School of Design and the Built Environment

Discipline of Urban and Regional Planning

Representations of Nonhuman Nature by Environmental Activists: Fostering Less Anthropocentric Planning in the More-than-human City

Ryan Gary John Quinn

This thesis is presented for the Degree of
Doctor of Philosophy
of
Curtin University

November 2018

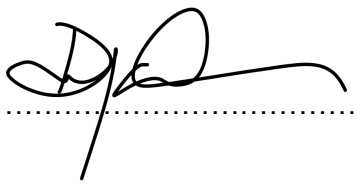
Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number #RDHU-246.15

The author would like to acknowledge the contribution of an Australian Government Research Training Program Scholarship in supporting this research.

Signature: 

Date: 2 March 2019

Abstract

Cities and urban spaces are increasingly being reimagined as the products of dynamic more-than-human relationships. Yet, the practice of planning these spaces retains an air of human exceptionalism. The inability for nonhuman species to participate in language-based deliberative planning practices renders them subject to representation by humans with an epistemic claim to understand their interests. Acknowledging the interconnectedness between humans and nonhuman nature, scholars have called for the range of representatives to be broadened to reflect a more diverse set of relationships and epistemologies available within the more-than-human world, to be more responsive to nonhuman needs, and create more ecologically-considered built environments.

With this expanded more-than-human understanding of the urban, the ethics of current planning practices are brought into question. Taking inspiration from the principles of the deep ecology framework developed by Arne Naess, this research has investigated the role of local environmental activists in controversial development proposals, and whether their other-than-scientific representations of local species and natures are able to shift planning processes and outcomes into a less anthropocentric and more ecologically considered space.

The research has focused its analysis on two Western Australian case studies: the proposed Mangles Bay Marina, at Point Peron, Rockingham; and the proposed residential development of the Underwood Avenue Bushland in Shenton Park. Utilising a discourse analytic and actor network theoretical framework, the research qualitatively analysed a range of in-depth interviews, media sources and technical documents pertaining to the environmental and planning approval processes for each case. The research focused on exploring the relationships between local activists and nonhuman natures, and how these influence the representations and discourses presented by activists publically throughout the planning process.

The findings reconfirm that whilst the practice of land-use planning appears to be human-led, its outcomes are significantly influenced by the various other-than-human entities involved. The research demonstrates the dynamic relationships and interspecies mingling promoted under a more-than-human city framing, and the agency of nonhuman individuals and species. Whilst nonhuman species and assemblages are unable to participate verbally within planning processes, they are active and at times powerful contributors capable of moulding development outcomes either directly or through their human representatives. The species that are capable of connecting with humans through their own charisma, affordances, legislative status or a combination – often framed as *flagship species* – are more likely to find

themselves being represented by humans and having a greater impact in the shaping of the urban around them.

These representations are also highly complex, developed through processes of relation building. The research found that the representations from environmental activists tended to retain a level of anthropocentrism despite their pro-conservation stance, reflecting inherent humanistic biases and casting doubt on the ability of humans to act nonanthropocentrically as promoted under deep ecology. Notwithstanding this, the research suggests if we increase the representation of nonhuman nature by encouraging the use of local knowledge in participatory planning practices, we can reduce the impact of human chauvinism and develop a more ecologically considered more-than-human city.

Table of Contents

Abstract 3

Table of Contents 5

List of Figures 8

Abbreviations & Acronyms 10

List of Relevant Legislation & Planning Documents 12

Acknowledgements 13

Chapter 1 Introduction 14

1.1 Representing Nonhuman Nature in Land-Use Planning 14

1.2 Research Aims & Objectives 17

1.3 Overview of Case Studies 18

1.3.1 The Underwood Avenue Bushland 19

1.3.2 The Mangles Bay Marina 21

1.4 Significance of the Research 22

1.5 Thesis Structure 23

Chapter 2 Human-Nature Relations in the Built Environment 26

2.1 Introduction 26

2.2 Human-Nature Relations and the Urban 27

2.3 Constructions of 'Nature' in Planning 29

2.3.1 Strong Anthropocentric Representations 30

2.3.2 Weak Anthropocentric Representations 33

2.3.3 Weak Nonanthropocentric Representations 35

2.4 The Deep Ecology Platform and the Built Environment 36

2.5 Planning the More-Than-Human City 42

2.6 (Human) Representations of Nonhumans in Planning 46

2.7 Conclusion 51

Chapter 3 Theoretical Framework and Research Design 53

3.1 Introduction 53

3.2 Theoretical Frameworks 53

3.2.1 Actor network Theory 53

Defining Actors 55

Callon's Methodological Principles 56

The Sociology of Translation 57

3.2.2 Discourse Analysis 61

3.3 The Research Program: Design, Data & Analysis 65

3.3.1 Case Studies 66
3.3.2 Archival Documentary Data 68
3.3.3 Local Newspaper Media 70
3.3.4 Interviews 70
3.3.5 Tracing Network Associations 72
3.3.6 Analysing the Discourses 75
3.3.7 Ethics 77
3.3.8 Reflecting on the Process 78
Challenges of Actor network Theory 78
Availability of Data 79
Critical Reflexivity 80
3.4 Conclusion 81
Chapter 4 The Underwood Avenue Bushland 82
4.1 Setting the Scene – Actors & Network Configurations 82
4.2 1999-2001: Early Dynamics & Community Opposition 86
4.3 2002-2004: Refusal of Subdivision & Environmental Approvals 93
4.4 2005-2009: The University's setbacks, Marg Owen and the Carnaby's Cockatoo 104
4.5 2010-2016: Partial Network Stabilisation for the University 116
4.6 Summary 122
Chapter 5 The Mangles Bay Marina 125
5.1 Introduction 125
5.2 Setting the Scene – Actors & Network Configurations 125
5.3 2005-2008: Development of the Mangles Bay Marina Concept and Early Opposition 129
5.4 2009-2011: Network Reshaping Amidst Growing Opposition 139
5.5 2012-2014: Competing Representations Through Environmental Obligatory Passage Points 149
5.6 2015 - 2018: Land-Use Planning and Pro-Marina Network Collapse 157
5.7 Summary 165
Chapter 6 Discourses of Nature 167
6.1 Introduction 167
6.2 Nature as a *Thing* to Colonise, Trade, Negotiate and Offset 168
6.3 Romantic Nature: A Double Edged Sword 174
6.4 Scientific & Conservation 181
6.5 Stewardship of Nature: An Ecological Gift 187
6.6 An Interconnected Nature 188
6.7 Deep Ecology & Marg Owen 190

6.8 Complex, Strategic and Relational Discourses: A Summary 197
Chapter 7 Exploring the Dynamics & Influence of Activists' Representations of Nonhumans 202
7.1 Introduction 202
7.2 Dynamic Entanglements: Tracing the Associations 202
7.2.1 Pro-Conservation Networks: Unpacking the Assemblages 203
7.2.2 Flagship Species: The Asymmetry of Nonhuman Agency 208
7.3 The Epistemology of Nature's Local Representatives 216
7.4 The Influence of the Environmental Activists on Planning Processes 220
7.5 Encouraging Planners as Multispecies Facilitators 224
References 229
Appendix 1: Curtin University Ethics Approval 262
Appendix 2: Participant Information Sheet 263
Appendix 3: Participant Consent Form 266
Appendix 4: Interview Questions 268
Appendix 5: FOI Request to the Department of Environment 270
Appendix 6: FOI Request to the Department of Planning 271
Appendix 7: Copyright Authorisation from Margaret Owen 272
Appendix 8: Copyright Authorisation from the *Weekend Courier* 274
Appendix 9: Copyright Authorisation from the *Subiaco Post* 278

List of Figures

Figure 1.1: Location of Underwood Avenue Bushland and Mangles Bay Marina case studies (adapted from Google 2018)..... 18

Figure 1.2: Local context map of the Underwood Avenue Bushland (adapted from Google 2018)..... 19

Figure 1.3: Illustration of the 'low woodland' vegetation within the Underwood Avenue bushland (Quinn 2016). 20

Figure 1.4: Local context map of the proposed Mangles Bay Marina site (Adapted from Google 2018a)..... 22

Figure 1.5: Structure of the dissertation..... 24

Figure 3.1: Outline of the five stage process undertaken throughout the research project following the selection of case studies. 65

Figure 3.2: The actors present within the *Weekend Courier* each year from 2005-2015 in relation to the HOPP case study. 73

Figure 3.3: Analysis of media appearances for the Carnaby's Cockatoo indicates a dramatic rise in agency capabilities. 74

Figure 4.1: The initial concept plan for the University's subdivision of Lot 4 Underwood Avenue, Shenton Park (ATA 1999)..... 83

