieved in this sense through the communication between many different groups working separately but interdependently toward shared goals. As Peter Block (2008) says, collective change occurs not because everyone is in the same conversation, but because 'what is occurring in one space is similarly happening in other spaces' (p. 79).

[36] I attended one of these sessions as a representative of Hunter Renewal.

2.2.5 Public participation in the NSW planning system

The enthusiasm of many institutions for public participation is often based on legislative requirements, to generate positive public relations, and to secure continued executive support and funding (Beder, 1999; Bidwell & Schweizer, 2020; Cuppen, 2018; Harrison & Mort, 1998; NSW Government, 2021a; Stirling, 2005; Wilkinson et al., 2012). The key piece of legislation that shapes public participation in land use planning in New South Wales is the *Environmental Planning and Assessment Act 1979*. This section will give an overview of the development of this legislation including how civil society played a role in its creation through the Green Ban protests.

Australia has a three-tiered system of government reflecting the geographic levels of local, state, and federal. Governments at the state and local level are more involved with land use planning than the federal government (Uddin & Piracha, 2023; Kelly, 1995). While contemporary approaches to planning have promoted local regions as the most suitable context for planning (Everingham, Cheshire, & Lawrence, 2006), it is worth noting that local governments are subject to state planning laws rather than having legislative power themselves (Searle & Bunker, 2010). Planning is therefore, in effect, always done *to* local regions and not *by* them.

Aspects of control in planning can also be viewed through the lense of public participation. The development of public participation in the functions of government began to be legislated broadly in Australia in the early 1970s (Christensen, 2019; Kelly, 2011). Before this time, only property owners were involved in decisions related to land use (Lipman & Stokes, 2008; Roddewig, 1978; Thorpe, 2013). Growing dissatisfaction with this situation grew when town planning was becoming more professionalised, and the gap between the public and decision-making arenas grew (Sandercock, 1975; Thorpe, 2013). The protest movement so borne—the Green Bans—has been attributed to pushing the NSW Government to reform planning laws toward greater protection for community and the environment (Cook, 2011; Kelly, 2011).

2.2.5.1 The Green Bans

In the early 1970s labourers working on Sydney building sites started to notice the wasteful practices of property developers because they were employed both to demolish residential buildings and to build the new office towers that would replace them (Burgmann & Burgmann, 1998; Mundey, 1981). The union that represented these workers, the NSW Builders Labourers Federation (NSWBLF), saw that planning

decisions gave greater preference to already privileged actors (property developers) at the expense of the needs of the wider public (residents). Profits were being generated for developers through replacing housing with lucrative high-rise office towers while many of the labourers on the sites were themselves in desperate need for housing (Burgmann & Burgmann, 1998[37]). The NSWBLF therefore started to see the importance of ensuring the labour of their members not be used in socially and environmentally harmful ways. They changed the term for industrial action that had previously been known as a 'black ban' to a 'green ban.' As Jack Mundey who was secretary of the union from 1968 through to 1975 said:

> *It's not much use getting great wages and conditions if the world we rebuild chokes us to death.'* (Mundey, 1972)[38]

While the Green Bans are often characterised with stopping development, a closer reading of the literature shows the bans were about fighting for the public to have more of a role in shaping, not necessarily just stopping, these developments.

For example, in 1971, the NSW government sought to evict public housing residents in the historic Rocks area of Sydney to make way for multi-storey office and residential towers (Mundey, 1981). Before the intervention of the NSWBLF, residents were told by government there was simply no time for public participation because they needed to meet their development deadlines (Roddewig, 1978). Inspired by the direct-action techniques of the anti-Vietnam war protests occurring at the time,[39] resident groups approached the NSWBLF for assistance. Unionised workers stopped work at <u>all</u> government developments until they promised to sit down to negotiate with affected residents (Iveson, 2014; Mundey, 1981; Thorpe, 2013). Delaying decision-making enabled residents more negotiating power than they otherwise would have had.

Jack Mundey (1981) describes how a Green Ban on the Rocks area paused development from 1971 to 1973 allowing time for the resident group to hold community-led, collaborative exercises to create alternative plans to what the government developer

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[37] Burgmann and Burgmann (1998) note that in 1971 the waiting list for NSW Housing Commission homes was 40,000 people. In March 2024 the waiting list was 48,744 (NSW Government, 2024a).

[38] Quoted in Burgmann & Burgmann (1998, p. 36) from an article 'Portrait of a militant' by Denis Minogue in *The Australian*, 5 September 1972.

[39] From the documentary film 'Rocking the Foundations' written and directed by Pat Fiske (1986). This film charts the history of the New South Wales Builders Labourers' Federation from 1940 to 1975.

was proposing (Thorpe, 2013). Leonie Sandercock (1975) describes, therefore, how alternative, community-led planning methods came about in Sydney because of the sheer frustration of residents being excluded from the formal planning process.

In their own *People's Plan*, residents of the Rocks offered alternatives to the high-rise towers. Their plan involved a mix of low-income housing complemented by infill development on vacant land, the protection of heritage buildings, and the inclusion of open space (Thorpe, 2013), demonstrating that residents were not against development *per se* but were against development that had 'no respect for the importance of their lives, values, and attachments' (Sandercock, 1975, p. 64). In the *People's Plan*, a desire for an alternative to regular planning processes that might include these values and attachments was expressed thusly:

> *Most importantly, the operations of SCRA [the government development authority] must be opened up, and structures set up for full and on-going open consultation between the Authority and residents, tenants, and interested citizens. The future planning of the Rocks should be a cooperative endeavour of the planners and the public, rather than the secretive conflict and bad feeling that has characterised relations up till now. It should be accepted as an overriding principle, that decisions made about the future of the Rocks must involve as fully as possible, even to the point of veto, those who live and work there now, and those who will come into the area to live over the next few years.*
> (Rocks Peoples' Plan Committee, 1972)

Coming together as 'the people' in the *People's Plan* attracted more people to identify with the cause and made it almost impossible for authorities to deny their legitimacy to speak on behalf of the wider populace (Iveson, 2014). Iveson notes, however, that even though some of the successes of the Green Bans were based on this performance of collective interest, many people who came to be defined as 'the people' were members of organisations (like unions and resident action groups) that had 'bred a belief in people's capacity to act and govern their own affairs' (ibid. p. 1007). To include the views of people into public plans is therefore not just about assembling a public, but also involves the capacity of that group to agitate in a way that is organised.

Frustrated at the challenges to their authority from the actions of environmental activists, including those involved in the Green Bans, the NSW Government had to admit the planning laws needed revising (Kelly, 2011). Published by the Minister for

Planning and Environment in 1974, the *Green Book* (so called because of the colour of the cover) set the ambition for a new planning system for the state of NSW, beginning with the participation that guided the drafting of the Bill itself (NSW Government, 1974). In the *Green Book's* foreword, the planning minster Mr John B. Fuller says that the public's views on the new plan would be invited through a series of public meetings as well as invited written submissions. When the Bill was being read for the second time in NSW parliament it was said that preparation for it had involved around 138 meetings, 65 of which were in regional areas. It was said that this was the most extensive public participation ever undertaken in the state (New South Wales, Legislative Assembly, 1979, p. 2880).

The existing planning system was critiqued in the *Green Book* for several reasons including a lack of consideration of the social and environmental consequences of planning decisions and a lack of public participation in planning. The ambition for a new system was articulated as:

> *The new planning system should allow the community's needs and aspirations to be reflected in planning proposals. Public involvement is not only informing people but also allowing their views to shape the plan. The public should be involved in the formation of a plan's aims, in the choice of alternative ways of achieving these aims and in the commitment to the final plan.* (NSW Government, 1974, p. 22)

This ambition was not subsequently legislated. In 1979 when the *Environmental Planning and Assessment Act (*hereafter the *EP&A Act* or the *Act)* was passed, it contained no provisions for early involvement of the public, nor their inclusion in the shaping of development plans.[40] The only requirements for public involvement were that already developed plans should be exhibited for 30 days, that affected persons may make written submissions regarding these plans, that these people are informed of the decisions related to the application, and that people could make objections to the plans in the court (NSW Government, 1979). Successive changes to the legislation have further reduced the public's ability to play a significant role in environmental decision-making (Kennedy, 2016; Kennedy et al., 2017).

[40] The *Act* stipulates how public participation might proceed (see appendices 8.4.1 for full text of this section). Participation in this context can mean the development of environmental planning instruments, development applications of a certain size, Environmental Impact Statements, as well as submissions invited for public inquiries (Park, 2010).

In the absence of any mandatory guidelines, public authorities can orchestrate participation in a way that suits them (Lockie et al., 2008). Christensen (2019) calls this 'hedging' because authorities can appear to be undertaking public consultation by aligning to these minimal requirements but do not have to put in further effort to create a more rigorous methodology that might expand the role of the public. Kristian Ruming (2019), for example, says of the Australian planning context, that the ability of the public to influence planning decisions is marginal, and that tokenistic engagement is employed more as a risk reduction exercise. Governments need to be seen to encourage participation without ever intending to listen to what the public says.

Amelia Thorpe (2013) notes, therefore, that the role of participation has moved away from the collaborative spirit of Sydney in the 1970s, setting the role of the public to one of mere adversary and objector to already developed proposals. Moreover, she says, because the *Act* was created in response to conflict between residents and authorities during the Green Bans, it was borne from an antagonistic position which frames how the legislation is enacted today. Uddin and Piracha (2023) say in this sense that opposition has been made a public engagement strategy.

2.2.5.2 Areas for public participation in the NSW planning system

There are three general areas of the planning system where the public currently has the formal opportunity to participate. These are in the assessment of individual development proposals, in the making or remaking of legislation within the planning system, and in the creation and review of strategic planning instruments such as regional plans (ibid.). The basic processes for these are illustrated in **Diagram 1** which was created to assist in conversations with Hunter Renewal.

The assessment of individual development proposals is legislated under the *EP&A Act (s 2.6)*. As covered above, this legislation has few mandatory requirements for participation beyond allowing for minimum times for proposals to be publicly exhibited and commented on by the public.[41] As mentioned earlier, this has led scholars such as Roddewig (1978) and Thorpe (2013) to characterise the public's role in land use planning as one of objector. In this combative subject position, the public are unable to contribute much to the planning process beyond saying yes or no. Such a

[41] See appendices for this section of the legislation.

defensive subject-position becomes tiresome, as one of our workshop participants said in an interview:

> *People are complained out at the end of the day because we've gone through this process for so many years.* [Workshop participant]

Despite successive planning reviews suggesting that the public should be more involved in planning at early stages of proposals (NSW Government 1974; Montoya, Wales, & Griffith, 2012), the public is still excluded from more meaningful and early participation in the shaping and assessment of individual development proposals.

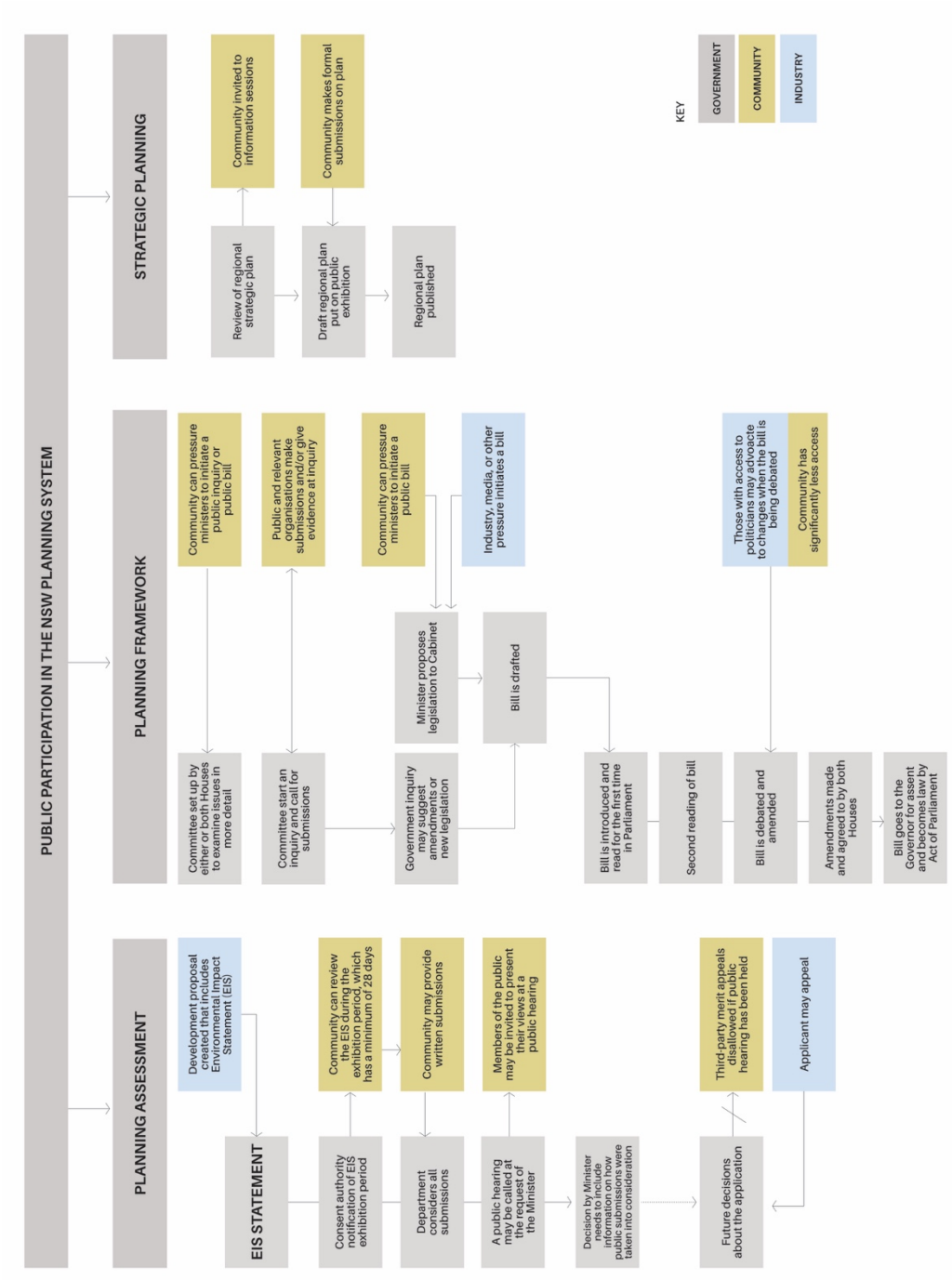
The public is also excluded in decisions about individual projects through the politicisation of decision-making. The Environmental Defenders Office notes, for example, that there have been changes made to legislation that have restricted the rights of third parties (including the public), to appeal decisions made in the NSW Land and Environment Court (EDO, 2016). Under these changes, if the government holds a public hearing into a matter, the rights of the public to appeal as a third party to the development application are extinguished (ibid.). The original development applicant may still appeal. Such legislative exclusion is well known by the Valley people we engaged. One person said the following in one of our Blueprint workshops:

> *They've changed the law so that community groups aren't entitled to merit reviews in the Land and Environment Court. Companies can appeal, but communities can't. They're like "you had your chance to put in a submission so go away".* [Workshop participant]

Certain topics in the assessment of proposals are also highlighted more or less forcefully which restricts their availability for community interrogation. Hedda Askland (2022) raised this in her expert review of the development application for the extension of the Mount Pleasant coal mine in the Hunter Valley. Askland found that the negative social impacts of the mine had been 'muted' in favour of economic benefits. Such was the overall disregard for social impacts, Askland notes, that the planning department categorised them under the heading of 'other' (p. 4).

Diagram 1

Three areas for public participation in the NSW Planning System.[42]



[42] SOURCES: https://www.parliament.nsw.gov.au/bills/Pages/Legislative-process-explained.aspx; https://www.parliament.nsw.gov.au/la/proceduralpublications/Pages/Factsheet-6---Making-Laws.aspx; https://www.parliament.nsw.gov.au/researchpapers/Documents/The%20NSW%20planning%20system.pdf; https://education.parliament.nsw.gov.au/teacher-lesson/legislative-process/; Elton Consulting (2003).

Shaping legislation. The second formal way that the public can participate in the planning system is to advocate for changes to existing legislation or pressure the government to create new laws. The publication of the *Future-proofing* report was, for example, timed to align with debate on the Royalties for Rejuvenation Fund (R4R) in NSW Parliament in 2022 as part of amendments being made to existing legislation under the *Mining Act 1992*. If it were not for the Hunter delegation to NSW Parliament and the public participation that preceded it (see section 4.1), the legislation would contain fewer requirements for community involvement, nor contain any guarantees that proposals funded through the legislation would be in the interest of the public or of the environment. The Hansard record for debate on this legislation is evidence of the delegation's influence. For example, there is mention of the advocacy work of Hunter Renewal through their parent organisation Lock the Gate. Greens MP Tamara Smith noted the work of the delegation when voicing her support for amendments to the Bill proposed by independent MP for Sydney, Alex Greenwich:

> *The Greens will support amendments that the member for Sydney will move in this place. Those amendments are the result of a cross-party collaboration facilitated by Lock the Gate, which has been working with community groups, particularly in the Hunter Region, to ensure that the Royalties for Rejuvenation program is fit for purpose.* (NSW Parliament, 2022, p. 8916)

As with the residents and unions of the Green Bans, in coming together as a group, Hunter Renewal, Lock the Gate, and the Hunter Jobs Alliance were able to advocate successfully for the communities they represent much more effectively than any individual person within these communities. While the final legislation has its drawbacks[43], the delegation achieved most of what they set out to do. With the report in hand, they took the voices of Hunter people directly into parliamentary debate about legislation that would have an impact on their future. Seeing that their constituents were supportive of transition meant that politicians needed to attend more to the idea that transition should be supported through policy development.

Strategic planning. The third way that the public can formally participate in planning is through the development of strategic instruments such as the *Hunter Regional Plan 2041* (NSW Government, 2021b). I could find little publicly available information on

[43] The legislation can be read in its entirety on the Parliament of New South Wales website. https://www.parliament.nsw.gov.au/bills/Pages/bill-details.aspx?pk=3948

who was engaged as part of this plan's development, merely a small amount of detail on how they were engaged. Engagement methods reportedly included consultation with 'stakeholders' about the previous plan, written submissions made following the exhibition of the plan, and virtual information sessions with community members before final drafting.[44] While the public was given more time to review this draft plan than they are generally granted for individual development proposals (45 as opposed to 28 days), there are no more ambitious avenues given for participation beyond one-way engagement about technical plans.[45]

References to participation within the *Hunter Regional 2041* plan appear, therefore, to be merely for legitimisation purposes because there is no evidence that public participation shaped the policy. If planning policy documents are material evidence of the government's attitude toward public participation, then the NSW Government appears to view participation only instrumentally to confer legitimacy and not as a valuable contributor to policy.

2.2.5.3 Public participation in Hunter Valley transitions

Since the time the *EP&A Act* came into effect, planning decisions using it have shaped how coal mining has developed in the Hunter Valley because consent conditions for mines are subject to the *Act*. As mentioned above, the public's ability to influence or object to decisions has been reduced since the introduction of the *Act*. One could say, therefore, that the scope for the public to stop developments which inhibit sustainability transitions is extremely limited. What, though, of opportunities for the public to be involved in more beneficial sustainable initiatives?

When looking for evidence of participation in government-hosted events related specifically to the transition in the Hunter, I could not find any events hosted by either local councils or the state government where community members were invited to attend in their capacity as citizens.[46] There have only been two publicised meetings about the transition to which Hunter Renewal has been invited to attend as a community representative body. The first was an information session about the

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[44] From the FAQ page related to the 2041 plan, accessed 27 March 2024 at: https://www.planning.nsw.gov.au/plans-for-your-area/regional-plans/hunter-regional-plan-2041/frequently-asked-questions

[45] See section 2.1.3.1 for an analysis of how the technicality of Environmental Impact Statements affect the public's ability to take part in conventional planning processes.

[46] See the table in appendices 8.4.4. See also footnote 55 on page 96 regarding the use of the term 'citizen'.

Royalties for Rejuvenation Fund in 2022. The second was a roundtable in the Upper Hunter held in August 2023 by Courtney Houssos, the Minister for Natural Resources in the NSW Labor government. The forum was held to discuss future jobs and economic opportunities for the region. Of the 60 people invited, just two people were invited to represent community interests via Hunter Renewal and the Country Women's Association.[47] There were no Indigenous people, nor anyone representing social services or employment agencies, despite extremely high levels of unemployment and homelessness in the area. There were 12 representatives from coal companies, six from unions, some of which represent coal workers (AWU, CFMEU), and three people from the renewable energy industry. Such an imbalance of participation demonstrates a lack of capacity to understand the value of local knowledge and engaging the public beyond a role as objector.

Meanwhile, community groups have hosted over 30 events about transitions on diverse topics such as the closure of power stations, ideas for how to recycle coal ash, and the future of renewable industry in the region (see appendices 8.4.5). These include the workshops that are the basis for this thesis. The public have therefore created their own opportunities to be able to raise and address the issues in a way that they believe they should be dealt with, thereby aligning to what Riniolo (2023) calls 'claimed' spaces of participation, in contrast to top-down 'granted' spaces.

People told me they were perplexed that government is failing as an institution to engage them regarding the issues of transition. They are left feeling as though no one in government supports their future interests, and that government attitudes to participation do not match their own. Participants in the workshops also said:

> *It's great to see someone at least having a go. It's disappointing, but I guess it's just once again reality, that it's gotta come from an organisation like yours as opposed to what our planning departments are meant to do.* [Workshop participant]

> *We need somebody who is working with the interest of community first and foremost. Community is the people that live and work here, but the agenda is guided by interests of boardrooms and stakeholders around the world. We are sidelined as a community*. [Workshop participant]

[47] I was provided the list of attendees by Hunter Renewal who said the organisers have allowed for it to be shared.

The above quotes suggest that people see the trajectories of their lives are controlled by the agendas of commercial, global companies. They also reveal that the public hold distinct perceptions regarding government-hosted versus community-hosted participation. These perceptions influence their willingness to participate, the extent of their contributions, and their evaluation of the effectiveness of their participation. People wish to have a more substantive role in planning their future. A point emphasised by one participant from the workshops:

> *That's what I keep saying again and again and again and again in these submissions, is that it is the community that's going to have live next door to this for the rest of their lives, not the developer, not the council, it's not the planner, it's the community, and they're the ones who have the least say, whereas we should be the ones who have the most say.* [Workshop participant]

While the NSW Government frame their rationale for public participation as normatively necessary and substantively important,[48] structurally they only grant limited opportunity for participation. The public are therefore led to believe they have more scope to influence than they do. As has been said, differences in held rationales for participation can lead to conflict (Webler et al., 2001; Wesslink et al. 2011; Wilsdon & Willis, 2004). A mismatch of rationales at the institutional level ultimately has an influence on how both the public and the government measures the value of public participation. In turn, methodological approaches to engagement are chosen that are highly restrictive and do not lead to substantive outputs.

In summary

This section has shown how public participation has been either enabled or constrained in policy making, sustainability transitions, and in land use planning for energy transitions. Through exploring participation through these fields, several lessons emerge that can be applied in designing participation to be more influential. First, that rather than valorising of one type of knowledge over another, integrating local and expert knowledges will broaden the evidence base for transition decisions in beneficial ways. Such integration means, however, that the processes involved in gathering local knowledge need to be made as visible as the scientific methods of technical experts so that local knowledge is taken as seriously. We have also seen that

[48] See for example the principles for community engagement that the NSW government states in the legislation for the creation of Community Participation Plans (*EP&A Act 1979 s2.23*).

participation is not just about assembling a group of people, but it requires these people being organised.

In making this last point about organising I turn to Alpa Shah (2017) who says that when coming together with a group to make change it is important to recognise, we are coalescing at a particular point in time that is subject to certain forces of history. I did this by exploring the political and ideological forces at play during the late 1960s and early 1970s that created the first instances of public participation in planning legislation, and though examining at the way that the organised forces of unions and resident groups in this period came together to fight for environmental and socially beneficial change. Both are inspirational for understanding how to attend currently to expanding the scope of public participation in sustainability transitions.

3 – Methodology

> *[Methodology is]… prising an opening and following where it leads. You try things out and see what happens. Thus, the art of inquiry moves forward in real time along with the lives of those who are touched by it, and with the world to which both it and they belong. Far from matching up to their plans and predictions, it joins with them in their hopes and dreams.'* (Ingold, 2018, p. 218)[49]

Methodology is a strategy or plan of action for research which stitches together a researcher's ontological, epistemological, and theoretical perspectives (Crotty, 2020). Methodology is the rationale of why certain methods have been chosen to address the aims of the research (Clough & Nutbrown, 2012; Crotty, 2020), and is therefore the foundation on which all research is built (Darlaston-Jones, 2007). In other words, the way I approach my research should align to how I think understanding is, or should be, developed about public participation.

As my intent with this research has been to walk at length alongside a community in their struggle for an active role in setting the direction of their lives, my methodology therefore aligns to the description from Tim Ingold above. Following a positivist form of inquiry would not have worked in a context replete with emotion and emergence. Instead, I have approached the research through a critical realist ontology using qualitative methods, because they are approaches that aim to make worlds visible so they can be improved upon (Denzin & Lincoln, 2005; O'Mahoney & Vincent, 2014).

This chapter will locate my research within the ontological and methodological traditions to which it most aligns. It is organised into four sections. The first section gives an overview of the ontological perspectives that have guided my approach. The second section presents the research design including the research questions, an overview of the research cycles, and how I have collected and analysed data. The third section looks at the methods, and the final section outlines the limitations of the study.

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[49] Interestingly, Ingold in turn suggests the primary characteristic of design is that it *carries on* rather than heading to a *predetermined target* (Ingold, 2018, p. 225). In research interviews it has been stressed by participants to me that this is a journey that will continue long after I have completed my study.

3.1 Ontological foundations

To discover how sustainability transitions were being discussed and negotiated in public settings, and who was invited to contribute to these discussions, initially I considered the *social constructionist* paradigm as a foundation to my research, because it conceives of how meaning is made and continually negotiated in social settings (Schwandt, 1994). I also presumed this constructivist orientation would lend itself to an inquiry of how my design expertise could enhance public engagement within these forums. An insight from the first round of data analysis along with some timely advice led me instead to critical realism, a philosophy that emerged in the 1970s from the work of Roy Bhaskar, then a doctoral student at Oxford University (Gorski, 2013).[50]

A *critical realist* approach challenged me to find deeper levels of meaning through analysing the mechanisms—social, economic, political—which might be behind the behaviours I was observing, and accounts given to me in interviews (O'Mahoney & Vincent, 2014; Rees & Gatenby, 2014).

Through exploration of critical realism, I realised I had not sufficiently considered that what I was hearing from community was not necessarily a complete truth, as they may have been influenced through political or other phenomena. By following social constructionism, I was falling short of providing sufficiently deep explanations because I had failed to look beyond the layperson's description (O'Mahoney & Vincent, 2014). I had also failed to account for absences of phenomena which can themselves be a controlling mechanism (Bhaskar, 1998). For example, the effects on social cohesion from an absence of worker rights. By drawing on social constructionism I had developed an ontological bias toward the accounts of the lay public with whom I was interacting, assuming their accounts of reality were a sufficient explanation.

In applying a critical realist approach, I have been able to propose better explanations and then provide actionable tactics to improve these cases in the future. There are three aspects that make critical realism a suitable ontological foundation (from Friedman & Rogers, 2009; O'Mahoney & Vincent, 2014):

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[50] Bhaskar's thesis titled 'Some Problems about Explanation in the Social Sciences' was rejected in 1971 because of its excessive length, but Gorski (ibid.) believes it was more to do with how Bhaskar was criticising the establishment's analytical modes of inquiry, which at the time were considered beyond reproach. Gorski says that when Bhaskar resubmitted many years later the thesis had grown to six volumes, confirming that length was never really the reason for the initial rejection.

- Critical realism (CR) accounts for how power and other often hidden socio-cultural structures affect our interpretations of reality.
- CR does not champion one epistemological strategy but looks for the best way to develop understanding of a phenomena: whether studying the facts of a situation or the interpretations of how situations are experienced, or both.
- CR tasks the researcher with developing strategies for how to practically overcome limiting structures. This aligns CR as an ontology to my research methodology of action research (see 3.2.1), and my adopted definition of design practice as 'inquiry for action' (Nelson & Stolterman, 2012).

3.2 Research design

The nature of critical realism as a reflexive, critical, and iterative journey from explanation of events to proposals of potential causal mechanisms (O'Mahoney & Vincent, 2014) aligns to action research which also allows for reflection, iteration, and forward momentum. In the context of my research, this means that the methods I have selected have helped me to iteratively gain a deeper understanding of the mechanisms affecting attitudes and support for public participation in transitions, and then propose ways to act on those understandings and observations.

The next section will explain the action research methodology I have chosen to achieve these aims. First, a reminder of the research questions:

1. Why is public participation necessary for sustainability transitions?
2. What factors influence how public participation proceeds in sustainability transitions?
3. What roles might designers play in supporting public participation in sustainability transitions?

3.2.1 Methodology: Action research

Adequately answering my research questions required being in the field to observe and record how participatory activities were planned, promoted, and conducted. An action research methodology guided this inquiry because it is a process grounded in the development of practical knowing (Reason & Bradbury, 2008) gained through continual reflection on the effects of actions taken (Dick, 2012).

Action research is both a research methodology and a social change practice characterised by participation, action, and learning (Greenwood, 2007; Reason & Bradbury, 2001). By applying this methodology, I seek understanding toward action. Consistent with this approach, I have been immersed in a project of transition rather than externally observing transition practices. Concretely this has meant working alongside community groups in the Hunter Valley, primarily Hunter Renewal (HR). The projects[51] we have worked on are concerned with increasing support for local people to influence sustainability transitions in the Hunter Valley.

While the immersive, ethical, and collective approach of my research accords a natural fit with Participatory Action Research (PAR), I have not termed what I have done PAR. In a conventional PAR project, a problem to be investigated would be defined by a team inclusive of those affected by the problem, and that team would shape the approach to research, conduct the research, and generate insights from that research (MacDonald, 2012; McTaggart, 1991; 1994). Using this definition, my approach differs to PAR for two reasons. First, the broader community[52] have not been involved in shaping the trajectory of the research (Fals Borda & Rahman, 1991; Koch, Selim, & Kralik, 2002; McTaggart, 1994). Rather, decisions about what to explore, and what should subsequently change in my research have been done by me as I've worked alongside people in the Hunter Valley. Second, while my inquiry as to roles for designers in sustainability transitions aligns to the 'practice-changing practice' nature of PAR (Kemmis, 2009), the reflective gaze is directed primarily toward my individual practices as a designer *within* the collective practices of Hunter Renewal and not aimed directly at changing their practices.

The object of my inquiry is, however, anything but individual in nature. Mary and Ken Gergen (2008) propose that action researchers embrace a 'collectivist orientation to research' in three ways: they work *with* rather than *for* people; they do not separate technical from local expertise; and, in working to coordinate toward action with diverse groups they reject traditional knowledge hierarchies. This collective approach to knowledge generation is key to my work with HR and is aligned with the iterative,

[51] The use of the term *project* feels unsuitable because of the short-term implications it has, as well as implying that there is an end point to the engagement. Nevertheless, I will use the word here to make the distinction between each of the engagements with Hunter Renewal easier to clarify.

[52] Community for this thesis is defined as people who live and work in the Hunter Valley and who will be affected by the transition away from coal mining and coal-fired power generation.

participatory, and action-oriented nature of the design process (Swann, 2002; Villari, 2014). A desire for positive change further aligns my approach to the ethical stance of action research within a critical realist ontology because as a researcher I have been seeking to improve the situations I've observed, not just explain them (O'Mahoney & Vincent, 2014).

Several scholars have related the approach of action research to the reflective practices that designers are familiar with, Donald Schön being the most notable (Price, Wrigley, & Matthews, 2021; Schön, 1983; Silverman, 2015; Swann, 2002). Beatrice Villari (2014) says that action research and design are symbiotic as disciplines because each is dependent on understanding and improving practice in context through participatory and iterative means that blur the lines between professionals and lay people in activities of planning, acting, reflecting, and interpreting.

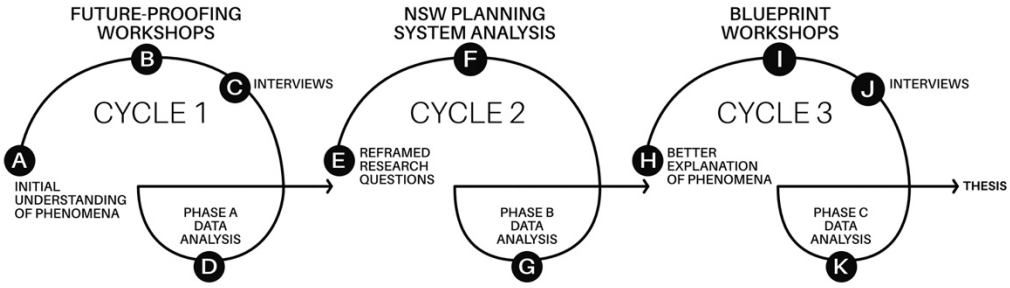
There is one more compelling reason for using action research, one which means that I could not have chosen another methodology. This is because the complex and unpredictable nature of problems related to sustainability transitions require approaches that can respond to emerging situations through flexible participatory mechanisms (Collins & Ison, 2009; Dick, 2012). The multi-layered dimensions of these situations demand the involvement of experts both local and elite, working together to address collective matters of concern (Greenwood, 2002). This melding of local and elite knowledges within the broader project of transition in which I am involved strongly relates to action research as Gergen and Gergen conceive of it (2008).

While these are compelling reasons for choosing action research, I am not ignorant of the many criticisms of the approach. These include insufficient methodological rigour (Greenwood, 2002), and a lack of attention to communitarian values meaning it can be more aptly described as 'applied research,' says McTaggart (1991). Action researchers have also been criticised for accepting interpretations of phenomena through the eyes of the participants without consideration of the structural mechanisms that may be shaping their opinions (Friedman & Rogers, 2009). Critical realism as an ontology offers to action research a means to connect these affecting mechanisms with the subsequent lay public interpretations (Ram et al., 2014). This 'ontic depth' (ibid.) reveals leverage points where change can occur because, 'being able to perceive these forces is the first step in controlling them, rather than being controlled by them' (Friedman & Rogers, 2006, p. 44).

3.2.2 The research cycles

While the overall project of transition is likely to take decades and consist of multiple overlapping and interconnected actions, my involvement with HR has focused on two key projects, labelled in **Illustration 4** as Future-proofing workshops (B) and Blueprint workshops (I). These projects formed two cycles of an action research process, the first and third cycles. The second cycle in between investigated the NSW planning system to develop a deeper understanding of the factors that might be shaping participation outside of the participation itself. The three cycles have aligned to the action research steps of *plan, act, observe*, and *reflect,* that are repeated to incrementally build the knowledge base on which action can be taken (Kemmis, McTaggart, & Nixon, 2014; Zuber-Skerritt, 2012).

Illustration 4
Trajectory of the research cycles.



Iteration of approach over three cycles allowed for my assumptions to be tested and variations to methods made based on what needed to be known at the time (Greenwood, 2002; Willig, 2012). An initial understanding of the phenomena (A) led to planning the action and observation phases: the Future-proofing workshops (B) and the first round of interviews (C). The first reflection period (D) led to reframed research questions (E) ahead of Cycle 2, the analysis of the NSW planning system (F). Data analysis during the second reflection period (G) led to a better explanation of the phenomena (H) that in turn led to the Blueprint workshops (I) and more interviews (J). The final phase of analysis (K) led to the findings that are contained in this thesis.

The research cycles included three phases of data analysis, each looking more deeply at the factors that influence how public participation occurs, as is consistent with a critical realist approach. **Table 3** below outlines the main object of inquiry for each cycle, the key framing questions, and the learnings that were brought into the next round. The three cycles are briefly explained after this table.

Table 3
Description of the research cycles and key questions for data analysis.

	CYCLE 1 Fieldwork	CYCLE 2 Literature review	CYCLE 3 Fieldwork
OBJECT OF INQUIRY	Public participation in a grassroots setting	The structure and development of legislation in the NSW planning system	Public participation in grassroots settings alongside expert inclusion
FRAMING QUESTIONS	Why is public participation necessary for sustainability transitions and what factors influence its success?	How does the NSW planning system influence public participation?	What factors influence participation in knowledge creation and how can designers support people to participate?
LEARNINGS BROUGHT INTO NEXT CYCLE	Participation necessary to broaden knowledge, but external factors such as legislation limit influence.	Legislation and political factors shape who is considered an expert and how knowledge is gathered.	Learnings brought into thesis discussion.

CYCLE 1

Why is public participation necessary for sustainability transitions and what factors influence its success?

To understand why public participation is necessary for sustainability transitions and to observe what factors support or inhibit it, I connected with Hunter Renewal (HR) to enable me to practically test the assumptions made in the literature review. The catalyst was an announcement from NSW Government of the creation of a Royalties for Rejuvenation Fund and Expert Panel aimed at assisting coal affected regions to transition (NSW Government, 2021b). The announcement led to an invitation from HR to help them and Hunter Jobs Alliance (HJA) plan a series of workshops to assess local resident views on how these royalties should be spent. The workshops allowed me to observe public participation in sustainability transitions and afforded me access to the participants of these workshops for later interviews. The workshops concluded with the publication of the *Future-proofing the Hunter* report that I designed and prepared for print (Hunter Renewal & Hunter Jobs Alliance, 2021). Key learnings from Cycle 1 were that public participation is necessary to broaden the knowledge base for transition decisions, and that the legislative environment is a factor that fundamentally shapes how public participation in energy transitions might proceed.

CYCLE 2

How does the NSW planning system influence public participation?

Drawing upon reflections of what occurred in the first cycle, inquiry in the second cycle aimed at deepening my knowledge of the NSW planning system and how it affects public participation. I further analysed interview data with a more specific lens pertaining to legislative factors that influence public participation. From this analysis I wrote a literature review of public participation in environmental decision-making in Australia (Crofts, 2023). This literature review was also based on my reflection that there is a preference in the transitions' literature for case studies from Europe and the United States. I wrote it to fill a gap in my knowledge of how participation was and had been occurring in Australia. My review has been used by Hunter Renewal and Hunter Jobs Alliance to guide their submissions to state government on how public participation should proceed. It has also been published on Hunter Renewal's website and shared with other organisations including organisers of Lock the Gate's work in Narrabri, and the Lithgow Transformations Hub. As well as learnings surrounding the legislative environment, this cycle revealed there was more to learn about how to integrate different knowledges within transition planning.

CYCLE 3

What factors influence participation in knowledge creation and how can designers support people to participate?

The third cycle was aimed at gaining deeper insights around participation in knowledge creation as an aspect of sustainability transitions, as well as developing further understanding of my role as a designer in supporting these activities. The catalyst for this work was Hunter Renewal's (HR) publication of a report on post-mining land use which they had commissioned from consultancy EY (2022). This report modelled scenarios of land use and associated employment and financial gains for a post-coal Hunter yet, as their lead organiser Dan explained, it did not sufficiently describe how these initiatives might be achieved, nor did it bring in a local voice in evaluating these scenarios. I suggested to HR that we work on extending EY's work to include both technoscientific and local knowledge in evaluating the models and making recommendations of how to achieve the scenarios in the local context.

3.2.3 Data collection and analysis

The data from all fieldwork was collected firstly from written memos during and after each workshop. The organisers and facilitators of the events contributed to this data

with reflection meetings after each workshop, as well as through subsequent semi-structured interviews. Interviews were transcribed, edited for clarity, and then sent to participants for checking before they were coded. Sense checking interpretations is a crucial aspect to my methodology as it reflects the ethical foundations of this research: that people have a right to shape their own worlds (and words) and therefore how their interpretations are portrayed. Sending them the transcripts for asynchronous review was also an opportunity to offer people who are less comfortable with direct confrontation in an interview process the opportunity to question my interpretations.

Once data were coded using themes from the literature review, relevant passages were copied into a spreadsheet using the codes as organising principles, allowing for the further interpretation of meaning as patterns emerged. This method is like the 'adaptive theory approach' described by Schirmer et al. (2016), whereby theory informs initial analysis and then the theory subsequently adapts. Notes were made in the spreadsheets which helped me to move from the particulars of the research to more general observations. I used a spreadsheet rather than speciality software (such as NVivo), as it provided me with far more control over the data and was more efficient because I was familiar with using spreadsheets for analysis from my professional practice. It also allowed for easier comparison across data: moving back and forth between the theory and the interview data to bring insights to the fore.

Data were analysed using thematic analysis, which is a systematic method of ordering data to find patterns of meaning (Braun & Clarke, 2012). Analysis was done in multiple stages so that it could be looked at several times with slightly different framings, thus aligning to a critical realist ontology which suggests that deeper meaning can be understood through analysis of the broader mechanisms shaping observable behaviour and action. Following Saldaña (2016) a coding book was created and adapted during each round (see appendices 8.1.5). The process was as follows:

- **PHASE A:** Analysis of Cycle 1 data using themes from the literature review.
- **PHASE B:** Looking at data from cycles 1 through the *Trinity of Voice* model (see below and 2.2.2 for more detail on this model).
- **PHASE C:** Synthesis of all data to align to the emerging framework for design activism (5.3.3), the sociology of expertise approach (2.1.2 and 2.2.2), and the factors that influence participation (5.2).

Trinity of Voice model

One assumption I had leading into fieldwork was that the quality of knowledge used to make decisions regarding transitions would be improved through the incorporation of different types of knowledges. A paper from Jason Corburn (2007) reporting on the successful use of community knowledge alongside technoscientific expertise was one source of this assumption (see 2.2.2). During this early period, I also came across Susan Senecah's 'Trinity of Voice' (ToV) framework that looked at the granting of voice to the public in situations related to environmental justice (see also 2.2.2). I noted in my research diary at the time, that after 13 interviews it had become clear that lack of citizen voice is a key issue for the Hunter community, and that the legislative aspects of this lack of influence might be worth investigating. The ToV model offered an appropriate framework through which to analyse the research data.