Figure 4.2: The alliance of actors required by the University in order to proceed with the proposed development. 84

Figure 4.3: Protestors from the FUAB placing white crosses outside of the bushland for the lives of the inhabitants likely impacted by the planned development (*Subiaco Post*, August 12, 2000, 12) 89

Figure 4.4: The third version of the University's proposed development at Lot 4 Underwood Avenue (CLE 2007)..... 90

Figure 4.5: Alliance of key actors for Underwood networks at the completion of 2001. 93

Figure 4.6: University students protesting against the University's proposal, outside the bushland (*Subiaco Post*, May 25, 2002) 94

Figure 4.7: The 'superlot' subdivision proposal of Lot 4 Underwood Avenue (EPA 2003)..... 96

Figure 4.8: Orchids in the Underwood Avenue bushland (Owen 2003b). 98

Figure 4.9: Marg's photo of the turtle frog (Owen 2004b). 101

Figure 4.10: Alliance of key actors in Underwood networks at the end of 2004. 103

Figure 4.11: Rainbow Bee-eaters captured by Marg Owen in the Underwood Avenue bushland (Save Underwood Bush 2018) 105

Figure 4.12: The 'quality/biodiverse' subdivision configuration of Lot 4 Underwood Avenue (EPA 2007)..... 106

Figure 4.13: Australian Painted Ladies in the Underwood bushland (Owen 2007b). 108

Figure 4.14: Macrozamia cones in Underwood (Owen 2007a). 108

Figure 4.15: The klepto-parasitic insect at Underwood (Owen 2007c)..... 108

Figure 4.16: A male Carnaby's Cockatoo eating Banksia prionotes in the Underwood bushland (Owen 2007d). 111

Figure 4.17: Alliance of key actors in Underwood networks at the end of 2009. 115

Figure 4.18: Approved subdivision layout including additional conservation area (Office of the Appeals Convenor 2010). 117

Figure 4.19: Signage promoting the FUAB's campaign during the annual City to Surf fun run along Underwood Avenue (Save Underwood Bush 2018). 119

Figure 4.20: Alliance of key actors following the issue of state approvals in 2010. ... 121

Figure 4.21: A Carnaby's Cockatoo mascot greeting then Premier Colin Barnett during the 2017 state government election (Save Underwood Bush 2018)..... 124

Figure 5.1: The beach of Mangles Bay along the Point Peron coastline (Quinn 2016). 126

Figure 5.2: A view of Lake Richmond, the freshwater lake situated near the proposed Mangles Bay marina site (Quinn 2016). 126

Figure 5.3: Alliance of key actors required by the pro-marina network..... 128

Figure 5.4: Options 2.2 - 2.4 of the proposed Cape Peron Marina (Strategen 2006) 132

Figure 5.5: Alliance of key Mangles Bay Marina actors at the end of 2008. 139

Figure 5.6: HOPP protest against the proposed marina (*Weekend Courier*, April 16, 2010). 142

Figure 5.7: Alliance of key Mangles Bay Marina actors at the end of 2011. 147

Figure 5.8: HOPP post on Facebook mobilising supporters in preparation for the PER public submission period (HOPP 2011). 148

Figure 5.9: Alliance of key Mangles Bay Marina actors at the end of 2014. 156

Figure 5.10: Proposed rezoning plan for the Mangles Bay Marina (WAPC 2015)..... 158

Figure 5.11: Jecks speaks to Premier Barnett at a HOPP protest (*Weekend Courier*, September 11, 2015, 21). 160

Figure 5.12: Pro-conservation network campaign, featuring the Little Penguin, calling on supporters to contact the Minister for Planning (CCWA 2018). 162

Figure 5.13: An image posted to the Hands Off Point Peron Facebook page, calling on supporters to save the Little Penguin (Hands Off Point Peron 2018). .. 162

Figure 5.14: Alliance of key Mangles Bay Marina actors by 2018. 164

Abbreviations & Acronyms

CCWA (Chapter 5)	Conservation Council of Western Australia
Environmental Consultant (Chapter 4)	Alan Tingay & Associates Environmental Scientists
EPA Act	Environmental Protection Authority Act 1986 (WA)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
Federal Environment Authority	Department of Environment, Water, Heritage, and the Arts (Federal); currently Department of Environment and Energy
FUAB (Chapter 4)	Friends of Underwood Avenue Bushland
HOPP (Chapter 5)	Hands Off Point Peron
Local Government Authority (Chapter 4)	City of Nedlands
Local Planning Scheme (Chapter 4)	City of Nedland's *Town Planning Scheme No. 2*
ODP (Chapter 4)	Outline Development Plan (Structure Plan)
PER (Chapter 5)	Public Environmental Review
Planning Consultant (Chapter 4)	Chappell, Lambert & Everett Town Planning and Urban Design
PPP (Chapter 5)	Preserve Point Peron (for the People)
Regional Planning Scheme (Chapter 5)	Metropolitan Region Scheme
SER (Chapter 5)	Strategic Environmental Review

SRG (Chapter 5)	Stakeholder Reference Group
State Conservation Agency	Department of Environment Protect; later Department of Parks and Wildlife; currently Department of Biodiversity, Conservation and Attractions
State Environment Authority	Environmental Protection Authority, supported by the Department of Water and Environment Regulation
State Planning Agency	Ministry for Planning; later Department of Planning & Infrastructure; later Department of Planning / Western Australian Planning Commission
State Water Corporation (Chapter 4)	Water Corporation
SWWTP (Chapter 4)	Subiaco Waste Water Treatment Plant
The University (Chapter 4)	University of Western Australia
TEC (Chapter 5)	Threatened Ecological Community
UBC (Chapter 5)	Urban Bushland Council
WAFIC (Chapter 5)	Western Australian Fishing Industry Council

List of Relevant Legislation & Planning Documents

Legislation	Jurisdiction
Planning and Development Act 2005 (Chapter 4 & 5)	State of Western Australia
Metropolitan Region Scheme (Chapter 4 & 5)	Perth Metropolitan Region
Bush Forever Policy (Chapter 4 & 5)	Perth Metropolitan Region
City of Nedlands Town Planning Scheme No. 2 (Chapter 4)	City of Nedlands
City of Rockingham Local Planning Scheme No. 2 (Chapter 5)	City of Rockingham
Environmental Protection Act 1986 (Chapter 4 & 5)	State of Western Australia
Environment Protection and Biodiversity Conservation Act 1999 (Chapter 4 & 5)	Commonwealth of Australia

Acknowledgements

Firstly, I'd like to acknowledge the Whadjuk Noongar people as the traditional owners of the land of which this research took place. I'd like to pay my respects to their elders past, present and emerging and acknowledge that this land was never ceded.

To the humans and nonhumans that supported me, inspired me, and challenged me throughout the PhD, thank you.

Thank you to my supportive and thoughtful supervisors: Diana MacCallum, Shaphan Cox and Courtney Babb. I am very lucky to have had such a supportive team guiding me through this journey. You have provided not only thoughtful critiques but opportunities beyond the PhD that enriched this experience. Our catch-ups were always filled with the right balance of humour and philosophy.

To my partner Andre – thank you for not asking me about my PhD and just assuming that I was smashing it.

To my family – thank you for always asking me about my PhD. You may stop now.

To the friends I made along the way – I have been so lucky to meet so many wonderful people across the world on this journey, none more impactful than Julie, Lil, Shan and Aditya. Thanks for your dedication to our midday lunch club and support along the way.

I am truly appreciative of being given the opportunity to undertake this PhD with an Australian government scholarship. It is so important that we continue to foster innovation and research by appropriately funding education opportunities for people from all avenues of life and socio-economic standing.

And finally, to the nonhumans and their activist representatives that inspired and participated in this work – thank you. Keep up the good fight.

Chapter 1 Introduction

1.1 Representing Nonhuman Nature in Land-Use Planning

Recently, a seemingly jubilant Metzger (2016) expressed his delight that natural scientists were developing a new understanding of the role and impact of the human species on the planet, questioning the engrained nature-culture dichotomy within Western society. The consideration of a new geological epoch, the *Anthropocene,* in which humanity is positioned as a leading cause of atmospheric and biospheric change has reconfirmed our species as interconnected with the natural systems and the biotic-web of the planet (Crutzen and Stoermer 2000; Steffen, Crutzen and McNeill 2007). We can no longer consider ourselves separate from nature. We can no longer view Nature (capital 'N') as pristine, human-free wilderness. It is all connected; nature (small 'n') includes all of the human and other-than-human elements and the dynamic daily interactions within. The dominance of industrialised human activity within this heterogeneous 'nature' has resulted in an unstable environmental era on a planetary scale.