Rigour in qualitative data analysis

As has been mentioned, there have been criticisms of the action research methodology as lacking in rigour (Greenwood, 2002; McTaggart, 1991). In many cases of qualitative research, including action research, causality must be inferred because there may be temporal distance between cause and action (Rubin, 2021). Research design therefore becomes an integral contributor to rigour in qualitative analysis. I have employed the following methods using Rubin's (ibid.) criteria to ensure rigour:

- **Triaging evidence to check my causal inferences.** I interviewed multiple people about the same activities (e.g., a workshop), and then sent transcripts of interviews to these people so that they could question my interpretations.
- **Interviewing detractors.** To offset my bias toward public participation, one person was interviewed who is unsupportive generally of public participation, and another who purposely avoided attending our workshops.
- **Drawing on existing literature**. As so much of the sustainability transitions literature I was initially drawing upon is from Europe, I checked Australian examples to test my claims. This led to my review of 49 Australian case studies of participation in environmental decision-making (Crofts, 2023).
- **Process tracing through document analysis.** When making inferences about NSW planning system process, I sourced information on government websites to check for evidence to support or refute my claims. As Rubin (2021) suggests, it is important to not just look for evidence that your claim is true, but that it might not be happening at all.

3.3 Methods

Throughout this research, methods have been adapted to suit the nature of the inquiry. An integrated literature review was applied before fieldwork. Methods for the fieldwork cycles (1 and 3) are shown below in **Table 4**, and include participant observation of workshop activities, 21 semi-structured interviews, and an analysis of correspondence with community organisers during the term preceding and following the project work. Cycle 2 was a literature review of materials related to the NSW planning system.

Table 4
Overview of methods for fieldwork (Cycle 1 and 3).

	CYCLE 1 **Why is public participation necessary for sustainability transitions and what factors influence its success?**	**CYCLE 3** **What factors influence participation in knowledge creation and how can designers support people to participate?**
PARTICIPANT OBSERVATION	15 hours of workshops (111 participants) 3 hours of facilitator meetings 40+ hours of planning and design of workshops	6 hours of a panel (8 participants) 5 hours of workshops (17 participants) 370+ hours of immersive planning work with Hunter Renewal for three days per week for 2.5 years
ONLINE SURVEY	1 online survey (134 respondents)	1 online survey (93 respondents)
SEMI-STRUCTURED INTERVIEWS	14 interviews (14 participants)	7 interviews (6 participants)

3.3.1 Integrative literature review

Integrative literature reviews draw from different theoretical traditions to create new perspectives in emerging fields (Snyder, 2019; Torraco, 2005). I chose an integrative approach because there is not yet sufficient material attending to rationales for public participation within sustainability transitions or design literature. This is also consistent with a critical realist approach, where existing literature is studied initially to create some potential applicable theories (O'Mahoney & Vincent, 2014). Several sources were used from Science and Technology Studies (STS) which addresses public participation within environmental issues more directly, for example, than does participatory design which has a focus on organisational matters. STS Scholars such as

Frank Fischer[53] were helpful in developing my understanding of the concept of local knowledge. Daniel Fiorino and Andy Stirling's work on rationales for participation[54] clarified that participation improves the quality of knowledge used to shape transition decisions. Several other scholars helped shape my understanding of the development of expertise and how that might relate to a socio-technical transition (e.g., Eyal, 2013; Dixon 2016; Hajer, 2005). The existing theory used was transferable to surface several theoretical mechanisms to understand the phenomena I was observing.

3.3.2 Participant observation

Through Hunter Renewal's invitation to be a part of the workshops (4.1 and 4.2), I was afforded privileged access to processes related to public participation in sustainability transitions as they occurred. While the workshops in Cycle 1 were initially planned to be held in person, the COVID pandemic necessitated a switch to online delivery. An amendment to my approved ethics application was sought to address this change (UTS HREC Ref. No. ETH21-6741).

Although the workshops themselves were aimed at gathering public views on the energy transition for reports aimed at the NSW Government, my key interest was in observing the process of participation in transition activities. I codesigned the workshops but did not facilitate them, a choice I made due to my status as an outsider, allowing me observe proceedings and the planning of the workshops. I was therefore able to establish a perspective on how the activities we designed supported or detracted from overall participant experience, as well as observing the experience of the organisers and facilitators. My observations were then sense checked by participants, facilitators, and organisers through the reflection sessions and semi-structured interviews conducted after the workshops. With permission from all participants, the online workshop sessions were recorded so I could conduct a deeper analysis of interactions that addressed the inquiry.

Observation in this study was linked to action; what I observed led to reflection and then iteration of processes for the workshops and changes in my own approach to design, all of which was aimed at assisting a grassroots group advocate for sustainable change. Alpa Shah (2017) describes participant observation in this activist sense as

[53] Fischer (2000; 2003).

[54] Fiorino (1990); Stirling (2005; 2008).

being about the production of knowledge within long-term engagements that enable us 'to challenge hegemonic conceptions of the world, challenge authority, and better act in the world' (p. 45). Through over 440 hours of participant observation over two and a half years I have sought to engage beyond distanced relationships to one where participants have become colleagues, and their struggle my struggle.

3.3.3 Online surveys

Online surveys were created for the projects in both fieldwork research cycles so people could contribute even if they did not have the time to be part of workshops. In both surveys people were asked to rate and comment on the ideas that were also being presented to people in the workshops. At the end of each survey, respondents were asked questions regarding their preferences for participation so that we could learn how to remove some of the barriers to their participation in subsequent engagements.

In the first cycle the survey questions were:

- How often are you involved with community activities? (rating given).
- What would encourage you to take part more often?
- What type of event do you prefer: workshops, public summits, interviews, surveys, other (please specify)?

For Cycle 3 we removed the engagement questions from the larger public survey and sent these questions only to the workshop participants. They were also encouraged to write in a short response for each question. The questions asked were:

- Did you feel heard and able to contribute? (yes, no, other please comment).
- Do you think the report reflects what we talked about? (yes, no, other please comment).

3.3.4 Recruitment for interviews

Recruitment for the interviews was done purposefully to serve the requirements of the research questions and therefore to explore the factors that influence how public participation proceeds in sustainability transitions. A focus on the mechanisms of influence means that the majority of those interviewed are organisers and facilitators of participatory events, whether for Hunter Renewal or other community-based organisations. Had I retained the first drafting of the second research question, which

sought to understand how to **increase** the capacity of people to participate (see 1.1), the ratio of participants to organisers may have been different.

Nevertheless, the people interviewed are still Hunter Valley residents and therefore community members.[55] Their intersecting roles as residents, workers, and organisers defines their subject position in perfect alignment to the needs of my research. In their positions as residents and workers, they will be just as affected by the transition as the general Hunter Valley public, but they are also unique subjects because they are helping steer this transition through their organising roles.[56] Speaking with them was therefore essential to understand more about the factors that influence participation in sustainability transitions.

A term used to describe this group of people might be "the usual suspects" because they appear to have capacity to effortlessly attend or to organise participatory events, as though effort is a measure of validity. "The usual suspects" is a pejorative term used by some (Local Government Association, 2016) to put the legitimacy of a group in question. These people are seen as unrepresentative of broader society because they are predisposed to participate (ibid.). It is also a term that represents the policing of public decision-making and what roles people are permitted to play in public life (Iveson, 2014). The public are supposed to be content to participate in democracy by voting, by being good workers, and compliant students (ibid.). By organising themselves to collectively address an issue, these people have disrupted the roles they are supposed to play. They are called the usual subjects as a way to comprehensively dismiss their legitimacy because they have the audacity to disrupt the status quo.

To speak of this group in more positive terms and reclaim their legitimacy as members of an affected public, due to their willingness to be involved in the workshops, the interviewed cohort could be considered as 'engaged citizens'[57] from a regional area of

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[55] This aligns to my non-essentialist definition of community, groupings of diverse people who live and work in the Hunter Valley region who have come together to approach a shared issue (see page 4).

[56] Iveson (2014) has noted this duality of subject position in reference to the membership of the resident action groups and unionists that were part of the Green Bans (section 2.2.5.1). He says that the groups involved in the Green Bans were a section of the general public who had been excluded from decision-making and were organising around the issue of inner-city development to reclaim their rights to participate.

[57] I use the term 'citizens' here with caution given that citizenship is a contested concept wielded with power to diminish the rights of some in society. Citizen here is used to imply engagement with policy and planning and should not be considered as a term related to immigration status.

Australia. This research can therefore offer some generalisability to other regional areas undergoing an energy transition which involve an informed and involved cohort.

The people interviewed are employed in diverse industries including manufacturing, public service, education, agriculture, health, and retail. Some live in the more populous centres like Newcastle or Lake Macquarie, and others live in regional towns or on remote farms near the coal mines. There was a mix of ages and genders. People were representative generally of the cultural backgrounds of Hunter Valley residents.[58] Some interviewees are members of other grassroots collectives in the Hunter Valley which also allowed me to discuss how their organisations support public participation at the community level. The second round of interviews also involved academic subject-matter experts who are also residents of the Hunter Valley.

People were approached by Hunter Renewal on my behalf to ask if they would be amenable to an interview. This request was mentioned during the workshops, focus groups, or panels so that it was not a surprise when HR asked them to be interviewed. One person was recruited as they had chosen not attended a workshop so that I could develop understanding of the factors that support or inhibit participation for them and then infer how organisers might attract people like them in the future.

3.3.5 Semi-structured interviews

Following the publication of each report, I interviewed participants, facilitators, and organisers using semi-structured interviews. In total I conducted 21 interviews with 18 individuals. Semi-structured interviews were suitable for this study for several reasons. First, in the context of the purposeful intent of action research, the interview subject matter allowed participants to discuss what was of most importance to them, and to direct this conversation toward suggestions for potential future action (Brinkman, 2014). Moreover, unlike an unstructured interview, having some structure allowed me as the interviewer to direct conversation toward topics that were necessary to answer my research questions. A back and forth between topics chosen by me and the interview participants made collective creation of knowledge possible (Brinkmann, 2014; Shah, 2017) — a key philosophy for this research.

[58] In the 2021 Census, around 43 per cent of people in the Census respectively stated “Australian” or “English” as their ancestry. “Scottish” or “Irish” was listed as around 10 per cent each, and Australian Aboriginal” 7.4 per cent (ABS, 2021a). Nationally 29.9 per cent stated “Australian” and 33 per cent “English” as a comparison.

Interviewing participants, facilitators, and organisers after the workshops meant I had existing rapport and demonstrated credibility with them which was essential for me as an outsider to this community. This familiarity allowed me to establish a better understanding of the context and people's relationship to the Hunter and to the topic of transition. It also enabled the interview to proceed more as an informal conversation which assisted in negotiating and clarifying the interpretation of events that were discussed (Muganga, 2015). As has been mentioned, I made sure to interview detractors and multiple people about the same event to reduce the likelihood that I was valorising a single interpretation.

The organising principles for the interviews were the claims, concerns, and issues that people have regarding their participation in sustainability transitions, how they support the participation of others, as well as their reflections on my work as a designer in these process (where they felt able to comment on this – see 5.3). These organising principles formed the discussion guides for the interviews. These can be found in the appendices (8.1.1; 8.1.2; 8.1.3).

Following each interview, I sent participants the interview transcript to allow them to check over what was said and determine whether it was an accurate record of our conversation. This aimed at giving participants more scope to set the way that they were represented, thereby countering common power imbalances in qualitative research between the researcher and researched (Ross, 2017). Although no participant requested changes to the transcripts, giving them the chance to review them allowed each participant to add their own interpretations of the data. For example, one of the participant's replied:

> *On reading it, I was struck that I had said that the reason people don't participate is because they are too stressed, and that they're quite comfortable. I think both things are true, but it's an interesting observation—how these two things relate to each other and need to be kind of flipped into the opposite dichotomy!*
> [Workshop organiser]

3.3.5 Reflective diary

Reflecting on practice enables a practitioner to highlight and then target areas of their own practice for improvement. In this study, I have kept a reflective diary to allow for this reflection to occur. At several junctures in both cycles of research I have used these individual reflections as a basis for collective reflection with organisers of the

workshops. The data from my reflective diary and from interviews with my workshop organising colleagues have provided the evidence for findings regarding the roles for designers in sustainability transitions (see section 5.3).

3.4 Limitations of the study

There are several limitations to this study which are discussed here.

COVID pandemic and public intimacy

As with most people conducting research from 2021, the COVID pandemic affected the approach to fieldwork. Prior to the pandemic, Hunter Renewal had hosted their events in person. In these settings, hospitality was a methodology: a means to give back to the communities they sought to engage and draw knowledge from. With COVID, there was a need to transform this 'public intimacy' to online platforms.[59] Although there are many limitations for conducting research online, especially when the subject matter is so attached to place, hosting the workshops digitally enabled an intimate setting nonetheless, as the 'haptic nourishment' (Simpson, 2020) of in-person interactions were replaced with a peek into domestic life. Once I interviewed the people who had hosted, facilitated, or attended the workshops, I felt more connected to them and consider this relational quality improved the ease of follow up interviews.

Ingroup favouritism in recruitment

Recruitment for the interviews was also guided by Hunter Renewal and their partners. Although this afforded me legitimacy and access to community members through the mediation of a trusted organisation, it also meant my recruitment may have suffered from a form of ingroup favouritism (Turner Brown, & Tajfel, 1979). Detractors of the overall aims of transition may have already been excluded by these organisations. Consideration of the effects of ingroup bias and a application of critical realist thinking led me to develop a more rigorous methodology (see 3.2.3.2) that included triaging evidence to check validity of interview subject claims. As a method this somewhat alleviated problems inherent with interview bias yet not with the construction of the workshop cohort. This is something to consider with later community-based work in the transition, especially because detractors of transitions have been identified as a key barrier to change (Colvin, 2020).

[59] This phrase is from Soysal (2010). See also the section **5**.2.1.3 Settings staged for generous exchange.

Government-hosted participation

One easily identifiable result of ingroup bias in recruitment is that all but two interview participants were supporters of community-hosted public participation. Attending to my positive bias toward participation was therefore challenging. Moreover, because I did not attend many events led by authorities (see 8.4.4), my interpretations of the quality of government-hosted participation have been mediated through what interview participants have said of these events. As I did not interview anyone in the public service, I was unable to trace how the outputs of our projects were used in policy making beyond what I was able to hear from the community organisers themselves. For insights into policy making, I relied on the literature.

Small interview numbers

I acted as a volunteer designer for Hunter Renewal (HR) during the fieldwork period of this PhD. Over this time, I estimated I worked some 370 hours for them, most likely more. The nature of the workload meant I had less time for interviews; the trade-off being a greater level of engagement with Hunter Renewal and the development of reciprocal trust. I regret, however, that there was insufficient time to interview, for example, more detractors of both transitions and of public participation. Their involvement may have provided greater insight into some of the structural barriers to acceptance of public participation in the creation of policy related to transitions.

Unfamiliar methods and artificial results

The methods used in design-led activities are laden with power, privileging those with more experience and comfort in their use (Thinyane et al., 2020). As the designer of the workshop activities, I may have failed to properly interrogate the power dynamics at play. As the methods would have been, in general, unfamiliar to participants, a degree of artificiality may have been introduced to the process (Gehrke, 2014).

Scope of influence

The scope of study was bound by the aims of Hunter Renewal. Although critical of capitalist structures, their work is focused on pragmatic actions that are possible within the boundaries of the existing system. While my role as an outsider could have been an anti-capitalist provocateur, such a posture would have done nothing to extend my invitation to the work nor necessarily assisted with the work itself.

4 – The workshops

This chapter gives an overview of the workshops that were the foundation to this research. They afforded me first-hand experience of public participation in a region undergoing a transition. Formal ethics was granted for observation of these workshops, and to collect data through working as a volunteer designer for a grassroots network in the Hunter Valley of NSW from late-2021 until mid-2023 (HREC Ref. No. ETH21-6741). The research period focused on two projects: the first occurring in 2021 in response to the NSW Government's proposal for a Royalties for Rejuvenation Fund and Expert Panel (NSW Government, 2021c). This first project is referred to as the Future-proofing work. The second project involved public and expert engagement held in 2022 and was related to coal mine rehabilitation. This is known as the Blueprint work. Both the Future-proofing and Blueprint labels come from the titles of the reports created during each project.

Following the launch of the reports, I interviewed people who were either organisers, facilitators, or participants in the workshops. These people represent an engaged group of citizens who are affected by the transition, and who have capacity to be more involved in shaping their future. They are therefore considered as community members through their overlapping values, practices, and identities (Gehrke, 2014). This aligns to my non-essentialist definition of community, as a group that comes together to approach a shared issue or groups of issues of concern (see the terminology section in the Preface). Through exploration of their diverse experiences using qualitative research methods, I learned valuable lessons that can help guide future participatory activities for similar affected and implicated people. This is why they were recruited.

To assist with clarity, quotes are labelled using the role that people played during the research: facilitator, organiser, participant. Where it makes sense to do so I clarify which of the two projects I am speaking about, either Future-proofing or the Blueprint. The data comes from 21 semi-structured interviews, two online surveys, and around 440 hours of participant observation from the planning, delivery, and critique of public and academic workshops.

4.1 Future-proofing the Hunter workshops

In March 2021, I asked Danielle Coleman (Dan) from Hunter Renewal if there might be room for me as a designer within the activities that Hunter Renewal was engaged in. Dan replied:

> *Goodness yes, there's room for you in here with us. I would love to have some help with working out how to be more visible when working with a tiny budget and a tiny crew of people*, [Dan, Hunter Renewal]

A few months later, I began working alongside Hunter Renewal (HR) and the Hunter Jobs Alliance (HJA) in the capacity of volunteer designer for a series of upcoming workshops with community. The Hunter Jobs Alliance are a coalition of environmental groups and unions formed in 2020 around a shared concern for transitions in the Hunter Valley. The key organisers from both HR and HJA have long-term relationships borne from common struggle in previous environmental and labour-justice issues, mostly in the Hunter Valley. In this way, this coalition aligns to the three forms of solidarity identified by Tattersall (2010; 2019): issue-based solidarity, relationship-based solidarity; and place-based solidarity.

I expressed to Dan that I would be *of service*[60] to HR and HJA by providing my skills in designing workshops, synthesising results, and in the graphic design of reports. In exchange, I asked for permission to use their work as the basis for my PhD and to approach community members through them for interviews. This reciprocity was welcomed by Dan who said that too often other researchers unthinkingly demand free labour before they offer their help. Groups such as HR are resource stretched, and any request for things which might seem small (such as an interview) take up time that could be better spent on the advocacy work that is their core function.

The Future-proofing workshops followed an announcement in May 2021 from the NSW Government that a portion of the state's overall mining royalties would be directed toward funding economic diversification in coal mining communities (Barilaro & Perrottet, 2021). Called the Royalties for Rejuvenation Fund (R4R), the legislation it covered, the government announced, would include the creation of a Hunter Expert Panel to advise on the spending of these funds. Hunter Renewal and Hunter Jobs Alliance (henceforth 'the organisers') conceived the workshops to share

[60] I am thankful to Shana Agid for alerting me to the posture of being *of service* to a community group.

information about the fund with their local community and to gather opinion from them on how the Fund and the Expert Panel could best serve coal communities.

Strategising began after the NSW Government announcement, and this was followed shortly after by workshop design. The workshops were delivered between August and October 2021. Data analysis and writing began in October in parallel to the design of the report. The report was launched in late November 2021 along with a media campaign. Research interviews were conducted in January and February of 2022 and the organisers took the report to NSW Parliament in March that year with a delegation of Hunter residents.

The workshops

The invitations to the workshops included a short video explaining the issues and the need for the workshops (Hunter Renewal, 2021). This video provided an alternative to written communication and is a common method that Hunter Renewal uses to broaden the reach of their messaging. See 5.2.1.2 for a discussion about invitation.

There were five workshops in total, held online, but targeting the local government areas most affected by coal mining and power generation in the Hunter Valley: Cessnock, Singleton, Muswellbrook, Maitland, and Lake Macquarie. Overall, 111 people attended (20-30 per workshop). Each workshop was 90 minutes in duration with various activities across this time aimed at building relationships and gathering information. The workshops were complimented by an online survey which had 134 respondents and was aimed at allowing people to give more detailed responses to the ideas that they may not have had time for during the workshops, and for people to respond who had not attended. The full agenda is in the appendices (8.2.2).

A pre-recorded video was shown at the beginning of the workshop to set the scene in a positive way of the changes afoot in the Hunter Valley and the associated opportunities and risks. Following this, a short activity asked participants in small groups (in separate “Zoom rooms”) what concerns or excites them about the future. Warrick Jordan from the HJA then gave a brief talk on why the organisers consider the Hunter Valley needs a dedicated transition authority to coordinate activities related to the transition.

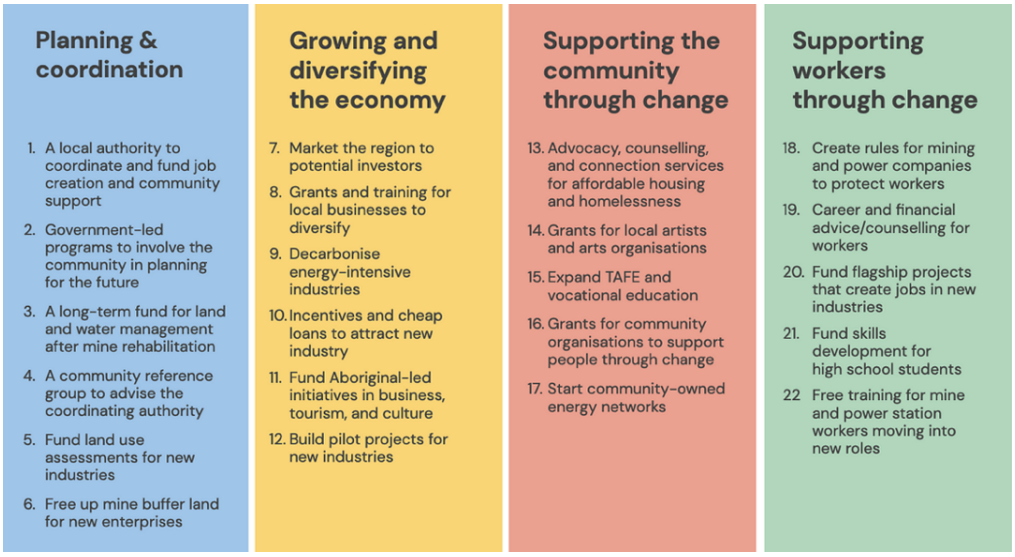
The main activity in the workshops was a type of ‘card sorting’ where several ideas for transition were presented to the group, who were then invited to rate these ideas while

discussing their reasons. The method was a type of 'speak aloud' protocol I had learned through professional work as a user experience designer. In a physical setting I would have made these cards to be like playing cards.

As a working group we collected ideas from around 30 reports from government (local, state, and federal), as well as those from industry here and internationally which were relevant to a coal transition. From this original set I collated and then synthesised over 150 ideas and then categorised them using parameters that had been identified by Hunter Jobs Alliance in a report they had recently published (2021b). The organisers then removed duplicates to select a set most suited to the Hunter. Although I did the first round of synthesis, it was important that the project team did the final selection because as a relative outsider I was unaware of the social, historical, and contextual fundamentals that would shape the effectiveness of these ideas in the Hunter Valley. See 5.2.2.1 for a discussion around the benefits and challenges of predetermining ideas.

The final set of 22 ideas were categorised into four broad areas for change: planning and coordination, diversifying business and industry, supporting the community through change, and supporting workers through change (**Diagram 2**).

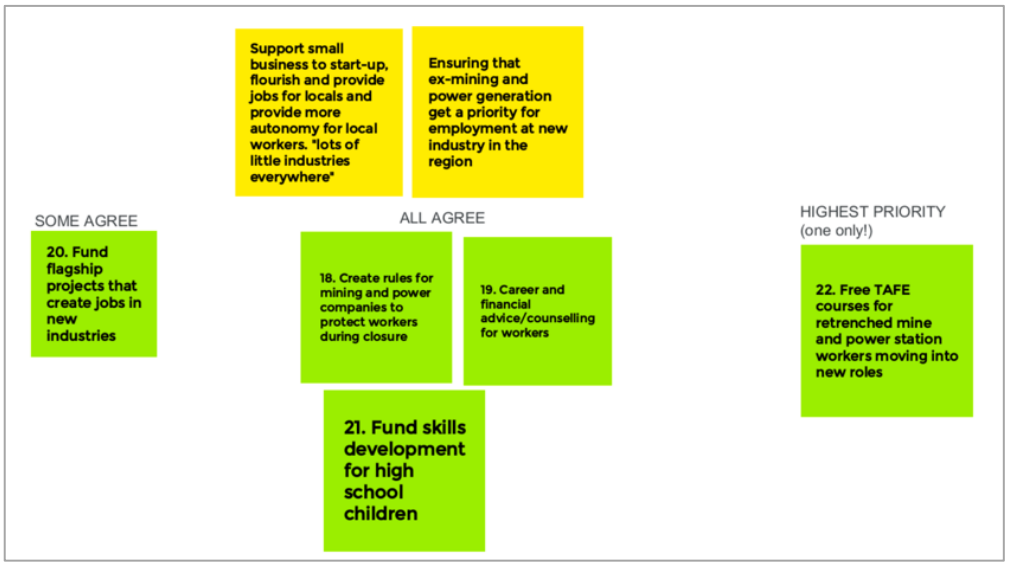
Diagram 2
The ideas for the Future-proofing workshops organised by category.



As the workshops were held online, I designed the main activity using Google Jamboard. Anything more complex would mean too steep a learning curve for the novice capacities of the facilitators. I chose this tool after researching other options,

which was of assistance to the organising team as online facilitation was not something they had much experience in. I was thus performing the retrieval aspect of design expertise (Cross, 2004. See also section 2.1.2). A page showing how the negotiations about the priorities concluded is shown below in **Diagram 3**.

Diagram 3
Example of the cards used in the Future-proofing workshops. Green cards are the original ideas and have been sorted into the categories of 'some agree,' 'all agree,' and 'highest priority.' The yellow cards are two new ideas that this group collaboratively developed.



Unfortunately, while in practice this Jamboard tool was relatively simple for facilitators to use, ahead of the workshops themselves, discussions around the technical aspects of the workshops dominated the organising phase. Concentrating on technical concerns meant there was insufficient focus on designing the good flow of events, perhaps resulting in a less than comfortable environment for some, including facilitators. There were two ways in which we reduced this discomfort. In not playing a lead facilitator role, I was better able to concentrate on observation of the process itself, and thereby able to give individual feedback to facilitators and adjust how the subsequent workshops proceeded. We also instigated a 'buddy system' for novice facilitators where they had a more experienced facilitator in their room who were able to offer support and to notice when energy was down and respond.

The prioritisation exercise was a two-step process so that people could first decide on which ideas they all agreed were important to implement in the next two years, then there was a discussion about the highest priority. The discussion allowed people to state their preferences, gain understanding, and gave us the opportunity to gather rich

information on why an idea would be successful or not in the Hunter. The idea cards in this sense acted as boundary objects[61] which enabled the development of a common understanding amongst diverse individuals. Discussion in the workshops allowed people to move into a generative space within the category topic of their group. In the online survey, ideas were presented as a full list so that people could rate ideas from across all categories. People were also afforded the opportunity to raise any other ideas they had which could fulfil the aims of transition we were speaking about. We also allowed for open comments on each idea in the survey so that we could add nuance to the ideas. For example, people remarked that a lack of local transport infrastructure would influence the level to which people could access training in new industries and therefore the speed and success of diversifying local industry. This nuance was added to the report.

After each workshop, the facilitators completed an online survey to capture their reactions and any key ideas or comments from the session they thought should be highlighted (see appendices for survey questions). The use of online survey software significantly sped up data collation and ensured that each facilitator was able to raise what was most important to them. This also helped us to adjust the workshops as we proceeded within Cycle 1.

As the dates of the launch of the report, the commencement of debate on the R4R legislation, and meetings with politicians were set, we only had a few weeks from the conclusion of the workshops in which to analyse and synthesise data, write up the findings, and design and print the report.

Data analysis

Data came from watching and transcribing workshop video recordings as well as the survey responses. Data were thematically categorised in a spreadsheet to create some coherence in some 1,000 separate comments. Through this I created summaries that were given to the organisers who were leading the writing process. This back-and-forth helped speed up the process. From these initial summaries, more detailed summaries were written up by researchers who volunteer for Hunter Renewal and were expanded upon by organisers to create the first draft of the report's text.

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[61] Star 2016 [1988].

Throughout the data analysis and writing process I was creating draft designs for page layouts so that the organisers could craft what they were writing to fit the page. This type of creative exchange was something I was familiar with from my professional experience working in publication design for newspapers such as the *Sydney Morning Herald*. The production of design and writing in this process is much more of a partnership where each discipline can tailor their work to fit the opportunities or restrictions of the other. The final report is on the Hunter Renewal website. See section 5.3.3.E for more on the design of the report.

Report launch

The report was launched at a local club in the town of Singleton in the Upper Hunter from 6.00pm so that as many people as possible could attend after their workday. The launch was a chance to present the findings back to the local community and was set in a relatively conventional format with a table of panellists in front of a seated audience of around 100 people. On the panel was Steve Murphy (National Secretary of the AMWU), Sue Gilroy (President of the Singleton Business Chamber), Steve O'Brien (TAFE staff member), Ingrid Schraener (Economist), and Kathy Chapman (nurse/union delegate). [62] Each panellist presented briefly on their reactions to the report's findings, and then the audience asked questions. The audience included coal workers, farmers, and other local residents. Food was served after the panel, and each attendee was given a printed report. Media was in attendance and the *Newcastle Herald* that day published a front page and centrespread story which included interviews with the organisers (Newcastle Herald, 2021; Phelan, 2021).

Reflection

After each workshop we reflected as an organising group both on how to alter our methods to gain better understanding, but also how to improve our participatory practices overall. Our group reflection therefore helped form an understanding of how to act in the future to support public participation. During the debriefs immediately after the workshops people also raised ideas for new engagement opportunities.

I also drew "sketchnotes" of what was said during each Future-proofing workshop (**Diagram 4**). Such visual records of events have become common in the service design

[62] AMWU is the Australian Manufacturing Workers' Union; TAFE is a NSW government-run vocational body and stands for Technical and Further Education.

field over the past decade. In my professional practice I commonly sketchnote on large paper or on whiteboards during collaborative events to allow people to see that their voices are being heard. The sketchnotes were sent to participants as a record of their participation. These were used in articles and presentations about the work (by me and by others) to articulate the collaborative and informal nature of the participation.

Diagram 4
Sketchnote from the Cessnock workshop. See versions of all on Miro (Crofts, 2024).

What happened next?

In March of 2022, the Legislative Assembly of NSW Parliament was debating the *Mining and Petroleum Legislation Amendment Bill 2022*, which contained the Royalties for Rejuvenation Fund (R4R) and Expert Panel legislation. The fund allocates a share of AU$25 million in coal mining royalties to each of four major coal mining areas in the state of NSW. This includes the Hunter Valley. Earlier that week, a delegation of Hunter people had spent two days in Parliament talking about this Bill and suggesting amendments. The delegation included representatives from Hunter Renewal, Hunter Jobs Alliance, Lock the Gate, local business chambers, as well as two workers from industry, and a young farmer. They met with three government ministers, two parliamentary secretaries, the opposition leader and relevant shadow ministers

(Labor), including those in Treasury, Planning, Environment, Climate Change and Regional Development, as well as the Hunter MPs, the entire Shooters Fishers and Farmers team, three Independents, and the Greens.

In each of these meetings, the delegation represented the views of Hunter people on the R4R legislation as published in the *Future-proofing the Hunter* report we had put together. As there are no spaces reserved for the public to use in the NSW Parliament building, organisers did not have a place to take these meetings or to debrief. This emphasises the way that community voice is restricted in government settings.

The key demands of the delegation were to address gaps in the Bill including ministerial control and discretion, lack of transparency, public interest considerations, and to secure greater community involvement. While the Labor party's amendments were voted down, all amendments proposed by Independent MPs Alex Greenwich and Greg Piper were accepted. Alex Greenwich said during debate:

> *I believe that the fund can be improved with some minor changes to increase transparency, accountability and community involvement in its operation. I foreshadow that at a later stage I will move amendments to ensure that the public interest and principles of limiting the impacts on the environment are considered in funding decisions; there is a public register of projects funded and advice given from expert panels; expert panels can make recommendations on their own accord; and there is scope to establish consultation requirements for expert panels.* (NSW Parliament, 2022, p. 8910)

Despite these small victories, when the Royalties for Rejuvenation Fund was legislated in 2022, it was crafted in a way that restricts access to how decisions are made. Of note is the recruitment scope of the Hunter Expert Panel, a group appointed by the Minister for Regional NSW to advise them on matters related to allocation of funding. The panel is a group of people who, under the *Mining Act Regulation 2022*, can be appointed only if they have either 'knowledge of the economic or commercial activity of the affected coal mining region to which the Expert Panel relates' or the person 'represents the interests of a group **likely to be affected** by a move away from coal mining' (NSW Government, 2022c, my emphasis). The delegation hoped that this last attribute would be changed to read 'people likely to **benefit** from a move away from coal mining' but this amendment was rejected by the then coalition government. It means that membership of the Panel has been opened to mining interests who will be

affected but not benefit from a move away from coal mining.[63] There are currently no representatives from community organisations which means this panel fails to extend participation to all stakeholders 'likely to be affected by a move away from coal mining' as the legislation has specified. There are no means for community organisations to have the interests of those they represent heard in this forum, and it is therefore likely that it is only the interests of the invited that will be transformed into policy through negotiations within this closed group (Laird, 1993). The makeup of the panel (as it was in 2024) is at risk of ignoring the impacts of the transition on the environment and communities. As Hunter Jobs Alliance said in a submission to the NSW Government in 2024:

> *We consider that decisions about how best to allocate funding should be made by a body reflecting the wishes of the broader Hunter community, including those representing business, workers, social justice and environmental concerns. The Hunter Jobs Alliance believes the current makeup of the Hunter Expert panel is heavily biased towards private, corporate, and mining interests and there is inadequate representation from a worker, environment & community perspective.* (Hunter Jobs Alliance, 2024)

Summaries of the Panel meetings from 2023 to 2024 have included scant detail on discussions: none are over two pages long (NSW Government, 2023b). This lack of transparency is at odds with how the legislation was drafted and is demonstrable of the impenetrable expert settings of the Hunter transition. The main email address for the panel has also been removed from the website. Requests for more information about the panel meetings have been put through by Lock the Gate but have thus far returned only highly redacted material.

[63] The current membership consists of two people who directly represent interests of coal mining companies (those *likely to be affected*), the NSW Minerals Council, and the Upper Hunter Mining Dialogue. Other members come from the Hunter Valley Wine & Tourism Association; the NSW Indigenous Chamber of Commerce; HunterNet (an advocacy network representing defence, industrial, energy, and agricultural interests); the Hunter Joint Organisation (the grouping of local councils); and the Institute for Regional Futures at the University of Newcastle (Nichols, 2022).

4.2 Community Restoration Blueprint workshops

The Blueprint series of workshops was conceived in mid 2022 by myself and Dan from Hunter Renewal to engage communities in post-mining land use planning (PMLU). The foundations were HR's earlier work including the *Hunter Renewal Roadmap* (see appendices 8.4.3) and the earlier Future-proofing workshops with HJA. The Blueprint project sought again to bring the local community's voice to the fore, acknowledging that since HR's launch in 2017 the local community have consistently expressed their concern that the Valley will be left economically and environmentally poorer without coordinated and long-term planning. Analysis of my research data and an introduction of a critical realist framing also led to me seeing that there were opportunities to explore knowledge coproduction beyond the community-focused activities we had done in the Future-proofing workshops.

Dan described the genesis of this work in a planning meeting in August 2022. She felt that if the local community was to wait for the government to propose a solution, that it might not be amendable to them, and it would be difficult to change it post hoc. It would be better, she thought, that the local community shaped the initial plan and then the government would have to use this as the basis for their work. As Dan said at the time:

> *What we tried to do with the first Roadmap was to pry open the conversation on transition in the Hunter. The vision of this Roadmap is still somewhat in train, but the issue of post-mining land use has yet to be represented at the level of general transition. Post-mining land use is a nightmare mess of disconnected plans and policies and, from experience, if we get the community endorsing a roadmap and a vision, then they will be accepted by politicians. Better than the politicians proposing something that's unsuitable and then us having to wrestle it back.*
> [Dan, Hunter Renewal]

With 17 coal mines scheduled to close in the Hunter Valley over the next two decades, there is a significant challenge ahead in restoration of land (Hunter Renewal, 2023). Concerns over the likelihood that the landscape would remain forever scarred, and the local community left to foot the bill for repair, led Lock the Gate (HR's parent organisation) to commission consultancy Ernst and Young (EY) to investigate the economic opportunities for PMLU. This work was aimed to demonstrate to decision-makers that there was a strong economic case for doing post-mine planning well.

When published in 2022, the EY report received positive commentary in the press about the compelling predictions for jobs and economic opportunities. [64] For example, one scenario would see the creation of 13,500 jobs and the addition of billions of dollars to the economy over the next 25 years (EY, 2022). While this vision was attractive, there was no pathway set by EY to achieving it. Dan often explained to people that the aim of this Blueprint project was to 'get the settings right so we can design a sustainable and prosperous future.' For her this meant a tailoring of all the legislative, regulatory, and planning frameworks as well as the policy responses, characterising this work as 'all the mundane and deeply unsexy foundations that you don't see but without them the whole thing will fall down. We need to be very clear that a vision is only possible if the government does X and the industry does Y.'

The whole project was aimed at learning alongside local community and local academics about their concerns and their preferences for how the Hunter should proceed with post-mining land use planning, and then translating those concerns into pragmatic recommendations and principles that could be actioned upon by government. These recommendations were grounded in the reality of a post-mining Hunter Valley and were intended to offset the many grand ideas that were being proposed (e.g., water parks, film sets, concert venues) which could distract people from acknowledging the mammoth scale of clean-up that needs to happen first. See 2.1.3.1 for an overview of one such vision.

Methodology

The methodology for the Blueprint project was inspired by a paper from Revez et al. (2020) who suggested that there would be benefits in combining knowledge of technical experts with local knowledges to develop a broader understanding of the social and technical implications of energy transitions. To do this, they hosted a Delphi Panel as well as conducting Participatory Action Research (PAR). They proposed that this was a suitable modification because using a conventional Delphi Panel would result in recommendations that were highly technical, benefitted the status quo, and tend toward stating the way that things *should be.* Including community members in the process through PAR would instead shift the conversation toward *what could be*.

[64] See for example, Murphy and Bernasconi (2022) and Kelly (2022).

A Delphi Panel is a style of iterative dialogue designed to alleviate uncertainty around a topic through a series of engagements with a panel of heterogeneous experts, primarily using written responses (Renn, 2006; Revez et al., 2020). In a conventional PAR project, the issue or problem that is the subject of investigation is defined by a team inclusive of those affected by the problem, and this team is subsequently highly involved in shaping the approach to research, conducting the research, and generating insights from that research (MacDonald, 2012; McTaggart, 1991; 1994).

The combined approach from Revez et al. (ibid.) was suitable for our project as a means to gather a complexity of perspectives on post-mining land use from a wide range of people as not one single person or group could hold all the information we needed to know. Alongside Dan and Dr Liam Phelan from the University of Newcastle, I used the Revez et al. model to develop an approach we called 'Delphi and Deliberation.'[65] In our variation we would purposely seek expert input and then give sufficient space for deliberation and the negotiation of meaning to take place by community. The deliberation about the ideas elevated the conversation beyond a yes/no binary of whether people supported the ideas or not. We first created a set of draft principles and recommendations ahead of an academic reference group review which took place asynchronously and synchronously. An edited set was then taken to community groups across the Valley through online focus groups and then a survey. Each focus group was based on a different topic so that people could choose to take part in the things that most interested them. This was a learning from the Future-proofing workshops where people were put into groups rather than being able to self-select.[66] The survey was designed to allow respondents to rank and comment on all principles and recommendations rather than only a single topic.

Each of the activities will now be explained in more detail. They afforded me the opportunity to observe public participation in transition processes as well as guide action toward transition itself as is common with an action research project.

Literature review

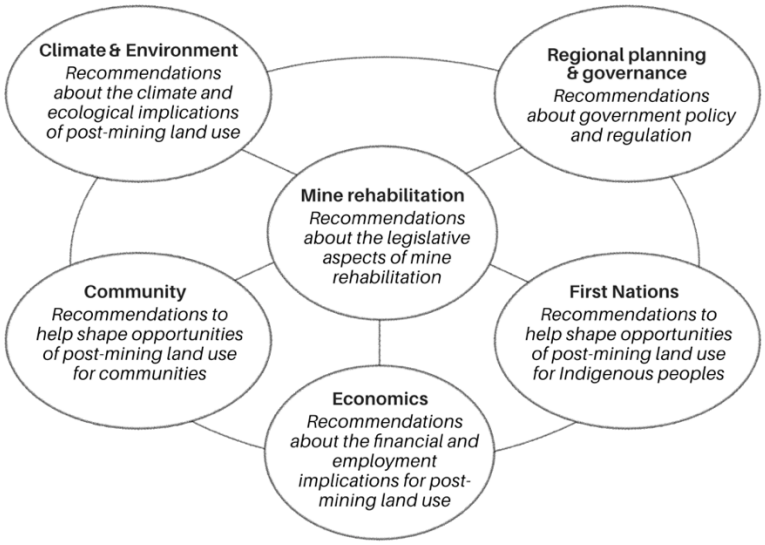
Once agreement was reached on the Delphi and Deliberation methodology, we set out to gather literature on post-mining land use, mine rehabilitation, and land use

[65] Revez et al. call their model Delphi and Democracy.

[66] See 5.2.2.2 for more about the impact of this selection process.

planning. Although post-mining land use is relatively understudied (Bainton & Holcombe, 2018), our investigation nevertheless yielded approximately 270 references. The sources are categorised in the appendices (8.3.1) and contain material from a range of topics such as relevant regulation and policies, development and zoning within a coal transitions space, how different legislative jurisdictions interact around land use, and the new federal government land restoration and biodiversity policies which had recently been announced.

Diagram 5
Draft principles for land restoration. Each of these formed topics for the focus groups.



Draft principles and recommendations were created from these reports using criteria from Arratia-Solar et al. (2022) as a foundation (**Diagram 5**). These criteria represent the attributes Arratia-Solar et al. say are needed to support successful post-mining land use. Their five criteria are: economic[67], technical (mine rehabilitation), environmental, social, and governance. To these we added First Nations, and this was warmly welcomed by First Nations representatives in dialogue with Dan from Hunter Renewal. The reasons behind the inclusion of the First Nations' principles was influenced by the nature of the project itself. Land use is contested in coal mining regions as a range of people compete for rights. Recognition of the rights of self-determination for First Nations peoples is a widely held principle of people in environmental movements in Australia, including within Hunter Renewal. As a

[67] We subsumed the economic category into others following the academic panel and ahead of the focus groups.

project focusing on land use planning, it was therefore essential for us as organisers to include principles that might help in moves toward self-determination for First Nations peoples. As one panellist noted with reference to the principal regarding First Nations peoples playing a greater role in mine restoration, “this principle is key, otherwise it’s just another day in the colony”.