Acknowledging this interconnection between the human and nonhuman is a profound step forward in breaking down the hegemonic anthropocentrism that underpins Western ethics, philosophy and our behaviour towards the environment. The dualistic view of humanity separate from nature finds its roots in Western intellectual heritage, which sought to distinguish humans from the wild (Taylor 2011). Human culture, reasoning, language and thinking were used to enforce a separation from animals who were discounted as mindless beasts that existed in sheer opposition to the unique traits of humanity (Sheets-Johnstone 1996; Freeman 2010). Supported by classical Cartesian arguments that close relationships can only be formed and sustained by humans, the human-nonhuman divide has been engrained into our academic and cultural mindset, and as such has driven the anthropocentric view that nonhumans are merely a resource for human use (Taylor 2011). Cities and the *built* environment are considered the civilised terrain of humanity, in which the wild is reshaped and tamed and natural resources extracted, processed and consumed.

Whilst these urbanised spaces reflect modified forms of local natures, there is no escaping the daily interactions with the various other-than-human species that co-reside within. The intriguingly complex and dynamic sets of relations that are formed between the human and nonhuman birds, insects, reptiles, mammals, bushlands, wetlands, green spaces and other nature-assemblages affect the everyday behaviour of humans, and the practice of urbanisation. Cities, the once proud vestige of human rationality and

progression, are being reconsidered as products of multiple human-nonhuman relations. Following theoretical and philosophical developments in political ecology, science and technology studies, and cultural geography, the human City is re-theorised as a materialisation of multi-species and multi-*thing* mingling.

Actor network theory (ANT), for instance, recognises the role of nonhumans as active contributors in the shaping of the world around us and in the development of urban spaces. The theory calls on analysts to view the world as a collection of networks and assemblages of human and nonhuman actors that work together to produce knowledge or drive action. The theory speaks of symmetry. It directs analysts to break down existing dualisms and to treat actors equally and symmetrically (Callon 1986). Nonhumans – including the sentient and insentient – are capable of influencing others and moulding the direction and output of networks to the same extent as human actors. From a planning perspective, ANT analyses render visible the multiple nonhuman entities that actively participate in the production of the urban (Rydin 2012). Maps, legislation, policy, species, landscapes, climatic conditions, building materials and others form part of the dynamic multispecies, multi-*thing* connections and relationships that are developed in planning processes and play a part in the production of the urban and the *more-than-human city.*

Accordingly, the ontological and ethical priority granted to humans in the practice of planning faces new theoretical and philosophical challenges under the more-than-human framing of the city. Whilst nonhuman flora and fauna are often provided with a level of statutory protection through various legislative and policy instruments, these are highly skewed towards endangered or economically significant species. Further, the inability for nonhumans to participate in language-based planning deliberations renders them subject to representation by humans with an epistemic claim to understand their interests. These practices have resulted in “objective” scientific translations becoming the dominant form of representation for nonhuman nature in planning matters, given science’s perceived ability to rationally assess the impacts of development on local nonhuman populations. Further, discursive translations often anthropocentrically frame nonhuman species and natures as something to colonise, commodify or consume. The conservation of natures are typically framed around the perceived scientific value of species, its perceived beauty, or the attributed cultural or historic value of, for instance, landscapes. The subjectivity involved in the discursive representation of nonhumans increases the risk of mistranslation, misrepresentation and further colonisation. Acknowledging the interconnectedness between the human and nonhuman in a more-than-human city, scholars have called for a re-evaluation of the way in which nonhuman interests are accounted for and accommodated in planning practice (Metzger 2016;

Hinchliffe and Whatmore 2006; Beauregard 2015). Critical to this is fashioning ways in which planning becomes more responsive to the nonhuman world, and the representation of nonhumans expanded beyond traditional scientific translations.

From an ethical perspective, environmental philosophers have been critical of the dominant anthropocentrism guiding Western society for several decades. Various forms of nonanthropocentric environmental ethics have been developed in an attempt to redirect society's understanding of, and relationship with, the nonhuman world. These philosophies seek to expand the moral considerations of humans to incorporate other living entities, and to create a language in which to assess our behaviour and attitudes towards nonhumans. The primary aim of these alternative ethical frameworks is to de-centre the human as an ontologically and morally superior being and to provide (Western) society with an alternative ethic to guide decision-making. One of the more prominent examples has been deep ecology.

Originally developed by Arne Naess (1986, 1973), deep ecology seeks to break down the human-nonhuman dichotomy by promoting an interconnectedness and reliance upon the natural world. The ethic calls for individuals to reconnect with nonhuman nature and to expand their view of the world to include the nonhuman entities that are intertwined and interlocked with our own existence. It seeks a greater respect towards nonhumans and an acknowledgement of the intrinsic value of individual nonhuman entities, creatures and things. From a planning perspective, Jacobs (1995, 96-7) argues deep ecology highlights that "planning is disturbingly utilitarian and anthropocentric in its orientation" and "raises the issue of how to structure planning so that the nonhuman species… receive a voice". Jacobs comments follows in the steps of Beatley (1989) who had for many years been calling for a theoretical and moral reorientation of the planning discipline, given the direct impacts of the practice on the natural environment. Whilst scholars such as Wolch (2002, 1996), Swyngedouw (2006, 1996), Beatley (1989, 1994a, 2000, 1991), Beauregard (2015, 2012), and Metzger (2015, 2016, 2014a, 2014b) have provided insightful explorations into human-nonhuman relations within the urban, the theory and practice of planning retains an "ontological exceptionalism of humanism" preventing a paradigm change (Houston et al. 2018, 2).

As planning theory continues to find its feet with regards to critically engaging in other-than-human notions of the urban, it may be useful and thought provoking to reflect on long-standing debates within environmental ethics and human-nature relations. Establishing synergies between the two may assist the discipline of planning in developing the theoretical and moral approach sensitive to the needs of the more-than-human that Beatley (1989) once called for.

According to Metzger (2014a), a key factor in providing a more ecologically considered, and perhaps even an environmentally ethical, land-use planning system requires the inclusion of other-than-scientific representations of nonhuman nature. Alternative epistemic claims to *know* nonhumans perceived to be affected by development proposals often reflect long-standing experiential knowledge, religious or spiritual epistemologies, or knowledge derived from intimate relations with the entities. These claims may be based on alternative interpretations of scientific translations, guided by particular political or moral beliefs (Tuckwell 2012). Critical to mitigating the further colonisation or loss of local nonhuman natures is providing an avenue for these alternative representations to be heard within the processes of land-use planning. Developing a more responsive planning system will assist in breaking down the anthropocentric nature of the system, and open up the potential for more environmentally ethical decisions and practices.

1.2 Research Aims & Objectives

This dissertation seeks to explore the use of alternative representations of local natures and individual nonhuman flora and fauna in controversial development proposals. In particular, the research seeks to:

> *Explore the role of local environmental conservation groups and activists in providing an alternative voice for nonhumans in land-use planning processes, and investigate whether their involvement is able to shift the associated development outcomes into an environmentally ethical, if not 'deep ecological', space.*

The research is grounded in two case studies in Perth, Western Australia:

1. The proposed subdivision of the Underwood Avenue bushland in Shenton Park and the local conservation group the Friends of Underwood Avenue bushland; and

2. The proposed development of the Mangles Bay Marina at Mangles Bay near Point Peron, Rockingham, and the local campaign Hands Off Point Peron.

Utilising an actor network and discourse analysis approach, the research has been undertaken with the following objectives:

1. Analyse the dynamics of the Friends of Underwood Avenue Bushland (FUAB) and Hands Off Point Peron (HOPP) pro-conservation networks to understand the more-than-human relations between the environmental activists and nonhumans;

2. Explore the motivations behind, and the epistemology underpinning, the FUAB and HOPP activists' representations of the local nonhuman species and nature assemblages; and

3. Analyse the influence of the FUAB and HOPP pro-conservation networks in the respective land use planning processes and whether their alternative representations of nonhuman nature assisted in producing less anthropocentric decision-making.

1.3 Overview of Case Studies

The dissertation is grounded in two case studies, based in Perth, Western Australia, including the proposed subdivision of the Underwood Avenue bushland, and the proposed Mangles Bay Marina, located as per Figure 1.1. With a number of environmental impacts to flora and fauna expected, both case studies have triggered conservation campaigns from local environmentalists and have presented a rich quantity of data regarding human-nature relations and the representation of nonhuman natures in local planning processes. The following section describes the context for each case study in terms of the development proposed, the local natures and nonhumans affected, and the local humans seeking to represent their interests.

Figure 1.1: Location of Underwood Avenue Bushland and Mangles Bay Marina case studies (adapted from Google 2018).

1.3.1 The Underwood Avenue Bushland

Lot 4 Underwood Avenue, the "Underwood Avenue bushland", is a 32 hectare parcel of remnant native vegetation, zoned for urban development, in the inner city suburb of Shenton Park (see Figure 1.2). The bushland is under the private ownership of the University of Western Australia and formed part of a larger tract of land that was gifted to the university in the early 20th century by the Western Australian State Government. This larger tract of land has since been developed into a range of urban land uses, partially kept in ownership by the university and partially sold to generate income. The Underwood Avenue bushland reflects some of the last remaining parcels of land in ownership by the university with good quality native vegetation.

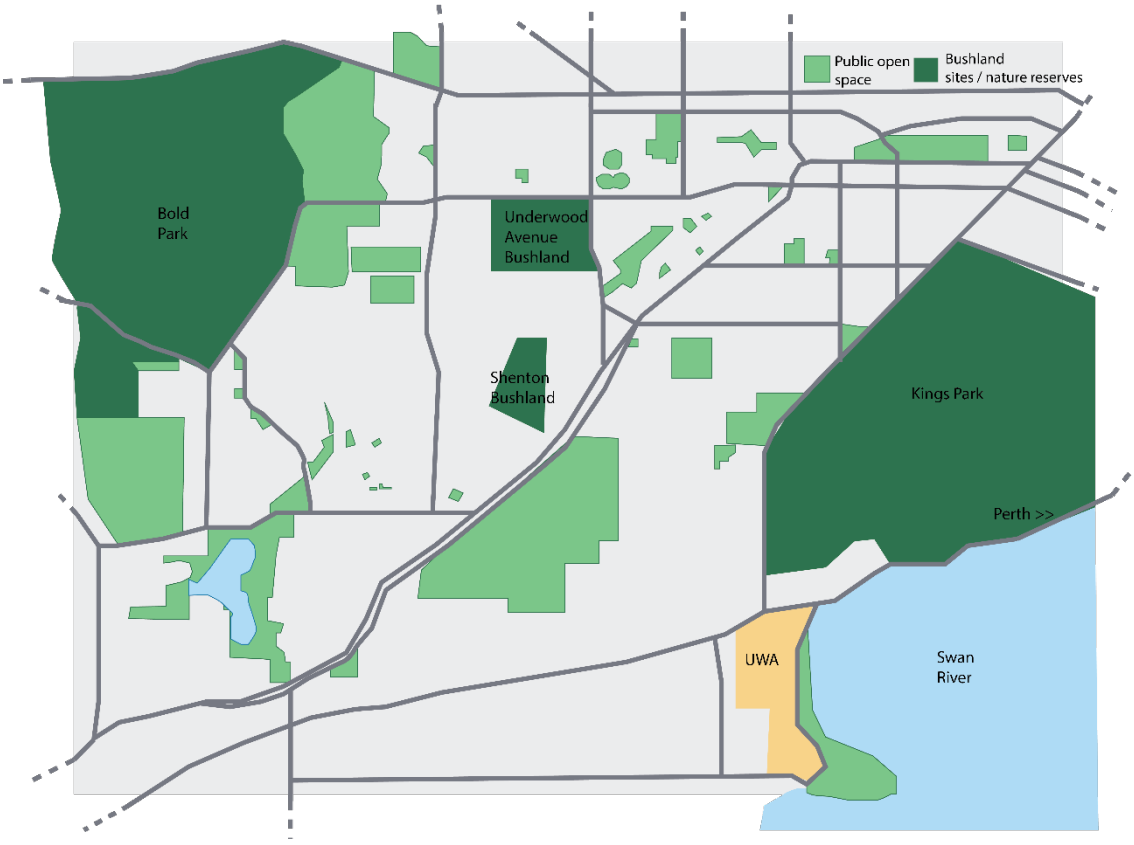


Figure 1.2: Local context map of the Underwood Avenue Bushland (adapted from Google 2018).

The bushland itself is comprised of native banksia, jarrah and marri low woodlands, supporting a wide range of bird, reptile, insect and mammal life (see Figure 1.3). Situated in between the Bold Park and Kings Park conservation reserves, the bushland has been described as important element in the western suburbs' ecological corridor. A number of rare, threatened and endangered flora and fauna species reside within the bushland, including a rare orange flowering low lying shrub, *Jacksonia sericea,* various species of wild orchids, a threatened community of plant species known as the Banksia Woodlands, and the endangered Carnaby's Cockatoo. Migratory species including the Rainbow Bee-

eater seasonally utilise the site. The ecological importance of the bushland was recognised in the State's bushland conservation policy, *Bush Forever,* as site 119, requiring a "negotiated planning solution" (Ministry for Planning 2000, 14). The policy designation called for a negotiated conservation outcome, which protects the highest biodiversity values of the site whilst acknowledging the bushland's private ownership and development potential.

Figure 1.3: Illustration of the 'low woodland' vegetation within the Underwood Avenue bushland (Quinn 2016).

In 1999, the University of Western Australia submitted plans to the state planning authority to subdivide the site to facilitate a multi-lot residential development. The university claimed the development of the site would assist in generating the income required to fund the education of the State's future generations. The plans subsequently led to the creation of the Friends of Underwood Avenue Bushland (FUAB), who sought to protect the ecological integrity of the site by opposing its development. The FUAB reflected a range of local conservationists, many who had developed a personal relationship with the adjoining, and ecologically similar, Shenton Park bushland through rehabilitation practices. The FUAB would go on to actively oppose the development of the bushland through the environmental planning and subdivision processes, and to date are still active in their campaign to preserve the bushland. To date the university has received state environmental and subdivision approvals, but has failed to receive approval from the federal environmental authority due to the development's perceived

impacts on the endangered Carnaby's Cockatoos, a species listed under federal legislation as "endangered".

1.3.2 The Mangles Bay Marina

The proposed Mangles Bay Marina was to be a combined marina and canal residential development situated within Mangles Bay, Rockingham, in the southern suburbs of the Perth metropolitan region. Located within the public realm of Mangles Bay and inland within the Rockingham Lakes Regional Park, the proposed marina had been a long-term vision for the area, reignited in 2004 by local City of Rockingham Councillor, Phil Edman, and Rockingham Member of Parliament, Mark McGowan. The proposal, both its historic and contemporary incarnations, were environmentally controversial due to the potential impacts on seagrass habitat, affecting the local fish and penguin populations. Despite these concerns, the proposal had enjoyed political support from both Labor (centre-left) and Liberal (conservative) State Governments, with funding for its implementation being provided and both state and federal environmental approvals being awarded. However, in 2018 the recently elected Labor State Government opted to refuse a proposed rezoning of the site required to progress the marina, leaving the project "dead in the water" (Jeffery 2018).

As shown in Figure 1.4, the proposed development fell within Mangles Bay, a popular local fishing and diving location, and Point Peron, a nature-based recreation area for local residents. The marine portion of the development required the dredging of seagrass habitat, a primary factor in the refusal of previous marina proposals in the area. Seagrass had proven relatively difficult to rehabilitate, and its loss was considered significant to the functionality of the marine environment and local fish stocks. In particular, the local population of Little Penguins relied on the fish supply within Mangles Bay during their breeding season. The terrestrial portion of the development cut through the Rockingham Lakes Regional Park and *Bush Forever* site 355, and adjacent to the freshwater Lake Richmond where the threatened ecological community of Thrombolites and a number of migratory birds resided. Concerns were raised by both local residents and the state environmental authority that a potential inland incursion of saltwater associated with the canal development would impact the hydrology of the lake and the ecology of its system.