Academic reference group survey and panel

The draft principles were sent in an online survey to eight academics from the University of Newcastle with expertise ranging from soil science to social psychology and environmental science. Following the survey, we held an online panel with four members of the panel. It was hosted by Professor Will Rifkin and observed by myself, Dan, and Dr Liam Phelan. In this forum, participants were able to negotiate meaning and provide recommendations based on their areas of expertise. The academic reference group helped us bridge the gap between expert reports and the public. See appendices for the discussion guide and agenda (8.3).

Public focus groups and survey

After the principles were edited based on the comments from the academic reference group, we invited 17 residents from the Upper Hunter to take part in focus groups about each of the topic groups. When invited, they were given a list of the topics and asked to choose which was of most interest to them. This differed from the Future-proofing workshops where people were not given a choice. All people had previously attended events put on by Hunter Renewal.

The focus groups went for one hour and there were two groups held for each topic, one during the day and one during the evening so that people could choose which time was most convenient. As with the Future-proofing workshops, the principles and recommended ideas were presented as a Google Jamboard so that people could easily refer to them. The core principle was read out by Dan and then the group was asked to rank the associated recommendations depending on how well they thought it could help achieve the principle. For example, in the mine rehabilitation workshops the following principle and recommendations were ranked:

> **Principle:** Appropriate financing is essential and will meet the challenges of landscape restoration and economic diversification.
>
> Recommendations:

A) Prioritise local businesses and partnerships in land use projects to retain wealth in the area and create regional resilience.

B) Mining royalties should be increased to fund the regional transition and industry diversification (return the wealth).

C) Rehabilitation bonds should be reviewed at five and two years before mine closure.

D) Bolster the Legacy Mines Program to meet the scale of potential risk related to abandoned mines.

The focus groups were supplemented with one-on-one interviews (conducted by Dan) with three people with life or professional experience in these topics. After the principles and recommendations were further edited, they were put out to a public survey online which had 94 respondents.

Report

After concluding the formal engagement series, we carefully reviewed the input to ensure that the principles and recommendations presented in the report accurately reflected the perspectives we had heard, and which might otherwise go unheard. Our goal was to ensure that these principles are rooted in local context, complementing the more technical nature of recommendations made by others though other channels.

Dan and I started discussing the design of the report quite early in the process, agreeing it should be designed to be read, must feel rigorous, and that fundamentally it should 'make rehab look important.' Rigour was obtained through the extensive research we did to put together the principles and recommendations. This was confirmed at the report launch where a local university research body commented that they were impressed with the comprehensiveness of our reference list,[68] and that it would make their own research significantly simpler now that we had provided it.

The use of terminology is inevitable in a report related to land use planning and the technical and scientific aspects of this endeavour, but we made a valiant attempt to write in simple, everyday language wherever possible and to point to more detail wherever it was needed. This was a translation exercise to help local people

[68] See section 5.2.2.3 for a discussion around how the legitimacy of academic experts was leveraged.

understand without being overwhelmed. In a discussion about this with the project team, Dan said:

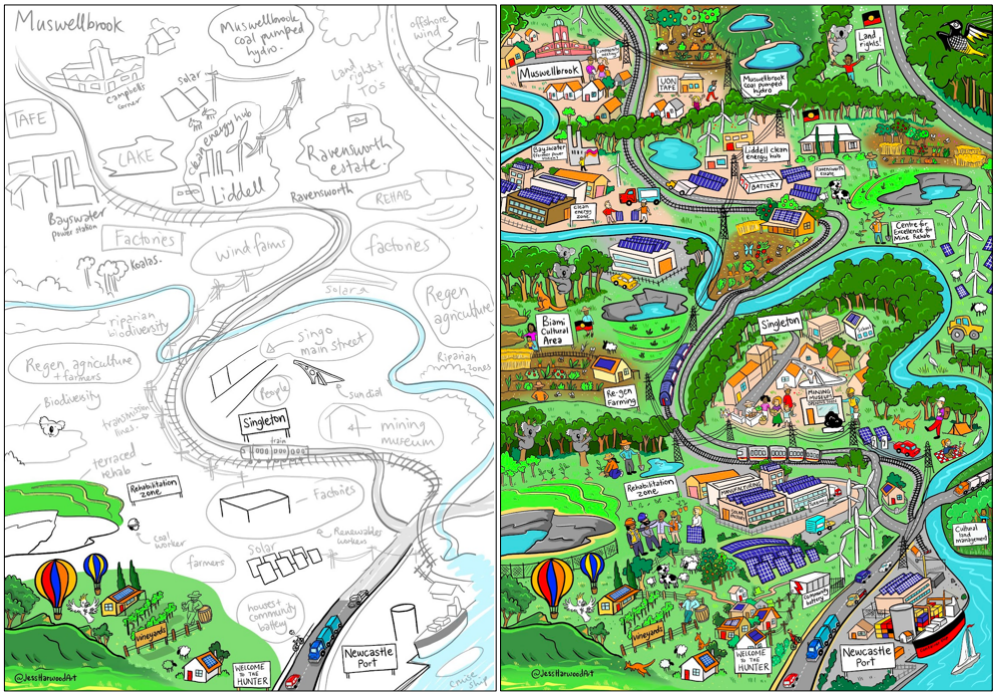
> *Our writing needs to show we know the detail but be simple enough for the public. We need to give people enough detail so they have just enough understanding to say, "Oh yeah, I get it," and then have the confidence that, because a whole lot of other experts have this covered, they don't have to think more about it as much.* [Dan, Hunter Renewal]

During discussions we acknowledged that experts are given time and resources to learn, digest, and comprehend these complex topics but the public was often not given equal opportunity (see 2.2.5). Designing this information to be read therefore involved editing for clarity to ensure that the end product was as simple as possible. This enabled the reader to be set up for success, and therefore able to spend time interrogating the ideas and not the syntax.

Clarity and comprehension were also on our minds when writing the questions for the public survey. We knew that the terminology would have to be understood as a standalone concept by survey respondents who could not ask for clarification. Clarity was required not just for accessibility, but also because the survey software we chose—free for budget reasons—did not allow concepts to be explained deeply. Our aim was that our explanations, although brief, would make sense to people and they wouldn't feel as though they were missing information or that information was being deliberately hidden from them.

The collaborative nature of knowledge production was extended to the creation of the vision illustration from artist Jess Harwood used in the report. The first draft can be seen below on the left (**Diagram 6**), where only a fragment is finished: the bottom left corner with the iconic Hunter Valley balloon rides and a vineyard. The remainder is roughly sketched out from some key concepts we had given Jess in the briefing process. The iterative process allowed Dan to ensure that the subject matters she needed to emphasise were included, even as the content of the report changed. The drawing was built up over time as an 'artefact of knowing' (Ewenstein & Whyte, 2007).

Diagram 6
Sketched (left) and finished drawings (right) by Jess Harwood from the *Blueprint* report.



Launch

As with the Future-proofing work the launch of the *Blueprint* report was held in a local club in the Upper Hunter Valley. The launch was highly attended and was set up in a similar manner with some of the expert reference panel speaking ahead of audience questions. Artefacts such as the report were available, and maps were pinned up to the walls so that people could look at them and use them as supports for conversations. We also printed an outlined version of the vision illustration so that children could colour it in while their parents or carers were focused on the talks.

Interviews

I conducted seven interviews in total following the Blueprint work. These were with two members of the academic panel, one key organiser (interviewed twice), and three community members who had not attended the workshops. One of the interviews had two key people from the Blueprint work in the one session so that I could ask them to reflect together on the work.

What this project achieved

Following the release of the report in April 2023, over 600 people signed up as supporters of its stated proposals. This data was used by Hunter Renewal during a delegation to NSW parliament in October 2023. Results are yet to be released.

In late March 2024, the report was used as evidence in a complaint to the Ad Standards Regulator on behalf of the Plains Clan of the Wonnarua People who are the traditional owners of the land on which most Hunter Valley mines are located (Ad Standards, 2024). The *Blueprint* report was used as evidence of the local Hunter community's knowledge about the 'destructive nature of mining activities' (ibid., p. 8). This demonstrates how design can play a role in legitimising the public's voice (see section 5.3.3.E).

Hunter Renewal is continuing to use the Blueprint work to make recommendations to NSW government that they should initiate a public inquiry into mine rehabilitation. The advocacy work thus far regarding post-mining land use (PMLU) seems to have also registered with government, as evidenced by the announcement in May 2024 that they would hold a parliamentary inquiry into PMLU. Whether this inquiry is as transparent as a public inquiry might be is yet to be seen. Nevertheless, PMLU is now on the public agenda, as confirmed by documents that Hunter Renewal has gained access to in late 2023 under the NSW laws pertaining to freedom of information. Without the work we did with the *Blueprint*, the Hunter community's concerns over PMLU may not have been made so visible and pressing to government.

There have also been two university student projects set using the *Blueprint* as part of the brief. Master of Architecture students at the University of Newcastle were tasked with imagining what BHP's Mount Arthur coal mine could look like following rehabilitation. The *Blueprint* was used as technical foundation for their projects. Students at the University of NSW were asked to use the *Blueprint* for a competition based on the UN Sustainable Development Goals to which I was invited to be a judge.

5 – Discussion

It is undeniable we need to transition away from the use of fossil fuels, and quickly. Significant and rapid decarbonisation of our energy systems is required to limit global heating below a 2°C average (IPCC, 2023). This means Australia's coal-fired power stations must be closed at the latest by 2050 (Climate Analytics, 2019; Sheldon et al., 2018), and our coal mines shuttered so that our carbon emissions are not exported overseas. If governed poorly, such large transformations of energy systems will disrupt communities and put many livelihoods at risk.

As the transition will affect large numbers of people across entire regions (Carr & Larkin, 2024), overcoming any political barriers to change appear to be only surmountable with a high degree of public participation (Carr, 2023; Colvin & Przybyszewski, 2022; Edwards et al., 2022; Johnstone & Hielscher, 2017; Olson-Hazboun, 2018; Weller, 2019). Yet, as was said by the NSW independent MP Alex Greenwich during a recent parliamentary inquiry into the future of energy production, 'sadly, too often in Australian politics when it comes to energy policy, communities and impacts on those communities are being left out' (Greenwich, 2022).

Through this work I have been afforded the opportunity to explore how public participation in sustainability transitions can be more generously supported. The projects I have worked on with Hunter Renewal have sought to present a more ambitious role for communities in shaping policy surrounding sustainability transitions, and to present this level of participation to the government as achievable and necessary. This chapter explores how this has been achieved using my three research questions to draw on the literature and extend interpretation through excerpts from fieldwork. My research questions form the core structure of this chapter. They are:

- Why is public participation necessary for sustainability transitions?
- What factors influence how public participation proceeds in sustainability transitions?
- What roles might designers play in supporting public participation in sustainability transitions?

5.1 Why is public participation necessary for sustainability transitions?

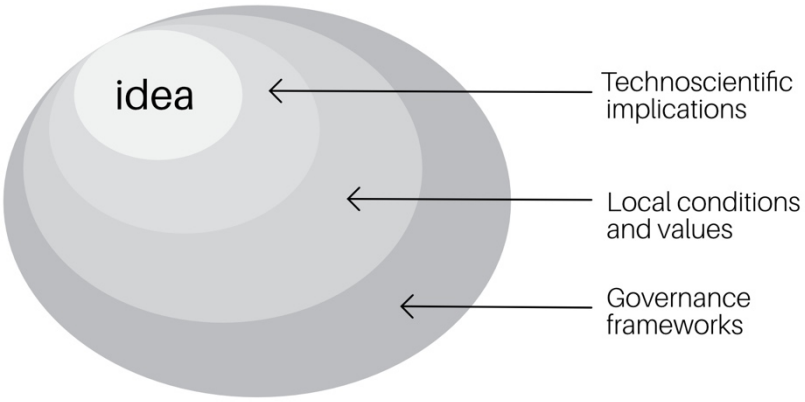
Commonly applied rationales for public participation were introduced in the literature review based on Daniel Fiorino's work (1990; 1997). Firstly, that public involvement leads to increased perception of decisions as legitimate. Secondly, the normative view that people have the right to play a role in shaping their own lives. Lastly, that the public's involvement will lead to better decisions. This is because the knowledge required to make decisions that affect a whole community require a broad understanding of local conditions, governance frameworks, technoscientific implications, and how solutions might be accepted locally (Chilvers & Longhurst, 2016; Fischer, 2000; Hayward, 1995; Hendriks, 2009; Johnstone & Hielscher, 2017; Lawhon & Murphy, 2012; Shove & Walker, 2007). No single entity can hold all this knowledge, which means the quality of decisions will be compromised should the knowledge of one group be preferenced over others. This is a critical realist view of expertise which sees that local knowledge adds to the evidence base for transitions as a compliment—not a replacement—to technoscientific and other expert knowledges.

My research has confirmed this substantive rationale: that public participation is necessary for sustainability transitions because it makes visible the concerns, values, knowledge, and ambitions of the local community, and therefore broadens the knowledge available to government of what is possible, what will be acceptable, and what will not be acceptable for a transition. Through the addition of contextually relevant detail and alternative perspectives on transition issues, public participation surfaces risks and opportunities that might not otherwise have been visible.

Through working alongside a community group over almost three years, I have seen that revealing and championing local knowledges through public participation means the local community may be seen as valid contributors alongside scientific and technical experts in planning and decision-making within sustainability transitions. As can be seen in **Illustration 5** below, their involvement thickens the evidence base, or the staging for transition decisions (Puig de la Bellacasa, 2017). As each knowledge group is drawn upon in reference to the original idea, the contextual applicability and potential for success—technically and socially—is broadened. All these contributions help to add weight to the original idea, making sure that the evidence base on which transition decisions will be made is as rich, diverse, and as contextually appropriate as

possible. A call for public participation is therefore not about the public making the decisions, but about broadening the knowledge base on which others can make decisions more effectively, equitably, and sustainably.

Illustration 5
Thickening the staging for transition decisions.



Evidence of the value of including local people came in the workshops, where community added contextual nuance to the ideas presented to them along with new ideas we had not considered. For example, people accept the idea that new, sustainable industries are necessary to replace fossil fuel production, but community want these industries to be built upon businesses that are owned and operated by local people so that profits are retained in the area. People support the idea of training for retrenched coal workers, but also think that everyone in the region should be given equal opportunity to raise their skills, not only those who have already benefitted economically from the coal mining boom. Community also spoke to the situated historical knowledge they hold, giving us an opportunity to learn from them about previous challenges when discussing transition ideas.

There is more to the involvement of community members beyond surfacing knowledge of local context, however, because people attribute values to ecosystems (Hayward, 1995). Such place-attachment means that community interpret transition decisions differently to technoscientific or policy experts because they view risks differently. For example, an idea has been raised to use the mine voids as rubbish dumps (Muswellbrook Council, 2014). During the Blueprint focus groups, people raised much concern over this idea, because they felt it was highly likely that Sydney rubbish would easily make its way ‘up the rail line’ to the Hunter and be incredibly damaging environmentally. That these people were concerned about rubbish being

dumped in an already toxic mine void shows that they see the land, even polluted land, in a different way to decision-makers. This is land to be rehabilitated, not further damaged. Government, on the other hand, see this land through an economic lense. Differences in these value framings will lead to problems when decisions are made.

The workshops revealed a level of understanding in the Hunter community across a range of technical and environmental concerns. For example, in the Blueprint focus groups people raised their concerns over environmental pollution, the depths of mine voids and effects of acidic water in them, rehabilitation methods, opportunities for the use of existing mine infrastructure, the true costs of coal mine rehabilitation, market prices for coal mine land, experiences from other coal mining regions, experiences of community consultative committees, legislative issues related to land use planning, jurisdictional conflicts regarding land use planning, and erosion control in large scale earthworks related to mine rehabilitation. Community members also provided valuable insights into mine rehabilitation that decision-makers, often situated outside the region, may not be aware of. One participant, for example, emphasised that because of the toxicity of the water in the mine voids they are unlikely to be unsuitable for uses often proposed by outsiders: [69]

> *The thing I've experienced with the decision-makers down in Sydney, they all have this visual in their head about what the void is going to look like, and that they'll be fishing on them and swimming and playing water sports*. [Workshop participant]

Likewise, another person remarked that politicians often talk about solutions without thorough consideration of whether they are contextually suitable:

> *You don't tend to hear politicians talking about any of this stuff. They're out there in their high viz vest and hardhat talking up the hydrogen plant that's going to save us.*[70] *And sure, we need some investment, and we need big employers, but we also need things are going to be successful in the Hunter*. [Workshop participant]

Consideration of context is critical because of how it is assumed that solutions from one region undergoing transition are thought to be transplantable to other areas. The Germany's Ruhr Valley, for example, is often used as a case study without sufficient

[69] See Drinan (2023) and Walters (2016) for an analysis of the toxicity of water in mine voids.

[70] There are concerns that the overwhelming support for hydrogen plants do not make 'economic or thermodynamic sense' (Rewiring Australia, 2022). In research conducted by The Next Economy in 2022, it was found that fossil fuel workers are also sceptical of the economic benefits for community that have been claimed.

consideration of how solutions for that region might be rendered as successful or otherwise through differing legislative and socio-political arenas (2.2.3). Closer to home, the methods being proposed to rehabilitate the Latrobe Valley coal mines (a region in the state of Victoria) are considered by some to be transferable, despite key differences in the geological makeup between each area (Beer et al., 2022).[71] Context is everything. As one workshop participant—a fossil fuel worker—said about the importance of listening to community:

> *That's what I've been saying the whole time – the experts are already here. We just need to tap into it.* [Workshop participant]

Local knowledges therefore add several dimensions to expert knowledge that either contribute to the overall impact or highlight risks that might not be otherwise seen when only technical and policy experts are engaged in transition discussions. Hunter people involved in this research understand this:

> *We don't think we've got all the answers, nobody does. We won't have all the answers for the Hunter until we all come together, and we start listening to everybody, until we've got a truly representative table.* [Workshop organiser]

> *Lots of community groups have local knowledge, which is amazing because I believe that working locally acts to a greater global advantage, but if you don't have people in place also addressing the systemic issues, there's only so much the local can do in my opinion*. [Workshop facilitator]

The workshops for both series revealed that within the 'lay public,' there exists a level of expertise about the subjects of transition beyond what is expected of them. However, when distinctions are made between their knowledges and technoscientific knowledges, local people may discredit their local expertise. On multiple occasions, community members expressed that they felt ill-informed, saying things like 'make it simple for me' and 'I haven't got enough knowledge to bring a great deal to the table,' ahead of telling us insightful stories about their lived experience with transition that we used in creating the reports. If the organisers had not had a commitment to participation, it may have been easy to overlook these people as experts in their region. In relation to this expert awareness (the awareness that expertise exists where one

[71] Hunter Valley coal is black or thermal coal whereas the coal from the Latrobe is brown coal (or lignite) which is much more porous. The ground is therefore more unstable in the Latrobe than it is in the Hunter.

might not expect it), rather than presuming to know who can contribute particular knowledge, Eefje Cuppen (2012) suggests that asking people directly 'who has relevant expertise and would be willing to contribute?' (p. 17). On reflection, this is what we did in the Blueprint focus groups by inviting people from the local community to choose which of the topic-based discussions they wished to join, instead of asking them to contribute to broader dialogue about all topics as we had done in Future-proofing.

Rather than valorising local knowledge over other knowledges, however, what is needed is to consider what aspects of knowledge about a topic are required at different stages of planning, decision-making, and designing. Our Blueprint methodology explicitly involved a mix of knowledge types to address this. The Blueprint academic reference panel discussions raised technoscientific implications and governance considerations about transition issues, giving the panellists the opportunity for a nuanced and generative discussion about the ideas, as well as the opportunity to explore collectively the critiques each member had raised individually. Amendments were varied, with a strong theme in favour of reducing ambiguity in the text and attention to more clearly defining suggested priority recommendations.

Unfortunately, the application of a more coproduced form of knowledge making does not guarantee that authorities in receipt of such knowledge will use it. Research on the so-called 'knowledge-action gap' rejects assumptions that all that is required for better action on an issue is the accumulation of better knowledge about that issue (Cook et al., 2013; Roche et al., 2022). The fact that our governments continue to approve new coal mines despite the burning of coal being a direct source of climate change is evidence that knowing does not lead to action.[72] It appears there is still much work to do in surfacing alternatives in ways that become politically impossible for governments to ignore. Examining the factors under which this can be enhanced is the subject of the following section.

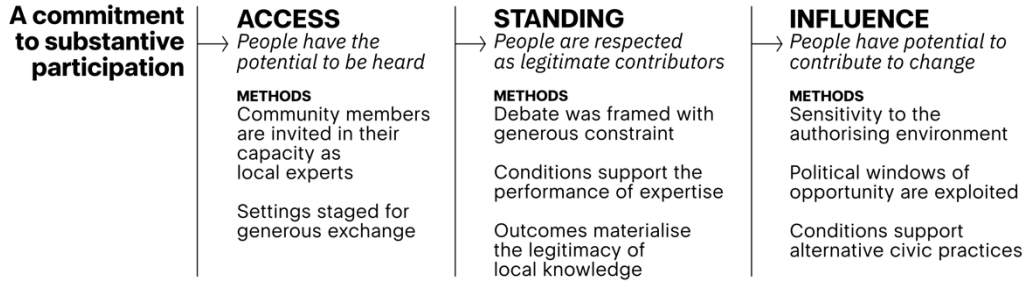
[72] See for example that the federal environment Minister, Tanya Plibersek, approved four coal mines in May 2024.

5.2 What factors influence how public participation proceeds in sustainability transitions?

The literature on energy transitions and environmental decision-making has extensively addressed the necessity for public participation to be inclusive, accessible, and conducted with respect. Studies also highlight the significance of engaging community members early, creating forums that are safe and accessible, and offering multiple ways to take part, amongst others (Crofts, 2023). While these procedural factors are important to attend to, research has revealed that even well-designed instances of public participation are unlikely to exert influence on planning policy without addressing the broader socio-political environment and structures (see 2.2.5 as well as Chilvers & Kearnes, 2016; Escobar, 2014; Raynor et al., 2017; Ruming, 2019). This section addresses these mechanisms through my second research question: what factors influence how public participation proceeds in sustainability transitions?

Data from research was interrogated through an adaption[73] of Senecah's original (2004) Trinity of Voice model (ToV): where *access* factors open the potential for community members to be heard, *standing* factors assist community voices to be seen as legitimate, and factors regarding *influence* support the potential for community to contribute to change. The diagram below (**Illustration 6**) shows how these factors stem from Hunter Renewal's substantive orientation to participation (left-hand side). This orientation shaped the methodology of both workshop series. Instances where the processes of the organisers or those of others have not aligned to the factors are also explored below to indicate where improvements can be made for further engagements. As Bhaskar (1998) suggests, absence is revealing.

Illustration 6
Factors that influence public participation in sustainability transitions.



[73] The first of my adaptions can be seen in the appendices at 8.1.6. Senecah's original model is at 2.2.4.

5.2.1 ACCESS: People have the potential to be heard

Senecah (2004) suggests that more effective participation might be achieved by supporting access, or the potential for the public to be heard. The factors I observed that support the potential to be heard are: (1) organisers held a substantive orientation to participation, (2) the public were invited to attend in their capacity as local experts, and (3) the workshops were staged for generous exchange.

5.2.1.1 A commitment to substantive participation

If participatory activities are organised without genuine consideration of the capacities of the public, they can be thought to be exclusionary. People may not have time to participate when organisers wish them to, for example. Whilst this exclusion can manifest through the recruitment strategy and design of participatory activities, it stems in the first instance from the attitudes of organisers to participation (Senecah, 2004). If the organisers are not committed to public involvement, and their rationale is merely to seek legitimacy for decisions, then this will shape the format of how participation proceeds. Methods follow on from epistemic philosophy in other words.

The organisers of the workshops believe that the input of the local community—not *the* community, this is *a* community—to the shaping of knowledge will broaden the evidence base and therefore the quality of decisions around the phasing out of coal in this place. Such a substantive rationale or positive orientation to participation means they look to apply methods which allow for contextual, local knowledge to be gathered and combined with other knowledges. The combined knowledges can then be used to contribute to decisions in ways that favour a broader range of interests, including ecological ones, as well as surfacing risks and opportunities that may otherwise remain hidden. As this organiser said:

> *The reason I advocate so strongly for the involvement of people in the Hunter community in this conversation is that the narrowing of decision-making to executives in corporations and senior bureaucrats and politicians has been a significant contributor to ecological damage. It's when power is narrowed to a few individuals who serve their own interests at the expense of everybody else's interests that you get bad decisions.* [Workshop organiser]

This substantive orientation to participation was noticed by one Blueprint panellist who commended us as organisers:

> *What was good was your commitment to participation, and manifesting that in many ways.* [Academic panellist]

This commitment to substantive participation can be seen in how workshops were hosted at different times and locations, opportunities were offered for both subject-specific and general interactions, and surveys were created for people with less capacity for taking part in lengthy workshops. It can also be seen in the history of Hunter Renewal, where public participation has formed the backbone of their movement since inception (see **Diagram 14** in section 5.3).

Alan Irwin (2014) has suggested that such authentic commitment to public participation is not always present, and that many authorities may be rhetorical in their support of engagement while staying committed to their existing positions. Irwin says that such participation 'at best will represent institutional *listening* rather than dialogue' (ibid. p. 168, emphasis in original), where authorities are perceived as enabling participation while ignoring the outcomes of participation (Stirling, 2005). This cynical institutional attitude was noted by facilitators:

> *The government does consultation this old-fashioned way because it's easy and it suits their needs. They do their "so-called" consultation and then do what they wanted to do anyway without having to change much.* [Workshop facilitator]

> *I think a lot of the time that industry or government has their own agenda. They engage community by merely informing them and that's all they want to do. They don't want participation; they want to minimise it.* [Workshop facilitator]

While there are many informal ways that the public can be involved with planning (NSW Government, 2019), there are relatively few formal opportunities legislated for participation (see section 2.2.5). The Hunter residents I interviewed believe that legislative change to enforce transparency around transition planning and planning more generally is needed. When asked to reflect on their experience with government-led engagement activities, many of those interviewed said that these activities felt tokenistic, and that their participation was only regarded as necessary 'to tick a box,' indicating that authorities lean toward participation being more about legitimacy for predetermined decisions than substantive aims:

> *Community engagement in Australia is just abysmal. They basically already know what they want to do, nine times out of ten, and they're usually just trying to use*

> *engagement as a tick box exercise so that they can pass through the gate to the next stage of the project.* [Workshop facilitator]
>
> *They call that 'consultation,' and this is what we're going to do, whether you like it or not*. [Workshop participant]
>
> *I feel like rarely do engagement attempts actually achieve what it is that they set out to do. Except the ones that are basically just trying to inform the community, and then get on with it. And in that case, I don't see that as real engagement, I think that to me that's just communication.* [Workshop organiser]

This contrasts with their perceptions of community-led participation, for example:

> *My number one priority is engagement, particularly if it can be a different method of engagement, getting the real views of people and being collated in a way that* ***might have some impact*** *on the longer-term future.* [Survey respondent]
>
> *It's great to see someone having a go. It's disappointing, but I guess it's just once again reality, that it's gotta come from an organisation like Lock the Gate*[74] *as opposed to what our planning departments do.* [Workshop participant]

These responses indicate that people perceive that government-led participation is less effective than community-led participation. Effectiveness seems to be grounded in people seeing evidence that they have been heard and then materialised in a way which <u>might</u> lead to better decisions (note emphasis in quote).

Here it is important to point out, drawing on critical realism, the relationship between the affecting mechanisms and the lay interpretations of the results of the mechanisms (Ram et al., 2014). As will be noted, for various reasons, governments have little capacity to carry out participation beyond structured and impersonal forms such as public meetings and hearings (5.2.3.1). As these forms of engagement—the affecting mechanisms—are the only ones required by legislation, the government can say they have provided effectively for public participation. In contrast, some members of the public may feel that government-led participation is only effective when their input leads to a tangible change that aligns with their views. They do not apply this strict measure to community-led participation (as evidenced by the '*might*' in the quote

[74] Lock the Gate is Hunter Renewal's parent organisation.

above). This is problematic because it sets up a deficit whereby the public only measure effectiveness of government-hosted participation through the receipt of what they consider to be a good decision. There is therefore a mismatch between the rationales for participation between government and the public. This may lead to a situation where the public will not wish to participate at all, leading to government miss out on their local knowledge.

The substantive attitude to participation by organisers of the Future-proofing and Blueprint workshops suggests that they consider that the involvement of the public will generate rather than incinerate possibility. A position neatly encapsulated by one survey respondent who said of our Future-proofing workshops:

> *People who have joined these workshops are trying to look for the positive outcomes and opportunities. Making our voices heard means we can tell others that by acting in the best interest of community we can get better outcomes.* [Survey respondent]

5.2.1.2 Community members invited in their capacity as local experts

Senecah (2004) says that to support access, clear rationales for why people are being asked to participate need to be given. This means people can more easily choose whether they should attend or not, questioning an assumption made often in recruitment that everyone will want to attend as part of a *general* public. Instead, more coherent recruitment directives grant agency to the public based on *specific publics* (Michael, 2009). It is a simple positioning that shows respect for people's time and capacity to participate:

> *I think people have a finite attention span and a finite amount of time to dedicate to this. Everyone's at capacity until you find that issue that lights a fire under them.* [Workshop facilitator]

When it came time to invite people to attend the workshops, they were given clear parameters around why the organisers wished them to attend because their local knowledge was needed to ensure contextual success of ideas. The importance of this approach was underlined by one participant who likened this to his volunteer fire fighting experience:

> *I'm in a local rural fire brigade. When I go to an area that I haven't worked in before, I tap into the local knowledge and talk to people. You can learn a lot that the experts don't know. We gotta get the experts talking to the common man, and*

> *just find out what the lay of the land is, and how they feel, and what their ideas are.* [Workshop participant]

People were therefore invited in their capacity as local experts. That is to say, they were not invited as members of the general public— residents of the Hunter Valley area who might be affected by transition away from coal—but of a specific public—residents who have specific local knowledge to contribute to planning the transition. As was said in one meeting with organisers, 'their expertise is about their communities.' Another facilitator articulated the importance of this local knowledge:

> *Understanding the past of their experience and their local knowledge of industry and history and places are invaluable; seemingly small bits of knowledge of the past all come into play.* [Workshop facilitator]

Hajer (2005) says that the quality of public participation is first determined by the way that the roles for actors are scripted. By this he means how role boundaries are set for how people will be permitted to participate. These role boundaries are often subject to how power—both direct and indirect—determines who can make specialised judgements about the world (Hikins & Cherwitz, 2011). That is, who is permitted to make claims to expertise. While enhancing people's ability to participate often comes with providing them more time or resources such as financial support for attendance, drawing on Hajer's work, we should also think beyond material aspects to how non-material power restricts or supports the capacity to participate. If people are not given the role description of "expert" then they may feel they have less capacity to participate on an equal footing as those who are labelled experts. Capacity manifests this way as permission.

The invitation text is discussed below in relation to how roles were framed differently for the Future-proofing and Blueprint workshops, and how this framing influenced people's willingness to attend. Such an interrogation is critical because it questions how restrictions might be placed on participants through the assumptions and expectations articulated through the content of the invitation (Turnhout et al., 2010).

Future-proofing workshops. In this series, role boundaries were set through the invitation process which was a mix of direct phone calls and emails to existing contacts from the mailing lists of the organisers. Social media posts were also made to attract interest. Dan said of the crafting of the invitation:

> *People might not feel that they have anything to contribute or can't be of use. The invite must be crafted to attract people and to speak to this — You are the expert in your area, and we need you to help us understand what can work and won't work here*. [Dan, Hunter Renewal]

The scripts for the phone calls and invitations gave people the reasons behind the workshops, the key messages are summarised below. The full text is in the appendices.

> I'm calling to invite you to a workshop about the Royalties for Rejuvenation fund that the NSW government has promised the people of the Hunter to assist us through the economic changes ahead. Have you heard about the fund that is being set up?
>
> Community input will be critical to making sure these funds are invested in a way that makes a real difference. Decisions about the future need to be made with the community, for the community. It's our home and our future, so we need to figure out what's really important to us, what are our priorities are, and how we should plan for them.
>
> These workshops will involve unionists, community leaders and citizens in a conversation to gather our thoughts, so we can be on the front foot with the process and ensure community voices are heard.
>
> It will be fun and informative, and we'll feed you.[75] You don't need to have any prior knowledge or expertise, just a love for the Hunter Valley.

These invitation scripts set up a normative rationale for participation—decisions should be made for community by community—and set expectations for how the event would be structured informally: people would be 'in a conversation.' While the invitation also specifies other roles—unionists and community leaders—the role boundaries of community were primarily geographic: 'You don't need to have any prior knowledge or expertise, just a love for the Hunter Valley.' Yet the text also states that understanding community priorities for the future is important 'to figure out.' People were therefore invited in their capacity as expert in local priorities.

The survey also invited people as experts in how transition processes would affect and be affected by contextual dimensions of the local area (geography, population, demographics, landforms, etc). Several survey respondents remarked that they were pleased that local people were being invited to share their knowledge:

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[75] This was pre-COVID when the workshops were still planned to be delivered in-person.

> *The whole survey is a great idea to embrace the community into a forward thinking, rational process that asks what's our future for and what should it be after the Hunter mines close*. [Survey respondent]

> *I am excited about involving the local community in designing the transition. Unless you take the locals with you on the journey so that they own the changes it will not be successful.* [Survey respondent]

Blueprint workshops. Hunter Renewal again drew on their mailing lists for invitations for this series. Key points from the recruitment calls are as follows. This invitation frames the problem as being one of a lack of cohesive land use and industry planning, names some technical matters such as regenerative industries and biodiversity, and initially specified that the workshops were to gather 'your insights and thoughts' about these general areas:

> I'm calling to invite you to join a small focus group about planning for post-mining restoration and land use in the Hunter. Planning for how the land is restored and re-used is a huge challenge that is yet to be properly addressed. The NSW government is looking at options to re-purpose land for new industries, but we have no landscape scale plan for restoring the Valley.
>
> Hunter Renewal is working on a project to set key principles and recommendations for getting the settings right so that plans for the future will support biodiversity, communities, and regenerative industries.
>
> We'd like you to join us to provide your insights and thoughts in a small focus group to be held online for one hour in late October.

People were then asked if they were interested in attending and, if so, which of the topic groups they would most be interested in (1) mine rehabilitation, economics; (2) Social, community, First Nations; (3) Planning, climate, environment. This process allowed groups (or publics) to form around the issues (Dewey, 1988[1927]). See also section 2.2.

The above invitation inquires first about general interest about the issue of mine rehabilitation and then, only if the person demonstrates they have some capacity, asks the person to define their own boundary of expertise based on a single issue with which they have knowledge or concern. This was a two-step questioning—do you wish to participate in this, what aspect of it do you want to participate in? It allowed for an increased capacity to participate, because people were permitted to make their own

judgements of whether to attend based on their interests and knowledge. This was a change made after reflections on the Future-proofing workshops where, due to technical restraints, people had been forced to discuss a topic they may not have been interested in. One facilitator noted at the time that in their experience it was better to invite people to participate to issues they really cared about.

The Blueprint work also invited academic expert input through a survey and panel discussion. Academic experts came from the University of Newcastle and came from the environmental science and social science faculties with expertise in issues related to sustainability transitions. The invitation to these academic experts said (the full invitation in appendices 8.3):

> Building on community priorities identified in the Future-proofing the Hunter report, and written for a lay audience, the Hunter Restoration Roadmap (working title) will inspire and raise the ambition for a region-wide integrated plan for post-mining lands.
>
> The draft Roadmap will be informed by a broad literature and will be reviewed by the Reference Group, comprising experts across a range of fields.
>
> We are engaging local experts to help us draft best practice principles and recommendations, and we are hoping you might join us as part of an Academic Reference Group.
>
> As part of the expert Academic Reference Group, you will be asked to review and respond to a DRAFT set of 15-20 principles.

Geography is again highlighted as the academics are being invited in their capacity as 'local experts,' a dual role as technically knowledgeable about a subject and about the local context. Our invitation to them in this capacity was strengthened by making it explicit that they would be reviewing the 'broad literature' that informed our work. One panellist noted that this text highlighted to the academics that they were a respected group and therefore more likely to wish to be involved:

> *The only person who's of higher status than an academic is somebody who evaluates academics… the invitation put the academics in a powerful state of evaluating expert knowledge. My hope is that that was a characteristic of the format generally: that those who participated felt they were being used for their expert knowledge on something.* [Academic panellist]

Both lay and academic participants were explicitly invited because of their expertise on certain subjects which challenges the idea 'that majority equals smartness,' as Miessen (2010, p. 14) has pointed out. Smartness for these workshops was supported through targetted rather than broad recruitment. Moreover, the adapted recruitment strategy for the Blueprint did not romanticise local knowledge over academic expertise—the 'unthinking adulation of the vernacular and local' (Gehrke, 2014)—but instead recruited for participation where it made sense (Miessen, 2010).

5.2.1.3 Settings staged for generous exchange

The way that participatory events are staged controls how people will perform during interactions (Hajer, 2005). Staging includes the setting or the location in which the participation occurs as well as any artefacts that are used to support the interactions. Ultimately, the choices made around staging relate back to the organiser's orientation to and rationale for participation. Their epistemic positioning will shape the methodological approaches and methods that are chosen, and therefore what knowledge may be generated. Stober et al. (2021) for example found that in transition initiatives where the rationale for participation was simply about attaining legitimacy for decisions, the methods used were non-interactional and consisted mostly of one-way information provision. In contrast, the rationale of organisers for the Future-proofing and Blueprint work was based on a substantive orientation which sought participation to broaden transition agendas and gather contextual nuance. This shaped the design of the workshops to be about generous exchange.

The COVID pandemic brought about a significant shift in how both workshop series were staged. Travel to regional areas was restricted in New South Wales when planning for the Future-proofing workshops began, meaning we needed to adapt the in-person workshops for online delivery. A shift that required redesigning the activities for an online environment to replicate the vital sense of hospitality that lies at the heart of Hunter Renewal. This philosophy is exemplified by their *Seat at the Table* dinners which operate on a principle of reciprocity: the local community is valued as a source of knowledge, and in return, they are nourished with delicious food in a welcoming atmosphere. The workshops are therefore designed to encourage a generous, two-way exchange in a safe and comfortable setting.

Setting this welcoming environment online for the Future-proofing and Blueprint workshops required a deft touch to allow comfort and connection through a digital

platform. The need for 'public intimacy'—a safe space to create shared narratives of the future (Soysal, 2010)—is part of the performance of being a community-based organisation for Hunter Renewal where development of trust is key:

> *I think the kind of work that we're doing is really important: being present in the community and creating spaces for people to come to talk about doubts they have* [about transition] *and to also present them with facts to the contrary that might help them overcome that doubt, but in an environment that's really non-confrontational and informative and positive.* [Workshop organiser]

For the organisers, creating a sense of safety is crucial, especially in a region where social division has been deliberately used a tactic to slow down the process of transition (see section 1.4):

> *Creating safety to take part is important to consider when trying to bring on people who aren't onboard with transition. These workshops are about creating safety about being involved.* [Workshop organiser]

For the workshops in both series, we therefore designed the online settings to mimic what people might experience at the kitchen table or dinner events that Hunter Renewal hosted prior to COVID. The importance of having a setting for participation where the local community feels comfortable was a strongly represented view. We did not always get this right:

> *Sometimes people would be there and after the first five minutes they disappeared. Obviously, some people who came didn't feel comfortable with proceedings.* [Workshop facilitator]

The platform used for participation is therefore crucial to consider, because it is a 'filter through which knowledge is gained' (Rongerude & Sandoval, 2016, p. 321). How the room is staged—digital or physical—matters because it shapes what knowledge can be created at that time. There were several tactics we employed to create a sense of comfort and safety that would encourage more generous exchange. The first was a reduction in numbers. Large and impersonal forums create alien environments, most often of use only to the hosts, because they act as a legitimising and efficiency mechanism. It matters less that people feel comfortable in these settings and more that the hosts can say that they "did" participation. As this panellist said:

> *The people who design usual forums are people who like to have a lot of people in the room, they designed it for themselves.* [Academic panellist]

Organisers initially aimed for over 200 people at each of the five in-person Future-proofing workshops but realised that this would be unmanageable for an online space if there was to be generous exchange. Workshop numbers were to no more than 30 people, randomly assigned to one of the separate topic "rooms".[76] We further reduced the numbers for the Blueprint work to allow for deeper exchange and co-exploration of meaning in a single intimate setting for each topic. The Blueprint invitation gave detail on how people would be engaged, in a 'small focus group.' This meant that an openness to dialogue was represented in the invitation and people would have been expecting to take part in this discussion rather than just observing.

While having only one conversational space for the Blueprint required more effort for facilitation, it was of benefit to participants. This participant, for example, said of the educational effects of the Blueprint process:

> *I feel encouraged by what you're doing and already I feel the energy that you are creating to facilitate community consultations. I feel a little bit out on the edge here in that I haven't got enough knowledge to bring a great deal to the table, but in saying that, I'm sure that if I was engaged in various information sessions, as this one is, I would become a little bit more knowledgeable. It seems that your organisation is facilitating community consultations as a learning curve.* [Workshop participant, Blueprint]

Such productive conversations are not always easy to foster with people who are different to you. One young person I interviewed, for example, did not attend our Future-proofing workshops because they prefer to be in spaces with people their own age where they can create settings full of fun, energy, and vitality.

> *Doing activism because of your anxiety and fear around climate change isn't always the best motivator. You also need to enjoy it. I guess the reason why I stayed in School Strike for Climate for so long was because I genuinely enjoyed it.* [Interview with young, non-participant]

The settings commonly populated with adults are in contrast stultifying and, they said, come laden with expectations of "proper" behaviour. Such exacting ideals for speech acts and expectations of politeness do not make this young person feel comfortable.

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[76] There were four topics, but we doubled up at times when there were more people. This doubling up was shared so that each topic was interrogated evenly.

Bureaucratic or overly technical language forms a deterrent for the lay public, requiring significant effort to overcome no matter the age of the participant:

> *The bureaucratic language has a deadening effect on people's spirits and imagination… A lot of people don't really have a great understanding or interest in governance because it's all quite dry and boring.* [Workshop facilitator]

Gehrke (2014) suggests says that people are best engaged in the places they frequent, using methods familiar and comfortable to them. This is crucial when designing platforms for change in diverse communities where it is crucial that people feel safe to speak honestly and without judgement (Cuppen, 2018; Ledwith & Springett, 2010). Choosing a venue and making the space comfortable for a range of people is important in any participatory practice, especially if working with people with lived experience who might view formal environments negatively (McKercher, 2020).

Some people interviewed suggested that formal institutional environments might be purposefully designed to be less than welcoming so that agitators such as themselves would not attend. One person mentioned that they had attending training to be more comfortable in these engagement spaces. Such exacting ideals can, however, silence people who are unable or unwilling to perform in such a manner (Turnhout et al., 2010). As one participant from the Future-proofing workshops said:

> *I'm still uncomfortable going up against the suits because these are people who have spent their life training in this area, where I'm just a bloke on the spanners. I don't have formal training, so it can be a bit daunting at times, and that tends to silence some people.* [Workshop participant, Future-proofing]

Similarly, one academic panellist for the Blueprint—an experienced facilitator—suggested that participatory activities need 'scaffolding' so people can increase their confidence to speak. By starting with something easy, like asking people to say their name in their first language, this panellist encourages intimacy in a public setting:

> *When you design participation, it's experimentation not just for the facilitator. You have to design it so that participants can experiment with having their voice heard and what's going to happen to it—how is it acknowledged—so they feel safe in participating.* [Academic panellist]

It was also recognised that what Hunter Renewal was doing to create spaces for genuine engagement and generous exchange was worthwhile but that everyone

needed more practice in these methods because people are just not accustomed to this level of debate. As this facilitator remarked:

> *It is not a normal, standardised part of community life to have these spaces for engagement, which is sad. Maybe we would be a bit further along [in transition] if it was normalised coming together to discuss these things and get better at collaborating.* [Workshop facilitator]

5.2.2 STANDING: People are respected as legitimate contributors

As explained above, the potential for people to be heard as experts is supported through the creation of welcoming settings and a commitment to substantive participation. Senecah (2004) notes, however, that just because a person is given access does not guarantee their knowledge will be respected. The next part of the ToV model—standing—is therefore related to epistemic justice, or being respected as a knower (Fricker, 2007). The aim here is to show that the contributions of community members are worthy of attention. I observed that the following conditions gave greater potential for community members to be considered as legitimate contributors: (1) debate was framed with generous constraint; (2) conditions supported the performance of expertise; (3) and reporting on outcomes materialised the legitimacy of local knowledge.

5.2.2.1 Debate was framed with generous constraint

When Hunter Renewal launched in 2017, they conducted an extensive engagement program to ask community what their vision was for the Hunter Valley post-coal. Activities included door knocking, market stalls, dinners, phone calls, and surveys. Community was asked broad, 'what if?' questions to encourage them to dream expansively. The ideas, once collated, formed the *Hunter Renewal Roadmap* (see appendices 8.4.3). Five years later when we embarked on the Future-proofing series of workshops, the organisers needed to be more targeted. Instead of a completely open agenda, ideas were presented to participants that had come from the *Roadmap*.

Their targetted strategy was required for several reasons. First, organisers needed to demonstrate to community members who had been involved since 2017 that they had been listened to, and their concerns were still relevant and being put forward. Presenting ideas that many of them raised previously was therefore justified. Second, organisers felt what was needed was action on existing ideas, not an opening of debate that would take more time than they wanted to ask of community. Third, there was

insufficient time for a lengthy, deep visioning process for this project. The NSW Government was forming legislation for the R4R fund and Hunter Expert Panel (section 4.1), meaning that community groups like HR and HJA needed to act quickly to bring their community's priorities into parliamentary debate. Finally, organisers knew from experience that if ideas were presented to the government from outside the remit of the legislation, the ideas would very likely be dismissed as out-of-scope. They also felt there would be a risk that the entire report would be ignored. This meant the scope had to be contained. Despite this restriction, the ideas were nevertheless representative of what Hunter Renewal had heard from community for the previous five years. There was restriction but it was restriction within a set of ideas that the engaged community were supportive of and, crucially, that government would see as feasible because they fit within the boundaries of the legislation. Being aware of the limited capacities of parliamentarians (5.2.3.1), organisers needed to give them a clear idea of the top ten preferences of community for transition.

The ideas were not, however, transferred without change from the 2019 *Roadmap* to the 2021 *Future-proofing* report. Through the workshops, the scope of each idea was 'thickened'[77] to reveal aspects of it that the government might not otherwise see or may choose to ignore. Therefore, instead of characterising restriction negatively, one could view it as 'generous constraint' (Gomart & Hennion, 1999), whereby disciplined guidelines for debate create the conditions for ideas to 'reveal and multiply… "Constraints" become the generous aspects of things which, **if prepared for**, create existence and initiate transformation.' (ibid. p. 221, my emphasis).

Constraint in participation 'if prepared for' can be productive (Gomart & Hennion, 1999). A view otherwise is based on the belief that complete control by citizens is always ideal (e.g., a misreading of Arnstein's Ladder), alongside a lack of acceptance from practitioners of the power that they wield. Power is everywhere,' says Kothari (2001, p. 141). Or as Turnhout et al. (2010) suggest, 'participation will always be exclusive in some way.' Choices are always made in what to present as an issue, the framing of the problems to be solved, and the people who are invited. It is impossible to ever have a completely open agenda. Power is always present, and it shapes how participation proceeds and what is produced. Rather than stage our events as

[77] See 5.1. The concept of 'thickening the staging' comes from Puig de la Bellacasa (2017) via Geertz (1973).

something more expansive and risk conflict through mismatched expectations and rejection through out-of-scope ideas, we *prepared* participants for restriction, and organisers were prepared to use the restrictions for productive purposes. In the workshop invitations it was explicitly stated as to why we needed to restrict the ideas to meet the legislative agenda. We were also very specific in asking for people's assistance in highlighting what could make this set of ideas succeed or fail in their specific local context. Generous constraint therefore predetermined which ideas would be put forward as a priority.

Over 150 ideas from existing reports were synthesised down to 22 ideas. The ideas were presented as 'cards' in the online workshop (see 4.1), becoming a boundary object that provoked deliberative behaviours: people using them as a starting point from which to argue the case for or against the idea using their local knowledge as a basis for their arguments. Interviews with facilitators and organisers revealed that people were happy with this approach because it helped provide some foundations to more broad discussions about the concepts:

> *I think that's what worked so well about it was having a solid foundation of concrete ideas as a starting place. The reason they felt so concrete was because of the work with various people over years on this issue of what we do now, and how we move on.* [Workshop organiser – Future-proofing]

Although people did not have an opportunity to choose the ideas that were put onto the agenda for this series of engagements, they were still given the opportunity to raise new ideas (see Diagram 2 in 4.1 for an example). People responded positively about the process for both projects, recognising that restrictions were hard to avoid given time frames. As this panellist for the Blueprint said in our interview:

> *I have been trying to think would there be a different way of doing this and I can't think of one. Part of why I take this stand is because of how technical, complex, and highly contested this question is. It is a tense area that could easily run away from us. So, coming to community with some frameworks for this conversation is a good way to do this.* [Academic panellist]

In the narrowing down of ideas for both the Future-proofing and Blueprint work, organisers made an initial political choice of what were plausible ideas. Notably this meant not recommending an immediate end to coal mining and power generation

because it would put local communities at risk economically. While shutting down the coal industry is a highly desirable idea, it is not immediately feasible for the Hunter.

Still, even with reassurance from interviewees, I struggled with knowing if we were doing the right thing in narrowing down the ideas to fit the government's agenda. One panellist for the Blueprint identified this as a risk of our process which seemed too focused on existing problems and not enough on possibility:

> *What we've done with the Blueprint was to talk to people about problems and failures. I know that there were questions about "what do you want", but from memory a lot of the conversation and a lot of the data was about what was missing.* [Academic panellist]

Furthermore, although we may have thought we were deliberately exercising generous constraint, Kothari (2001) argues (drawing on Foucault) that even when we feel we are the freest we are in fact still subject to the power dynamics in society. The indirect nature of power means that it is possible to be doing the bidding of the powerful without awareness (Flyvbjerg, 1998). Lukes calls this 'inactive power' (2005, p. 78) and says the real holders of power never have to act themselves and most often rely on the anticipated actions of others. Therefore, what did we lose in self-editing to benefit the aims of government? Or, rather, who benefitted from our restriction?

Onyx et al. (2010) in their study of advocacy organisations in Australia show that there has been a certain amount of professionalisation and de-radicalisation so that organisations can maintain access to policy discourse and funding. Yet they also suggest that production of knowledge by third sector organisations contributes to policymaker knowledge where there is often a deficit of expertise. Nevertheless, continuing to only work within acceptable boundaries, risks containment within status quo definitions of transition success. It also lacks the type of disruptive imagining that may break us out of unsustainable paths. The initial *Hunter Renewal Roadmap*, and the successive projects such as the Future-proofing and Blueprint work, still only offer solutions within a short- to medium-term framework that is ultimately determined by power and therefore of benefit to those who hold it.

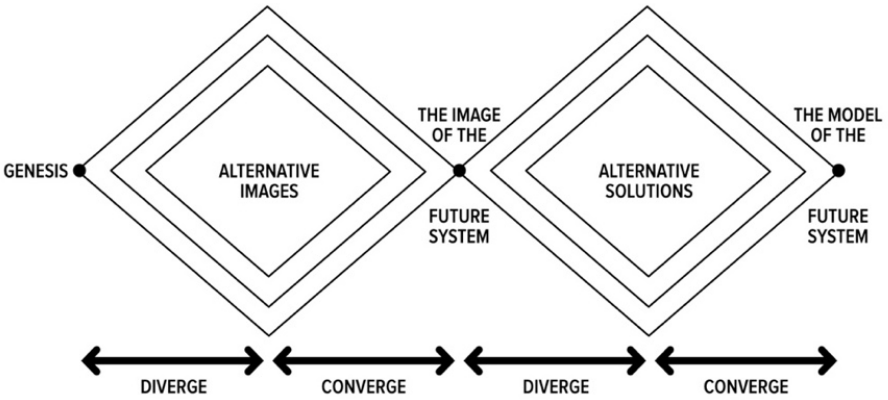
During an interview with one academic panellist they—while not a designer—used this tension between open and restricted agendas to describe what we were doing as a design process. They said what we had done, was to allow for an initial exploration of a

wide scope of ideas (Roadmap), and then create a smaller set that aligned to certain criteria. The exchange is worth relating in full:

> ***Kimberley**: In the work with Hunter Renewal, we winnowed down lots of ideas down to what are the plausible possibilities for this place… But I struggle because supposed "best practice" suggests there should be a completely open book.*
>
> ***Panellist**: And the trick is who decides what's plausible? I see there's real power in getting that list of recommendations through the eye of the needle, and it's a design process… You have a need, and you expand the arena of things you consider and then you narrow that down to a passage point. You say of all the things we could do; these are the things that I think we could move ahead with. And then that passage point becomes the terms of reference for the detailed design.*
>
> ***Panellist**: And then, how do we satisfy these criteria? You expand again and then you narrow down. So, it's not one or the other, they're both steps along the way. And you can argue there's been 50 years of considering alternatives, now let's do the design process, because that's different from that harvesting process.*[78]

As the panellist describes above, the Hunter is presently at a passage point where they have a range of things they could do which may become the terms of reference for detailed design. The process is not as I feared, methodologically questionable, but rather an unfinished design process. Bela Bánáthy's (1996) model of design (**Figure 9**) can be used to show this process.

Figure 9
Model of the design process from Bela Bánáthy (1998).



[78] According to this person, a 'harvesting process' is a cherry picking of ideas which are not subsequently subject to interrogation through a design process.

Bánáthy's model was popularised by the UK Design Council and termed the *Double Diamond* to describe two iterative phases of divergence and convergence. During both the Future-proofing and Blueprint work, we applied a process of divergence to consider, as Bánáthy says 'a number of inquiry boundaries, a number of major design options, and sets of core values and core ideas' (p. 73). Then we converged as we made choices to 'create an image of the future system' (ibid.). The work is unfinished. The principles and recommendations we have published in the reports are, as Bánáthy describes, an image of a future system which can now be subject to exploration of alternatives. They are not definitive solutions, they provide an agenda for future negotiation (Guba & Lincoln, 1989).

It is critical, however, that organisers remain vigilant and prepared for government to seek to continue to set the future agenda. As has been said, Dan is conscious of the need to stay in front of government, and their fossil fuel industry supporters, by putting the local community's priorities onto the public agenda before those in power can set it and, 'it has to be wrestled back' (Dan). In May 2024, the NSW Government announced there would be a parliamentary inquiry into post-mining land use.[79] Hunter Renewal will again need to be proactive in representing the Hunter community's vision before they are 'told how it will go' (Dan).

5.2.2.2 Conditions support the performance of expertise

Being prepared also meant creating the conditions that shaped how community knowledge might be produced and then perceived. Hajer (2005) says that 'the design of the setting affects what is said, what can be said, and what can be said with influence' (p. 624). He has termed this the 'dramaturgy of participation.' It is a framework for conceiving how the conditions of participation afford the performance of different roles. The settings, stagings, and scenes of interaction shape the way problems are understood, how knowledge is coproduced, and the way people interact or play their role. Hajer says that scenes are the containers for acts and that these containers shape how these acts occur. For example, activities might be staged one way and people might seem like protestors; design the settings another way and people could be seen as collaborators. The settings of participation therefore affect the

[79] https://www.nsw.gov.au/media-releases/productive-uses-of-land-after-mines-close.

role that people play and ultimately the perception of their contributions. Turnhout et al. (2010) add to this by saying:

> *Conceiving of participation as a performative practice emphasizes that identities, knowledge, interests, and needs are not represented but shaped, articulated, and constructed in the participation process itself.* (Turnhout et al., 2010, n/p)

To ensure local knowledge is respected and viewed as legitimate, the conditions must exist where community members can perform well as experts. Exploring how this was done in the workshops can be seen by highlighting three aspects of the staging of the workshop activities: facilitation, cadence, and scripting.

Facilitation. The performance of expertise in public participation is ultimately controlled by those who stage-manage affairs: the facilitators (Kothari, 2001). While these actors control the performance of participants during activities, the way that organisers craft the conditions for participation ultimately shapes how facilitators enable others to perform. During planning of the Future-proofing workshops, a tension arose between organisers wanting to have facilitators who were local (but novice) or experienced, outsider facilitators. Although some organisers thought that expert facilitators would be more likely to stage an event that was seen as professional (and therefore worthy of respect), others thought using novice, but local facilitators would garner positive reactions through playing on parochial tendencies.

The decision was made to stay local, but facilitators were given a guide to materially scaffold their performance (see appendices 8.2.4). They were encouraged to divert from this guide if it felt necessary. More experienced facilitators adapted these guides and their facilitation to fit emerging situations. For example, if there were fewer people in their group than expected, or they had a particularly dominant participant.

A challenge of course with using novice facilitators is they do not have as many techniques to deal with emergent situations; they lack the retrieval strategies of experts (Cross, 2004; Hartelius, 2008). The facilitation guide was therefore created to assist novice facilitators perform as experts.

> *The facilitator guides were really helpful. It's amazing how much those resources make a difference. I felt very prepared and supported. I felt that enabled me to then bring out my best as a facilitator. I've done some work where I was just thrown in the deep end, and I didn't feel that here.* [Future-proofing facilitator]

Cadence: Csikszentmihalyi (1990) suggests optimal experience comes from a state of flow that, despite connotations that a flow state is achieved through complete freedom, comes because the experience is designed to make the task feel easier. Part of the design of flow for the workshops included their cadence, which was curtailed in duration so as not to overwhelm participants in an online environment. Controlling the timing to ensure we would get the results we needed and achieve a flow state was a challenge. In looking at my notes from reflection sessions after the workshops, there are phrases that indicate how important a consideration of cadence was. For example: 'how can we get participants up-to-speed?'; 'do this only if time allows'; and 'what should I do if there is time left over?' Nevertheless, it was noted in interviews that we had created a good experience overall, as this facilitator said:

> *I think the agenda and the facilitation and the flow of the workshops. It was really fantastic.* [Workshop facilitator]

Designing the timing for each activity was about achieving a balance between what we needed (getting clarity on which ideas people thought were a priority) and giving participants 'enough airtime' so that they felt their presence and knowledge was respected. Cadence therefore controls how people can perform their expertise during participation. Cadence also controls how people's expertise can be performed over time. In one interview, a facilitator who works for another community organisation said that when they design an event they also consider how many events there have been or are likely to be about that issue and, therefore, whether people might feel over-engaged and develop consultation fatigue:

> *I always think of it from an audience experience, it's like 'how many public meetings are we going to have?'* [Workshop facilitator]

Scripting. In terms of the performance of participation, Hajer (2005) defines *scripting* as deciding who will be involved and the cues that will be in place to define behaviour. During interviews with the organising team after the Future-proofing workshops, it became clear that limiting participants to topics of which they had little interest or knowledge had not allowed them to perform the expertise as they had expected to. Organisers felt this might reduce their willingness to attend events in the future. Our cues, our scripting, our agenda, had not allowed people to perform the role they wished to play. The idea of having topic-based workshops then started to emerge:

> *We could get people around a table, or virtually, sharing stories of that issue what's their lived experience of that issue, why is it important to them. Everyone*

> *might come at it from a different angle, but through a process of sharing together everyone starts to see the overlap in their shared interests. This might be the starting point for diverse groups working together.* [Workshop organiser]

The Blueprint methodology (4.2) was developed from this kernel of an idea and was aimed at harnessing diverse knowledge about post-mining land use from academic and lay public experts. The academics interrogated all topics, and the participants of the focus groups (or focused conversations as we called them internally) concentrated on a restricted range of topics. The people invited to the focused conversations were knowledgeable in some way about the topic of interest for that session. This led to some very fruitful discussions and highlights just how much knowledge resides in the local community. People held a range of roles including farmers, business owners, cafe managers, ex-UN officials, economists, and Landcare coordinators. The focused conversations were set up in a relatively open manner, with a main principle and around 3-4 recommendations as to how that principle might be achieved Dan described these principles as 'getting the settings right for the future.' The discussion was facilitated through guiding questions such as:

- Does anyone need clarity on any of these?
- Do you have any concerns or additions?
- Given your knowledge of your local area, of the recommendations in front of you, which is your highest priority, and why?

The relative flexibility of agenda meant that people could speak to an aspect of the topic that was of most concern or interest to them. Their contributions helped us to shape how we framed each topic in the *Blueprint* report to include their diverse concerns, instead of just presenting them as a definitive and technocratically described ideas. Their concerns and views on topics are inscribed throughout using quotes from the workshops and the survey. For example:

> *The mines have privatised all the profits and socialised all the costs, and then they also want to decide what to do with the land afterwards. As a community we have to say, 'NO! We want to be involved from the beginning as equals'.*
> [Workshop participant]

Performance of expertise for both academic and lay participants was also supported by giving them explicit permission to critique how we had framed each principle.[80] The flexibility of format and the generous time given to each topic meant people helped us shape the language to be clearer and more accessible. This development can be seen below (**Table 5**), where the wording changes from left to right through the process from the Delphi Panel (academic experts) to the focus groups (lay experts).

Table 5
Refinement of recommendations language from before the Delphi Panel to the final report.

BEFORE DELPHI PANEL →	AFTER DELPHI PANEL →	AFTER FOCUS GROUPS AND PUBLIC SURVEY →	FINAL REPORT
REHABILITATION & LANDSCAPE RESTORATION			
Mining lands will be rehabilitated to restore biodiversity, create thriving communities, ecosystems and support regenerative industries	Mined lands and buffer lands will be rehabilitated to create thriving ecosystems, vibrant communities and regenerative industries	Mined lands will be rehabilitated, and buffer lands restored to support biodiversity and regenerative industries	Mine-owned lands will be restored to support biodiversity and regenerative industries
REGIONAL PLANNING & GOVERNANCE			
Governance will be transparent, accountable, and coordinated to achieve landscape restoration and a just transition for Hunter communities	Governance will be transparent, inclusive, accountable, and coordinated to achieve landscape restoration and a just transition for Hunter communities	Governance will be transparent, inclusive, accountable, and coordinated to achieve landscape restoration and a just transition for Hunter communities.	Planning and policy mechanisms will be coordinated to achieve landscape restoration and a just transition for Hunter communities
COMMUNITY			
Hunter communities will be engaged meaningfully and continuously so that land use plans align to local needs, expectations and values	Hunter communities will be engaged early, meaningfully and continuously so that land use plans align to local needs, expectations and values	The needs, values, and expectations of Hunter communities will be at the centre of post-mining land use planning	The needs, values, and expectations of Hunter communities will be at the centre of post-mining land use planning
FIRST NATIONS			
First Nations peoples' perspectives and responsibilities to Country will be preeminent in land use planning	First Nations responsibilities to Country will be preeminent in land use planning	Traditional Owner responsibilities to Country and Indigenous knowledge will play a greater role in restoration of mining land and future land use planning	Traditional Owner responsibilities to Country and Indigenous knowledge will play a greater role in restoration of mining land and future land use planning
CLIMATE & ENVIRONMENT			
Land use planning will drive an orderly transition to net zero by 2050 to ensure a safe and stable climate	Land use planning for the Hunter will be consistent with achieving a safe and stable climate	Restoration and reuse of mining lands will be consistent with achieving a safe and stable climate	Restoration and reuse of mining lands will be consistent with achieving a safe and stable climate

[80] See appendices for list of all principles and recommendations at 8.3.10.

An openness to critique is also illustrated by the following discussion about one recommendation. The recommendation was initially worded: 'Ensure the local community benefits from new developments through mechanisms such as community ownership, profit sharing schemes, and prioritisation of local jobs.' When Dan asked participants to comment on this recommendation, they asked for clarity on what we meant by 'community benefits':

> *P1: First of all, I would like to see "the local community benefits" be quantified and have to be benefits the community actually wants.*
>
> *P2: Agree. We want to clearly understand if there are co-benefits.*
>
> *P3: What do you mean by community benefits? Do you mean that the local sports clubs are gonna get some money? I'm trying to understand what you're actually trying to say there.*[81]
>
> *P1: I would like to add I would like to make communities plural and local communities benefit directly from new developments.*

The exchange above demonstrates that we successfully created the conditions for people to perform their local expertise, because they felt comfortable enough to critique our work. They were also encouraged through the process to add to our overall contextual understanding. The involvement of them in coproducing the meaning of a seemingly innocuous phrase—community benefits—meant that the final wording in the report was much more explicit about what the benefits should be. As the report is 'an agenda for future negotiation' (Guba & Lincoln, 1989), the local Hunter community have therefore been involved in scripting the cues that might guide future behaviour in their region.

5.2.2.3 Outcomes materialise the legitimacy of local knowledge

It is a widely accepted yet too rarely critiqued view that the more people who participate the better. Some have dismissed this as retaining relativist tendencies toward quantitative measures of success (Chilvers & Kearnes, 2016; 2020). People may

[81] When P3 mentions local sports clubs, they are referring to 'social licence to operate' (SLO) mechanisms such as the funding of local sporting clubs, which is a common practice of fossil fuel companies in mining regions, where companies use the funding to gain public support for their operations. The SLO concept has emerged from frameworks of corporate social responsibility (CSR) and denotes the 'level of ongoing approval or societal acceptance of the activities of an industry' (Hall et al., 2015).

therefore discount the legitimacy of a participatory event because of low attendance and forget to attend to the rich and nuanced findings that the process enabled.

This paradox was evident in the Future-proofing workshops as, while organisers were very clear on stressing the value of community input, they judged the value of this input through positivist terms such as overall attendance, as evidenced on reviews of the process from these facilitators:

> *I don't think negative is the word in the context of the sessions themselves, but the negative more was I guess a frustration that we didn't have more people attending.* [Workshop Facilitator]

> *In the two workshops that I was in, participation probably was a bit down on what organisers expected were aiming for.* [Workshop Facilitator]

Furthermore, organisers were also striving for diverse representation in the workshops based on how the workshops might be judged by outsiders:

> *There's a part of me that a bit disappointed about the turn out for all the workshops…While we haven't claimed anywhere that we are a representative sample of the community speaking in this report, I do think that the fact that it's very unrepresentative makes it less valuable.* [Workshop organiser][82]

When evaluating the success of the Future-proofing workshops, organisers were conscious that low attendance and a seeming lack of diversity could put the validity of results in question. As the objective of the Future-proofing workshops was to impress on politicians and policy makers that community views were worth listening to, organisers saw that small attendance could make our efforts easy to ignore. As one interview participant said, 'numbers work when you're talking upwards.' As organisers could not rely on impressive numbers to capture the attention of politicians, a compelling story needed to be told through design to materialise the legitimacy of the local community's contributions. As one facilitator remarked:

> *Another great thing these workshops have done is giving more validation to testimonies and stories. Having a social sciences background, I've always been told "Oh, that's not real science. That's not real statistics". But nothing in my*

[82] See the methodology section for more about recruitment and the notion of 'the usual suspects'.

> *opinion beats stories because you can't make up those emotive things in a number.* [Workshop facilitator]

Dixon (2016) and Yates (2015) have both noted that it is the material inscription of alternative processes, practices, and ideas that contribute to their legitimising potential. As Dixon says:

> *Because inscriptions evidence the translation of material mediation, they render the process of constructing expertise traceable. By tracing the process of translation that undergirds an inscription, it is possible better understand the mediation process, and better conceptualize the quality of its construction.* (Dixon, 2015, p. 113)

By focusing on the materiality of how expertise is constructed, policymakers are given a means to evaluate the quality of the information. Dixon proposes that local expertise is often perceived as less valid than scientific expertise because the process of developing knowledge through lived experience is rarely documented compared to that of documenting the process of scientists in labs. In an interview with Dan from Hunter Renewal, she spoke with frustration that such deep explanations of process were necessary, but also that she understood why:

> *One of the things that I have learned through this process, one that annoys me, is that we have to legitimise ourselves all the time, because otherwise you get snarky people going "well who are you anyway? You're just a bunch of activists, you're not really community". I've never really paid much heed to that, but now I realise the importance of explaining how broad we went, the efforts, and the lengths that we went to in engaging that audience.* [Dan, Hunter Renewal]

The quote above demonstrates what might be called a 'balanced account of expertise' (Quast, 2018), as Dan has expressed the importance of articulating not just who was involved but how the task was accomplished (Brady, 2018; Eyal, 2013; Quast, 2018). In documenting process there is a greater chance that the local knowledge created through our participatory activities might be taken as more legitimate than if we had not expressed the process in so much detail. As Dr Liam Phelan said in one of our workshop planning meetings for the Blueprint, 'legitimacy is in the process.'

The first legitimising move, therefore, was documenting process. The second legitimising move was reducing the effort of politicians to comprehend the priorities and concerns of community. This was about making things visible. Manzini (2015)

says that designing for visibility is about making wishes, viewpoints, and issues more prominent so that they can be acted upon. As I expressed to organisers, I designed the report to be read, not put on a shelf. While more detail on each of the ideas was in the main body of the report, key concerns and priorities of Hunter people were displayed prominently through bold information graphics (**Diagram 7** and **8**).

Diagram 7
Top concerns from the Future-proofing workshops and survey.

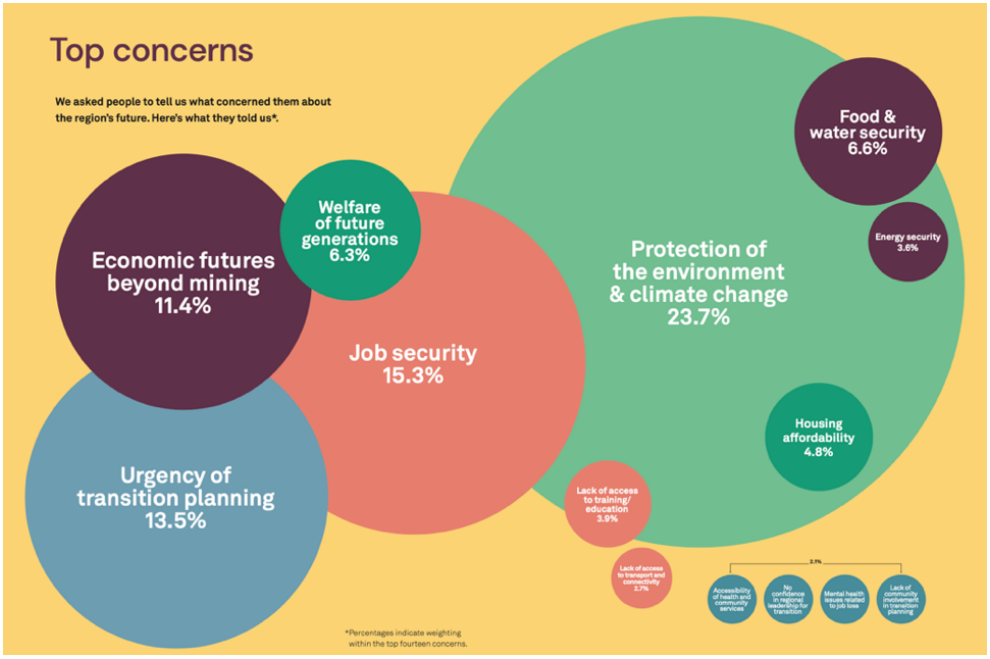


Diagram 8
Top priorities from the Future-proofing workshops and survey.

Simple expression of key messaging was also important when it came to choosing quotes and imagery for the report. For Dan, it was crucial that the quotes were 'pointy and not basic,' meaning that they needed to demonstrate that people in the region were knowledgeable beyond the basics and were adding to the nuance of the ideas we were proposing. She figured this would help secure legitimacy through demonstrating that local people hold valuable contextual knowledge. For example, this quote from a local resident was chosen as the opening statement in the report:

> *We have to understand the pace of change that will occur in the makeup of industry in the Hunter Valley over at least the next ten years, and plan for, and reposition ourselves to take advantage of these changes.*
>
> *I'm excited that with our highly skilled, innovative, and diverse labour force, we can attract new business to our region – business types perhaps we haven't even thought of yet, and so make the Hunter Region a place known for things other than just coal mining.*
>
> *We have done this before – compare us now to how the region was when it was reliant on the BHP operation. We already have the experience and expertise to transition to a new and exciting future*. [Lake Macquarie resident]

The quote here demonstrates this person has a high degree of comprehension of how existing skills can be used to build a fossil-free future for the Hunter. It also shows that this resident can draw upon historical experience of previous transitions (BHP owned the large steelworks in the area that closed in 1999) to position transition as a positive. The use of such quotes throughout both reports was essential for the organisers to convince decision-makers of the legitimacy of their demands.

Crucial here, also, is that the language and design used to articulate community knowledge is comprehensible to that community. Fischer (1993) describes a professional who can bridge between theoretical and practical knowledge as an 'interpretive mediator.' Mediating the display of knowledge in a way that was appealing to both government and local people and could be read by all concerned was therefore part of my design brief. One of the facilitators reported back about the reaction of her parents to the *Future-proofing* report in relation to readability:

> *It was so impressive, and it is very easy to read as well. I sent it to my parents and family and ordinarily I would be hesitant because they know that I'm very*

involved with reports, journal articles and stuff, but I was like "no, no, no this is fine. This is great." [Workshop facilitator]

As the cover would be the first point at which legitimacy would be judged, choosing an image was challenging. The difficulty stemmed from the different perspectives among organisers regarding the message the image needed to convey. For some it needed to be 'jobby,' to indicate that there was a future in industrial employment in the Hunter beyond coal. For others, it had to be more 'futury,' and might show people installing solar panels. Some wanted the image to indicate this project was very much people-focused, but it was difficult to find photos that were not of white men, and organisers did not want to continue this gendered narrative of transitions. The final image (**Diagram 9**) contained none of these requests as I firmly, yet gently, exerted my expertise as a visual communicator in making the final decision.

Diagram 9
Covers of the Future-proofing and Blueprint reports.

The cover image is a landscape view of the Hunter Valley in early morning light. As a rural image it helps to position the Hunter as an agricultural site beyond mining. The sunrise indicates the contents of the report as hopeful. While there are images of coal mines inside the report, there was a shared concern amongst organisers that mining images had been used to the point that they were no longer as powerful as they once may have been. We reviewed this for the Blueprint work which was more directly

about mine rehabilitation and needed to show the scale of the problem. Both covers are displayed below for comparison.

While the display of compelling data was the means to lay claims to legitimacy in the *Future-proofing* report, for the *Blueprint*, authorship was the key legitimising concern. There was much discussion in the organising group, for example, about the naming of academic participants in the final report. The discussion included whether academics from other universities should be invited to participate. In the end we decided to use only academics from the local university so that knowledge might be more contextually relevant and perceived as thus.

Early in the Blueprint work we as organisers wondered whether these academics would wish to be named, and what the external value would be of naming people. We agreed that having an academic reference group as visibly separate to the project team would lend a perceived neutrality to the process, thereby increasing the chance the whole process would be perceived as legitimate to outsiders. Dan later said of this choice to utilise academic expertise in the Blueprint work and not in the previous Future-proofing work:

> *I preferred our process this time where we sense checked with academics. I felt it gave it more weight and credibility. It is sad that's the case, but because of the names and the process attached it has been picked up by other academics and has had other interest. The Future-proofing report didn't have as much broad interest because it was seen as just "those" community people.* [Dan, Hunter Renewal]

In publicly stating that we had engaged an academic reference group we were therefore making an explicit political choice to align to stereotypes of experts as neutral actors.[83] The academics therefore served two purposes: technical and political. We used the academic's knowledge to sense check the ideas for feasibility and their names as referred credibility.

Notably this process also revealed my own biases. I had assumed that naming the academics would add scholarly weight to the report. Dan agreed but also pointed out that others might dismiss these academics as 'no more than leftie greenies' thereby

[83] This is related to a positivist position that technical or academic knowledge is objective and free of politics (Negev & Teschner, 2013). This unquestioned acceptance of authoritative knowledge as objective fails to recognise that all knowledge is imprinted by power (Stirling, Ely, Marshall, 2018).

countering any credibility we were attempting to secure. Finally, while the piece was written by many, the authorship of the piece remained with Hunter Renewal. The academics are thanked for their contribution, as are the local experts and the project team, but no individual is named as an author.

Along with tensions regarding authorship and academic legitimacy, tensions arose between members of the Blueprint organising team with respect to attributing a place of residence to people quoted throughout the report. Ultimately, the choice of how people's location was labelled was driven by how the legitimacy of outputs from the participatory activities might be judged by others. I heard during interviews that this concern about external perception of legitimacy is deeply embedded:

> *I think part of what we have suffered from in the last 20 years is remote decision-making and a disenfranchisement of people from being able to participate in and take control of decisions when they will live with the consequences of those decisions.* [Workshop organiser]

Understanding how this situation has arisen requires knowledge of how outsiders are perceived by Hunter residents, especially by residents who have been disenfranchised by decisions made outside the region. All areas of the Hunter contribute to the coal economy through workers, services, and supply chain services, yet it is the people who work in the pits, ports, and power stations who have thus far received the most political attention.[84] An uneven distribution of attention has resulted in many people feeling left out of conversations about their future, concerns which have amplified conflicts between geographic areas regarding who benefits and who may miss out because of the transition. The result is that it is very easy for geography to become weaponised in transition discourse in the Hunter. Being aware of this, we adapted how we treated geography to fit this politicised model of legitimacy.

Attending to the perceived biases of others represents an application of passive identity power (Flyvbjerg, 1998; Fricker, 2007; Kothari, 2001) and involves assumptions about who is authorised to participate in processes related to place making (the making of place), and under what conditions of positionality — affected insider or unaffected outsider (Tsing, 2000). It is said that affectedness is often defined externally when outsiders select who they think is affected and therefore who

[84] Thanks to Dan for this phrase.

should be engaged (Chilvers & Kearnes, 2016; Marres, 2012). We concealed geographic nuance about the resident's home location because we assumed people might not support our claim that the knowledge we had gathered was legitimate if they saw it as coming from outside what they consider the most affected people or region. Legitimacy was thus conferred materially through inscribing the process, displaying data in compelling ways, and through explicit choices around authorship and geographic identity. All these tactics were utilised to extend the potential for the local community to be respected as local experts.

5.2.3 INFLUENCE: People have potential to contribute to change

Influence for Senecah (2004) does not imply that the decisions of government will be completely shaped by the public, but that their inputs will be considered alongside those of other stakeholders. However, while there is normative and instrumental support for public participation in policy making, authorities rarely incorporate public views in any substantive manner (Chilvers, 2009; Escobar, 2014; Felt & Fochler, 2008; Leino & Laine, 2012; Reed, 2008). Therefore, although participation is considered the right thing to do and provides legitimacy for decisions, ultimately the public have little scope to influence policy directions. One workshop organiser expressed this situation in saying:

> *The people who experience the consequences of decisions made by elites really don't have much opportunity to have input into or control over those decisions.* [Workshop organiser]

Through this research I have discovered that influence ultimately comes from the interactions between political and planning processes. The contributing factors include: (1) sensitivity to the authorising environment; (2) the ability to exploit windows of opportunity; and (3) creating conditions that support alternative civic practices.

5.2.3.1 Sensitivity to the authorising environment

In a study of ministerial practices in the UK government, Andrews (2017) found that the decisions of politicians were shaped by internal and external factors including time, political and public support, media perception, and historical context. Andrews says that having a sensitivity to this authorising environment is essential in supporting the willingness of politicians to accept and engage with evidence beyond conventional experts. During research I observed three aspects of the authorising environment that

organisers are sensitive to: the capacity of public servants to undertake participatory activities; a political environment that prefers winning solutions; and a lack of capacity to attend to non-expert involvement.

The capacity of public servants. Increased demands on the time of public servants poses a significant obstacle to the development of more inclusive participatory processes within government (Margerum, 2016). Consequently, the expectations placed on public servants for participation often exceed their capacity to engage the public in meaningful ways, preferring to direct what resources they have toward using community engagement to legitimise the decisions they make. This risks only a narrow set of issues being subject to public debate, and ultimately reduces politicians' access to alternative ideas and awareness of risks. Organisers know this and have stepped in to fill the gap.

John Kingdon (2014) notes that a system lacking in capacity results in the design of highly structured and impersonal forms of participation such as public meetings and hearings. Opportunities for less structured engagement were suggested during an internal review of the NSW planning system in 2012, but were dismissed as too difficult with current resourcing:

> *... Getting up front agreement from communities on these strategic planning decisions will require a whole new level of public engagement that has not been done at the state or regional before in NSW. Innovative approaches and huge resources will be needed to make this work.* (Montoya et al., 2012)

While many people in the research expressed their dissatisfaction with government-led participation, calling it tokenistic (5.2.1.1), they also recognised that this tokenism might be because of resource constraints that hinder proper attendance to community engagement. People said the public service was probably doing the best they could with what was made available to them. One organiser inquired, for example:

> *I mean do they even have the dedicated human and financial resources dedicated for this stuff? I don't know specifically, but it doesn't feel like they do.*
> [Workshop organiser]

One facilitator noted that the type of engagement that we had done in the Future-proofing workshops was hard work, but if community organisations could do it then it should be also achievable for government:

> *How do we take all those diverse interests and hear them all and make sure that those people feel heard? This is why the government needs dedicated resources and frameworks to do this engagement. Sure, it was hard work, but if we can do it, why can't government? They just need to dedicate the bloody resources to doing it, and to be open to being taught how to do it the way people want it to be done.* [Workshop facilitator]

A political environment that prefers winning solutions. Organisers of the Future-proofing workshops also thought that a lack of deep community engagement enacted by the public service might be related to politicians being reticent to present ideas in draft form to the public and being criticised for their lack of detail. The politicians preferring instead to present fully finished proposals. Others said that the public service can be hesitant to propose anything to their ministers that will not be accepted immediately, indicating that politicisation of transitions is well and truly embedded though a type of "don't ask don't know" policy. As one organiser put it:

> *The public service has a lack of political permission and a fear of the risk of unveiling problems that they can't put back in the bottle if you ask the questions. You ask the questions and then you create a political problem that no one asked you to create*. [Workshop organiser]

Attention to the political environment is directed both internally, as above, and externally in terms of a sensitivity to how the media might portray policy approaches and decisions (Andrews, 2017). I heard from one government informant, for example, that politicians often consider a policy through a lense of media perception, saying 'what if this ended up on the front page of the *Tele*?.'[85] Such a concern means that government can be unwilling to consider proposals that will not be immediately perceived as having the likelihood to succeed.

A lack of capacity for non-expert involvement. Through interviews I heard from people that government had told them that they wished they could conduct participation as well as we had done it. While this might indicate a willingness to conduct better participation, to date there have been no government forums for discussing transition with the public in the Hunter Valley. Those which have occurred have only consisted of an expert audience invited to discuss technology opportunities,

[85] The *Tele* refers to the *Daily Telegraph* which is the Murdoch-owned tabloid in NSW.

the circular economy, or industrial restructuring and reemployment.[86] This may suggest that government are unwilling to conceive of expertise beyond conventional ideas of the credentialed technoscientific expert. If they were, there would have been more opportunities for the local community to participate in transition discussions. As these facilitators noted:

> *I don't know of any other organisations in the Hunter besides Hunter Renewal, Lock the Gate, and the Hunter Community Environment Centre that are convening these community spaces regularly around coal and energy transition.* [Workshop facilitator]

> *There's more work going on in the community and special interest groups than there possibly is in the public service who you would think would be driving these things.* [Workshop facilitator]

As policy makers appear to have little time and 'carrying capacity' with which to consider all the issues (Birkland 2007, p. 65), if issues are brought to their attention through the type of work Hunter Renewal have done, then these issues might have more chance of being raised higher on the public agenda. By gathering knowledge outside of government avenues and presenting the issues in ways that defied easy dismissal (5.2.2.3), Hunter Renewal provided information about community preferences for transition that policy makers may not otherwise have felt compelled to attend to. One organiser for example noted:

> *The Hunter Renewal contribution was to show there was an appetite in the community for these things. Hunter Renewal amplified what was invisible to government.* [Workshop organiser]

One of the academic panellists also noted this about the *Blueprint* report:

> *We have an artefact that looks good, reads well, it's very professional, but it also doesn't read like an activist brochure. It is well researched, it's very well supported, and it is very balanced. It's excellent research and excellent work that gives a really important foundation.* [Academic panellist]

By placing the preferences of the local community about transition into the public sphere through the reports, media, and the publicity of this work, politicians and

[86] I created a list of known engagements in the Hunter that relate directly or indirectly to transitions to check this claim. See appendices 8.4.4 and 8.4.5.

public servants cannot deny they are aware of it and must either accept it or acknowledge that other factors have influenced their decisions. Such an approach emphasises the importance of being sensitive to the authorising environment. The timing of such action is critical and is the subject of the next section.