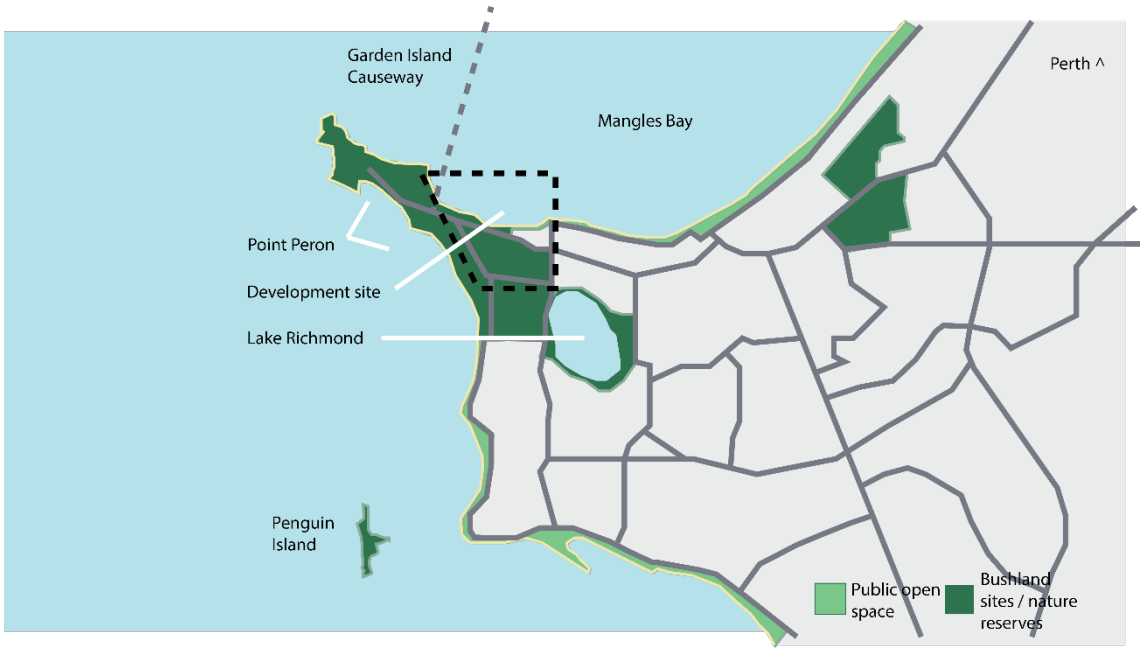


Figure 1.4: Local context map of the proposed Mangles Bay Marina site (Adapted from Google 2018a).

In response to the environmental concerns regarding the proposed development, the group Preserve Point Peron for the People was formed, headed by local environmentalist Bob Goodale. The group led the local conservation campaign against the proposed marina for a number of years, before the formation of Hands Off Point Peron (HOPP) by fellow local environmentalist Dawn Jecks. With a renewed focus on the social impacts of the proposed development, in addition to the environmental concerns, HOPP enrolled a large local and regional support base garnering media and political attention. Members of both the initial conservation group and HOPP tended to be long-term local residents, with deep connections with the Mangles Bay and Point Peron natures. Despite the proposed development receiving state and federal environmental approvals, the HOPP group have continued to oppose the development whilst the proponents seek to obtain their final planning approvals.

1.4 Significance of the Research

In an era characterised by multiple environmental crises, this research is timely and significant for planning theory. Given the relational turn in cultural geography and the development of the environmental humanities and animal geographies, the research is an opportunity to contribute towards re-framings of the urban as a product of multispecies relations. By utilising actor network theory, the research is able to provide further empirical evidence through case study led research to demonstrate how urban spaces are moulded and shaped by traceable human-nonhuman relations and assemblages, and in particular illuminate the role of nonhuman individuals as active and influential

contributors in the political processes shaping cities. Similar studies have been published in recent years as the theoretical and methodological framework offered by ANT is increasingly being utilised by planning theorists seeking to explore the nonhuman realm of planning matters – see, for instance, Rydin and Tate (2016).

Secondly, the research seeks to explore the role of local conservationists representing the perceived needs and interests of local nonhuman populations in planning matters affecting them. Accordingly, the empirically based research is able to contribute to theoretical debates regarding other-than-scientific representations of nonhuman nature and the impact this has on the outcomes of planning processes. Further, with the assistance of ANT the research is able to explore and unpack the various relationships between local conservationists and nonhumans and gain an understanding of how these alternative representations are forged through processes of enrolment, translation and mobilisation. Additionally, the discourse analysis component demonstrates how these relationships are translated, and used to mediate particular outcomes through land use planning processes. The research will also illustrate how the networks of counter campaigns operate to enrol and mobilise supporters and decision-makers, how they discursively translate relationships with local nonhumans, and the practices they use to influence planning processes.

Finally, since Beatley and Jacobs there has been limited academic literature published on the use of environmental ethics or philosophy, such as deep ecology, as a framework that could be used to re-evaluate how planners consider the environmental implications of planning decisions and actions. Fox (2000b) criticised deep ecology for its apparent lack of attention on the *built* environment as a place where local natures exist and require the moral consideration of humans in order to thrive. The research is an opportunity to explore whether deep ecology is indeed a useful guide for planners and planning decision-making in urban areas and whether the involvement of multiple and diverse representatives of nonhuman nature is able to produce less anthropocentric planning outcomes that recognise the interconnectedness between humans and nonhuman nature as promoted in deep ecology.

1.5 Thesis Structure

The thesis has been structured as shown in Figure 1.5 below. The structure is intended to provide the reader a methodical and linear experience, introducing the key theoretical and philosophical perspectives through a comprehensive literature review that complements and feeds into the developed methodology. Following these two chapters, the reader is taken through the two case study chapters that demonstrate empirical examples of the research issue under the framework of actor network theory. These

chapters are followed by chapter six, which focuses on the discourse element of the research agenda. The final chapter provides a thorough critical discussion of the research findings and returns to address the research question and objectives.

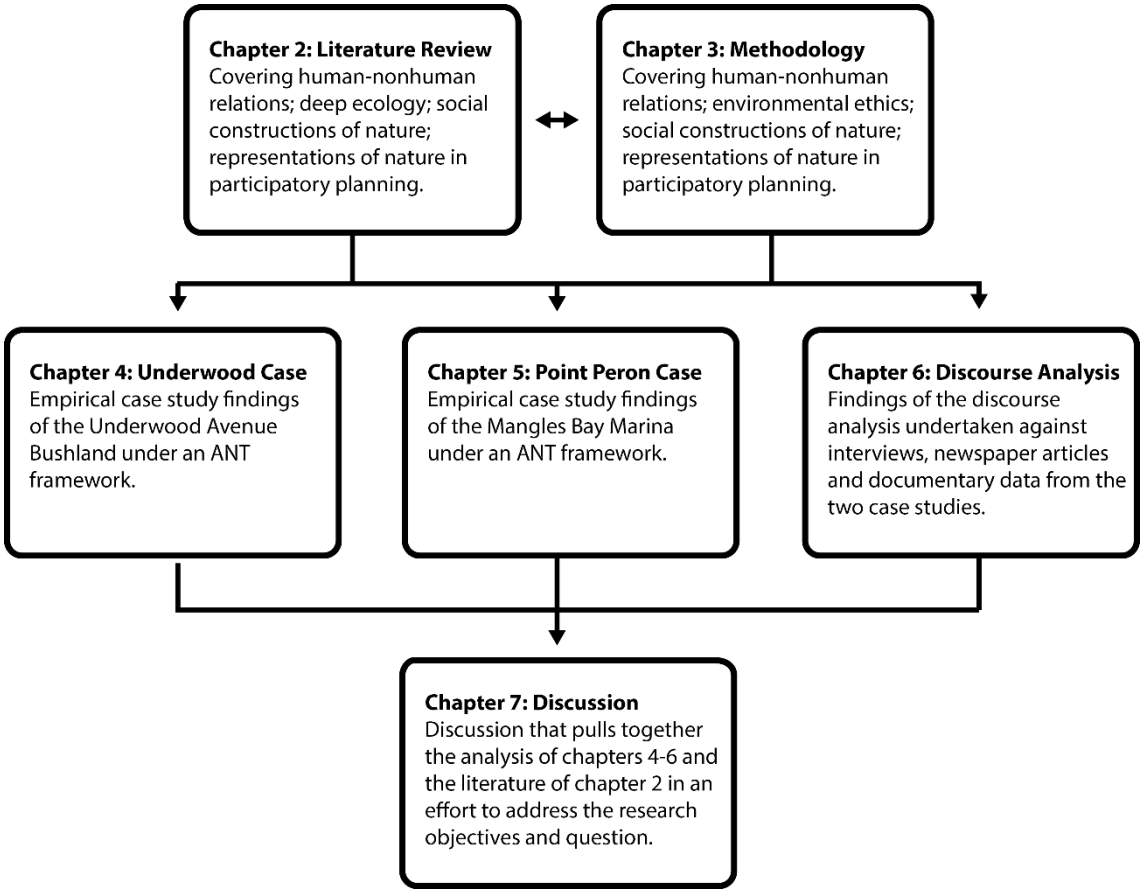


Figure 1.5: Structure of the dissertation.