5.2.3.2 Political windows of opportunity are exploited

While energy transitions are inherently sociotechnical processes, encompassing both technical shifts in power generation as well as the societal changes that drive and are driven by these transformations (Geels, 2004), public discussions in Australia have been restricted to technological and economic paradigms (see section 2.2.3). Broader issues that affect whole communities have been left out of public discussions, as have concerns around the fossil fuel industry's role in climate change, and their impacts to public and ecological health. Moreover, the relative financial strength of the fossil fuel industry in Australia has delayed the need to urgently consider transition, as this workshop organiser said:

> *One of the problems that have plagued us in the Hunter has been the absence of basic logic of it simply must be done.* [Workshop organiser]

There is however now an urgent need to transition as the effects of climate change become increasingly evident. Raising the wider implications of energy transitions higher on the policy agenda is therefore imperative. Kingdon (2014) says that problems rise to the attention of policy makers in several ways that may be predictable (e.g., the renewal of legislation and elections) or unpredictable (e.g., a disaster occurs). Sustained pressure from advocacy groups may also bring matters to the attention of policy makers. Kingdon (2014) says that these windows of opportunity do not open often nor stay open for long, and actors therefore have little time in which to advocate their positions.

> *It's a race against time to get our part done and get ahead of them: "here's one we prepared earlier"—so you can't ignore it, and if you do ignore it, we will have all the more reason to get louder and for people to be angry*. [Workshop organiser]

Community engagement for the Future-proofing work was deliberately scheduled to exploit such a political window of opportunity. The issues of concern to community were therefore given their best chance to become more salient to legislators, thereby breaking into the dynamics usually controlled by more powerful actors. In April 2021, the minister responsible announced the R4R policy, and in June 2021, Dan from

Hunter Renewal invited me to assist their campaign. Engagement activities commenced in August 2021 and extended into 2022, coinciding with the government's call for submissions on the relevant legislation.[87] Debates on the legislation were held in March 2022, leaving less than a month between the end of public engagement and the legislative debates. Dan's original email asking me to be involved said:

> *We have decided to run 'Seat at the Table' style public workshops to share info and gather input into how the Royalties for Rejuvenation funds and the Hunter Expert Panel can best serve coal communities. We are concerned that without the community pushing for inclusion and consideration in these two Regional NSW initiatives we will just end up being told how it will go. We would love for you to be involved in the planning and facilitation of these.* [Dan, Hunter Renewal]

Seizing this political window of opportunity was aimed at pushing for the local community to play a greater role in shaping policy related to the energy transitions. Such a role has progressively been restricted in NSW through changes to legislation (2.2.5), changes to protest laws, [88] a reduction in working class resistance aligned to a drop in union membership[89], and reduced powers of local government in planning (Burgmann, 2000). These changes have seen an overall reduction in the public's capacity and willingness to collectively organise to shape policy that affects them locally and beyond. Advocacy groups such as Hunter Renewal have therefore had to employ different means to secure government attention on behalf of community.

Seen in this light, the Future-proofing campaign was what Hoppe (2010) calls concerted action for public purpose. The organisers had to make sure that what the local community wanted was well publicised *before* the government designed the bulk of the legislation, because organisers believed if the local community didn't push for their concerns to be included, they would have to accept the terms made by government. When the minister responsible announced the intent to form the R4R

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[87] See Hunter Renewal's submissions campaign here – https://lockthegate.good.do/royalties/emailaction/

[88] The introduction of the *Roads and Crimes Legislation Amendment Bill 2022* restricted the rights of NSW residents to protest in public through heavy fines ($22,000) and jail time for anyone charged with blocking roads or infrastructure. A review of this law is to commence in late 2024 after public pressure.

[89] Union membership in Australia has reduced from 2.5 million people in 1976 to 1.5 million in 2016 (Gilfillan & McGann, 2018; Tattersall, 2006).

Fund and Expert Panel, Dan said: 'This announcement means it's time to recalibrate our strategy and make sure we are in on the ground level of design.'

The political window of opportunity afforded by the legislative debate was also of benefit for attracting the attention of the public. Such motivational relevance (Schutz & Embree, 2011), with its distinct and near-term objectives made it easier to convince a busy public to take part. Knowing that the carrying capacity of the public is no less restricted than government, we were explicit in our invitations about why we wanted to take people's time because their input would make a 'real difference' (8.2.1). As this facilitator says:

> *Our workshops had a clear, strategic outcome in terms of understanding that the Expert Panel was imminent and that this is a really good time to draw on people's time for this cause*. [Workshop facilitator]

The Blueprint project was initially scheduled to coincide with the NSW state election in March 2023. As we got closer to the election, Dan realised that politicians would have less capacity to look beyond issues that might secure their re-election or have them elected. Dan felt that mine rehabilitation and land use planning were the type of important but 'deeply unsexy' issues that would just not get anyone's attention at this time. Hunter Renewal decided, therefore, to launch the report locally in the short-term and wait until after the election to approach politicians at a state level, thereby aligning the timing of policy proposals to the carrying capacity of institutions (Birkland, 2007). As this facilitator noted when speaking about the timing of the workshops:

> *Inside our government systems there's only so much bandwidth to concentrate on particular issues.* [Workshop facilitator]

Since the publication of the *Blueprint* report, Hunter Renewal has made some progress, although it has been slower than anticipated because of the need to align to the carrying capacity of political players. Dan reports that politicians at both state and local levels have become more open to discussing mine rehabilitation and land use planning, as evidenced by the announcement of a NSW parliamentary inquiry into post-mine land use (NSW Government, 2024b). Additionally, through door knocking, HR have learned there is growing support in the Upper Hunter for more action on mine rehabilitation and transition more broadly. The Hunter Community Alliance have also used the work of HR on transition as the basis for their 'case for change'

which includes advocating for action on the energy transition.[90] Mine rehabilitation and post-mine land use planning was also the subject of attention for the August 2023 meeting of the Hunter Expert Panel (NSW Government, 2023b), indicating that the issues raised by Hunter Renewal are having some effect.

Bell and Reed (2021) suggest that insufficient attention has been given to the influence of temporal factors on the success of participation. As can be seen here, organisers of both the Future-proofing and Blueprint work were highly attuned to how their campaign would succeed or fail because of the temporal constraints of government. In scheduling the Future-proofing and Blueprint work to exploit political windows of opportunity, Hunter Renewal and their partners ensured that there was greater potential for community to have influence over the policy development surrounding the energy transition in the Hunter. The Future-proofing work aligned with legislative schedules, and the Blueprint work was timed to avoid the pressures of an election period. While such a sensitivity to the authorising environment is common in advocacy practice, it may not be yet as prevalent in participatory practice associated with sustainability transitions.

5.2.3.3 Conditions support alternative civic practices

As has been said several times, the knowledge needed for sustainability transitions sits across a vast range of knowledges and disciplines. If the government lacks capacity to gather such knowledges through more collaborative inquiry (5.2.3.1), rather than directing resources to incremental improvements to processes at the institutional level (i.e., better designed workshops), perhaps responsibilities for participation should be more widely extended. For example, through overlapping, ecologies of participation directed at a broad range of issues, each of which attract diverse publics, yet are coordinated toward shared goals (Chilvers & Kearnes, 2016; Hendriks & Grin, 2007). Herberg et al (2020) consider this layering of civic and corporate participation to be a more effective means to achieving success in transitions through the provision of forums where the lay public can discuss issues outside of formal channels, and then representative organisations create ‘corridors’ for this knowledge to be provided to state actors. I observed Hunter Renewal acting as such a corridor between the broader community and policy makers, helping to translate what community wanted into the

[90] See the Hunter Community Alliance website.

language and structures that government has capacity for. One organiser expressed the value of such an attitude thusly:

> *Providing a channel to say, 'we actually did speak to people, and this is what they said,' I think creates a bit of a release, a bit more space in the operation of those in the public service, and even politicians, who understand the problem perfectly well but somehow feel constrained in their ability to address it properly.*
> [Workshop organiser]

A collaborative rather than combative approach was something that others spoke of as crucial to the eventual success. One organiser said:

> *We must have the words to slip into the government's consciousness to make them do something, but also to realise that they can do something. This is not impossible. We are trying to give you the steps to do this.* [Workshop organiser]

Organisers also said there is a role for community groups to bridge the disconnects between community and industry, and ensure that animosity and distrust between these groups doesn't lead to an impasse:

> *Climate change generally is an issue where you meet person after person who understands the problem perfectly well but sees only the constraints on their own ability to do something about it. Providing a more generous space around people to say, 'you know, I am going to create for you an opportunity for you to make a different kind of decision,' I think is the only way to approach the problem. Rather than hammering people into corners and saying 'you're terrible' you're causing this. You've really screwed it up.'* [Workshop organiser]

The people I worked with for both events recognise that collective inquiry aimed toward more substantive outcomes is not easy, but it is worth it.

> *If it had been easy, then it would have been done already. We are just imagining the change we want to see and creating a platform to try to get that happening.*
> [Workshop facilitator]

> *The thing I particularly like about the work we do is that it is grounded in community. Even though it's hard and even though things take a lot longer, it humanises the whole process. We take the time to include people about what's going on around them and empower them to do something about it.*
> [Workshop facilitator]

While the government may only have capacity for orchestrated forms of participation, augmenting this with different types of participation—as we have been doing—may help government raise their overall capacity to hear what the public say. This is not about replacement but enhancement; what Eyal (2013) calls a rearrangement of relations around generous exchange (5.2.1.3). Through adding to what is already happening, no matter how small, people have been afforded a greater variety of means to participate in ways suitable for their different capacities. Through this work, therefore, we expanded the opportunities for participation at the same time as demonstrating new modes of civic conversations. We created the conditions through which alternative civic practices were made more possible.

David Graeber (2007) has said that projects which seek to creatively expand the ambition of democratic practice often fail when they meet the immovable structures of bureaucracy; where the 'heaviness' of the regulatory objects suppress the ambitions of groups trying to do democracy differently. The influencing factors in this section demonstrate that the potential for the local community to shape their futures is determined by addressing these bureaucratic structures head on, but with a sensitivity that invites further collaboration. Doing so is not always glamorous, because it is often about designing the more mundane, backstage conditions that support these participatory performances. Such tactics are common for community groups:

> *None of us are here because we want to become famous or win big grant money. That's not anything that drives any of us. We're here because we believe in bringing together community voices and offering a pathway for community to be part of the process that determines our future.* [Workshop organiser]

In summary

Making headway on sustainability transitions relies on overcoming several limiting factors to transformation of our social, political, and economic systems (Avelino et al., 2016; Scoones, Leach, & Newell, 2015; Smith & Stirling, 2010). Previous literature on public participation has emphasised how activities can be designed to be more inclusive and accessible but have not always addressed the larger socio-political factors that determine whether people's participation will have any influence on the development of policy.

The socio-political factors discussed in this section were framed using the heuristics of access, standing, and influence from Susan Senecah's *Trinity of Voice* model (2004). *Access* is about creating the potential for people to be heard. *Standing* is about creating potential for people to be respected as local experts. *Influence* is about giving community the potential to contribute to change. I have shown that access and standing are found by adopting a substantive orientation toward participation, and this leads to the creating of conditions whereby the public can perform their expertise and have their contributions taken more seriously by decision-makers—leading hopefully to change. None of the factors discussed in this chapter alone will help to influence how public participation proceeds in sustainability transitions but addressing them together may just provide a way forward.

5.3 What roles might designers play in supporting public participation in sustainability transitions?

To approach this third question, I worked for almost three years in a voluntary capacity as a designer with a community advocacy network in a coal mining area of regional Australia. Through this work I have been able to explore different roles for designers in the field and fill empirical gaps in knowledge of the role of design in sustainability transitions, a gap in knowledge which has been noted in the literature (Ceschin & Gaziulusoy, 2020; Gaziulusoy & Ryan, 2017; Hyysalo et al., 2019; Lähteenoja et al., 2023).

This section begins with a revealing story of how design as a field was understood by my collaborators in the Future-proofing project. Following this, using examples from the fieldwork, I will introduce several roles that bridge the gap between design in theory and design in practice.

5.3.1 'I don't know what you mean by designer'

A few months after the Future-proofing work ended, I asked one of the organisers what contributions I had made as a designer to support their work. They replied, 'I don't know what you mean by designer, Kimberley.' That a colleague was unable to articulate what knowledges and skills I had brought to the project highlighted a broader trend. Throughout this research I have noticed that people hold different images or mental models of 'designer,' and that these differing images have caused tensions when attempting to work collaboratively. Legibility is a useful concept with which to begin to analyse these phenomena.

In Kevin Lynch's seminal work, *The Image of the City* (1960) he describes how a city becomes 'legible' as people begin to recognise its different elements—all the paths, edges, landmarks, nodes, and districts which make up the urban conglomeration. When these elements gain clarity for people, patterns form that allow them to create coherent images of the environment, enabling them to navigate the city and to develop shared mental models with fellow citizens that help them live together. Lynch suggests that it is important to draw on these patterns when planning cities so that even new and complex environments feel familiar and legible for people.

In transition management theory, the transition arena is the space where groups of diverse actors develop shared understanding of sustainability transition problems and

collectively experiment with 'constellation of governance innovations' to address them (Loorbach et al., 2015, p. 54). This is an evolving space where actors may cycle in and out as the experiments change in nature, developing interconnected transition paths aimed at a shared vision (Loorbach, 2010). One could therefore conceive of transition arenas as spaces that, like cities, consist of diverse elements, paths, and actors with a plurality of knowledges and diverse perspectives working across various locations, scales, and times.[91] Legibility of the transition arena allows actors to work together. If a designer is invited to this arena, and the other actors are unable to develop a recognisable image of what designers do and how their work fits with other roles, collectively navigating the arena and its problems will be difficult.

If I had made more legible the different elements that form the role of 'the designer' it may have reduced some of the tensions with working with others in this transition arena. For example, as the quote below shows, for this organiser it appeared that I was overstepping boundaries of what roles I should be playing when I began to design the activities for the Future-proofing workshops:

> *An outcome of the time and head space that you had meant you ended up leading at times. I guess that wouldn't be a problem if we named it at the start: if we named that you were one of the leaders of the project and we had delegated that responsibility to you in that way. Then it wouldn't be as much of an issue.*
> [Future-proofing organiser]

Organisers said that the tensions would not have arisen if we had named my role at the start. Schön (1983) says that naming the things we will attend to helps to frame how we will approach a problem collectively. This includes role boundaries that describe what will and won't be done (McKercher, 2023). As Schön points out, conflict arises when role boundaries are not named because people then apply their own expectations to the role. People in the organising team, at least at the beginning, viewed design primarily as a creative practice and had not considered as having a relationship to the complex problems that we were tackling in the transitions space. I now realise I should have named the elements and edges of my role so that my place in the work became legible to them. As this organiser said:

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[91] This description of transition spaces comes from Lawhon and Murphy (2012), Selkirk et al. (2019), and Urquiza et al. (2018).

> *As a designer it would have been good to have something that explained your process and methodology and your role for the broader team. "You can come to me for this, I can help you with that". Something that makes accessing and understanding what you were doing at any given time clear. It needs to be something that the core team can drop in and out of.* [Future-proofing organiser]

The person above is describing the legibility of the designer's role like Lynch's elements of a city. They stress the importance of being able to know where they are and how they fit into what a designer is doing even if their work is irregular. As I did not name the things to which I would attend, people felt lost. As this organiser said:

> *There were probably a few moments where it felt like we weren't in control, as HJA and Hunter Renewal, the people putting their names to this work. Because you were ahead of the game all the time it meant that you set direction and set the pace somewhat. But I was like "woah woah woah, back up, is this actually the direction we want to go in?* [Future-proofing organiser]

Such a situation reveals a challenge for any designer wishing to work in the transition or community organising space: if people don't understand what designers can do, their intentions may be questioned. Therefore, when starting out in transitions work with communities and community organisations, designers need to name the boundaries of their role and make their practice legible for others. With this in mind, Dan from Hunter Renewal suggested that we write up my job description which can be read on the next page.

Dan and I talked about this job description as guidelines to be established ahead of practice. Establishing the boundaries of work is something I would always do in a professional, paid context but did not do in this instance, revealing I was being more informal with my approach. Was I lessening the status of this grassroots work by being so ill-defined in my role? Creating a role description ahead of working with a grassroots organisation then becomes not only a crucial practice of naming the things of the situation, but also a mark of respect. It solidifies the intent and boundaries of the work and shows that learning how to be together in a collective is an important part of the work that should not be discounted just because the rate of pay is.

5.3.2 Role description for a designer in sustainability transitions

The Position: Engagement design lead

To ensure an equitable and sustainable transition away from fossil fuel dependence in the Hunter Valley we must listen to communities. This position is part of a research and advocacy team dedicated to ensuring that community needs and ideas for a just future are heard by decision-makers. The role will help build research and engagement frameworks that help us assist communities at the frontline of transition.

As well as being an amazing toolbox of ideas for how to conduct community engagement, you're flexible, patient, and comfortable with working in a diverse team in a resource-light environment. You are as interested in producing well-crafted artefacts as you are in synthesising the detail of policy and research data.

The Engagement Design Lead will be responsible for:

Research

- Identifying appropriate tools to gather community input to suit research objectives.
- Streamlining research and design methods to suit diverse capabilities.
- Undertaking qualitative research programs using a range of methodologies.
- Synthesis and presentation of research data.
- Writing and editing of report content with a team.

Engagement

- Workshop design and preparation of workshop materials.
- Training of workshop facilitators.
- Developing long-term engagement plans that allow for the capacities of communities.
- Prototyping and testing new engagement methods.

Collaboration

- Developing connections with other research groups in the Hunter to share learnings.
- Developing connections with grassroots networks in other areas to share methods.
- Maintaining connections with your own communities of practice to ensure professional development and knowledge exchange which furthers the groups aims.

Communication design

- Graphic design and production of reports.
- Visualising data.

Systems and process improvement

- Developing ways to ensure the team understand your value to the organisation and how to engage you.
- Developing internal systems that support your role.
- Running reflection sessions with the team to allow for iteration and improvement.
- Initiating regular check-ins and updates to get the team up-to-speed on your work.

Interestingly, although Dan and I wrote the role description, we did not use it formally as a type of contract to guide how we worked together. It was written but not referred to again. In an interview with one of the academic panellists for the Blueprint, they described the creation of similar contracts as a process of 'learning how to agree.' They said that often people will complain that creating contracts requires a lot of effort only for the documents to be placed on a shelf and never referred to again. Yet, the panellist emphasised, it is the process of contract creation that helps a collective understand how they will work together and how they learn to agree. As they said in the interview:

> *You're practising, and there's that notion if you're going to do something difficult, don't do the difficult thing right away. You build up to it.* [Academic panellist]

The creation of the contract—or role description—is therefore practice for the difficult things to come. As illustrated by the quotes at the start of this section, I did not do this for the Future-proofing work. Instead, I rushed into the project and did not take the time to negotiate with my team mates on how we would work together. This is why there were tensions. The time expended in learning how to agree may have created more favourable conditions for collective work.

As my engagement with HR stretched into years, Dan and I had more time to develop together how we would work. This time enabled us to be more fluid with our roles than we would have been in a conventional client/designer relationship. Our deep trust meant we could be open to swapping roles when one person was unable to take the load. I took one meeting for her with a government department for example, and Dan remarked more than a few times that she now realised that many of the things she was doing she could now see as design where she had not before. If there had been too many immovable boundaries over what I was meant to do as "designer," Dan may not have felt comfortable in doing some of these 'designerly'[92] tasks herself.

Taking a sociology of expertise approach to this (see 2.1.2), rather than making definitive claims over the boundaries of what she or I would or would not do, we developed the conditions under which the tasks could be accomplished by all who needed to be involved. These conditions were grounded in the development of familiarity and trust over time. This suggests that in situations where there is more

[92] This phrase comes from Nigel Cross (2006) who first used it to describe the common ways that designers think and act in professional design practice.

time to 'move at the speed of trust,'[93] there is less need for defined boundaries around roles. The rapid pace of the Future-proofing work required more defined boundaries which became less needed as Dan and I developed our partnership.

Naming the things to which we will attend does not mean, therefore, creating impenetrable borders and defending claims to skill boundaries. Heckert (2019) has suggested that, at least in anarchist and activist practice, there needs to be a certain fluidity of roles; a playfulness which allows for emergence in strengths and experimentation with skills. Being too focused on representation of role, Heckert writes, means we are less able to concern ourselves with relations. Allowing for a greater fluidity in roles therefore reduces any sense of hierarchy and strict boundaries around what I should or should not do as "designer". Instead of sticking to an exacting script, my performance as a designer within an activist collective should be described in more improvisational terms, with loose guidelines based on what needs to be achieved rather than specifying who must do what and how.

Yet there is more to it than this. I wish to return to a question I posed in the literature review—can everyone who designs do this, or does one need to be an 'expert designer'? As will be seen later in this section, I have been able to recognise patterns in the participatory activities Dan and I have produced and then inscribe them as a model (section E). This has given Dan a framework she can repeat in the future without having the cognitive burden of remembering what it was that we did together. I have therefore applied one of the cognitive attributes of designers identified by Lawson, Cross and others (see section 2.1.2) of the capacity to retrieve suitable strategies from repeated experience, but also extended this in a way to create the conditions for others to act in a designerly way. Not everyone can recognise the patterns to create repeatable models, but people can follow these models.

The model, though, is not a prescriptive toolkit or definitive script. It was created over time as I was immersed in the work and adapt it through reflecting with others on what worked and what did not. Handing over premade toolkit without the relational immersion would have been *presumptive,*[94] because it would imply I know what the problem is and how to approach solving it without necessarily having any experience

[93] Brown, 2017, p.27.

[94] Comment during a supervisor meeting with Abby Mellick Lopes.

in the situation. Toolkits in this sense are solutionist, because rather than opening a generous space for problem posing they offer quick fixes (Flesler, Neidhardt, & Ober, 2021). Instead of toolkits, Mellick Lopes and Healy (2021) suggest applying a language of adaptable patterns that can be sequenced in different ways depending on the problems at hand and scale of the project.[95] An example of this relational patterning in practice comes from Dan, and is one of my favourite quotes from our interviews:

> *If we had just contracted you to help us work out how to run these workshops, there wouldn't have been all the conversations, and we wouldn't have created the kind of relationship that we did. It was very flexible and so comfortable. Having that level of trust was why it turned out to be so bloody excellent in the end. It was a very good experience; we made a very nice cake. I couldn't be happier, it was brilliant.* [Dan, Hunter Renewal]

5.3.3 A framework for design activism in sustainability transitions

There is no time to tinker around the edges. There is an urgent need to transform our social, political, and economic systems if we are to survive. Nortje Marres (2023) asks therefore, if current modes of political debate and public consultation about the impending climate catastrophe 'can be translated into action in the world' (p. 978). Rather than wait to see if any of the old models will work, over the past two and a half years I have been working as a designer in a grassroots organisation to prefigure and apply reimagined civic practices. Through experimenting with these participatory modes, we have shown how the public can play a more active role in defining and visioning a preferable future. This has meant embracing a new role as a design activist.

I have created the framework below (**Illustration 7** below), building upon the adapted model of the transition design process (Figure 5), and the combined model of design activism, transition design, and transition management (Table 1). It shows how the phases of the design activism process—*relate*, *reveal, contest, redefine*—sit on a pathway to a future vision within a transition arena. The design roles (*A-G*) are loosely aligned to the design activism phases and support the participation of the public in sustainability transitions, primarily through civic experiments. The roles sit along the transition pathway in relation to the *short- to mid-term* visions from Hunter Renewal

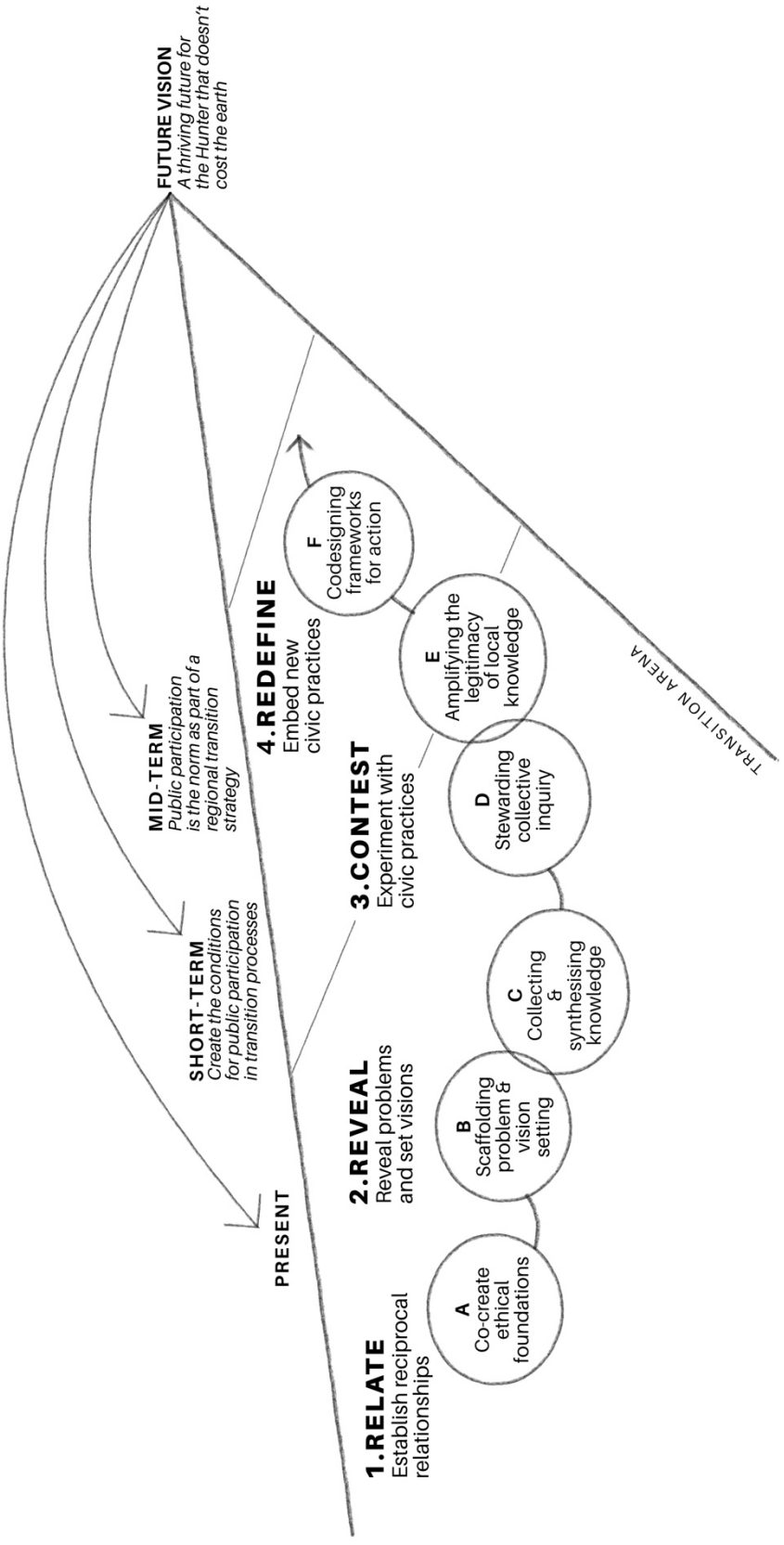
[95] Their suggestion here builds on the 'pattern language' work developed by Christopher Alexander and his colleagues at the Center for Environmental Structure. See Alexander et al (1977).

and the communities they represent. These visions have come from the *Hunter Renewal Roadmap* and through dialogue with Dan their lead organiser. The roles and visions in this framework represent just one possible path amongst all the interdependent projects of the energy transition in the Hunter Valley. As mentioned above, this framework is a set of repeatable but not prescriptive patterns. A table listing the dominant design practices and key tasks that correspond to each design role is below (**Table 6**), followed by longer descriptions of each of the roles.

Table 6
Roles, dominant design practice, key tasks, supporting factors for design activism.

DESIGN ACTIVIST FRAMEWORK	SUPPORTING DESIGN ROLES	DOMINANT DESIGN PRACTICE & KEY TASKS
1-RELATE **Establish reciprocal relationships**	(A) Co-create ethical foundations	**Design activism** Establish ethical relationships based on reciprocity and trust. Collectively determine the ethics of engagement that shape how the group might (and should) work together.
2- REVEAL **Reveal problems and set visions**	(B) Scaffolding problem & vision setting	**Transition design, visual communication, information design** Map the problem space; Identify windows of opportunity; create boundary objects to enable negotiation and development of shared understanding; co-create visions.
	(C) Collecting & synthesising knowledge	**Design research** Identify appropriate research methods based on problem and vision; undertake or guide appropriate research; synthesise and translate for use by community.
3- CONTEST **Experiment with civic practices**	(D) Stewarding collective inquiry	**Participatory design** Design workshop activities and materials; train workshop facilitators.
	(E) Amplifying the legitimacy of local knowledge	**Visual communication and information design** Design of artefacts to support advocacy.
4- REDEFINE **Embed new civic practices**	(F) Codesigning frameworks for action	**Community-based participatory design** Develop long-term engagement plans; identify where a design-led approach is needed.

Illustration 7
A framework for design activism in sustainability transitions.



A. Co-create ethical foundations

Dominant modes of design practice: Design activism
Key tasks: Establish ethical relationships based on reciprocity and trust. Collectively determine the ethics of engagement that shape how the group might (and should) work together.
Supporting factors: Trust.

DiSalvo (2022) suggests that forms of exploitation unfortunately exist in research and design-led research where communities do not benefit equally from the work, and where inequality is embedded. Establishing a trusted relationship with Hunter Renewal was the foundation to all the good work from the engagement. Trust came at first through a clear articulation of the value that I could bring to them (communication design skills) and was co-created and developed over time by remaining as someone 'in service' to rather than attempting to act upon existing situations in a way that centralised my own research needs (see section 4.1).

The ethics of reciprocal practice did not change over the three or so years we worked together. Though the boundaries of the work were fluid and, at times, illegible until made explicit (see 5.3.2), an ethics of engagement for a designer working in grassroots, political activity is built upon establishing trusted relationships, an understanding of the political and social situation in which the work is happening (see 'Mapping the problem space' below), and a critical acceptance of the existing organising strategies of community-organising work.

B. Scaffolding problem & vision setting

Dominant modes of design practice: Transition design, visual communication, information design
Key tasks: Map the problem space; identify windows of opportunity for action; design boundary objects, co-create visions.
Supporting factors: Political windows of opportunity exploited; Community invited in their capacity as local experts; Debate framed with generous constraint.

During this phase a group of actors work together to identify, define, and frame problems to create shared understandings of the challenges they face. In doing so, people participate 'in the tricky work of *setting* the terms by which designing takes place (Agid, 2019, my emphasis). *Problem setting* here is distinguished from *problem solving* which can be considered more of a rationalist approach to dividing problems into component parts for easier analysis, thereby distancing the problem from the

social situation (Fischer, 2000).[96] In contrast, problem setting—when applied in a strategic design context where tactics for action are required in a complex space[97]—does not assume that knowledge about a problem can be sufficiently developed from outside of the context of that problem, nor separated from the people implicated by its operation in the world. Problem setting is therefore a collaborative exercise where we collectively question what is at the heart of the issue or issues we seek to address.

Mapping the problem space

As has been covered in section 2.1.3.4, in transition design, the process of mapping the problem and stakeholder space ideally assists groups move beyond the identification of problems to making plans to address them. This process must be done collectively with people impacted by the problem to reveal connections between actors, interdependencies, and the roots of problems (Irwin, 2018). Unveiling as many different stakeholder perspectives about the issue as possible will ensure that the problem space is not prematurely narrowed. Terry Irwin (ibid.) suggests that adding a design-led component to stakeholder mapping helps 'educate, clarify and facilitate new behaviours and outcomes and permeate socio-technical systems' (p. 975). Although Dan from Hunter Renewal has said she would never have previously considered what she did design *per se*, she has been mapping the problem space since Hunter Renewal's inception in 2017 and has used various artefacts to communicate the challenges of transition to 'as many politicians, decision-makers, and politicians as we could' (interview with Dan).

Other organisations in the Hunter have also been mapping the problem and stakeholder spaces. For example, at the beginning of my PhD in early 2021 when making connections in the Hunter Valley, a researcher from Beyond Zero Emissions (BZE) approached me to assist them in co-creating a stakeholder map of organisations

[96] Fischer draws upon both Paolo Freire and Donald Schön here. Freire used the term 'problem posing' to define, in education settings, processes by which students work with teachers to coproduce knowledge rather than simply receiving information from them (Freire called this approach 'banking'). The posing of questions leads to discovering interrelated issues and a deeper understanding of the problems in 'the total context' (Freire, 2005 [1970], p. 81). The term 'problem setting' is attributed to Donald Schön who said: 'Problem setting is a process in which, interactively, we *name* the things to which we will attend, and *frame* the context in which we will attend to them' (1983, p. 40, emphasis in original).' For Schön this was a 'conversation with the situation.'

[97] Definition from Karine De Mello Friere (2017).

in the region implicated by the transition away from coal mining (**Diagram 10**).[98] Over several weeks, the BZE researcher and I mapped and connected actors and organisations using different online tools. The map here was used by BZE to explain to others the complexity of the situation in the Hunter and how easy fixes were simply not possible with so many interdependencies. The mapping was therefore a tool that enabled the expansion in understanding of the problem space at a particular time.

Diagram 10
Stakeholder map of the Hunter transition created with BZE.

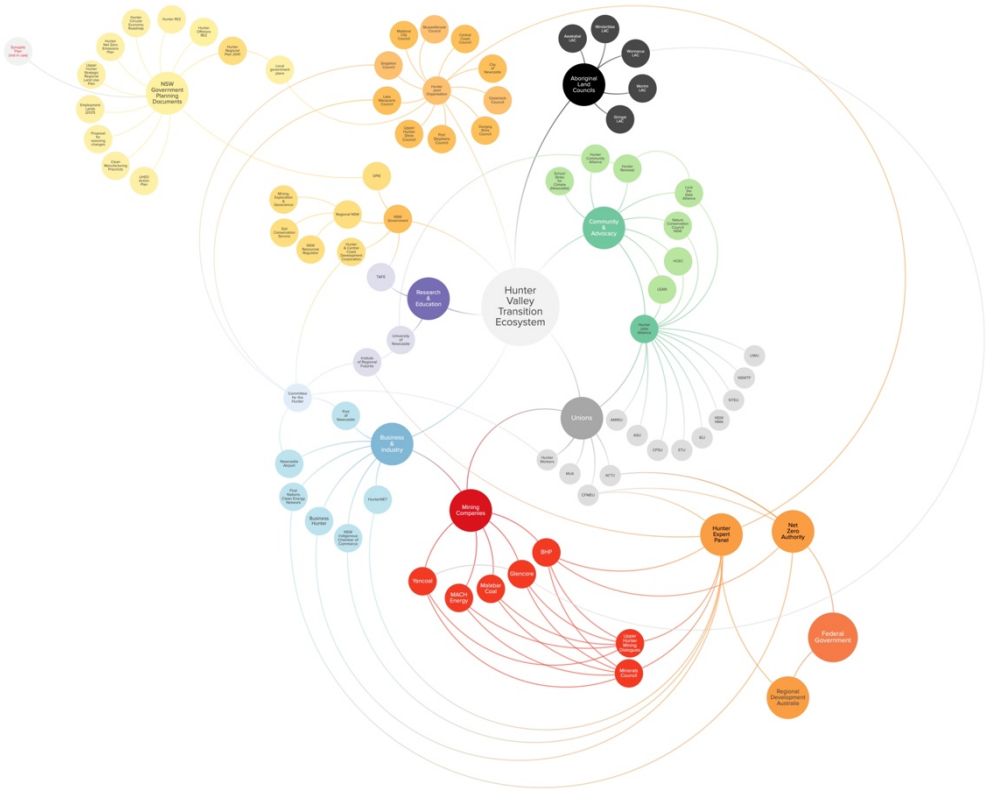
Since this map was created, many of the organisations on the map have shut down, and new alliances have been made, making this mapping only useful in analysis of a past point in the Hunter's transition history. The centralisation in the visual of BZE, while helpful for their needs, also offers just one interpretation of connections. As a map it therefore reveals little of the ecology of solutions or system interventions that might be possible (Irwin, 2019b; Irwin & Kossoff, 2024).

I later radically simplified the stakeholder map at the request of Hunter Renewal so that it could be more useful for them (**Diagram 11**). This development from complex to simple is an example of the way that designers consider problems at several levels,

[98] Larger versions of these and other diagrams from this thesis can be viewed on Miro at: https://miro.com/app/board/uXjVM4rw9PU=/?share_link_id=977385894764

moving up and down scales to address different implications of problems (Cross, 2003; 2004). While this simplified map offers relatively few insights beyond abstracted notions of who is linked to whom at a very specific point in time, it has been helpful as a boundary object during our conversations about ever changing 'lay of the land,' as Dan calls it. Doing this mapping also built my understanding of the political and social conditions in which Hunter Renewal was working.

Diagram 11
Simplified stakeholder map created for Hunter Renewal.



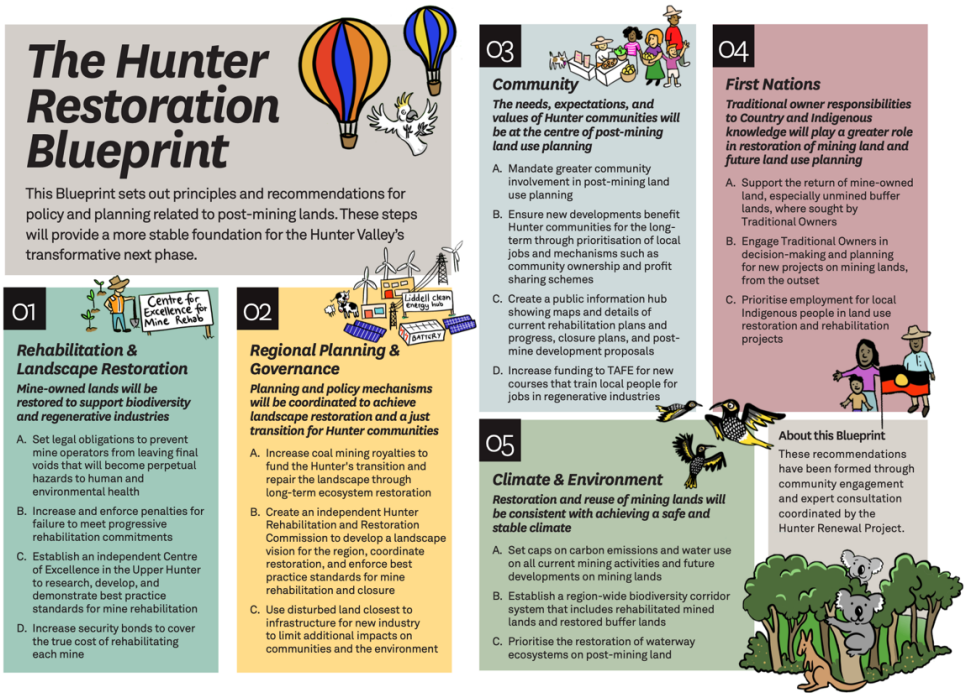
There is a problem however with simplification of the problem space. If done prematurely, it may result in people deferring action, assuming that the issues are more easily solvable than they actually are. This demonstrates how design disciplines such as visual communication can be used to persuade or restrict understanding (see 2.1.3.1). Narrowing a problem space can be politicised when, for example, energy transitions are condensed to a small set of employment and economic concerns. This narrowing serves political interests to delay the transition thereby benefitting existing dominant players in industry (see 1.4). Setting the problem of energy transitions more broadly was a key aim of the Blueprint work because Hunter Renewal wished to

demonstrate to decision-makers and community that energy transitions entail more than a switch of energy sources from fossil fuels to renewables. They therefore require more attention than they are being currently given.

During the early work for the Blueprint, I created both internally-facing and externally-aimed “maps” or representations of the problem space. Internal representations were created to recruit academics to the panel (**Diagram 12**), and external representations made to assist public understanding of the problem space (**Diagram 13**). As can be seen by these two examples, the visual form of a “map” can vary greatly depending on the function. To recruit academics, we needed something that appeared rational and considered (and unfinished, note the text is red). For the public we needed to visualise the problem more attractively to entice them to engage. These choices are core skills of visual communication and information designers.

Diagram 12
Map of the problem space for recruitment of academic panel.

Diagram 13
Illustrative map of the problem space for community.



Identifying windows of opportunity for action

One of the gaps that has been identified in the framework of transition design is a means for transition designers to identify points in the system to intervene (Mulder & van Selm, 2018). My research entailed over 370 hours of working closely with Hunter Renewal, affording me ample opportunities to observe how such identification was done and then, later, when I was more familiar with the problem space, co-identify with my colleagues where interventions were required and might have more impact.

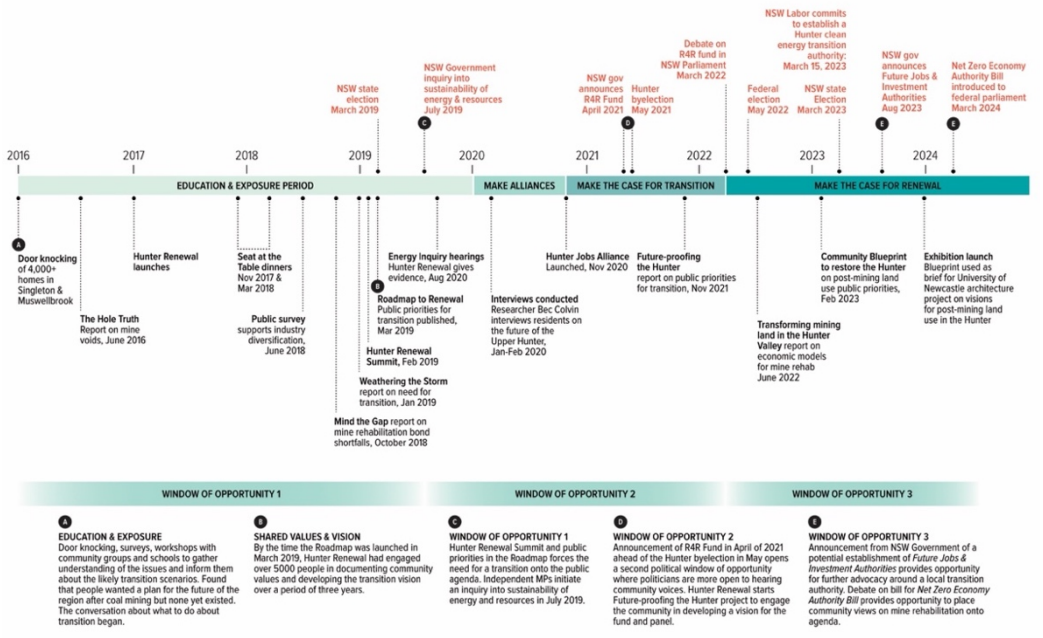
Advocacy networks are well versed in identifying these points to intervene—or windows of opportunity—as they are often key points at which these groups can affect change in public policy (5.2.3.2). Through my expertise as an information designer, I was able to visualise these individual moments in relation to one another. Without the guidance of Dan, though, my attempts at locating the points of intervention may have been more difficult. In fact, during one reflection session with Dan she commented that some of my hunches were only helpful for my research and not for their work:

> *There's lots of rabbit holes that you went down that may have helped your PhD but didn't make the cut into what we could include in our project.*
> [Dan, Hunter Renewal]

Such a comment emphasised the need for a humble approach to mapping the problem space in the transition. As an outsider, I saw things that were important to me but not to the community group I was working with.

Our collective problem identification has continued. In April 2024 as the *Net Zero Economic Authority Bill*[99] was moving through federal parliament, Dan reviewed a timeline I was creating (**Diagram 14**). She said it helped her to see the whole journey that HR had been on, as she was often 'too much in the weeds.' The timeline helped Dan to 'see the possibilities of what is next.' This map, then, acted both as a mapping of the historical trajectory of the problem but also as an artefact that gave Dan a different perspective on her previous work in relation to what she was currently doing. As Schultz and Barnett (2015) have said about their CRM mapping approach, tracing the flows between the past and future helps describe what should be done in the present. Together, Dan and I edited the map and added in another 'window of opportunity' to align with debate around the Net Zero Economic Authority, offering HR another opportunity to raise their concerns around a broader view of energy transitions, and to push for greater transparency and participation in the activities of the authority.

Diagram 14
Timeline of key windows of opportunity from Hunter Renewal's work.



[99] This will be a federal body with an agenda focused on creating investments in alternatives to fossil fuel industries as well as support for fossil fuel workers to change industries (Commonwealth, 2024).

Designing boundary objects

I made several artefacts for Hunter Renewal to help develop shared understanding of problems. These artefacts have acted as boundary objects that have mediated between different stakeholders across disciplines and allowed for negotiations in a complex environment through making the views of multiple stakeholders explicit (Star 2016[1988]). As one interview participant said of the workshop:

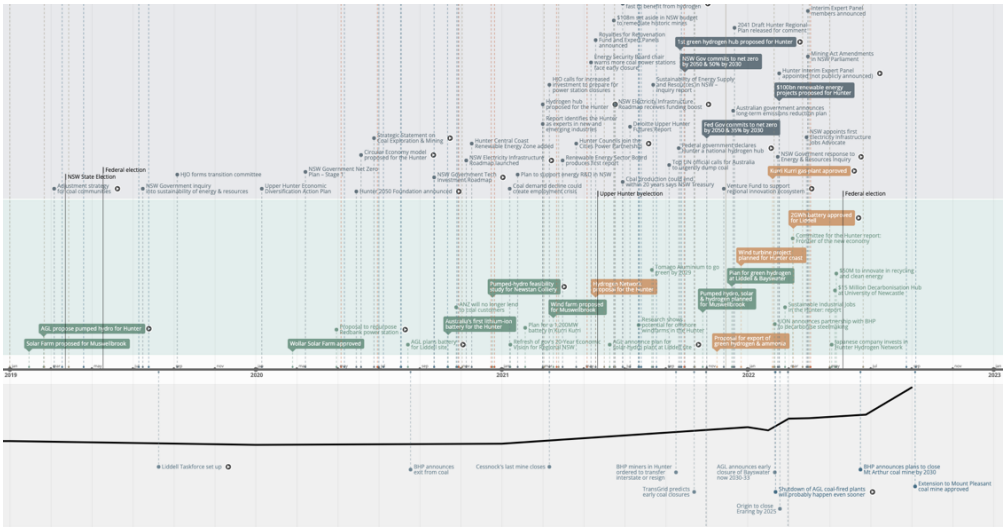
> *… obviously people had done a lot of research… providing the quotes and giving stuff to draw the conversation out of the public and give people something to focus on and talk about and maybe trigger ideas. I thought it was good.*
> [Workshop participant]

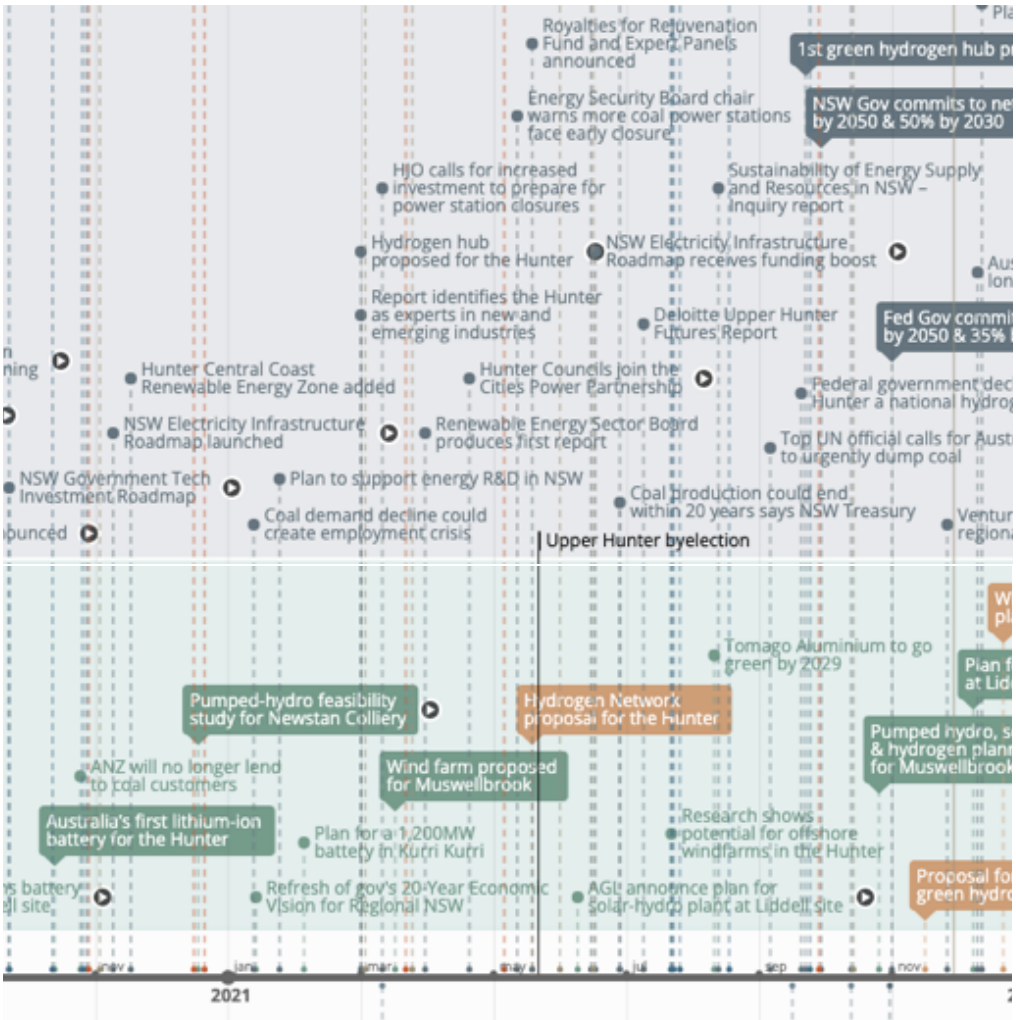
Another artefact created for Hunter Renewal is a more detailed timeline of the Hunter transition (**Diagram 15** overleaf). It depicts key events across multiple streams of industry, government, and community. Dan and I have been continuing to add to this map, and she sees it will be useful for a long time for HR and for others. For example, it has acted as a conversation prompt for Dan when asking community organisers and interest groups in the Hunter Valley to recall key events that have led to the current situation of this energy transition. The design of this artefact highlights a skill of visual communication and information designers to situate the detail of the local aspects of transition in relation to the larger-scale global and systemic structures that ultimately shape how transitions proceed (Cross 2003; 2004). By mapping the relations of people and organisations to legislation, policy decisions, time, and other factors like the price of coal, this artefact makes visible the connections that might otherwise remain hidden. As a reflexive tool the mapping also enhanced my understanding of the system, a type of thinking in the making, or research through design (Frayling, 1993).

Co-creating visions of new systems and practices

The shaping of visions in transition management (see 2.2.3) is theorised as being almost exclusively the realm of technical elites, leaving limited scope for public participation. In contrast, transition design (TD) suggests that visions should be co-created with all those affected. These visions of the future then act as relatable but powerful ‘magnets’ for all participants to aspire to, as well as shaping the objectives to which projects in the present can be aimed (Irwin & Kossoff, 2024). The visions ‘reach toward a world that our minds imagine, but our current behaviour does not support’ (du Plessis, 2015, p. 2).

Diagram 15
Timeline of Hunter transition events created for Hunter Renewal (including detail).





Hunter Renewal started visioning with the Upper Hunter community more than five years ago through workshops held in community halls, schools, and local clubs. Dan speaks often of the piles of sticky notes she still has in the corner of her office from these sessions. They are bent and torn, but still organised based on the key questions of what do we love about our region; what do we want our region to look like post-coal; and how do we get there from here?

In 2019, the *Hunter Renewal Roadmap* was published following two years of direct community engagement and collaborative generation[100] (see appendices 8.4.3). The vision was aimed at 'planning for a healthy and prosperous future' for the Hunter and offered several short- to medium-term strategies for achieving a vision of 'a thriving future for our region that doesn't cost the earth' (Hunter Renewal, 2019). In 2023 this vision was built upon in our workshops for the *Restoration Blueprint* which stated that 'to unlock the opportunities of the future, we must first clean up the legacy of the past' (Hunter Renewal, 2023).

Such a vision links ecological restoration to transition design, as Madeline Sides has found in case studies of transition design within forest restoration projects in the United States (2023a; 2023b). She suggests that the restorative work of transition design is in creating both short-term projects to repair damaged ecological systems and designing for the long-term project of transformation by establishing alternative and repeatable ways for communities to take collective action in the future. TD has a role to play here, Sides suggests, in linking together these interventions—whether expert or community-led—across time by materialising the visions and plans. The linking between the smaller interventions form 'ecologies of systems interventions' (Irwin & Kossoff, 2024), where short- to mid-term projects within known boundaries are amplified and linked to form an ecology of solutions (Irwin, 2019b). As one of the Future-proofing organisers said in an interview:

> *There's no one thing that's going to solve this, you just do one thing after another, and you try to maintain for yourself a sense of your values, your framework, and your understanding of the context that you're in, and the principles that you're operating under.* [Workshop organiser]

[100] https://www.hunterrenewal.org.au/roadmap_to_renewal

The Future-proofing and Blueprint work therefore represent two short-term interventions working toward the shared longer-term goals of a restored Hunter (Illustration 6). My role was to design artefacts to scaffold problem setting in the present and to help link these short-term interventions to the longer-term vision. The reports for both projects therefore articulate 'an agenda for future negotiation' (Guba & Lincoln, 1989) as they contain several ideas for future projects that can contribute to the overall vision in the future. My role therefore demonstrates a skill that Tonkinwise (2024) suggests is necessary for transition designers 'to attend more strategically to opportunities beyond their current context, enabling them to shift from being problem-solvers to being wider change agents' (p. 287).

C. Collecting & synthesising knowledge

Dominant modes of design practice: Design research
Key tasks: Identify research methods; conduct research; synthesise and translate results.
Supporting factors: Debate framed with generous constraint; Sensitivity to the authorising environment; Political windows of opportunity are exploited.

Once relationships are built, problems are identified, and visions articulated, a deeper understanding of the problem space is required. Designers have long used research methods as a foundation to their inquiries; a tradition in western paradigms that can be traced back to the science of design approach of Horst Rittel and others in the early 1960s (Bayazit, 2004; Cross, 2007; Protzen & Harris, 2010). The use of research *through* design is where design methods are used to generate understanding (Frayling, 1993; Stappers & Giacardi, 2014). As the objects of design have expanded (see 2.1.1) so too has the scope of what designers need to research to gain understanding of these objects. In this light, some suggest that designers working in transitions need to develop a deeper understanding of the realities of the economic, legislative, and political structures that steer systems transformation (Boehnert, 2017; Boehnert, Lockton, & Mulder, 2018; Ceschin & Gaziulusoy, 2016; DiSalvo, 2015; Sangiorgi, 2010; White, 2015).There is a role in sustainability transitions for designers who have research skills, can distil core concepts, synthesise from across knowledge banks, and translate this data into a form that is accessible to broader audiences.

Since inception, Hunter Renewal have followed a relatively established path toward developing understanding through research. The process is as follows. They first identify what they see as the boundaries of the problem space, take this to community

for further negotiation and interpretation, then have researchers or research organisations produce papers on related topics through deeper inquiry. The results of this initial research are then synthesised, translated, and materialised for distribution and communication. Their process is aimed at providing a depth and breadth of evidence that can be used in negotiations with government about policy and legislation, and to develop legitimacy that inspires further collective action toward transitions. Albeit not named as such by Dan, this process is not unlike the divergence and convergence of the design process (Figure 9 in section 5.2.2.1).

Crucial to design research is the process of synthesis which involves the organisation and 'pruning' of information into more comprehensible structures that can be used to produce knowledge (Kolko, 2009). Synthesis as a process is often not articulated by designers which leads to their clients believing that creative leaps were made to insights instead of exposing that there is intentional and expert labour in moving from data to knowledge (Kolko, 2009; 2011). During both workshop series, the laborious task of synthesising technoscientific information from existing reports became a working example of the impenetrability of the planning system (see 4.1 and 4.2). For Future-proofing, the categories were determined by Hunter Jobs Alliance. For the Blueprint work I selected the underlying framework for synthesis using a model from Arratia-Solar et al. (2022). By this stage, I had been working with Hunter Renewal for almost two years, meaning I had a deeper knowledge of the territory from which to select an appropriate framework to guide our inquiry. Dan remarked how helpful it was that I had found this categorising framework:

> *As a designer it was super valuable that you found that category inspiration early on and proposed it as a framework. It cut out a lot of work that we would have had to do in finding a framework that narrows the focus but is still broad enough to encompass the key elements were that we needed. This set us off in the right direction and we didn't waver. It helped keep us on track.* [Dan, Hunter Renewal]

For the *Blueprint*, data from around 270 individual reports were synthesised to produce the initial principles and recommendations. By doing this for the broader community ahead of engagement, we provided a translation of core concepts which could be understood more easily and then built upon by people in the local community with their deep contextual knowledge.

Unfortunately, because the time available for synthesis was quite short there was no time to engage the broader community in synthesis. Part of this lack of capacity may have an element of control, however. As has been documented by Shana Agid (2016) in their work with communities at risk of over-policing in Oakland, Agid went through a process of 'letting go' of controlling processes so that participatory knowledge making could take place with the whole stakeholder group. I was perhaps not as effective as Agid in letting go, as evidenced by something Dan said in an interview about how much of the synthesis I did:

> *For me it was like overwhelmingly too much information, and it was hard for me to find the time to appreciate the depth of detail. I wanted to say, "slow down".*
> [Dan, Hunter Renewal]

There are, therefore, questions remaining as to whether I spent enough effort to let go and allocate the time to more fully coproduce knowledge with the local community—including community representatives in the organising teams. Nevertheless, my skills in synthesis were welcomed by my busy colleagues, as they focused on other parts of the work such as recruitment, publicity, and advocacy to government. I recognise now that synthesis as a "backstage" element to the work is a particularly useful task for an outside design researcher to conduct, because it means that the community organisers like Dan can take on more of the "frontstage" work in connecting with community and government. Dan said of how I collated the work of others:

> *What I see your oddest skill is you've been a scrapbooker. You've collated stuff, forests of stuff. And not just our stuff, but the work of others. You've brought it all together as a fresh proposal but ensuring that everyone gets a nod.*[101]
> [Dan, Hunter Renewal]

Other organisers also recognised the value of this work:

> *You can see the grunt work on narrowing down the options has paid off as we've ended up with very practical stuff that legitimately reflects concerns and world views. These are actionable projects we can push that will be effective and seen to be effective I would think.* [Workshop organiser]

[101] By this she means my citation practice.

D. Stewarding collective inquiry

Dominant modes of design practice: Participatory design
Key tasks: Design workshop activities and materials; train facilitators
Supporting factors: Organisers have a substantive orientation to participation; Community invited in their capacity as local experts; Settings staged for generous exchange; Conditions support alternative civic practices.

In conventional inquiry models for policy making, evidence is gathered by experts about problems that have been framed by decision-makers (2.2.2). The evidence so gathered therefore most often fits into a framing set by those in power (Turnhout, 2024; Weller, 2019). Anything outside of this framing is considered illegitimate or superfluous knowledge because the problem has been set deliberately narrow to make it appear easier to solve (Brown, 2010). Such structure predetermines the nature of the knowledge that will be gathered and leaves little room for broader exploration nor a compelling argument for contextual inquiry.

Contemporary thinking about the nature of socio-environmental problems like sustainability transitions, recognises that the complexity of the problem space requires a commensurate complexity of knowledges and expertise (Fry, 2009; Stirling et al., 2018; Wahl & Baxter, 2008). Opening the boundaries of rationalist model of policy making therefore requires a switch from thinking of policy problems as discrete and tidy entities waiting to be solved, to conceiving of problems as emergent, adaptive, and diverse in nature (Chilvers & Kearnes, 2020). It requires us to consider that problems cannot be solved within a single discipline or profession but must be approached through collective inquiry which allows for iteration as problems adapt, intertwine, and expand (Brown, 2010; Collins & Ison, 2009).

The value of this collective inquiry is in gathering a more diverse knowledge base upon which sustainable solutions can be built (Bridger & Luloff, 2001; Colvin, 2020; 2021; Wahl & Baxter, 2008). Viewing this through the sociology of expertise and critical realism means understanding how to design the conditions under which this collective inquiry might succeed. How might we support different experts and their diverse knowledges to be harnessed? A stewarding role for design therefore promotes the idea that the production of knowledge should be communitarian, not individually owned and protected (Astray, Alonso, & Alonso, 2014; Turnhout, 2024).

Such collective opportunities have thus far alluded the Hunter Valley, at least formally, as government-led arenas in which futures are discussed have been closed off to

community (see 5.2.3.1 and appendices 8.4.4). Rather than waiting to be invited, groups like HR are working outside of the system to stage collective inquiry (8.4.5). Dan says of the original participatory events for Hunter Renewal that:

> *The whole framing of having 'a seat at the table' was very much because people have not been offered the opportunity to participate in crafting the destiny of their lives and their communities' future, and they want that opportunity. We had to create it because power holders have not been offering it.* [Dan, Hunter Renewal]

The processes of collective inquiry in both projects are examples of alternative civic conversations (DiSalvo, 2022) because they afforded citizens a space to discuss policy ideas in ways that had not been provided by authorities. In these fora, rather than accepting that established expert opinion was contextually suitable and applicable without change, HR and their partners put forward expert knowledge to be interrogated by community. One panellist from the Blueprint work remarked on our approach to collective inquiry:

> *The methodology you two developed was in a tricky space, but you worked out how to use the resources at hand and develop essentially what is a peer review process of the recommendations, that were reviewed but also advanced by the community.* [Academic panellist]

As a reminder, the process for these civic, collective inquiries was designed to first collect and synthesise expert knowledge on the issues of concern, and then put that knowledge to community for questioning (see 4.2). We called this a Delphi and Democracy approach after Revez et al. (2020). Community inputs provided valuable contextual detail that would not have been heard if we had stopped at the initial inquiry held with experts.

Designers have several roles to play in creating the conditions under which this collective exchange of knowledge and ideas can occur (Thorpe & Gamman, 2011). It is about being able to plan and strategise the experience of participation across multiple roles, contexts, and activities. Broadly speaking this stewarding role is about choosing the tools, shaping the tools, training the tools, and sharing the tools.

Choosing and shaping the tools. Successful participatory work requires knowledge of desired outcomes, an understanding of the capacities of facilitators, and then the ability to shape methods relative to these factors. As I was embedded within a

collective of community organisers, I could choose and shape the tools we used based on deeper knowledge of the intents and capacities of the people I was working with. I was therefore described by Dan as being an 'amazing toolbox of ideas' because I was able to translate what it was that they wanted to achieve for each project and then choose appropriate tools, test them for accessibility, adapt them as necessary, and then train people in how to use them. This was particularly useful for Dan when COVID lockdowns meant we had to move the workshops to an online space where she had less knowledge of available tools:

> *Having you scope out the tools and testing their suitability and accessibility was brilliant because I don't have experience in the online environment. I may have picked the wrong thing and tied myself in knots. I had confidence in you that you were suggesting the most appropriate tools.* [Dan, Hunter Renewal]

Training the tools. In both the Future-proofing and Blueprint work, in stewarding collective inquiry I proposed some initial methods and then we as an organising team shaped these methods to suit the outcome we needed, the time we had, and the capacities of people to take part. For Future-proofing, because there were several novice facilitators, there was more reliance on me to design the model and structure it carefully for others to use who were not familiar with the methods, or in the online environment. Before the first round of workshops, I created a long and short 'facilitator's guide' document (see appendices 8.2.4) and conducted training with all the facilitators.

Part of the value of me acting in an observer role rather than as a facilitator of the workshops was being able to see where changes could be made and then suggest iterations of method and adaptions to people's facilitation as we proceeded. The value of this training was confirmed with facilitators who were thankful for the guidance I had given them. Dan said of the importance of this training and reflection:

> *People need to feel confident to be part of the professional stage show.*
> *You can't send them out and just ask them to make it up as they go.*
> [Dan, Hunter Renewal]

Sharing the tools. Being aware there would be a time when I would no longer be able to provide design services as comprehensively to Hunter Renewal and their partners, I attempted to share and teach skills wherever possible. Aside from training facilitators in our projects, I have shared the tools from the framework that we used with other

transition groups in places such as Lithgow and Narrabri. Rather than these groups adopting our methods wholesale, through conversation we have worked out together how the methods might be shaped to suit their context.

This research has therefore led me to consider that there could also be a stewarding role for designers in bridging across multiple regions undergoing transition; a designer that can work within and across these regions so that knowledge and methods are shared but shaped through collective dialogue to be contextually appropriate. This would entail designing the experience of participation across different time and spatial scales, not just within the single moments of being together as a group. This role must consider how the outcomes will be used within each region. How does what is being done now feed into the next thing? How is knowledge shared for future use? Such an approach would be 'outscaling' across grassroots networks rather than 'upscaling' to higher jurisdictional levels where bureaucratic structures would be required for management (Rodríguez, Walter, & Temper, 2024, p. 20). In this way, the *Action for Ownership* model we have created (see 5.3.3.F) could be collectively developed to form a pattern language of resistance and grassroots ecological action that is shared with others in the wider network.

Sharing as part of the designer's role could be termed 'infrastructuring,' because through training I have made the methods available for use after the project has finished and beyond the project's boundaries (Bjögvinsson, Ehn, & Hillgren, 2012; Dantec & DiSalvo, 2013; De Konig et al., 2018; Ehn, 2008). This infrastructuring has been recognised by Dan, who remarked:

> *You've helped us to identify what tools we can use to engage the community online. But the benefits go way beyond that, because the participants and their facilitators come from all other organisations, like Hunter Jobs Alliance and Hunter Community Environment Centre. You've skilled up a whole community. We've set a model that people like and that is clearly outlined in both our documents which provides a guide to other groups as well.*
> [Dan, Hunter Renewal]

There is a final aspect to this stewardship role that is directly applicable to transitions. The notion of *stewardship* implies being obligated to the wellbeing of others and having a sense of responsibility for our part in the system we are attempting to change (Chapin III et al., 2009). As transitions will be long in duration, a designer stewarding

collective inquiry should therefore proceed with the understanding that this role is for the long-term and is not a project that has stopping points (Tonkinwise, 2014).

Valtonen (2020) says that designers must be prepared to commit to the long-term in support of the communities they work with, an approach that tempers the impatience of designers that White (2015) says fuels them to move voraciously onto the next new thing as an agent of capitalism. Designers therefore need to orchestrate the cadence and experience of transition such that there is more continuity across knowledge, outcome, and intent over long periods of time. As Dan said at one stage regarding the transition in the Hunter:

> *The project is for life; it will be decades long.* [Dan, Hunter Renewal]

E. Amplifying the legitimacy of local knowledge

Dominant modes of design practice: Visual communication and information design
Key tasks: Design of artefacts to support advocacy
Supporting factors: Community are invited in their capacity as local experts; Debate framed with generous constraint; Outcomes materialise the legitimacy of local knowledge; Sensitivity to the authorising environment.

Ahead of field research I conceived there might be an opportunity for designers to play a role in amplifying community knowledge and concerns regarding transitions. This idea was based on Frank Fischer's (2000) suggestions that the value of local knowledge is in growing the contextual applicability of scientific knowledges. Later I was also inspired by Yates (2015) and Dixon's (2016) suggestions that unless the processes of alternative practices are inscribed materially, they will not be accepted as legitimate. I could see through this scholarship that there were opportunities for designers in helping others see that local knowledge is a legitimate contributor to public decision-making. Field research has confirmed that there are roles for visual communication and information designers to materialise and amplify the legitimacy of the community's local knowledge. It entails using design to help portray the local community's knowledge in such ways that it is perceived as valid partner to scientific, technical, and other expert knowledge.

I have shown how my expertise as a designer has enabled the translation and portrayal of community expertise in a manner that is compelling to a policy audience. As one of the facilitators of the Future-proofing workshops said:

> *Seeing this report shows that we are legit. Just because we're 'community'... it doesn't mean that we're less than or anything like that. I think amazingly, and it shouldn't be this way, but the little things like a well-designed report show that.* [Workshop facilitator]

Persuading authorities to take local knowledge seriously in policy making relies on understanding the norms and values of policy players as well as the political context (Tangey, 2017). Hunter Renewal and their partners are intimately familiar with the norms, values, and political context of NSW Government—the authorising environment—which most affects the Hunter transition. This means they were able to brief me as a designer in how to shape the reports as evidence to better persuade decision makers in this context.

My expertise as a designer was in shaping the information to be read so that authorities found it compelling (see section 5.2.2.3). As one panellist from the Blueprint expressed in an interview, the report has made it almost impossible for people to ignore that transition is both desired and necessary.

> *The Blueprint has put the community into this discussion by saying you can't ignore it. You can't go out and say you're doing all this stuff if you haven't read this, and you haven't taken account of that, and you're not paying attention to what is happening there, you're not doing your job. The fact that you managed to pull that off is going to be really important.* [Academic panellist]

Materialising local knowledge in an established format such as reports means that decision-makers may find the knowledge more acceptable, digestible, and actionable. This matters because materialisation raises issues that might otherwise not become salient for decision-makers. As was mentioned in section 2.2.5, there is evidence in the Hansard record of NSW Parliamentary debate that the reports were used by politicians to frame their arguments for changes to the legislation. Dixon (2016) has found that making the process of constructing expertise more 'traceable' allows policy makers to judge the value of the information and its usability more easily. The way that we detailed the workshop processes in the reports allowed for policy makers to see how different sources of knowledge were generated and accumulated. Articulating process therefore demonstrates how expertise was constructed (Brady, 2018; Eyal, 2013), and furthers the possibility of policy makers evaluating and utilising community-generated knowledge and evidence in their decision-making.

When writing up the methodology for the *Blueprint* report, Dan remarked that it was the first time that she had been so detailed in explaining the process but that there were clearly benefits to this:

> *Describing the process in so much detail is new to me. In the past is we've written little bit but articulating it this way is useful for other community members to know that they could do it too, but also it demonstrates to decision makers that yes, this was a legitimate process, a wide ranging, inclusive process made of diverse people in the community*. [Dan, Hunter Renewal]

The final reports are therefore a legitimising move that lessened our need to rely on quantitative measures of success (5.2.2.3). Inscribing the process added legitimacy because it showed how understanding was developed and demonstrated that community members are capable of grappling with a complex set of issues in a collaborative environment.

Through continued advocacy work using the materials I have designed, Hunter Renewal have become considered as more a credible entity and are being actively invited by governments to transition arenas to contribute the knowledge of the communities they represent. Dan says of this:

> *These two reports would not have happened without you. They've been received well and have brought the community's voice into parliament in a concise and articulate matter. We couldn't have said all this in one meeting, and now the ministers are referring to it. If it was plain text in a stodgy document no one would read it. You've elevated the community's voice in a way that's not been done before in the Hunter*. [Dan, Hunter Renewal]

Such an achievement was made possible because of my immersive involvement with the projects of Hunter Renewal. The value of embeddedness is being in constant dialogue with the people being examined (Gordon, 2012). This reflexive position allows for those being studied to be part of the processes of generating knowledge and insights. By being immersed from the start of both projects, I acted as a bridge between understanding and expression of that understanding. I was also able to judge how to communicate what was heard in a way that adequately represented the feelings and the values of the people we had engaged. I understood that the finished piece needed to look different from a government report, but sophisticated enough that it will be read and accepted by government as legitimate.

The immersive relationship also manifested during writing and editing. During the production of both reports, the organisers and I were involved in a 'generative dance'[102] as we coproduced knowledge through experimentation in telling the story of in different ways (5.2.2.3). Such a process differs from typical designer-client relationships where the designer is not part of the writing process and is given the text only once it is complete. This gives little opportunity for the co-development of visual supports for the aims of the communication and is at the root of graphic designers being labelled "decorators". A division thereby forms between the report writers' intended meaning and the interpretation the designer delivers.

If instead—as I was with these projects—the designer is involved in meaning making from the beginning, the subsequent design choices will support meanings negotiated by the group, even as meanings develop (see 'A: Co-create ethical foundations'). The designer will therefore be more aware of the way in which the group wishes to frame the risks, issues, and challenges, and can make design choices based on this. That is not to say that a designer cannot be briefed on these things, but there is a risk that such nuance will be missed in the briefing process where there are so many other concerns that must be discussed (budget, timing, etc.).

Having my design skills available to HR was also of benefit economically. Dan says that paying an external designer would have meant compromises would have been made to save money. The eventual product was better, she says, because I had been involved from the beginning and deeply understood the aims of the work:

> *You understand what we are doing. If we outsourced it the design would be harder to do. It would be harder to do revisions and I would end up saying "it's fine". Then we wouldn't have gotten what we wanted... you're a perfect package!*
> [Dan, Hunter Renewal]

Of course, my labour was not just inexpensive, it was free. This is not something I should gloss over in reporting about this experience. Grassroots organisations cannot afford designers and designers cannot necessarily afford to stop the work they are doing because their livelihoods depend on their wages. If I am proposing models for designers to work within sustainability transitions, then I should also be cognisant of this. Azouzi and Di Lucchio (2023) suggest that designers working in any movement

[102] Cook & Brown (1999).

ultimately aimed at degrowth will need to reimagine what it means to be a designer; how should one operate outside of capitalist systems and within collectives and commons of care, simplicity, and conviviality? Damian White (2015) also specifically calls for practitioners in transition design to work to emancipate those who are in servitude to the capitalist system, rather than only imagining a future possible within the existing system. If this radical change is not enacted, White says 'we will not only delimit the audience for transition design but underestimate the forces that press against the possibility of having the time or energy to be involved in civic experiments to enable transition futures' (ibid. p. 48). While this was not something my research was directly aimed at; it is a questioning that needs to be made at some point. Without working examples of how to be a designer outside of the current system, radical change is less likely to occur (Tonkinwise, 2024).

F. Codesigning frameworks for action

Dominant modes of design practice: Community-based participatory design
Key tasks: Develop engagement plans, identify when a design-led approach is suitable
Supporting factors: Organisers have a substantive orientation to participation; Conditions support alternative civic practices.

When Hunter Renewal and Hunter Jobs Alliance invited me to work with them on the Future-proofing project in 2021, they had already identified when it would be beneficial for decision-makers to hear from the local community (see section 4.1). Knowing that parliamentary debate was the end point for the engagement activities, we modelled the workshops based on what would be required in their advocacy to government on the legislation. The activities were also created based on the previous experiences of the organising team, my professional experience as a designer, scholarship I had been reading on sustainability transitions, as well as existing frameworks for public participation in environmental decision-making (Crofts, 2023).

The model that we used in the Future-proofing work influenced what we did in the Blueprint work. Following the culmination of this project, Dan and another Hunter community organiser started to develop a model for engagement and advocacy based on our workshop processes. The resulting model therefore encapsulates our three years of experimenting with different forms of engagement, along with their professional experience in the transitions space. They are calling the model the 'Action for Ownership Model' (**Diagram 16** overleaf). Dan says it will become a guide for the future practices of Hunter Renewal and other grassroots groups in their network.

Diagram 16
Draft Action for Ownership Model.

If we had this model when we began our work, our initial planning may have had fewer tensions because the trajectory of what we intended to do may have been more legible to everyone (see 5.3.1). Furthermore, the places where different disciplines were required (including design), may also have been clearer. This was a point made in interviews.

> *I think different people bring different sets of skills that are crucial at different parts along the way. I would hesitate to say that there would be things that people shouldn't be part of, but of course there are some temperaments or skills sets that people might have that would be better suited to fill those roles, whether it be engaging with government or industry or other community-based work.*
> [Workshop facilitator]

The model exists now in a form that can be followed and used and, because I trained facilitators and organisers to follow the methods, Dan says that I have 'skilled up a whole community.' The 'Action for Ownership Model' was therefore codesigned with community in an experimental, iterative, and reflective practice. The model was not

created solely by me as a designer, but my ability to recognise the repeatable patterns enabled the process to be inscribed in model form. Dan said of this process:

> *You've streamlined stuff for us. I now have a go-to model and some strategies. We've always done similar things, but you've just made it neater and tidier and easier to wangle [sic]. I feel far more confident about our methods of engagement in terms of what we can do depending on what the outputs are, but particularly around this kind of gathering community input. The style of the focus groups is super valuable, and I will use that again and again*. [Dan, Hunter Renewal]

Her point about the tools we used being like those they had previously employed demonstrates that grassroots collectives and community projects like Hunter Renewal are not unskilled in engagement, far from it, yet they can do with the assistance of designers in bringing methods into usable and repeatable frameworks (5.3.1). Gordon (2012) describes the value of assisting activist collectives with reflective practice. Through this work, Gordon says, assumptions are uncovered and fragmented practice and thinking is structured to enable action. It demands a certain humility from designers in realising that we are offering to be of service in shaping and amplifying what is already being done (Agid, 2016; Irwin, 2018; Manzini, 2015). It also means designing the system to operate without our presence.

As a practice this could be considered *design of context* as well as *design in context* (Läteenoja et al., 2024; Young, 2008), because it is not only about designing the things used in participation but the participation itself. By codesigning frameworks for action with community organisers, I have helped create the enabling conditions for more collective action to take place into the future. As this organiser said:

> *A lot of the work that I'm doing I is building solidarity and community and getting people to want to work together and to have some agency to create a better Hunter Valley. This will steel us for what might unfold with the climate in the future and stop us from turning on each other. I don't think fascism is going to help us in any kind of economical social collapse.* [Workshop organiser]

Hunter Renewal have subsequently advised advocacy groups in other transition regions on the participation methods within the *Action for Ownership* model, thereby building communities of practice that learn together about issues as they arise. This is something that Dan has been doing with HR since its inception. Building communities of practice is crucial for the long-term project of coal phase-outs. Transitions are not a

one-off event that can be facilitated through the usual engagement methods, but something that must be approached in a more collective and ongoing manner.

In summary

Design is a collective and creative act of worldmaking that considers not just the ongoing impacts of our designs, but also interrogates the influence of the methods and frameworks we apply in the present. While there is a large body of research regarding how designers can contribute to the sustainable transformations of the consumer energy space and through sustainable product design, as yet there has been little exploration of roles for designers in supporting public participation in a regional energy transition where the effects of moving toward renewable energy will be uniquely felt. Through working as a design activist with a grassroots network in a regional community, I've shown how designers can assist in codesigning the mechanisms of participation within an energy transition. These organisations are now better able to sustain participatory efforts for the lengthy duration of sustainability transitions and use the methods we have co-created to broaden the framing of issues beyond technology innovation to include sociological and ecological concerns.

This section began with the naming of the specific tasks that a design activist might do when embedded within a grassroots network, formatted into a job description. A 'framework for design activism in sustainability transitions' emerged from this role description. It shows how public participation in sustainability transitions can be supported through the identified—but not immovable—roles for a designer, each representing a dominant mode or discipline of design. By field testing whether an expert designer such as myself can successfully translate expertise from a commercial setting to a regional energy transition, I have thus sketched a path for other designers to determine their place within sustainability transition processes.

6 – Conclusion

This research has examined the role of public participation in planning the phase-out of coal mining and power generation in the Hunter Valley and has used this inquiry to suggest practical opportunities for designers in supporting public participation in sustainability transitions. The inquiry has been grounded in reciprocity through the invitation of Hunter Renewal to be embedded as a designer in their work, affording me privileged access to processes related to public participation in transitions as they occurred. For almost three years I have explored how designers can help to reimagine participatory processes so that community voices are heard, respected, and incorporated in planning sustainability transitions.

My research is essential for this period in human history because how we approach sustainability transitions is vital for our survival. Allowing transitions to continue to be driven only by the interests of status quo actors will lock us in to unsustainable development and an inequitable future. My thesis makes three core contributions to redirecting this path:

1. It broadens transition agendas through design-led civic practices

My research has shown that public participation is necessary for sustainability transitions because the involvement of the public reveals context-sensitive knowledge about local conditions that outside decision-makers may otherwise overlook. Through design and practical experimentation with new modes of public participation with a policy-orientation, this research highlights the significance to sustainability transitions of respecting and using local knowledge alongside technoscientific expertise. Doing so demonstrates how transition agendas can be broadened to include a balance of social, ecological, and economic concerns. Validating community support for these design-led civic practices through this research has illustrated that such alternative methods are feasible, desirable, and achievable. Therefore, what is transformative about this work is not just proposing alternative ideas for transition, but in prefiguring alternative means for these ideas to form. Significantly, my contributions have helped Hunter Renewal to influence decisions made at the NSW State Government level regarding participation in transitions. I have therefore raised the ambition of what is possible through design-led, collective inquiry.

2. It identifies factors that support public participation in sustainability transitions

Previous research reveals that despite increased appetite for participation, the ability for the public to influence policy remains low. My research identifies several socio-political factors that determine the level to which the public might have influence within sustainability transitions. The factors include inviting community members to participate in their capacity as local experts; materialising the legitimacy of local knowledge; and having a sensitivity to authorising environments. In moving the conversation beyond incremental improvements to participatory activities, the research provides guidance for how to create the potential for the public to exercise greater influence over the course of their futures.

3. It demonstrates practical roles for designers in supporting public participation in sustainability transitions

My research expands the practical understanding of how designers can play a role in making long-term, equitable, and sustainable change. It does so through development and testing of a 'framework for design activism for sustainability transitions.' This framework prefigures new modes of civic inquiry aimed at bringing a local community into the exploration of sustainable futures alongside technoscientific experts. The framework proposes five roles for designers: scaffolding problem and vision setting; collecting and synthesising knowledge; stewarding collective inquiry; amplifying the legitimacy of local knowledge; and codesigning frameworks for action. Articulating these roles will make it easier for other designers to conceive of their place within sustainability transitions.

Suggestions for future research

Throughout the time I have spent with Hunter Renewal for this research, their key coordinator Dan has lamented the surfeit of researchers and scarcity of capacity. As a designer with practical skills to give, and a mindset of reciprocity, my research was not a burden to her. The suggestions I make here for further research are made with this practical, caring, and relational outlook in mind.

Field testing the framework for design activism in other transition arenas

The five design roles within the framework for design activism offer a path for other designers to determine a place for their expertise within sustainability transition processes. The research has shown how these roles have manifest in a regional energy transition yet should be transferable to other transition arenas. There would be value

in research to extend the potential of transition design through this practical framework. As I have explored the roles as an individual designer within a grassroots network of non-designers, another important exploration would be to understand how the roles could be filled by multiple designers working together as a collective. This exploration would add a dimension to my findings of how to coordinate across different times, scales, and activities.

Critical, strategic design experiments

There many ideas for transition published in the *Future-proofing* and *Blueprint* reports, that others could begin working on immediately. A critical design methodology could be used to test these ideas, paying particular attention to the role of the planning system in supporting or constraining their development. For example, what would community interaction with these proposed ideas look like in a more transparent planning system? How might the public be engaged in developing and testing how these future services, products, and systems ideas work to support transition? The reports are the agenda for future negotiation and now a divergent process of further research is needed into how the ideas in them can be made more effective.

Reimagining transition economies beyond capitalism

Investigations could also explore sustainable futures in alternative economies that emphasise value beyond the movement of capital in established markets with a predominantly male workforce. Such an exploration might tap into the ongoing development of state and federal transition authorities to ensure the economic and social benefits of energy transitions are evenly distributed.

Understanding the use of community-led knowledge within policy development

As this research has focused on knowledge creation at the grassroots level it has not been possible to directly trace what happens to this knowledge once it has been delivered in reports to government. While I have been able to infer that the recommendations made by community through our work are being heard, and their knowledge somewhat applied to decisions, further research into the mechanisms of how this happens inside government could help designers create participatory processes to target the authorising environment even more effectively. It would be of value to explore how to use the alternative civic practices described in this thesis to build civic capacity across other transition subject matters.

Coordinating transition efforts across regions

There is a need to diffuse the alternative practices articulated in this research (e.g., the *Action for Ownership Model*), to other regions undergoing transition so that more urgent, collective, and interdependent action can be taken. For example, by continuing to build on and share the mapping processes done for this regional energy transition (5.3.3.B), other points to intervene can be identified. From this, other publics, designers, and researchers can be assembled to tackle the issues relevant to those points of intervention. Researching how this process happens will build further practical understanding of how transition designers can play a role in making long-term, equitable, and sustainable change.