The second chapter introduces the reader to the theoretical and philosophical framings of human-nature relations in the urban environment, establishing the scene for the dissertation. In particular, the chapter seeks to explore the specific relations between humans and nature within land-use planning processes and the development of the built environment. The chapter starts by exploring the historically dominant Western understanding of nonhuman nature that is perceived to sit in opposition with the rational, emotional human being under the anthropocentric human-nonhuman dichotomy. Under this perspective, the city is viewed as the sole domain of the human with nonhumans permitted only in domesticated form, tamed by humans. The deep-seated nature of this perspective in Western society is further explored by a review of the dominant discursive framings of nature in planning practice. The discussion demonstrates the most common constructions of nature reinforce the human-nonhuman dichotomy and view nonhumans as ontologically and morally separate entities. The chapter then proceeds to explore

contemporary more-than-human concepts of the built environment. The discussion explores the literature within cultural geography and the environmental humanities seeking to disrupt the dominant anthropocentrism within Western society by positing an interconnectedness between the human and natural worlds. Under such perspectives nonhumans are considered active contributors in the production of what are historically perceived human places. However, from a planning perspective such entities are rarely provided stakeholder status due to their inability to actively claim a stake in deliberative process. This dilemma is explored through contemporary planning literature and linked to the principles of deep ecology as an ethical framework and nonanthropocentric environmental philosophy that similarly seeks to achieve a greater recognition of nonhuman interests and more ecologically sensitive human actions.

Following the literature review, chapter three provides an explanation of the methodology utilised in order to complete the research project. It establishes actor network theory (ANT) and discourse analysis as the two theoretical frameworks supporting the research. The chapter provides the reader with an overview of ANT's key principles and methodology as developed by Callon (1986) and Latour (2005a), and explores the theoretical underpinnings of discourse analysis and the semi-structured explorative approach undertaken. The chapter proceeds to introduce the design of the research undertaken including an introduction of the qualitative case study approach utilised and the specific methods of data collection undertaken. The chapter concludes with some reflections regarding some of the challenges encountered whilst undertaking the research project.

Chapters four and five present the findings of the ANT analysis of the Underwood Avenue Bushland and Mangles Bay Marina case studies. Developed as linear narratives, each chapter takes the reader on a journey through the relevant case study with the aim of exploring and identifying key actor networks, relationships and processes as guided by the ANT framework. The chapters provide the reader with a thorough overview of the key planning processes undertaken in each case study and the relationships between key human stakeholders and the local nonhuman species and nature assemblages. Particular attention is given to the local pro-conservation networks and their role within the planning system as they seek to represent the interests of the local nonhumans.

Chapter six focuses attention on the discourse analysis and presents the key findings and discussions associated with this component of the research. The analysis of the articles and 'letters to the editor' from the local newspapers in each case study, in addition to a range of technical reports and submissions received from government agencies, and the interviews conducted with local conservation activists is presented.

The findings highlight a range of discourses presented and the variances across stakeholders, and across case studies. In addition, the analysis of the in-depth interviews provides some initial understanding of the underlying ethics of the local conservation activists and the extent to which these align with the principles of deep ecology, or elsewhere along the environmental ethics spectrum. The chapter also turns its attention to how discourses evolve over time as local conservation activists' relationships with various human and nonhuman stakeholders change. The findings illustrate an alignment to deep ecology by local conservationists within the interviews, and yet a more anthropocentric discourse presented publicly, with nature viewed in highly romanticised forms and as a resource for human well-being and recreation.

The final chapter pulls together the key findings of the empirical studies in an effort to fulfil the objectives of the research. The discussion comments on the empirical findings from the ANT case study analyses that suggest planning outcomes and the production of the urban reflect the sort of multispecies and multi-thing relations espoused under the recent relational turn in cultural geography. The discussion critically reflects on the practice of representing the interests of nonhumans and whether humans are capable of dislodging their inherent humanism in favour of a nonanthropocentric ethical and ontological position. The discussion also critically reflects on whether deep ecology can be a viable platform for the practice of planning to utilise in order to achieve ecologically sensitive development outcomes. In response to these discussions, the chapter provides some concluding remarks about the development of a planning practice that facilitates multiple representations and acknowledges diverse more-than-scientific epistemic claims to know nonhuman nature and thus represent their interests.

Chapter 2 Human-Nature Relations in the Built Environment

2.1 Introduction

This chapter sets the scene for the dissertation by exploring human-nature relationships within urban environments and in the practice of land use planning. Reviewing the academic literature within the field, the chapter first introduces the deep-seated anthropocentric relationship between humans and nature, within urban Western societies, before progressing into an analysis of the common discursive representations of nature within planning practice. Deep ecology is explored as an environmental philosophy that may assist individual humans in developing nonanthropocentric relations with, and representations of, nonhumans, particularly within planning processes. The chapter then unpacks the recent philosophical and theoretical socio-ecological concept of the more-than-human city – the notion that human places are not devoid of nature but

rather reflect complex more-than-human relations. Following this, the chapter explores how the practice of planning can be more responsive to nonhumans and how individual humans may represent their interests in human-centric negotiations through processes of translation.

2.2 Human-Nature Relations and the Urban

The process of urbanisation involves a complex meshing and moulding of human and nonhuman actors, resulting in a transformed and often human-centric landscape. Many perceive such human dominant places as devoid of nature. Phenomenologically, cities and other built environments do not resemble the prevailing perception of nature as *wilderness,* pristine and uninterrupted (Cameron 2012). Ecologically, urban environments are not 'natural', and yet they abound with floristic and animal diversity and remain subject to natural (and increasingly unpredictable) climatic processes (Thomson 2007). Cities are not "dead zones", but rather provide a multitude of habitats in parklands, backyards, and landfills, within which some species adapt and thrive (Byrne 2010, 65). Leman-Stefanovic (2012) argues that cities do not exist independently of nature, but acknowledges that throughout society there remains an imagined bifurcation between the natural and the urban. This dichotomy is driven by an underlying position of anthropocentrism that is reproduced through the discursive and physical relationships between humans and nonhuman nature within, particularly Western, urban environments.

Anthropocentrism as defined by DeLapp (2011, 37), "embodies or expresses, whether implicitly or explicitly, a set of beliefs or attitudes that privilege some aspect(s) of human experience, perspective or valuation". Ontologically, anthropocentrism refers to viewing the world with humans as its core focus (Hayward 1997). Ethically, it assumes that humans, and their interests, are morally significant while the interests of nonhumans only matter morally to the extent that they may affect humans and our own interests (McShane 2009). Whilst scholars continue to debate the roots of anthropocentrism, it is clear that Western society and culture, in particular, has been largely influenced by such human-centred thinking (Schultz, Zelezny and Dalrymple 2000). Today, a psychological, philosophical and political disconnect remains between humanity and the nonhuman natural world, arguably contributing to contemporary ecological issues.

This human-nonhuman binary is linked to the period of rational modernism during which Taylor (2011) argues rigid dualisms were taken uncritically as self-evident. Nonhumans, and in particular animals, were positioned as the opposite to, or lesser versions of, rational humans and each were considered to have their distinctly separate places within the world (Plumwood 2003). This was a period characterised by human progression,

where nonhumans were considered a resource that would assist in the goal of economic, technological and societal advancement (Franklin 1999). The perceived irrationality of nonhuman nature was seen as an invitation for colonisation and reordering, whereby the 'wild' was 'tamed' and resources transformed for human consumption (Plumwood 2003). Indeed, the "destruction of habitat, the enslavement into medical research and the creation of industrial animal husbandry" would become, and arguably still remains, common practice in Western capitalist economies (Franklin 1999, 3).

The City[1] has since become a potent symbol of human domination over nature and a reflection of this hegemonic human-nonhuman dichotomy filtering through Western society. Perceived as a secure enclosure for humanity, the City represents the end of the wilderness and the domestication of the wild by human hands (Anderson 2003). It symbolises the overcoming of nature and nonhuman (and human) wildness, by the civilised and rational human (Thomson 2007). Wild lands were considered 'empty lands' – *terra nullius* – ripe for colonisation and transformation (Wolch 1996). The subsequent rollout of urban expansion across Western society has been driven by this notion of progress, fuelling the continued conquest, re-ordering and economic exploitation of the natural world (Wolch 1996). Accordingly, the City is viewed as a celebration of anthropocentric advancement and used as a constant in which nature is defined against, reinforcing a human-nonhuman dichotomy and the privileging of the human (Thomson 2007; Anderson 2003).

The contemporary practices of urban development and related land-use planning processes continue to reflect a deep-seated anthropocentrism within the Western world. Whilst urban designers such as Ebenezer Howard and Patrick Geddes explored environmentally conscious city concepts, and environmentally conscious planners advocate for green corridors and urban forests, the designs remain focussed on human-centred outcomes. Development sites are often framed as barren or as hostile to humans, and concerns for wildlife often presented in terms of their value to humans aesthetically, recreationally or economically (Palmer 2003a). Animals are provided little ethical or political status in development processes, with legislation and regulations in place to minimise impact on particular species but rarely enforced to halt development (Beatley and Bekoff 2013; Wolch 1996). Further, the development of human-animal relations is limited by planning regulations that highly regulate which animals are permitted in urban environments, reinforcing a divide between the civilised and wild (Gaynor 1999).