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In wrapping up, one of the most rewarding aspects to this action research project is that I have been involved in driving real change. Such an impact would not have been possible without the partnership I have developed with Dan over the past three years. In reflecting on our partnership, she said that my work has helped her to clarify her expertise and develop a more refined model of participation for Hunter Renewal:

> *I never really reflected a whole lot. I've just been barrelling ahead with the next thing. The process of working with you through your PhD and all your questions have made me realise "ah, that's what we do!" Your PhD is helping me to digest seven years of work.* [Dan, Hunter Renewal]

Helping Dan to reflect on her practice was not an intentional aim of this work, but as reciprocity was one of the first mindsets that guided me, hearing how valuable my contributions were to Dan is one of the most satisfying achievements of this PhD. I return to the question asked of me at the beginning of this research by one of my supervisors, Abby Mellick Lopes: what is at stake for you? As a marker of my changing positionality, the answer to this has also changed. At the beginning, I approached the work from the standpoint of outside expert who wanted to lend my skills to the cause. I believed people in the Hunter needed to see that transition was desirable and, as a designer, I could help with this. Following almost three years of research my position has changed. I can see that people in this community already know that transition is desirable and that my role is not to open their eyes but to open those of the people holding back the Hunter Valley transition. This is the work of a design activist who can rupture status quo logics to let other views and practices have some air.

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8 – Appendices

Appendices index

8.1 Research materials

Interview list..... 241

8.1.1 Interview discussion guide (participant Cycle 1)..... 242

8.1.2 Interview discussion guide (facilitator/organiser Cycle 1) 243

8.1.3 Interview discussion guide (facilitator/organiser Cycle 3) 244

8.1.4 Code book 246

8.1.5 Comparison of themes across the three phases of analysis 247

8.1.6 Coproduced model for participation..... 248

8.2 Future-proofing documents

8.2.1 Call scripts and invitations 250

8.2.2 Workshop agenda 251

8.2.3 Public survey 252

8.2.4 Facilitators' Guide 255

8.2.5 Facilitator's survey 256

8.3 Blueprint documents

- 8.3.1 Document source categories for the Blueprint 257
- 8.3.2 Email invitation for academic reference group 257
- 8.3.3 Academic reference group survey 259
- 8.3.4 Academic reference panel discussion guide 261
- 8.3.5 Email to academic reference group after panel 262
- 8.3.6 Call script for focus groups 263
- 8.3.7 Reminder email for focus groups 264
- 8.3.8 Focus group agenda 265
- 8.3.9 Public survey 266
- 8.3.10 Restoration Blueprint principles & recommendations 269

8.4 Other

- 8.4.1 EP&A Act 271
- 8.4.2 Analysis of the Muswellbrook Coal image 272
- 8.4.3 Hunter Renewal Roadmap (2019) 274
- 8.4.4 Transition engagements in the Hunter (government)..... 275
- 8.4.5 Transition engagements in the Hunter (community)..... 276
- 8.4.6 Designer roles in sustainability transitions 277

8.1 Research materials

After the list of interview participants, three discussion guides are presented. The first two are for the Future-proofing work (cycle 1). The third is from the Blueprint work (cycle 3).

Interview list

All interviews conducted by telephone. All interviewees live and work in the Hunter Valley.

Cycle 1

Interview 1 (2022). Danielle Coleman, Lead Coordinator, Hunter Renewal, January 18.

Interview 2 (2022). Organiser, Future-proofing workshops, January 19.

Interview 3 (2022). Organiser, Future-proofing workshops, January 20.

Interview 4 (2022). Organiser, Future-proofing workshops, January 21.

Interview 5 (2022). Workshop participant, power station worker, January 21.

Interview 6 (2022). Facilitator, Future-proofing workshops, January 25.

Interview 7 (2022). Facilitator, Future-proofing workshops, February 1.

Interview 8 (2022). Workshop participant, human resources consultant, February 2.

Interview 9 (2022). Facilitator, Future-proofing workshops, February 9.

Interview 10 (2022). Non-participant, School Strike for Climate organiser, February 17.

Interview 11 (2022). Facilitator, Future-proofing workshops, February 15.

Interview 12 (2022). Facilitator, Future-proofing workshops, February 17.

Interview 13 (2022). Facilitator, Future-proofing workshops, January 31.

Interview 14 (2022). Facilitator, Future-proofing workshops, April 13.

Cycle 2

Interview 15 (2023). Researcher from partner organisation, March 8.

Interview 16 (2023). Hunter Jobs Alliance member, March 29.

Interview 17 (2023). Blueprint panellist, April 12.

Interview 18 (2023). Dan Coleman, Hunter Renewal, June 2.

Interview 19 (2023). Dan Coleman & Blueprint panellist, July 27.

Interview 20 (2023). Hunter Community Alliance member, September 19.

Interview 21 (2024). Dan Coleman, Hunter Renewal. April 17.

Other research

METHOD	DESCRIPTION	NUMBER
Survey	Online survey for the Future-proofing workshops included three questions related to this thesis.	134 respondents
Survey	Post-focus group survey for the Blueprint workshops included two questions related to this thesis.	6 respondents
Observational research	I worked for Hunter Renewal for almost three years. This afforded me several opportunities for observational research.	370+ hours

8.1.1 Interview discussion guide (participant Cycle 1)

Thank you for taking part in this research. I am a PhD student from the University of Technology in Sydney. I have been working with Hunter Renewal and the Hunter Jobs Alliance recently in their recent community workshops to understand what the community thinks the Hunter Expert Panel should do. This work is part of my PhD. The purpose of my research is to examine how to involve the community more in planning a transition away from fossil fuels, as well as to understand potential roles for designers like me in this process.

WHO? I am interviewing people from the Hunter Valley, to understand your thoughts on how the community can be more involved in planning for your future.

TIME. The interview should last no more than 60 minutes and you can stop it at anytime.

RECORDING. I would like to audio record our conversation so that I can transcribe it. The recording will not be used anywhere else and will be destroyed. Do you consent for this interview to be recorded?

CONSENT. Have you had time to read the consent form? If so, do you consent to the following? Please say yes or no. You can change your answers at any time, even if we are halfway through the interview.

] YOUR NAME. You can choose whether or not your name is associated with the things you say. You change this at any time. If I directly quote you in my thesis I will contact you to check the accuracy of the quote and to get your permission to use your name. Do you want your name associated with the things you say?

] DATA USE. There might be some things you say that could help Hunter Renewal or Hunter Jobs Alliance with their work. Do you consent for information from this interview to be shared with Hunter Renewal and Hunter Jobs Alliance? Would you like me to check with you first if I do this?

] PUBLICATION. Information from this interview may be used in the future in a journal article or book chapter. Do you consent for this interview to be used for these purposes?

Any questions before we begin?

QUESTIONS FOR COMMUNITY

1) You and the Hunter Valley ~5 mins

- Please tell me a little about yourself. How long have you lived here? What do you do with your time?
- What is your favourite part about living in the Hunter Valley?
- What's your vision for the Hunter Valley in 20 or 30 years?
- What do you think is the most important thing about the Hunter to keep as things change?
- Is there anything that would stop this happening?

2) Participation general ~5 mins

- Do you get involved much with things in your community?
- Why do you do these things (OR: what would help you to be involved more?)
- Are there things you'd like to do more of but haven't been able to yet?

3) Participation in transitions ~15 mins

- Thinking about what you said about the Hunter's future, do you think the community should be involved more in planning for this future? Why is this?
- What type of things do you think the community should be involved in?
- Are there things the community should not be involved in? Why?
- Are there particular groups of people or organisations you think should be more involved in planning a transition? Who are they and why should they be more involved?

4) The workshops ~10 mins

- Let's talk now about the community workshops. Why did you take part?
- What did you most/least like about the workshops?
- Do you have any suggestions on how things like this could be improved?
- Would you take part in something like this again?
- What would you like to see happen from the workshops? How likely do you think that is?
- Did you read the report? Do you have any comments?

5) Wrap up ~ 3 minutes

- Is there anything I may have forgotten to ask you about that you would like to share?
- Thank you for your time. If you would like a copy of the transcript of this interview, I can email one to you. I can also email you a copy of my thesis if you are interested. Please feel free to email me if there are things that come up that you think I should know about.

8.1.2 Interview discussion guide (facilitator/organiser Cycle 1)

You and the Hunter Valley ~5 mins

- To start, I'd like to know how long have you lived in the Hunter Valley?
- What is your favourite part about living in the Hunter Valley?
- What's your vision for the Hunter Valley in 20 or 30 years?
- What do you think is the most important thing for the Hunter to keep if things change?
- Is there anything you can think about that would stop this happening?

Participation general ~5 mins

- Let's talk about community participation. What type of things are you involved with regarding the community?
- Why do you do these things?

Organising participation in transitions ~15 mins

- What are the challenges in increasing public participation in transition planning? For example, are there changes within government (policy, process, other)?
- Are there particular people or organisations you think should be more involved in planning a transition? Who are they and why should they be more involved?
- When do you think the community should be involved more in transition planning? As the vision is being set/when ideas are starting to be raised/decide on particular ideas?
- Are there things the community should not be involved in? Why? (e.g., technical)
- Are there things regarding transition that you think the community might know more about than outside people? For example, in the workshops people said that it was a great idea to increase TAFE courses but that it would be hard if you didn't own a car to attend them as there is little public transport.

The workshops ~10 mins

- Let's talk about the workshops. What did you most/least like about the workshops?
- Do you have any suggestions on how they can be improved?
- Are there other things you'd like to do regarding community participation?
- What would you like to see happen next? How likely do you think that is?
- The workshops in 2021 were responding to a particular opportunity that came about because of the Panel. Can you reflect on this and what influence these "windows of opportunity" in policy have for community engagement?

Roles for designers ~15 mins

Part of my research is to work out what roles there might be for designers and researchers in transition planning. When I say researcher, I am thinking about people who might do what I am doing now with this interview. When I think about designers, I am thinking about both the types of designers who can help make communications have more impact by improving the ways things look and what they say. I also think of designers who improve the way things are done in an organisation. In this way, design is really about making things better.

- Do you have designers or researchers in your organisation now (or do you regularly hire freelancers?)
- What is the value to your organisation for these roles?
- What things did I do as a designer that were particularly helpful?
- What could I have done differently?

Wrap up ~ 3 minutes

- Is there anything I may have forgotten to ask you about that you would like to share?
- Is there anyone else you think I should speak to?
- Thank you for your time. If you would like a copy of the transcript of this interview, I can email one to you. I can also email you a copy of my thesis if you are interested. Please feel free to email me if there are things that come up that you think I should know about.

8.1.3 Interview discussion guide (facilitator/organiser Cycle 3)

When I started this research, I was exploring how to increase community participation in planning sustainability transitions. I've now realised that there's little point in increased numbers or frequency of participation if the community's voice is not listened to. My research has therefore shifted direction slightly toward exploring how to support the potential for the community to be heard and for roles for designers in enabling this. This is based on the idea that the community are experts in their local area, and that this contextual knowledge is essential to form solutions to transition that will be robust in place.

Today I would like to talk to you about how you think participation activities can be designed to increase the likelihood that community voices are listened to. We might use the workshops to unpack this, as well as your thoughts on other participatory activities you've experienced related to transition in the Hunter. The interview should last no more than 60 minutes and you can stop it at any time. [consent questions as per first two discussion guides]

Participation general ~3 mins

- What type of things are you involved with regarding community participation?
- What led you to this work?

Increasing the potential for the community to be heard in transitions ~15m

- What role should the community play in transition planning in the Hunter? Why?
- What type of things should they be involved in? [decisions, visioning, evaluating]
- Are there things the community should not be involved in? Why? (e.g., technical, scientific)
- How can they be supported to bring their perspectives to the table?
- Are there particular types of activities you think best suit the community? What doesn't work?
- What challenges do you see in increasing the use of community knowledge in transitions?
- What organisations or types of organisations should play a role in helping bring the community's voice to the table? (grassroots, private, local, state)
- How can we increase the likelihood that the government considers the perspectives of the community in decision-making around the transition?

The workshops ~10 mins

- Let's talk about the workshops. What did you most/least like about the workshops?
- Do you have any suggestions on how they can be improved?
- I am using a model called 'ecologies of participation' to guide my thinking. It says that because the knowledge required for transitions is multi-faceted then a range of methods are required to get that knowledge. This means that participation might take more structured or unstructured forms depending on what type of knowledge is required at the time.
- With this in mind. What else do you think that Hunter Renewal and Hunter Jobs Alliance could do now that these workshops are over, and the Panel and Fund legislation is moving ahead?

Roles for designers ~15 mins

- Part of my research is to work out what roles there might be for designers and researchers like me in transition planning.
- What things did I do as a designer for the workshops that were particularly helpful?
- What could I have done differently?
- Are there any other roles for designers you can see in transitions?

Wrap up ~ 3 minutes

- Is there anything I may have forgotten to ask you about that you would like to share?
- Is there anyone else you think I should speak to?

Thank you for your time. If you would like a copy of the transcript of this interview, I can email one to you. I can also email you a copy of my thesis if you are interested. Please feel free to email me if there are things that come up that you think I should know about.

8.1.4 Code book

The following code book was used during analysis of interview and workshop data in the first, phase of analysis. Creating a code book follows recommendations by Saldaña (2016). Codes were a mix of concepts from the literature review, and emergent concepts were added as the data were being analysed and new insights emerged. As analysis proceeded, these codes were too numerous and needed to be reduced to make further analysis more manageable. This can be seen in columns two and three in table 8.1.5 on the following page.

RATIONALES FOR PARTICIPATION (research question 1)	**FACTORS INFLUENCING PARTICIPATION** (research question 2)	**ROLES FOR DESIGNERS** (research question 3)
Substantive: To make an impact	Framing of problems	Insider vs Outsider role
Normative: Right thing to do	Timing (windows of opportunity, phases of participation)	Amplify knowledge and concerns
Instrumental: Increase legitimacy	Inclusion (diversity, age)	Creating welcoming spaces
To increase participation	Setting (context, online vs in-person)	Emphasising legitimacy
To demonstrate value of local knowledge	Planning (recruiting, resources)	Helping the community to pose its problems
Building community mindedness	Host (government or community)	Revealing alternatives
Care for community	Facilitation	Stewarding collective inquiry
Shaping people's world	Capacity of participants	Synthesizing collective knowledge
	Organiser roles (connecting bridge, advocating, capacity building)	Orchestrating participation
	Tokenism	
	Reciprocity	
	Trust	
	Emotions: Fear/Anger/Despair	

8.1.5 Comparison of themes across the three phases of analysis

The table below shows themes from the three phases of analysis. These are labelled A, B, and C to ensure there is no confusion with the research cycles. The three rows indicate how themes are organised by my research questions.

PHASE A	PHASE B	PHASE C
What are the broad factors that shape the effectiveness of public participation?	How is the effectiveness of participation shaped by people's access to participatory forums, their standing as legitimate knowledge holders, and if their participation has influence?	What factors influence participation in knowledge creation and how can designers support people to participate?
1. WHY IS PARTICIPATION NECESSARY FOR SUSTAINABILITY TRANSITIONS?		
- Substantive: To make an impact - Normative: Right thing to do - Instrumental: Increase legitimacy - To increase participation - Demonstrate value of local - knowledge - Building community mindedness - Shaping people's world	- Broaden agendas beyond the status quo - Demonstrate value of local knowledge - Substantive: To make an impact	- Harness the value of local knowledge - Broaden agendas beyond the status quo - Substantive rationale: To make an impact
2. WHAT FACTORS INFLUENCE PARTICIPATION?		
- Framing of problems - Timing (windows of opportunity, phases of participation) - Inclusion (diversity, age) - Setting (online vs in-person) - Planning (recruiting, resources) - Host (government or community) - Facilitation - Capacity of participants - Organiser roles (connecting, advocating, capacity building) - Tokenism - Reciprocity and Trust - Emotions: Fear/Anger/Despair	Access: Exclusionary contexts/activities; Alienating transition arenas Standing: Exclusionary or selective recruitment (preference for technical expertise); Making space/distributing power; Working more visibly and collectively Influence: Exclusionary framings; Exclusionary legislation; Windows of opportunity	Access: Boundaries of expertise Standing: Perceptions of legitimacy Influence: Authorising environment; Legislative boundaries; Institutional capacity; Windows of opportunity
2. WHAT ROLES ARE THERE FOR DESIGNERS IN SUPPORTING PARTICIPATION?		
- Insider vs Outsider role - Amplify knowledge and concerns; Amplify legitimacy - Creating welcoming spaces - Helping the community to pose problems - Revealing alternatives - Stewarding collective inquiry - Synthesising collective knowledge	- Amplify legitimacy - Stewarding collective inquiry - Synthesising collective knowledge	- Amplify legitimacy - Stewarding collective inquiry - Synthesising collective knowledge - Creating 'boundary objects' to assist negotiation - Codesigning frameworks for action

8.1.6 Coproduced model for participation

This was the original draft of the analysis criteria. All criteria in the first column are from Senecah (2004). Concepts in columns two and three are from the literature review.

ACCESS: There is potential to be heard		
ATTITUDINAL	**COPRODUCED MODEL**	**TRADITIONAL MODEL**
Attitude to collaboration	Participants are invited to contribute their knowledge and shape the approach to knowledge generation	Participants are invited to add legitimacy to the process
Early public involvement	The public is invited early in the process to shape the approach and knowledge space	Participants are invited to comment on predetermined options
Creative approaches to provide voice	There are multiple ways and opportunities for different types of people to participate in ways that make sense to them.	Participation is focused on single events
PROCEDURAL	**COPRODUCED MODEL**	**TRADITIONAL MODEL**
Adequate and widely disseminated notice	Invitations are widely distributed through channels familiar to potential participants and early enough for them to make arrangements to attend	Invitations are selectively sent
Convenient times and places	Events are held at times and in places that suit the widest possible range of people and options to participate are offered for those who cannot attend at these times	Events are held at times convenient to the organisers and no other options are given
Ongoing opportunities for involvement	Participants are given other opportunities to become involved	The events are one-off
PEDAGOGICAL	**COPRODUCED MODEL**	**TRADITIONAL MODEL**
Readily available information and education	Information related to the event is easy to find, available in a diverse range of formats, and designed for maximum accessibility	There is only limited available information ahead of the event, most often preferencing the written word
Technical assistance to gain a basic grasp of the issues and choices	If issues are particularly technical, genuine efforts are made to help participants gain a basic understanding	Assumptions are made that all participants adequately understand all technical issues so no effort is made to help them
STANDING: Voices are respected		
ATTITUDINAL	**COPRODUCED MODEL**	**TRADITIONAL MODEL**
Courtesy or an absence of discounting verbal or nonverbal behaviour	Participants demonstrate courtesy to one another	A drive for consensus forces polarization of position
Genuine empathy for the concerns of other perspectives, dialogue, and feedback	There is space to consider a range of participant concerns	Single perspectives are preferenced to purposefully manage scope
PROCEDURAL	**COPRODUCED MODEL**	**TRADITIONAL MODEL**
Opportunities for dialogue and deliberation	Activities are shaped to encourage people to deliberate	Activities are designed for yes or no responses
Clear parameters for authority of participation	People are made aware of the negotiables and non-negotiables related to their participation	The parameters of decision-making are not communicated

Clear parameters of investment	People are told how much time and effort is required	Effort required is not communicated to participants
PEDAGOGICAL	**COPRODUCED MODEL**	**TRADITIONAL MODEL**
Collaborative room arrangements	Physical spaces for discussion are set out in collaborative ways. In online collaborations, there is opportunity for people to discuss in small and large groups	Spaces set up to allow for dissemination of knowledge rather than discussion. Formal room arrangements are alienating for some
INFLUENCE: There is potential to contribute to change		
ATTITUDINAL	**COPRODUCED MODEL**	**TRADITIONAL MODEL**
Thoughtful response to stakeholder concerns and ideas	Participant ideas are welcomed, and their concerns listened to	The ideas and concerns of the organisers shape the process
PROCEDURAL	**COPRODUCED MODEL**	**TRADITIONAL MODEL**
Opportunities to meaningfully scope alternatives	The public is invited to share their ideas	Ideas for discussion, deliberation, or decision are predetermined
Opportunities to inform decision criteria	Participants can shape how decisions will be made during the activity or following the activity	Decision criteria are pre-determined and may not be made public
Meaningful decision space	Activities are designed for decisions to be made and honoured	Activities are designed for communication or deliberation but not decision-making

8.2 Future-proofing workshop materials

8.2.1 Call scripts and invitations

The script for phone calls read as follows, **emphasis** from original:

> I'm calling to invite you to a free dinner and workshop in Cessnock about the Royalties for Rejuvenation fund that the NSW government has promised the people of the Hunter to assist us through the economic changes ahead. Have you heard about the fund that is being set up?
>
> In May this year the Deputy Premier announced a minimum of **$25 million per year** and an **Expert Panel** to help the Hunter to secure large-scale investments that will create the jobs of the future, and to help our communities plan for the transition ahead. **Community input will be critical to making sure these funds are invested in a way that makes a real difference.**
>
> The government will soon be reaching out to community groups like ours to discuss the guidelines and priorities for spending the funds, so we are hosting workshops across the Hunter to hear your ideas. We will then provide a report to the government on what the community wants, because **decisions about the future need to be made with the community, for the community.**
>
> **Would you like to join us for the 2-hour dinner workshop in Cessnock? It will be fun and informative, and we'll feed you. You don't need to have any prior knowledge or expertise, just a love for the Hunter Valley.**

The general invitation read as follows:

> Let's talk about the future: How can we future-proof the Hunter Valley? The Hunter is facing big changes over the coming decades, and we need decisions about the future to be made with the community, for the community.
>
> This year the NSW state government committed to establishing a Hunter Expert Panel and $25 million of Royalties for Rejuvenation, to assist us through the economic changes heading our way. Community input is critical in making sure these funds are invested in a way that makes a real difference.
>
> **It's our home and our future, so we need to figure out what's really important to us. What are our priorities and how should we plan for them?**
>
> Join us for an interactive ONLINE workshop, to determine our future together.

The Hunter Jobs Alliance sent out a variation to this invitation that read:

> We want community input on how the NSW state government should deliver commitments on investing in **job creation** and managing **economic change** in the region. These workshops will involve unionists, community leaders and citizens in a conversation to gather our thoughts, so we can be on the front foot with the process and **ensure community voices are heard**.

8.2.2 Future-proofing workshop agenda

5.15pm	15 mins	Facilitators, people with roles log onto Zoom. Run through agenda and roles
5.30pm	3 mins	People arrive. Repeat welcomes and says we'll start shortly
5:33pm	3 mins	Acknowledge Country Introduction to workshop. What Hunter Renewal and Hunter Jobs Alliance have been doing. Basic zoom etiquette/tips. Information on recording
5.36pm	4 mins	Show the pre-recorded video. Introduce the first breakout.
		BREAKOUT 1 - WHAT CONCERNS OR EXCITES YOU ABOUT THE FUTURE?
5.40pm	8 mins	In breakout rooms. People introduce themselves. Name, where they're from, how they spend their time. Ask people to think of the next ten years, and what concerns or excites them about the future. Facilitator starts. [BROADCAST 5.47: "Stop recording before you leave"]
		BREAKOUT 2 – WHAT ARE OUR PRIORITIES? WHAT SHOULD BE FUNDED?
5.48pm	8 mins	Why an Authority is needed Contextualise with orgs, ideas etc
5.56pm	3 mins	Introduction to breakout 2. Tell participants this activity will be 35 minutes. Add link to all cards in chat.
5.59pm	15 mins	Sort 10 mins What do we need in the Hunter Valley in the next two years? Cards are sorted into ALL AGREE and SOME AGREE piles. If no one agrees leave the card in position at the top. What's missing? 5 mins Think about your world - work, community - what would be good that hasn't been covered? [BROADCAST 6.15pm: "HALFWAY - START PRIORITISING"]
6.14pm	20 mins	Imagine you are community representatives on the Hunter Expert Panel in its first year. Given your knowledge of your local community, of the ideas in front of you, which is your top priority to be funded in the first 2 years? [BROADCAST 6.25pm: "10 MINUTES TO GO"] BROADCAST 6.33pm "SUMMARISE FOR REPORTBACK." BROADCAST 6.34 "STOP RECORDING/STOP SCREEN SHARE"
6.34pm	10 mins	Feedback. What is the top priority for each table - Table facilitators summarise 1-2mins per breakout
6.45pm	5 mins	Synthesis of views presented
6.50pm	5 mins	Wrap up with how this information will be collated, shared, next steps, farewell participants
6.56pm	15 mins	Facilitators stay to give feedback. Close meeting 7.15pm at the latest

8.2.3 Public survey

INTRODUCTION SLIDE

The NSW Government has promised the people of the Hunter that we will receive money from the Royalties for Rejuvenation fund to assist us through the economic changes ahead.

This survey is to help us share community priorities for spending the funds, because decisions about the future need to be made with the community, for the community.

[insert video] Please take a moment to watch this introductory video

DEMOGRAPHIC QUESTIONS (local government area, industry of employment)

WHAT'S AT STAKE QUESTIONS

For more information about each of these ideas please see this webpage.

a. **Thinking about the next ten years, what concerns you about the future?** E.g.: "I'm a casual high school teacher. Depopulation of my town would mean fewer student enrolments, and potential loss of employment for me."

b. **Thinking about the next ten years, what excites you about the future?** For example - "In a well-managed transition my employment hours could remain stable or even increase."

c. Imagine if you were placed in control of funding for the Hunter's future… Please rank the ideas so we know what's important to you

RANKING QUESTIONS

Rank from top to bottom.

What should attract the most funding?

- ☐ Planning for transition
- ☐ Renewable energy
- ☐ Training and skills development
- ☐ Protecting and repairing the environment
- ☐ Supporting small business
- ☐ Diversifying industry
- ☐ Community and worker support to adjust to change

How should we plan and coordinate for the future?

- ☐ A local authority to coordinate and fund job creation & community support
- ☐ Government-led programs to involve community in planning for the future
- ☐ A long term fund for land and water management after mine rehabilitation
- ☐ A community reference group to advise the coordinating authority
- ☐ Fund land use assessment for new industries
- ☐ Free up mine buffer land for new enterprises

How should we support the community to adjust to change?

- ☐ Grants for local artists and arts organisations

- [ ] Expand TAFE and vocational education
- [ ] Grants for community organisations to support people through change
- [ ] Start community-owned energy networks
- [ ] Advocacy, counselling, and connection services for affordable housing and homelessness

How should we support workers to adjust to change?

- [ ] Create rules for mining and power companies to protect workers during retrenchment
- [ ] Free TAFE courses for retrenched mine and power station workers moving into new roles
- [ ] Career and financial advice/counselling for workers
- [ ] Create jobs by fitting homes and schools with solar and insulation
- [ ] Fund skills development for high school children

How should we support business and industry?

- [ ] Market the Hunter to attract investment
- [ ] Grants and training for local businesses to diversify
- [ ] Decarbonise energy-intensive industries like aluminium
- [ ] Incentives and cheap loans to attract new industry
- [ ] Fund Aboriginal-led initiatives in business, tourism, and culture
- [ ] Build pilot projects for new industries such as fly ash reuse

BEST / WORST IDEA

What did we miss? Please briefly share any ideas we missed

What was your favourite idea in this survey and why?

What was the worst idea from this survey and why?

ENGAGEMENT PREFERENCES

The next questions are about how you want to be involved in the future

This will help us to tailor events for you. If you would like to be involved more.

How much do you get involved in community activities? For example, attending local meetings, writing letters, volunteering, organising events.

- [ ] Frequently (more than five times a year)
- [ ] Occasionally (one or twice a year)
- [ ] Never
- [ ] Not enough (you wish you could do more)

OPTIONAL QUESTION: People will only see this if they type NEVER or NOT ENOUGH in the previous question What would encourage or enable you take part more often (e.g free childcare)

What type of event do you prefer? We are always looking for ways to improve. Please choose which method suits you best.

- Workshops
- Public summits
- Interviews
- Surveys

OTHER PLEASE SPECIFY

How else would you like to be involved?

Please tick all the activities that are of interest to you. Please add your email address on the next page so we can get in touch.

- Joining the Hunter Renewal mailing list
- Joining the Hunter Jobs Alliance mailing list
- Joining the Hunter Community Alliance mailing list
- Reading a copy of reports created from this survey
- None of these [if they click this option they will skip to consent]

8.2.4 Facilitators' Guide

This guide was provided to facilitators of the Future-proofing workshops.

Facilitators' Guide

BREAKOUT 1 ~ 8 mins

What excites or concerns you about the future?

The purpose of this activity is to get people to meet each other and to get them to think about their own stake in the Hunter's future.

1. **PRESS RECORD** and let the room know they are being recorded.
2. Say something like "let's learn a little about each other, I will go first".
3. **Your name, where you live, what you do with your time, what excites or concerns you about the next 10 years in the Hunter.**
4. You have 1-2 minutes each. Ask people to be quick so everyone has a chance to speak.
5. **PRESS STOP RECORDING** when you are notified.

BREAKOUT 2 ~ 35 mins

PART 1: Sorting ideas ~ 15 mins

The purpose of this activity is to prioritise ideas for the Hunter's future. The ideas have come from government, business, universities, and other experts. What will work best for your community?

1. **PRESS RECORD**
2. Click on the "**share screen**" button and select your Jamboard window
3. Ask for volunteers to take turns reading cards (not everyone may wish to)
4. Ask if anyone needs clarification
5. Ask people to raise their hands if they think it is a priority. No votes leave it where it is. Drag card to relevant pile. Remain as neutral as you can.
6. **WHAT'S MISSING?** Ask for other ideas in that category. Make a card, put it in it's pile.

PART 2: Highest priority ~ 20 mins

The purpose of this part is so we can tell the government what people in this community think is the number one priority.

CHOOSE JUST ONE, NOT TWO!

1. **Narrow.** Through group discussion narrow down to one idea that is the HIGHEST PRIORITY. Drag the idea card to the highest priority pile.
2. **Plan.** Discuss what you will report on to the whole group.
3. If you have spare time, show people another category of cards and discuss those (there are spare cards at the end of the Jamboard).
4. **PRESS STOP RECORDING** when you are notified.
5. Stop screen sharing after you stop recording.

FEEDBACK ~ 10 mins

Share back with whole group

Each facilitator will be asked in turn to share back with the whole group what they spoke about.

1. What **category** did you have?
2. What was your group's **highest priority**?
3. What did your group struggle with?
4. Did your group have any new ideas?

TIP

If one group member is taking over, remind them that you don't have much time and it's important to hear from everyone. Let them know there will be a survey they can fill out to share more of their ideas.

8.2.5 Facilitator's survey

These were the questions asked in the facilitator survey following the Future-proofing workshops.

- What was the group's highest priority idea/s?
- What did the group grapple with and why?
- Any good quotes you think could be added to our report?
- What was the group's favourite idea and why?
- Did you add any ideas? What were they?
- Did any problems, issues or conflicts come up that you think we should know about?
- What was it like using the Jamboard? Would you use something like that again?
- Do you have any suggestions on how we could improve this process for the future?
- Would you take part in something like this again?

8.3 Blueprint workshop materials

8.3.1 Document source categories for the Blueprint literature review

For the Blueprint literature review we commenced with an examination of planning documents specific to the Hunter region, such as regional plans (NSW Government, 2022b). Subsequently, we then investigated relevant legislation and guidelines pertaining to both rehabilitation and mining, including the Mining Act 1992 and the Mining Regulation 2016. We also reviewed journal articles addressing participation in transitions and post-mining land use, alongside mining rehabilitation case studies, media articles, mining industry reports, and reports from Indigenous organisations and non-government organisations.

Industry (includes mining companies, mining industry bodies, or other companies that support the mining industry)	85
Government (includes local, state, and federal jurisdictions)	77
Academic (including journal articles and books)	56
NGO or think tank reports	32
International organisation reports (e.g. the UN)	10
Media articles	6
Indigenous authored or Indigenous organisation	5
TOTAL	271

8.3.2 Email invitation for academic reference group

The first email text sent to the academic reference group is below to introduce Hunter Renewal and their work ahead of the description of what would be required of them.

> Dear [X]
>
> **A bit about us:**
> Over the past five years Hunter Renewal has engaged with thousands of local residents to create a post-coal future vision and demand for regional diversification support and planning. In 2019 we designed the Hunter Renewal Roadmap - a set of principles and recommendations to put us on the path to success. Since then change in the Hunter has accelerated and the conversation has matured.
>
> It is time to progress to the next stage - creating a new community-facing document that will focus on post-mining restoration and alternative land uses

that allow for diverse industries, biodiversity, and people to thrive. We are engaging local experts to help us draft best practice principles and recommendations, and we are thrilled that you will join us as part of a Roadmap Reference Group. Emeritus Professor Will Rifkin has kindly agreed to Chair the Reference Group.

The Restoration Roadmap:

Building on community priorities identified in the Future-proofing the Hunter report, and written for a lay audience, the Hunter Restoration Roadmap (working title) will inspire and raise the ambition for a region-wide integrated plan for post-mining lands (PML). It will outline guiding principles and recommendations to enable a transformation, over the coming decades, to a revitalised landscape that supports clean industries, jobs, and biodiversity.

The DRAFT Roadmap will be informed by a broad literature review (underway) and will assessed/sense-checked by the Reference Group of eight experts across a range of fields. The principles and PML specific recommendations will then be further refined and prioritised at a series of workshops with communities across the Hunter, resulting in a final Hunter Restoration Roadmap (a one-pager) and supporting report.

What we are asking of you:

As part of the expert Reference Group you will be asked to review and respond to a DRAFT set of roughly 20-25 principles and recommendations. We estimate your review would take around 2-3 hours. The principles will cover the many and overlapping aspects of post-mining land use including economy, community, First Nations, environment, rehabilitation, and governance. The timeframe for your review is 16th September 2022.

We will also invite you to join a zoom meeting of the Reference Group on the 30th September (morning) to discuss and refine together.

What you need to do:

Please let us know by 29th August if this all works for you and we will be in touch with more details.

8.3.3 Academic reference group survey

After the academics agreed to be on the reference group, we sent them a survey asking them to rate each of the principles and recommendations. This table contains the collated scores. The colours represent those which had least agreement (red), some agreement (yellow), or strong agreement (green).

PRINCIPLES & RECOMMENDATIONS	AGREE	DISAGREE	Neither agree nor disagree
MINE REHABILITATION Mining lands will be rehabilitated to restore biodiversity, create thriving communities, ecosystems and support regenerative industries	8	0	0
1A. Increase penalties for failure to comply with rehabilitation laws (the maximum is currently $1.1m)	7	1	0
1B. Limit the period a mine can stay in 'care and maintenance' to three years	7	1	0
1C. Require mines to announce closure dates at least five years in advance and to publish closure dates and plans in a public register	8	0	0
1D. Publicise a schedule of site inspections that includes detailed findings of the progress and quality of rehabilitation	8	0	0
1E. Require companies to aim to return the landscape to its approximate original contour post-mining	3	1	4
1F. New land uses must be able to sustain that use for the long-term (e.g. soil type, depth, gradient) and not increase risks such as fire, flood, or drought	7	0	1
1G. Prioritise research on impact and reuse of mining and power generation waste-streams (e.g coal ash)	6	0	2
REGIONAL PLANNING & GOVERNANCE 2. Governance will be transparent, accountable, and coordinated to achieve landscape restoration and a just transition for Hunter communities	8	0	0
2A. Establish an independent Centre of Excellence for coal mine rehabilitation in the Hunter to research and develop best practice standards for mine rehabilitation	5	1	2
2B. Create an independent Hunter Rehabilitation and Restoration Commission to create a landscape vision for the region, coordinate restoration, and enforce best practice standards for mine rehabilitation and closure	5	1	2
2C. Develop a region-wide biodiversity corridor system that puts new legal obligations on mine operators to regenerate ecosystems and manage them long-term on mined and mine-owned lands	7	1	0
2D. Ensure that any reduction in rehabilitation requirements (to enable new industrial uses) is offset by a requirement for mining companies to return un-mined land to public ownership	4	1	3
2E. Plan to utilise the most disturbed land closest to infrastructure for new industry to limit additional impacts on communities and the environment	7	0	1
ECONOMICS 3. Appropriate financing is essential and will meet the challenges of landscape restoration and economic diversification	8	0	0
3A. Increase coal mining royalties to help fund the Hunter's transition and repair the landscape through long-term ecosystem restoration	6	1	1

3B. Fix the security bonds system by increasing the contingency provisions to 25-50% as recommended by the NSW Audit Office	7	0	1
3C. Incentivise and prioritise local businesses and groups to develop new projects on old mine sites	8	0	0
3D. Increase funding to TAFE and vocational education for new courses that prepare local people for jobs in new industries	8	0	0
SOCIAL/COMMUNITY 4. Hunter communities will be engaged meaningfully and continuously so that land use plans align to local needs, expectations and values	8	0	0
4A. Create a public information hub showing maps and details of rehabilitation plans, mining plans, and post-mine development proposals	9	0	0
4B. Promote development that supports sustainable recreation, public spaces, and provides public access to waterways	8	1	0
4C. Ensure the whole community benefits from new developments through mechanisms such as community ownership, profit sharing schemes, and prioritisation of local jobs	8	1	0
4D. Create a new model for engagement in development planning and approval that gives local people greater involvement and influence in decisions shaping their region	8	1	0
FIRST NATIONS 5. First Nations peoples' perspectives and responsibilities to Country will be preeminent in land use planning	6	1	2
5A. Facilitate the return of mine-owned land that has not been mined to Traditional Owner	6	0	3
5B. Support the rights of free, prior and informed consent for Traditional Owners in relation to access and protection of cultural sites	9	0	0
5C. Ensure First Nations knowledge and aspirations is central in all mining land restoration and new development projects	8	0	1
5D. Meaningfully engage Traditional Owners and First Nations groups in the planning, development, and management of new projects	9	0	0
5E. Provide incentives for Aboriginal-owned businesses to propose and develop new projects	8	1	0
5F. Provide employment for local Aboriginal people in land use restoration projects (e.g. Indigenous land rangers)	9	0	0
CLIMATE & ENVIRONMENT 6. Land use planning will drive an orderly transition to net zero by 2050 to ensure a safe and stable climate	5	1	2
6A. Establish a region-wide network of biodiversity corridors to protect wildlife and sequester carbon	9	0	0
6B. Build climate resilience into development planning to make sure new projects are ready for changing water availability and climate	9	0	0
6C. New developments and activities on mining lands must aim to minimise carbon emissions (e.g. low carbon materials, regenerative agriculture)	9	0	0
6D. Prioritise the restoration of waterway ecosystems on post-mining land	8	0	1

8.3.4 Academic reference panel discussion guide

The academic reference group panel was a hosted discussion lead by Dr Will Rifkin

HOUR	TIME	ACTIVITY
8.45	15m	Team comes online to check connections, slides if needed, etc
9.00	5	Welcome participants as they come in
9.05	3	**Acknowledgement of Country** (suggest also acknowledge Wonnarua as main TOs of Upper Hunter)
9.08	2	**Welcome**. Quick overview of agenda. Ask for permission to record for notetaking.
9.10	10	**Introductions**. Each panellist introduces them and their expertise. No more than 1 min each. Dan introduces herself and mentions Kimberley as well as students.
9.20	3	**Project overview.** Project recap. How this activity fits in with the broader work. What we have done thus far, next steps.
9.23	10	**Icebreaker question.** What did you think about the drafting of the principles and/or the recommendations?
9.35	3	**Overview of process.** Start with principles, then recommendations. Will begin with those with less disagreement then move onto others if time.
9.40	40	**Principles.** Talk through each, beginning with ones with less agreement.
		IF TIME: Ask students what has struck them about this process?
10:20	60	**Recommendations**. Go through in order, starting with most controversial in each.
11:20	20	**Recap**. What have we missed? Does anyone want to go through anything once more? Are there people we should ask to give advice on certain recommendations to fill gaps in our knowledge? Are there any we should get more information on?
11:40	10	**Wrap up.** What is the takeaway here? Describe the next steps.

8.3.5 Email to academic reference group after panel

After the reference group panel, members were sent a follow up email to thank them for their time, inform them of the next steps, and give them a summary of where we had reached in terms of the principles. The email included notes on the wording of the principles before and after the panel discussions. These are below.

PRINCIPLES – SECOND DRAFT:

Mined lands and buffer lands will be rehabilitated to create thriving ecosystems, vibrant communities and regenerative industries.
First draft was "Mining lands will be rehabilitated to restore biodiversity, create thriving communities, ecosystems and support regenerative industries".

Governance will be transparent, inclusive, accountable, and coordinated to achieve landscape restoration and a just transition for Hunter communities.
First draft was "Governance will be transparent, accountable, and coordinated to achieve landscape restoration and a just transition for Hunter communities".

Appropriate financing is essential and will meet the ongoing challenges of landscape restoration and economic diversification.
First draft was "Appropriate financing is essential and will meet *the* challenges of landscape restoration and economic diversification".

Hunter communities will be engaged early, meaningfully and continuously so that land use plans align to local needs, expectations and values.
First draft was "Hunter communities will be engaged meaningfully and continuously so that land use plans align to local needs, expectations and values".

First Nations responsibilities to Country will be preeminent in land use planning.
First draft was "First Nations peoples' perspectives and responsibilities to Country will be preeminent in land use planning".

Land use planning for the Hunter will be consistent with achieving a safe and stable climate.
First draft was "Land use planning will drive an orderly transition to net zero by 2050 to ensure a safe and stable climate".

8.3.6 Call script for focus groups

This was the script for calls to database members to recruit for the focus groups. Each person was told why they had been called.

Hello, am I speaking to xx?

This is xx from the Hunter Renewal team.

I'm calling to invite you to join a small focus group about planning for post-mining restoration and land use in the Hunter.

Do you have a moment to chat?

- YES - proceed with script NO - can we send you an email about it?

  Over the next two decades at least 17 big mines in the Hunter will close, and 160,000 hectares of land will become available for reuse.

  Planning for how the land is restored and re-used is a huge challenge that is yet to be properly addressed. The NSW government is looking at options to re-purpose land for new industries, but we have no landscape scale plan for restoring the valley.

  Hunter Renewal is working on a project to set key principles and recommendations for getting the settings right so that plans for the future will support biodiversity, communities and regenerative industries.

  We'd like you to join us to provide your insights and thoughts in a small focus group to be held online for one hour in late October.

  Are you interested?

- YES. Fabulous, let's choose the best session for you and get you registered. Go to the spreadsheet Tab A - Ask which topic/session they would like to join, and tell them the dates and times - if all 8 name places have been filled.

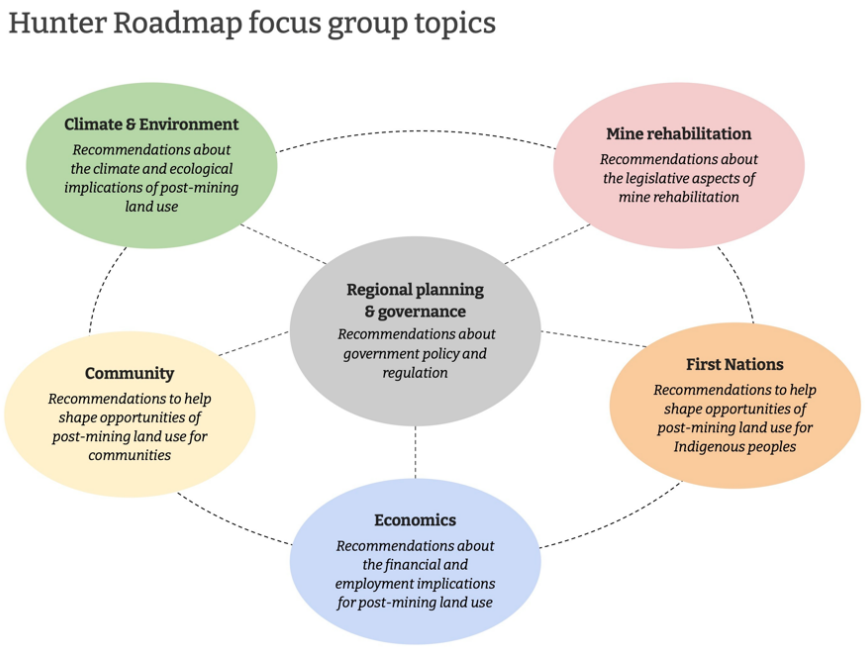
8.3.7 Reminder email for focus groups

This was sent out to the focus group participants a few days ahead of the events.

Hello,

Thanks again for registering to join our Focus Group on Planning for the restoration and reuse of Hunter mining lands on Thursday 20th October from 6-7pm.

Below (& attached) is a diagram of all the topics we will be covering in this series of focus groups. Because we want to make the most of your time, we will concentrate on the topics of mine rehabilitation and economics during the session you are attending. We will also send out a survey following these focus groups so that you can vote and comment on the other recommendations related to other topics.



The session is quite short, only 1 hour, with approximately 6 participants. We will guide you through the set of recommendations and ask for your feedback on each. Your contribution will help us develop our next roadmap and report on community expectations for post-mining land restoration.

If you need to cancel your registration, please do so from the link in the zoom registration email you received last week, so that we can offer your spot to someone else. Your link to sign into the session is also in the registration email, and I will send you a reminder with the link the day before the session.

I'm looking forward to seeing you there, Dan.

8.3.8 Focus group agenda

This is the general run sheet for the focus groups.

11:50pm	10m	Facilitators log onto Zoom. Run through agenda and roles
12.00pm	3mins	People arrive. DAN repeatedly welcomes and says we'll start shortly
12.03pm	3 mins	Acknowledge Country (DAN). What this is for. Basic zoom etiquette. What Hunter Renewal are doing. Over the next two decades at least 17 big mines in the Hunter will close, and 160,000 hectares of land will become available for reuse. Planning for how the land is restored and re-used is a huge challenge that is yet to be properly addressed. The NSW government is looking at options to re-purpose land for new industries, but we have no landscape scale plan for restoring the valley. Hunter Renewal is working on a project to set key principles and recommendations for getting the settings right so that plans for the future will support biodiversity, communities and regenerative industries. Today we are hoping to listen to your insights and thoughts about this issue, particularly [insert topic name]. Is everyone good with that?
12.06pm	8 mins	Open question. Please tell us your name, where you live and then tell us: What does a post-mining Hunter mean for you personally?
12.14pm	30 mins	**Discuss Principles & Recommendations** Now we are going to go through the draft principles. We don't have much time, and we will send out a survey later to get more feedback. But for now, let's keep it speedy! These principles and recommendations from over 100 reports from experts, governments, and other organisations. These are all the topics [share screen] For this topic, our core principle is [insert principle] Any comments about this principle? The recommendations for how we hope this principle can be achieved are now on the screen. [Read out recommendations 1 to 4. Cards are sorted into ALL AGREE and SOME AGREE piles. If no one agrees leave the card in position at the top.] Does anyone need clarity on any of these? Do you have any concerns or additions, will this work? Given your knowledge of your local area, of the recommendations in front of you, which is your highest priority? [Repeat for second set]
12.45	2 mins	IF TIME - of all the things you saw today what is the most important for you?
12.48	10 mins	**Wrap up discussion – Why did you come here today?** We are doing this as a community group because we want to see the Hunter restored, but beyond this, has anyone invited you to consultations? Who lives next to a mine? How often are you being consulted and on what? Perceptions about being involved in decision-making in the Hunter

8.3.9 Public survey

A public survey was also hosted on Jotform (free online software) for the Blueprint. Participants were asked to rank the principles and recommendations. The survey included a link to a plain text website with more information about each. This was necessary as the free software we used did not allow for pop ups within the survey itself. The text of the principles was slightly amended based on the outcomes from the reference group survey and panel. Technical language was also explained where necessary.

Thanks for taking part in this survey

Your ideas will help us understand your views on what is possible for the restoration of Hunter mining lands. This will take about 10-15 minutes.

INTRODUCTION SLIDE

The mining landscapes of the Hunter are a huge liability but can be turned into an opportunity and will be one of the greatest measures of a successful transition. This survey will help us gather community priorities for these lands, because decisions about the future need to be made with the community, for the community. Please take a moment to watch this introductory video.

PRINCIPLES

Please rate the **principles** [from 1 to 5] so we know what's most important to you. Please add any comments following the ranking.

1. Mine owned lands will be rehabilitated to improve biodiversity and support regenerative industries (e.g., sustainable agriculture).
2. Rehabilitation and restoration governance processes will be transparent, accountable, and coordinated.
3. Financing for rehabilitation and development must meet the scale of the region-wide challenge and be properly managed.
4. Local communities will be engaged meaningfully in the process of land use planning.
5. First Nations peoples' rights to the custodianship (Legal ownership) and management of their lands will be supported.
6. Land use planning in the Hunter must contribute to improving environmental and climate health

RECOMMENDATIONS

Please rate the recommendations [from 1 to 5]. There are six categories based on the principles above. Each has some explanatory text to help with explanation.

LANDSCAPE REGENERATION

1. Mining companies should be fined more if they don't rehabilitate properly (At the moment the most that companies can be fined is $1.1 million)
2. Strengthen laws to ensure mining companies progressively rehabilitate dormant and active mines (At the moment there isn't a strong financial prerogative to act on rehabilitation plans)
3. Companies should give at least 5 years notice of closing a mine (At the moment they can give only a month or two notice which leaves communities at risk)
4. Reports on rehabilitation progress should be publicly accessible, up-to-date and open to scrutiny (Rehabilitation and mining plans should be available through an online directory)
5. Change the laws to require that companies do not leave massive voids in the landscape (In the Hunter there are 45 mine voids totalling an area as large as Sydney Harbour).

REGIONAL PLANNING AND GOVERNANCE

1. Establish an Independent Centre of Excellence to research and develop best practice standards for mine rehabilitation and landscape regeneration (this will allow stakeholders to demonstrate and share knowledge)
2. Establish an independent Hunter Rehabilitation and Restoration Commission to coordinate and enforce best practice standards for rehabilitation and mine closure (This body will work together with a Hunter Valley Transition Authority when established)
3. Set legal requirements for mine companies to create natural biodiversity corridors on and near mined lands, promoting long-term ecosystem healing. (Biodiversity corridors are links of native vegetation that allow native animals to travel safely.
4. Ensure that any changes in rehabilitation requirements to enable new industrial uses requires an equivalent community and environment benefit (companies might otherwise be able to dodge paying for rehab because the new user doesn't need the land returned to a quality state)
5. Industrial expansion should be limited to the most disturbed lands only so environmental impact is minimal. (If this isn't required, un-mined land might be developed on because it is easier than rehabilitating the mined land, resulting in unnecessary environmental degradation)

ECONOMICS

1. Increase funding from royalties for long-term rehabilitation (At the moment there is inadequate funding to support rehabilitation in full)
2. Increase security and rehabilitation provisions in line with NSW Audit Office recommendations (At the moment security bonds are inadequate for the cost and scale of rehabilitation)
3. Develop an incentive scheme for new projects on old mine sites (ideally this would prioritise projects with Indigenous and community ownership)

4. Fund expansion of TAFE and vocational education to upskill local Hunter residents for new jobs (At the moment the Upper Hunter's tertiary education offerings are limited)

COMMUNITY

1. Promote development that supports sustainable recreation, public spaces, and provides public access to waterways
2. New developments should focus on benefiting the local community (e.g., Promoting local jobs, community ownership and profit sharing)
3. Involve the local community meaningfully and continuously in the visioning and decision-making process (At the moment community consultation is lacking)

FIRST NATIONS

1. Support the Native Title lands claim process in the Hunter.
2. Support Traditional Custodians in protecting their Country and cultural sites. (to ensure that connection to Country for Aboriginal people is made better,
3. Incorporate First Nations knowledge and expertise in rehabilitation and land restoration (For example, knowledge of suitable native vegetation and fire management) not worse)
4. Meaningfully engage Traditional Custodians and First Nations groups in the planning, development, and management of new projects.
5. Provide employment for local Aboriginal people in land use restoration projects (e.g., Indigenous land rangers)

CLIMATE & ENVIRONMENT

1. Incorporate climate resiliency in new development projects (At the moment development plans do not factor in climate change).
2. New developments must be carbon neutral, or have a plan to become carbon neutral (At the moment, there is no provision for this in the planning system)
3. Waterway ecosystems on mined lands must be restored (Mining has significantly polluted local creeks, rivers, and wetlands)

What did we miss?

Please briefly share anything you think we should know about these recommendations.

8.3.10 Restoration Blueprint principles and recommendations

1. REHABILITATION & LANDSCAPE RESTORATION

Mine-owned lands will be restored to support biodiversity and regenerative industries

a. Set legal obligations to prevent mine operators from leaving final voids that will become perpetual hazards to human and environmental health.
b. Increase and enforce penalties for failure to meet progressive rehabilitation commitments.
c. Establish an independent Centre of Excellence in the Upper Hunter to research, develop, and demonstrate best practice standards for mine rehabilitation.
d. Increase security bonds to cover the true cost of rehabilitating each mine.

2. REGIONAL PLANNING & GOVERNANCE

Planning and policy mechanisms will be coordinated to achieve landscape restoration and a just transition for Hunter communities

a. Increase coal mining royalties to fund the Hunter's transition and repair the landscape through long-term ecosystem restoration.
b. Create an independent Hunter Rehabilitation and Restoration Commission to develop a landscape vision for the region, coordinate restoration, and enforce best practice standards for mine rehabilitation and closure.
c. Use disturbed land closest to infrastructure for new industry to limit additional impacts on communities and the environment.

3. COMMUNITY

The needs, expectations, and values of Hunter communities will be at the centre of post-mining land use planning

a. Mandate greater community involvement in post-mining land use planning.
b. Ensure new developments benefit Hunter communities for the long-term through prioritisation of local jobs and mechanisms such as community ownership and profit sharing schemes.
c. Create a public information hub showing maps and details of current rehabilitation plans and progress, closure plans, and post- mine development proposals.
d. Increase funding to TAFE for new courses that train local people for jobs in regenerative industries.

4. FIRST NATIONS

Traditional owner responsibilities to Country and Indigenous knowledge will play a greater role in restoration of mining land and future land use planning

a. Support the return of mine-owned land, especially unmined buffer lands, where sought by Traditional Owners.
b. Engage Traditional Owners in decision-making and planning for new projects on mining lands, from the outset.
c. Prioritise employment for local Indigenous people in land use restoration and rehabilitation projects.

5. CLIMATE & ENVIRONMENT

Restoration and reuse of mining lands will be consistent with achieving a safe and stable climate

a. Set caps on carbon emissions and water use on all current mining activities and future developments on mining lands.
b. Establish a region-wide biodiversity corridor system that includes rehabilitated mined lands and restored buffer lands.
c. Prioritise the restoration of waterway ecosystems on post-mining land.

8.4 Other materials

8.4.1 EP&A Act

There are several references in this thesis to the *Environmental Planning and Assessment Act 1979* regarding community participation in planning. Of note is section 2.6 of the *Act* which contains the mandatory requirements for participation. This is reproduced here for ease of referral by the reader. This version is current as of October 2023 and was accessed on 6 November 2023.

Division 2.6 Community participation

2.22 Mandatory community participation requirements

(1) Part 1 of Schedule 1 sets out the mandatory requirements for community participation by planning authorities with respect to the exercise of relevant planning functions.

Note—

The mandatory requirements include public exhibition for a minimum period, public notification requirements and the giving of reasons for decisions by planning authorities. The regulations under that Schedule may also require community consultation by applicants for consents or other approvals.

(2) Those mandatory requirements for community participation include any other forms of community participation that are set out in a community participation plan under this Division and that are identified in that plan as mandatory requirements.

8.4.2 Analysis of the Muswellbrook Coal image

In speaking of the ways that visual and information design mediate and interpret meaning, an image of a proposal put forward by Muswellbrook Coal was analysed. This can be viewed in section 2.1.3.1. The text below is a deeper analysis that whilst valuable has been moved here to the appendices to aid clarity of the main body of text.

Interpretation of words or images depends on an interaction between the cues made available for the viewer or reader. These cues include diagrams, words, and layout and their values, social setting, knowledge, and experience (Schriver, 1997). The cues made available in the Muswellbrook Coal image are (a) typographic labels, (b) rendered additions to the original image (c) the original image (d) three-dimensional image of landforms. These will be analysed in order.

(a) **Typographic labels**. Short on detail, high on potential, these labels point both to existing and proposed entities. The Bells Mountain exists, as does the biodiversity offset area.[103] Meaning is constrained here, however, because the viewer may perceive that the company will create this biodiversity area, when it is simply an area of undisturbed bush that the company has gained credit for not destroying. Proposed labels such as the hydrogen plant, pumped hydro, and the excitingly titled *Energy Resilience Centre of Excellence* do not yet exist and will only become a reality after planning approval by the NSW Government. Subject to approval, the pumped hydro is not expected to be completed until 2027 (Infrastructure Partnerships Australia, n/d) which means there is a delay in potential that the viewer may not be aware of.

(b) **Rendered additions**. The most prominent addition is the solar and battery farm in the centre of the image which shows only one third of the proposed area for solar.[104] As the existing coal mine area is not visible, the cue constrains meaning because it may appear that the farm will be built over the existing mined area. Referring to documentation delivered to the federal government to secure

[103] The biodiversity offset area is a small parcel of existing bushland that the company has left undisturbed to offset the ecologies destroyed during coal mining. This is regulated under the *Biodiversity Conservation Act*. The total area of the mine was approximately 618 hectares, the total area of this biodiversity area is 23.21 hectares (Muswellbrook Coal Company, 2023).

[104] Estimate made from image supplied to the federal government to secure biodiversity offset approval for the 'Muswellbrook Solar Farm' (Department of Climate Change, Energy, the Environment and Water, 2022b). Documents indicate the total area of disturbed land will be 350 hectares and not be on land that has been mined.

biodiversity offset credits, the actual area of the solar farm is in two parts, north and south of the existing mined area, not on the mined area.[105]

(c) **Original image.** The underlying photograph or compilation of photographs portray the area as a green and healthy environment with a clear blue sky. What is constrained in this image is that during the coal mines' lifetime (it closed in 2022), the owner received several infringement notices and complaints about poor air quality due to the mine's operations (Winn, 2021). Also not shown are the increase in respiratory illnesses in the Upper Hunter over this time (Goetze, 2019). While this individual mine is by no means responsible for all these issues, the image presented to us represents a false depiction of reality. The Upper Hunter area is currently experiencing a severe drought; residents (not industry) have been requested to follow water restrictions (Upper Hunter Shire Council, 2023). Due to the drying effects of climate change, it is unlikely that this area is or will ever be this green.

(d) **Three-dimensional landform**: In the bottom left corner is a three-dimensional image (3D) of the landform which is labelled 'pumped hydro'. The use of this image is intended to provide more detail about the proposed layout. Warren-Kretzschmar and Von Haaren (2014) say that different visualisation methods should be used to allow for the perceptual capacities of different audiences, and it has become increasingly common for 3D models of proposed landscapes to be used in helping the public understand the dimensions of planning proposals (Gill & Lange, 2015). Such images can be static or dynamic and can be more-or-less legible to a viewer depending on their familiarity with the topic or the location (Lange, 2001). This 3D image shows the landforms that will be present at the end of the mine's life. This includes the final void, which is the deepest part of the mine which the proponent says can be used to store water which will be used to generate energy (Idemitsu, 2022). What is not seen is that the water in voids such as this will be highly toxic (Drinan, 2020), and will draw water out of the environment (Dahlgren, 2022). Across the Hunter, the area of the final voids left after mining will be equal to the size of Sydney Harbour but much deeper (Lock The Gate, 2018).

[105] Department of Climate Change, Energy, the Environment and Water (2022b).

8.4.3 Hunter Renewal Roadmap

This was created in 2019 by Hunter Renewal as a consolidation of two years of conversations with residents in the Hunter Valley about transition.

HUNTER Renewal Roadmap

The Hunter region is vulnerable to changes in the market for coal and this could leave thousands of people jobless, landscapes unrehabilitated and the region in economic recession if there are no plans and actions in place to stimulate job creation in alternative industries.

The Hunter region can prosper regardless of declines in the coal industry, but the region needs support and investment to diversify before coal declines. The region has expertise in energy, civil engineering, manufacturing, food production, wine growing, tourism and agriculture. It connects to the world via the Port of Newcastle and the rail line that can deliver Hunter products for export. It has exceptional natural beauty, biodiversity and water resources and vibrant towns and villages.

Past experiences of structural change in mining and energy industries from Australia and around the world provide us with the lessons we need to ensure a positive transition for our region to protect us against declines in coal. Key elements of successful transitions include:

- Early preparation well in advance of change
- Strong community leadership and participation
- Consistent and clear policy support from governments
- Allocation of substantial public finances
- Worker retraining and re-employment
- Detailed economic diversification plans

We seek support from local, state and federal government, business and civil society for:

1. A policy framework at the state level to support a fair and effective transition, including:
   - A community-driven process that builds on the Hunter region's strengths and has strong community participation embedded in the process.
   - A just transition that maximises support for affected workers and promotes training and alternative employment in well-paid and fulfilling jobs.
   - Immediate and rapid prioritisation of existing programs such as renewable energy development and education and skills training towards the Hunter.
2. At least $2 billion from the Snowy Hydro Legacy Fund dedicated to coal mining regions with an emphasis on infrastructure upgrades for energy generation, grid connectivity, manufacturing, transport and communications.
3. A Hunter Regional Transition Taskforce with representatives from the community, unions, employers and government to coordinate the transition and facilitate community participation processes.
4. A Hunter Regional Diversification Plan building on existing strengths and encouraging the development of industry clusters, labour-intensive projects and education, training and technology hubs.
5. Strengthened laws for rehabilitation of mines and power stations to increase financial bonds and improve standards, boosting the jobs available now and into the future in environmental restoration.

www.hunterrenewal.org.au

8.4.4 Transition engagements in the Hunter (government)

A catalogue of publicised, government-led engagement events related to transition in the Hunter since 2021. There have been no meetings open entirely to the public.

	FORMAT/DATE	NAME/HOST	AUDIENCE	ISSUE
1	**Invited workshop** 4 May 2022, Newcastle	SIM Tables* for Community Empowerment: Hunter Joint Organisation *short for simulation tables	Member Councils, Resilience NSW, the RFS and SES	Community resilience in response to climate change. Training for councils on how to use the SIM tables with view to help communities plan for emergency situations
2	**Telephone survey** August 2021 to April 2022	Clean energy community education program: Hunter Jobs Alliance and Newcastle City Council	Western Newcastle residents	Telephone survey to understand community sentiment and concerns in relation to the clean energy transition.
3	**Invited online meeting** July 2022	Royalties for Rejuvenation Fund: Draft Regulations Consultation – Regional NSW (NSW Government)	Targeted groups within coal regions (local councils, industry bodies, businesses and one community group)	Targeted consultation sessions to gather feedback on the Regional Expert Panel structures outlined in the regulations. Hunter Renewal invited to one of these.
4	**Written submissions** 21 September to 19 October 2022	Mining Amendment Regulation 2022: NSW Government	Public	Written submissions to give feedback on the proposed Mining Amendment Regulation
5	**Online exhibition** 6 December 2021 until 4 March 2022	Draft Hunter Regional plan 2041 public exhibition: NSW Government	Public	Public exhibition of Draft Hunter Regional Plan 2041, virtual engagement with community members
6	**Invited meeting** 8 August 2023, Cessnock	Roundtable. Future Jobs & Investment Authorities. Hosted by NSW Minister for Natural Resources, Courtney Houssos	Mining companies, unions, energy producers, industry groups and universities	How to create jobs, re-skill workers and economically diversify
7	**Invited meeting** 5 February 2024	Hunter Transmission Project regional reference group, EnergyCo/NSW Government	Local government (3 people), Aboriginal (1 person), environment sectors (2 people), community representatives (3)	Discussions on the development of the Hunter Transmission Project, an electricity transmission line to link new renewable projects to the grid

8.4.5 Transition engagements in the Hunter (community)

A list of publicised, community-led engagement events related to transition since 2017.

Hunter Renewal

- Door knocking, market stalls, community presentations (2017 – 2024)
- Seat at the Table dinners (2017 & 2018)
- Hunter Renewal Summit (2019)
- Energy Inquiry submission workshops (2019)
- Webinar series (2020)
- Future-proofing the Hunter workshops (2021)
- Community Blueprint workshops (2022)

Hunter Jobs Alliance

- West Newcastle survey on transition (2021)
- Future-proofing the Hunter workshops (2021)
- Pub Talk: When Power Stations Close - lessons from Port Augusta, Hazelwood and Collie (2021)
- Webinars (2022, 2023)
- Campaign workshops (2023)

Hunter Community Alliance

- Candidate forums (2022 & 2023)
- Founding Assembly (2024)

Hunter Community Environment Centre

- Citizen science day (2022)
- Public meeting 'Power station closures - what next for Hunter workers and environment?' (2022)
- Out Of The Ashes report briefings (2020)

The Next Economy

- Hunter Conversation for Change workshop (2022)

Beyond Zero Emissions

- Workshop: Cooling Your Home online workshop program (2021)
- Million Jobs Plan workshops (2020)

Coal Ash Community Alliance

- 2030 - Empty Coal-ash Dams? A first workshop to imagine how we can get there (2023)
- Coal Ash Public Meeting (2021)
- Community Briefing on Coal Ash Inquiry Findings (2021)
- Power and Pollution: National Community Summit (2020)

8.4.6 Designer roles in sustainability transitions

A review of 80 papers from the fields of Design for Sustainability Transitions, Transition Design, Ecologically-Engaged Design, and Systems Design.

KEY: **A:** Mentioned coproduction of knowledge; **B:** Mentions legislation or planning

PAPER	FIELD	A	B	OBJECT OF DESIGN
Alamu Owoyele, B., & Antonio Edelman, J. (2021). Deep Design: Integrating Transitions Research and Design with Agency, in the Digital Era. *Design as Common Good*. https://designascommongood.ch/day-2	Transition Design	N	N	digital technologies
Bisson, M., Palmieri, S., Ianniello, A., Botta, L., & Palomba, R. (2022). Transition Design: An opportunity for design and designers. *INTED2022 Proceedings*, *1*, 2692–2702. https://doi.org/10.21125/inted.2022.0786	Transition Design	N	N	product design
Boehnert, J. (2018). Anthropocene Economics and Design: Heterodox Economics for Design Transitions. *She Ji, 4*(4), 355–374. https://doi.org/10.1016/j.sheji.2018.10.002	Design for sustainability	N	N	economic transitions
Boehnert, J. (2018). *Design, Ecology, Politics*. Bloomsbury Academic	Design for sustainability	N	N	design and ecological literacy
Boehnert, J. (2019). Ecocene Design Economies: Three Ecologies of Systems Transitions. *Design Journal*, *22*(sup1), 1735–1745. https://doi.org/10.1080/14606925.2019.1595005	Ecologically engaged design	N	N	design and ecological literacy
Boehnert, J. (2019). Transition Design and Ecological Thought. *Cuadernos Del Centro de Estudios de Diseño y Comunicación, 73*. https://doi.org/10.18682/cdc.vi73.1042	Ecologically engaged design, Transition Design	N	N	design and ecological literacy
Boehnert, J. (2017). Ecological Theory in Design: Participant designers in an age of entanglement. In R. B. Egenhoefer (Ed.), *Routledge Handbook of Sustainable Design* (pp. 86–98).	Ecologically engaged design	N	N	design and ecological literacy (gap in economic understanding)
Boehnert, J., Lockton, D., & Mulder, I. (2018). Editorial: Designing for Transitions. *Proceedings of DRS 2018 International Conference*. https://doi.org/10.21606/dma.2018.008	Transition Design	N	Y	Niche
Boyle, E., Watson, C., Mullally, G., & Ó' Gallachóir, B. (2021). Regime-based transition intermediaries at the grassroots for community energy initiatives. *Energy Research & Social Science, 74*. https://doi.org/10.1016/j.erss.2021.101950	–	N	N	community energy initiatives
Bruce, J. (2017). Design strategies for impact. In R. B. Egenhoefer (Ed.), *Routledge Handbook of Sustainable Design* (pp. 27–39).	Design for impact	N	N	products, services and systems
Ceschin, F. (2014). How the Design of Socio-technical Experiments Can Enable Radical Changes for Sustainability. *International Journal of Design, 8*(3).	Design for Sustainability	N	N	products, services and systems
Ceschin, F., & Gaziulusoy, I. (2016). Design for Sustainability: An Evolutionary Review. *DRS2016*.	Design for Sustainability	N	Y	products, services and systems
Ceschin, F., & Gaziulusoy, I. (2016). Evolution of design for sustainability: From product design to design for system innovations and transitions. *Design Studies, 47*, 118–163.	Design for Sustainability	N	Y	products, services and systems
Ceschin, F., & Gaziulusoy, I. (2017). How many ways to design for sustainability? In R. B. Egenhoefer (Ed.), *Routledge Handbook of Sustainable Design* (pp. 417–432).	Design for Sustainability	N	Y	products, services and systems
Ceschin, F., & Gaziulusoy, İ. (2019). *Design for Sustainability: A Multi-level Framework from Products to Socio-technical Systems*. Routledge.	Design for Sustainability	Y	Y	products, services and systems
Coops, F. (2022, June 16). *Designing for transitions and transformations*. https://doi.org/10.21606/drs.2022.897	Transition Design	N	N	design profession
Corsini, L., & Moultrie, J. (2021). What Is Design for Social Sustainability. *Sustainability, 13*.	Design for Social Sustainability	N	N	products, services and systems

de Koning, J. (2019). *Design and Transition Management: Value of synergy for sustainability.*	Design and transition management	N	N	products, services and systems
Dewberry, E., & Johnson, J. (2010). Design interventions, prediction and science in the sustainable transition of large, complex systems. *The 2nd International Conference on Design Engineering and Science* (ICDES 2010. http://www.jsde.or.jp/icdes2010/speeches.html	Systems design	N	Y	policy
DiSalvo, C. (2015). Three reflections on the Transition Design Symposium provocations. *Design Philosophy Papers, 13*(1), 51–55. https://doi.org/10.1080/14487136.2015.1085696	Transition Design	N	N	economies, capitalism
Doordan, D. (2015). Professional skills and local engagement: the challenge of Transition Design. In *Philosophy Paper*s, 13(1).	Transition Design	N	N	design education
Garduño Garcia, & Gaziulusoy, I. (2021). Designing future experiences of the everyday: Pointers for methodical expansion of sustainability transitions research. *Futures : the Journal of Policy, Planning and Futures Studies, 127.* https://doi.org/10.1016/j.futures.2021.102702	Design for Sustainability transitions	N	N	visions
Gaziulusoy, A. İ. (2019). Postcards From "the Edge": Toward Futures of Design for Sustainability Transitions. *Cuaderno 73,* 67–84.	Design for Sustainability transitions	N	Y	cities
Gaziulusoy, A. I., & Brezet, H. (2015). Design for system innovations and transitions: A conceptual framework integrating insights from sustainablity science and theories of system innovations and transitions. *Journal of Cleaner Production*, 108, 558–568. https://doi.org/10.1016/j.jclepro.2015.06.066	Design for Sustainability transitions	N	N	cities
Gaziulusoy, A. I., & Houtbeckers, E. (2018). Convergences: Design for Sustainability Transitions and Degrowth. *6th International Degrowth Conference.*	Design for Sustainability transitions	N	Y	products, services and systems
Gaziulusoy, A. İ., & Ryan, C. (2017). Roles of design in sustainability transitions projects: A case study of Visions and Pathways 2040 project from Australia. Journal of Cleaner Production, 162, 1297–1307. https://doi.org/10.1016/j.jclepro.2017.06.122	Design for Sustainability transitions	N	N	cities
Gaziulusoy, İ., & Öztekin, E. E. (2019). Design for sustainability transitions: Origins, attitudes and future directions. *Sustainability (Switzerland), 11*(13). https://doi.org/10.3390/su11133601	Design for Sustainability transitions	N	N	products, services and systems
Gaziulusoy, A., and Erdoğan Öztekin, E. (2018) Design as a Catalyst for Sustainability Transitions, in Storni, C., Leahy, K., McMahon, M., Lloyd, P. and Bohemia, E. (eds.), *Design as a catalyst for change - DRS International Conference 2018, 25-28 June, Limerick, Ireland.* https://doi.org/10.21606/drs.2018.292	Design for Sustainability transitions	N	N	products, services and systems
Gaziulusoy, I., & Ryan, C. (2017). Shifting Conversations for Sustainability Transitions Using Participatory Design Visioning. *The Design Journal, 20*(sup1), S1916--S1926. https://doi.org/10.1080/14606925.2017.1352709	Design for Sustainability transitions	N	N	products, services and systems
Hansson, K., Forlano, L., Choi, J. H. J., Disalvo, C., Pargman, T. C., Bardzell, S., Lindtner, S., & Joshi, S. (2018). Provocation, conflict, and appropriation: The role of the designer in making publics. *Design Issues, 34*(4), 3–7. https://doi.org/10.1162/desi_a_00506	Design for Sustainability transitions	N	N	design processes/roles
Houtbeckers, E., & Gaziulusoy, I. (2019). Ecofeminist understandings of care and design for sustainability transitions: Towards a theoretical framework of work for the degrowth movement. *Nordes 2019: Who Cares?*. www.nordes.org	Design for Sustainability transitions	N	N	design processes
Huybrechts, L., Dreessen, K., & Hagenaars, B. (2018). Building capabilities through democratic dialogues. *Design Issues, 34*(4), 80–95. https://doi.org/10.1162/desi_a_00513	Participatory design	N	Y	democratic dialogues
Hyysalo, S., Marttila, T., Perikangas, S., & Auvinen, K. (2019). Codesign for transitions governance: A Mid-range pathway creation toolset for accelerating sociotechnical change.	Design for Sustainability transitions	N	N	design processes

Design Studies, 63, 181–203. https://doi.org/10.1016/j.destud.2019.05.002				
Hyysalo, S., Perikangas, S., Marttila, T., & Auvinen, K. (2019). Intermediate Codesigning in Transitions Governance: Catalysing and Channelling Participant Action. *Design Journal, 22*(6), 873–894. https://doi.org/10.1080/14606925.2019.1661557	Design for Sustainability transitions	N	N	design processes
Hyysalo, S., Lukkarinen, J., Kivimaa, P., Lovio, R., Temmes, A., Hildén, M., Marttila, T., Auvinen, K., Perikangas, S., Pyhälammi, A., Peljo, J., Savolainen, K., Hakkarainen, L., Rask, M., Matschoss, K., Huomo, T., Berg, A., & Pantsar, M. (2019). Developing policy pathways: Redesigning transition arenas for mid-range planning. *Sustainability (Switzerland), 11*(3). https://doi.org/10.3390/su11030603	Design for Sustainability transitions	N	N	design processes
Irwin, T. (2015). Transition Design: A Proposal for a New Area of Design Practice, Study, and Research. *Design and Culture, 7*(2), 229–246.	Transition Design	N	N	design practice
Irwin, T. (2018). The Emerging Transition Design Approach. In C. Storni, K. Leahy, M. McMahon, P. Lloyd, & E. Bohemia (Eds.), *Design as a catalyst for change - DRS International Conference 2018*. https://doi.org/10.21606/drs.2018.210	Transition Design	N	N	design practice
Irwin, T., Kossoff, G., & Tonkinwise, C. (2015). Transition Design Provocation. *Design Philosophy Papers, 13*(1), 3–11. https://doi.org/10.1080/14487136.2015.1085688	Transition Design	N	N	design practice
Irwin, T., Tonkinwise, C., & Kossoff, G. (2020). Transition Design: An Educational Framework for Advancing the Study and Design of Sustainable Transitions. *Cuaderno 105.*	Transition Design	N	N	design practice
Joore, P., & Brezet, H. (2014). A Multilevel Design Model—The Mutual Relationship between Product-Service System Development and Societal Change Processes. *Journal of Cleaner Production, 97*	Design for Sustainability transitions	N	Y	products, services and systems + design practice
Julier, G., & Kimbell, L. (2019). Keeping the System Going: Social Design and the Reproduction of Inequalities in Neoliberal Times. *Design Issues, 35*(4), 12–22. https://doi.org/10.1162/desi_a_00560	social design	Y	N	design practice
Julier, G. (2013). From design culture to design activism. *Design and Culture, 5*(2), 215–236. https://doi.org/10.2752/175470813X13638640370814	Design activism	N	Y	design practice
Kivimaa, P., Boon, W., Hyysalo, S., & Klerkx, L. (2019). Towards a typology of intermediaries in sustainability transitions: A systematic review and a research agenda. *Research Policy, 48*(4), 1062–1075. https://doi.org/10.1016/j.respol.2018.10.006	not about design	N	Y	stakeholder coordination
Kjøde, S.G. (2022). Navigating Designerly Systemic Approaches for Sustainability Transitions. *Proceedings of Relating Systems Thinking and Design* (RSD11 Symposium).	Transition Design	N	N	design practice
Kossoff, G. (ed.), & Potts, R. (ed.). (2016). Can Design Catalyse the Great Transition? *Papers from the Transition Design Symposium 2016.*	Transition Design	N	N	design practice
Kossoff, G., Irwin, T., & Willis, A.M. (2015). Transition Design. *Design Philosophy Papers, 13*(1), 1–2. https://doi.org/10.1080/14487136.2015.1085681	Transition Design	N	N	design practice
Lähteenoja et al. (2023). Transition co-design dynamics in high level policy processes. *Design Studies, 88.*	Transition Design	N	N	design processes
Lam, D. P. M., Horcea-Milcu, A. I., Fischer, J., Peukert, D., & Lang, D. J. (2020). Three principles for co-designing sustainability intervention strategies: Experiences from Southern Transylvania. *Ambio, 49*(9), 1451–1465. https://doi.org/10.1007/s13280-019-01302-x	Codesign	Y	Y	design practice
Lockton, D., & Candy, S. (2019). A Vocabulary for Visions in Designing for Transitions. *Cuaderno 73.*	Transition Design	Y	Y	open data
Lu, P., & Sangiorgi, D. (2021). Exploring implications for designing sociotechnical transitions: taking reflexivity as a matter of scale. *Matters of Scale: The 9th Nordes Design Research Conference.*	Transition Design	N	N	design practice

Lukkarinen, J. P., Salo, M., Faehnle, M., Saarikoski, H., Hyysalo, S., Auvinen, K., Lähteenoja, S., & Marttila, T. (2023). Citizen energy lost in sustainability transitions: Knowledge co-production in a complex governance context. *Energy Research & Social Science, 96*. https://doi.org/https://doi.org/10.1016/j.erss.2022.102932	not about design	Y	Y	Energy systems
Manzini, E. (2006). Design, ethics and sustainability. *Guidelines for a Transition Phase*. University of Art and Design Helsinki (June), 9–15.	social innovation	N	N	design practice
Manzini, E. (2015). Design in the transition phase: a new design culture for the emerging design. *Design Philosophy Papers, 13*(1), 57–62. https://doi.org/10.1080/14487136.2015.1085683	expert design	N	Y	design practice
Matern, Theuner, J., Knippschild, R., & Barrett, T. (2022). Regional design for post-mining transformation: insights from implementation in Lusatia. *Planning, Practice & Research*, 1–18. https://doi.org/10.1080/02697459.2022.2147641	Regional design	Y	Y	design practice
Mulder, I., & Loorbach, D. (2018). Rethinking Design: a critical perspective to embrace societal challenges. Can Design Catalyse the Great Transition: *Papers from the Transition Design Symposium 2016*, 16–24.	Transition Design	N	N	design practice
Mulder, I., & van Selm, M. (2019). On transforming transition design: from promise to practice. *Conference Proceedings of the Academy for Design Innovation Management, 2(*1). https://doi.org/10.33114/adim.2019.03.323	Transition Design	N	N	design practice
Öztekin, E. E., & Gaziulusoy, I. (2019). Designing Transitions Bottom-up: The agency of design in formation and proliferation of niche practices. *The Design Journal, 22*(sup1), 1659–1674. https://doi.org/10.1080/14606925.2019.1594999	Design for Transitions	N	N	design practice
Öztekin, E. E. (2022). *Design in community-led sustainability transitions.*	Design for Transitions	Y	N	design practice
Raynor, K. E., Doyon, A., & Beer, T. (2017). Collaborative planning, transitions management and design thinking: evaluating three participatory approaches to urban planning. *Australian Planner*, *54*(4), 215–224. https://doi.org/10.1080/07293682.2018.1477812	Design thining	N	Y	Urban planning
Ryan, C. (2008). Climate change and ecodesign part I: The focus shifts to systems. In *Journal of Industrial Ecology (Vol. 12(* 2), pp. 140–143). https://doi.org/10.1111/j.1530-9290.2008.00026.x	Ecodesign	N	N	Ecosystems Innovation
Sangiorgi, D. (2010). Transformative Services and Transformation Design. *International Journal of Design, 5*(1).	service design	Y	N	Design practice
Scupelli, P. (2015). Designed transitions and what kind of design is transition design? *Design Philosophy Papers, 13*(1), 75–84. https://doi.org/10.1080/14487136.2015.1085682	Transition Design	N	N	Design practice
Theuner, J., & Matern, A. (2022). Transitions to Sustainability Using Strategic Spatial Planning: Designing Spatial Visions in the Coal Phase-out Process in Lusatia. *DISP, 58*(3), 40–49. https://doi.org/10.1080/02513625.2022.2158599	Spatial planning	N	N	closed coal mines
Tonkinwise, C. (2013). *It's Just Going to be a Lotta Hard Work – Four Problematic and Five Potential Ways of Accomplishing Radical Sustainability Innovation.*	product design	N	Y	Design practice
Tonkinwise, C. (2014*). Design's (Dis) Orders: Transition Design as Postindustrial Design.*	Transition Design	N	N	Design practice
Tonkinwise, C. (2015). Design for Transitions - from and to what? In *Critical Design Critical Futures*. http://www.cd-cf.org/articles/design-for-transitions-from-and-to-what/	Transition Design	N	N	Design practice
Tonkinwise, C. (2023). Some Theories of Change behind and within transition designing . In L. Simeone, D. Drabble, N. Morelli, & A. de Götzen (Eds.), *Strategic Thinking, Design and the Theory of Change* (pp. 270–293). Elgar Online.	Transition Design	N	N	Design practice

Valtonen, A. (2020). Approaching Change with and in Design. *She Ji, 6*(4), 505–529. https://doi.org/10.1016/j.sheji.2020.08.004	Various	N	N	Design practice
van der Marel, F., & Björklund, T. (2022). Designers as Change Agents: Perceived Roles in Advancing Sustainability in Organizations on Different Design Utilization Levels. *Proceedings of the Design Society, 2*, 1149–1158. https://doi.org/10.1017/pds.2022.117	Design for sustainability	N	N	Design practice
Vink, J., Wetter-Edman, K., & Koskela-Huotari, K. (2021). Designerly Approaches for Catalyzing Change in Social Systems: A Social Structures Approach. *She Ji: The Journal of Design, Economics, and Innovation, 7*(2), 242–261. https://doi.org/10.1016/j.sheji.2020.12.004	Systemic design	N	N	Design practice
Wahl, D. C., & Baxter, S. (2008). The Designer's Role in Facilitating Sustainable Solutions. In Source: *Design Issues* (Vol. 24, Issue 2).	Designing for sustainability	N	Y	Design practice
Wahl, D., Orr, D. W., & Leicester, G. (2016). *Designing Regenerative Cultures*. Triarchy Press.	Designing for sustainability	N	Y	Design practice
White, D. (2015). Metaphors, hybridity, failure and work: a sympathetic appraisal of Transitional Design. *Design Philosophy Papers, 13*(1), 39–50. https://doi.org/10.1080/14487136.2015.1085694	Transition Design	N	N	Design practice
White, D. (2020). Just Transitions/Design for Transitions: Preliminary Notes on a Design Politics for a Green New Deal. *Capitalism, Nature, Socialism, 31*(2), 20–39. https://doi.org/10.1080/10455752.2019.1583762	Transition Design	N	N	Design practice
White, D. (2021). Labour-Centred Design for Sustainable and Just Transitions. In *The Palgrave Handbook of Environmental Labour Studies* (pp. 815–838). Springer International Publishing. https://doi.org/10.1007/978-3-030-71909-8_35	Design for sustainability	N	Y	Design practice
Willis, A.M. (2015). Transition Design: the need to refuse discipline and transcend instrumentalism. *Design Philosophy Papers, 13*(1), 69–74. https://doi.org/10.1080/14487136.2015.1085687	Transition Design	N	N	Design practice
Willis, A.M. (2013). Design, Politics and Change. *Design Philosophy Papers, 11*(1), 1–6. https://doi.org/10.2752/089279313X13968799815958	Design general	N	N	Design practice
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