[1] Thomson (2007) notes City with a capital 'C' aptly reinforces the symbolic importance of the city as a civilising and civilised place within Western society, emphasizing a separation between the human and nonhuman.

Whatmore and Boucher (1993) argue that the process of land use planning has essentially formalised a divide between humans and other-than-human species. The term land use when viewed as land (nature) + use (culture) is anthropocentric and reinforces the human-nonhuman dichotomy (Hillier 1998). With the use of statutory provisions and systems of zonings that impose site-based restrictions on land, coupled with private property rights and often a pro-development mentality to 'improve' land perceived as empty, planning supports the narrative of human domination and colonisation over nonhuman nature (Whatmore and Boucher 1993; Thomson 2007; Plumwood 2003). As such, the practice of land use planning, including its mechanisms and controls, often reduces nature to packaged parcels, rather than acknowledging its more intricate and interconnected reality. The scope of consideration of nonhuman interests is often reliant on the (human) actors involved and their personal relationships with, and discursive constructions of, the particular nonhumans or natures implicated (Philo 1995). Indeed, the way we relate to, and speak about, nonhuman nature plays a significant role in the way we respond to, and plan for, the other-than-humans that co-exist within urban environments.

2.3 Constructions of 'Nature' in Planning

Social constructions of nature are multiple, dynamic and transitional. These discourses are individualised and deep-seated, derived from childhood experiences, personal relations with nature, religion and culture (Black 2002). They change from generation to generation in line with scientific advancements and society's understandings of such advancements. As such, *nature* is a highly contested term, constantly evolving and open to challenge over time and by other actors (Cammack, Convery and Prince 2011). The meaning ascribed to nature through language does not neatly reflect the reality, but rather the discursive context filtering our interpretations. Accordingly, when speaking of any 'nature' we must ask 'which nature?' and 'whose nature?' (Beck 1995 cited in Hajer and Versteeg 2005, 178).

Further, the translations of reality into discourse have notable consequences in the way we respond to natural phenomena, construct identities and relate with other human or nonhuman entities (Jørgensen and Phillips 2002). As nature discourses gain strength in society they are able to harness political or economic support, culminating at such a point of recognition they are translated into policy (Frawley 1992). Often, the ascendancy of one discourse does not accurately reflect the conflicts and tension involved in the dethroning of prior dominant representations (Frawley 1992). As Newby et al. (1990, 3-4) note environmental discourses and the discussion of environmental issues are:

> "…deeply political, revealing issues which are the very stuff of political debate: the expansion of individual choice and the satisfaction of social needs; individual freedom versus a planned allocation of resources; distributional justice and the defence of private property rights; the impact of science and technology on society".

The following section will discuss some of the dominant discursive representations of nature in planning discourse, as they have evolved through time and how they have impacted the profession and the practice of planning.

2.3.1 Strong Anthropocentric Representations

Social constructions of nature present in planning discourse can, in most cases, be considered to sit firmly within the realm of anthropocentrism. These discourses tend to value nonhuman nature for its instrumental value, such as resource extraction or amenity. In a broader context, after the scientific revolution of the seventeenth century representations of nature were increasingly led by scientific explanation, rather than divinity (Davoudi 2012). As a result, Davoudi (2012, 56) argues that "nature was no longer cherished as a source of inspiration", but rather as a material system which humans had both the means and the right to exploit. Nature was, and generally remains, an instrument for human growth and progression with little reflection on the needs or requirements of individual nonhumans or the systems and processes of nature as a whole (Verhagen 2008). As such, various anthropocentric representations of nature reinforce the notion of human dominance over nature, which remains prevalent in Western society today (Verhagen 2008).

Frawley (1992) argues the most dominant perspective throughout Australian history is the colonial representation of nature, where emphasis is placed on economic development and the 'improvement' of nature into a form where its materialistic value can be extracted to the benefit of the colonisers. Historically this representation was derived from the immigrant European population (particularly Anglo-Celtic) who reacted negatively to the unfamiliar Australian bush, which was perceived to be of little value either aesthetically, economically or productively and therefore ripe for subjugation and conquest (Frawley 1992). Nature was viewed in stark utilitarian terms as a storehouse of resources and functions to be exploited rather than conserved (Gleeson and Low 2000; Davoudi 2012). This mindset is perhaps best illustrated in the clearing of the Western Australian Wheatbelt region between the early 1900s to early 1980s. Government funded schemes, such as a "Million Acres a Year", were implemented to drastically alter and colonise the natural landscape, transforming it into a productive agricultural region. The project resulted in the largest clearing of native vegetation of any region in the world (Beresford 2001). Converted army tanks, horse powered log rollers,

slash and burn techniques, steel balls and tractors were implemented to remove vegetation and satisfy lease agreements requiring a minimum 50% of native vegetation to be cleared within ten years (Beresford 2001).

The preference for a European inspired landscape, and rejection of the Australian variety, has filtered through generations and can explain the non-native landscapes that tend to dominate Australian urban environments today. The characteristics of the colonial discourse has, however, evolved from a position of outright rejection and unabated, unregulated exploitation to a utilitarian point of view characterised by state-led intervention in resource management, such as controlled water usage in agricultural regions (Frawley 1992).

The representation of nature as a commodity that can be economically valued, traded within markets, used to negotiate outcomes or as something that can be offset has, for some time, been common through capitalist societies (Castree 2003). More recently, the commodification, marketisation and privatisation of nonhuman species, nonhuman individuals and nature networks have been discussed widely under a neoliberal framework (see McCarthy and Prudham 2004; Heynen and Robbins 2005; Mansfield 2007; Castree 2008b, 2008a; Sullivan 2013). From the 1980s onwards, driven by the neoliberal economic climate, nature as a commodified, marketable resource became a more dominant representation within planning discourse (Davoudi 2012; Whatmore and Boucher 1993).

In this discourse, nature is viewed in terms of the commercial benefits it could provide. There was an assumption that any loss in flora could be replaced or offset, often with some sort of perceived net gain, as negotiated through the planning system (Davoudi 2012). Viewing nature as a commodity in this sense is not restricted to economically driven exploitative behaviours in, for instance mining, but also to the marketability of the aesthetic and pleasurable qualities of nature. Whatmore and Boucher (1993) describe how the development of land has become capable of producing new and exciting environments with the use of landscaping, driven by the narrative of pleasure and amenity, and marketed in such a manner. Accordingly, there is a distinct connection between the commodity and colonial discourses. The commodification of natures, and the colonisation that typically occurs alongside, is often construed as *planning for the public good* or for the *national interest*, and as a result has led to a contraction of the environmental agenda within land use planning (Healey and Shaw 1994; Davoudi 2012; Whatmore and Boucher 1993). *Land*owners are considered to have a *right* to maximise the potential marketable or resource value of *their* land, subsequently limiting any rights nonhuman nature may have within the planning system and encouraging colonising

behaviour (Hillier 1998; Sandercock 1990; Jansujwicz and Calhoun 2010). In order to obtain the maximum value, 'improvements' must occur transforming local natures into 'land' that can be 'used' according to our 'land-use planning' systems. Nature assemblages are thus no longer represented as 'nature' but as 'land' that can be appropriated, sold into private ownership, and re-purposed for a predominately human use.

Conversely, the heritage perspective of nature sought to preserve both built and natural landscapes in recognition of their amenity and aesthetic values. Unlike other discourses which also cherish nature for its aesthetic value, the origins of the heritage discourse were highly elitist, seeking to protect the English countryside *for* the Nation, but *from* the public who were considered a threat to the survival of significant landscapes (Newby et al. 1990, 6). This elitist preservation of nature caused tension with those seeking to capitalise on the agricultural value of the land (Davoudi 2012). Nonetheless, the preservationists prevailed and various landscapes were protected across England according to a hierarchy of value ranging from national to local significance (Davoudi 2012). Similarly, in Australia certain natural landscapes started to be framed as nationally significant and requiring protection. This led to the establishment of the National Trust in 1947, which was tasked with preserving heritage buildings, but also natural features, flora and fauna deemed to be of significance (Freestone 2014). By the 1970s the Australian states in concert with the Australian Heritage Commission began recognising landscapes for their cultural heritage values, particularly in relation to Indigenous culture and history, and actively sought to protect them (Russell 1989). Heritage protection of both the built and natural environment has since become entwined into the planning system's statutory responsibilities at all levels of government, and further managed through local development design guidelines.

More recently, in response to climate change and the sustainability agenda, Davoudi (2012) and Baldwin and Stanley (2013) contend nature has been represented further as a 'risk' to society and the urban. The discursive framing of nature as a risk has resulted in attempts to re-tame or regain the upper hand against what has become an unruly environment, with the re-introduction of scientific-rational decision making in land use planning (Davoudi 2014). Priorities have shifted from viewing nature "as a resource to be sustained *for* cities to considering nature as a threat *against* which cities are to be secured" (Davoudi 2014, 361). As a result, scientific modelling and technical reports on factors such as sea level rise, projected temperature increases, bushfire or cyclone activity hold significant agency capable of dictating discourse and policy directions (Swyngedouw 2009).The risk of loss of human life as a result of environmental threats tends to trump measures that seek to protect the environment for its intrinsic value.

2.3.2 Weak Anthropocentric Representations

A number of discourses of nature exist within the realm of weak anthropocentrism. Although these narratives acknowledge the value of nonhuman nature to humans, they tend to appreciate a flourishing nature that is free from exploitation. For instance, the romantic representation of nature in planning discourse is characterised by the image of nature as a wilderness refuge away from the city; a place of inspiration; a source of delight, that ought to be protected from urbanisation (Davoudi 2012; Healey and Shaw 1994). The Garden Cities movement encapsulated this romantic notion, with Ebenezer Howard seeking to combine the benefits of the idealised countryside with urban life, including the employment and social opportunities of cities with the fresh air and scenery of the country (Hall 2002). Similarly, planners such as Patrick Abercrombie and Thomas Sharp led the charge throughout the United Kingdom in the 1940s to protect and separate town and country in order to preserve the country landscape as a refuge for urban dwellers (Healey and Shaw 1994).

In Australia, the romantic representations of nature were initially hindered by the view that the Australian landscape was uncivilised, rough and irregular (Frawley 1992). However, at the turn of the twentieth century appreciation for the native bush motivated the bushwalking and conservation movements, which eventually through a growing appreciation, led to the implementation of national parks across the country that protected pockets of nature from development and exploitation (Frawley 1992). Walter Burley Griffin, during the early 1900s, sought to develop suburbs with a reverential perspective of the natural terrain, including his winning design for Canberra which remains visible today (Freestone 2014). Throughout the 1970s and 1980s the conservation movement continued to argue for the protection of Australian natures, which, due to the country's late European development, provided a unique opportunity to retain relatively healthy, intact ecosystems (Russell 1989). Whilst the motivations for the preservation of parcels of countryside is anthropocentric, the outcome permits both individual and collections of nonhuman nature to exist in, typically, their 'natural' state as opposed to being deconstructed for its instrumental value.

Similarly, the conservation discourse is based predominantly upon the aesthetic value humans allocate to particular natures. However, Whatmore and Boucher (1993, 169) argue the discourse has a second distinct science-based strand, which regards nature as a "scientific (biotic) repository, realised in a system of nature reserves". The two strands of this discourse reflect the dominant treatment and handling of modern environmental planning, with a focus on a regulatory system of zoning and strategic land use planning which segregates nature from society in the form of designated green

spaces, conservation reserves and national parks (Whatmore and Boucher 1993). Freestone (2014) suggests this was first evident in the South Australian Town Planning and Development Act 1920, which regulated subdivision design and called for the conservation of any natural beauties or amenity. In more recent times there has been a concerted attempt to better integrate or connect segregated spaces, with concepts such as wildlife corridors, in order to assist in the conservation of nonhuman species within urban environments (Kong et al. 2010; Huber et al. 2012). Nonetheless, planning for conservation or improved biodiversity remains relatively anthropocentric in scope, with nonhumans attaining significantly fewer, if any, rights compared to humans within the planning system (Hillier 1998), or theoretical consideration within planning academia (Houston et al. 2018). Additionally, Hurley and Walker (2004) warn the scope of the conservation discourse is largely dictated by human-centric scientific interpretations of environmental problems, which are susceptible to manipulation and varied interpretations by humans with alternative understandings and relations with nature (Tuckwell 2012).

Scientific interpretations of nature within planning can fluctuate in their degrees of anthropocentrism, dependent upon the dynamic and politically charged deliberations they are positioned within. These interpretations can be critical in determining how nonhuman nature is managed in land use planning decision making. Hillier (1998, 88) presents a rather pessimistic view, arguing that the elevated position of power scientists have, due to society's "symbolic legitimacy of science and the experts who can perform scientific analyses", results in their interpretation being accepted as fact, diminishing laypeople's knowledge or experiential understandings. Scientists are idealised as the only authorised spokesperson for the natural world or, as a cynical Haraway (1992, 312) states, "the perfect representative" with "his passionless distance his greatest virtue". Scientific knowledge is thus considered a powerful tool that can be used, manipulated or exploited to garner political support and acceptance for a particular land use proposal or political objective. However, Wynne (1992), Hurley and Walker (2004) and Tuckwell (2012) note the contestation surrounding scientific narratives can often diminish or reject its hegemony at the local political level.

While expressing concerns similar to Hillier, Cadieux (2011) and Frawley (1992) suggest scientific narratives of nature also open opportunities for critique, reflection and, as a result, less anthropocentric land use planning. Frawley (1992) argues that while scientific data was initially used in resource development, it also provided a mechanism to critique 19th century colonial exploitation of the environment. Later, the use of scientific data provided a sense of legitimacy to arguments for the preservation of natural ecosystems (Frawley 1992). Today, third party participants in land use planning dilemmas, such as

environmental activists, are able to deliver an alternative to a proposal by engaging with scientific data and delineating a substitute, or re-interpreted, construction of nature (Tuckwell 2012). Cadieux (2011) explains that participants often rely on science to construct and support a convincing narrative of nature, seeking to legitimise their proposed course of action, whilst undermining alternatives. Davison (2008) supports this notion, arguing that environmentalists often rely on scientific interpretations to demonstrate an interdependence between humans and nonhumans, and whilst their interpretations are often highly romanticised, it is this combination of science and romanticism that drives an intense distress and desire to defend.

Subsequently, scientific interpretations of nature may be used to both support and destabilize anthropocentric planning proposals, depending upon the political strength and power less-anthropocentric proposals are able to garner. Nonetheless, the use of science in discursively constructing nature in planning processes has resulted in both the conservation and exploitation of the environment. As with other contested discourses, the competing scientific interpretations of nature simply intensify the political nature of land use planning.

2.3.3 Weak Nonanthropocentric Representations

The ecological discourse of nature in planning is the only recognised representation that may be situated within the nonanthropocentric realm. Drawing upon the romantic and conservation representations, and gaining rigour through pro-conservation scientific narratives, the discourse articulates a reality of human and nonhuman interconnectedness, where collectively the human, flora, fauna, fungi and other-than-human species produce a functioning life-support system for the earth (Whatmore and Boucher 1993). Progressed through post-World War II narratives calling for a reconnection with nature, Davison (2008) suggests the ecological discourse was developed through two broad strands of science: the natural and social. A nuanced scientific understanding of the relationship between humans and the nonhuman natural world allowed for the introduction of terms such as ‘interconnected’ into the language describing nature and human-nature relations. Additionally, advancements in the social sciences generated a greater understanding of the psychological and physical health benefits to humans who were in regular contact with a healthy, flourishing local nature. Thus, the concept of holism was established – an intimate ecological connection between the human and nonhuman - correlating with nonanthropocentric environmental philosophies such as deep ecology.

From a planning perspective, the discourse supports a regulatory land use planning system that restrains development and rejects the domination and continued exploitation

of nature (Whatmore and Boucher 1993; Frawley 1992). The discourse is also commonly aligned with sustainability, with a view of imposing a whole of environment ecological vision of nature into planning deliberation in order to achieve an ecologically sustainable economy and society (Whatmore and Boucher 1993; Frawley 1992). However, Whatmore and Boucher (1993, 170) argued the discourse's "radical implications for the political economy of land development and for the ethos and protocol of planning practice" relegated the narrative to a marginalised position by planning practitioners. Still today, nonanthropocentric representations of nature fail to dislodge planning policy and practice from its deep-seated anthropocentrism and tendency to commodify nonhuman natures (Gunder 2010). Houston et al. (2018) claim planning has failed to overcome its inherent human-centric approach, despite new theoretical explorations into the more-than-human city and the political strength of the environment movement fuelled by philosophies, such as deep ecology, that call for a radical repositioning of human priorities.

2.4 The Deep Ecology Platform and the Built Environment

The field of environmental ethics has evolved following a recognition of the moral limitations towards the nonhuman world associated with Western society's current ethical frameworks. Whereas traditional ethical frameworks are human-centric in approach, environmental ethics is concerned with the moral relations between humans and nonhumans (Taylor 1986). It seeks to expand the moral consideration of humans to include the other-than-human occupants of the world (Light and Rolston III 2003), in response to a growing uneasiness surrounding the destructive environmental characteristics of human economic, technological, and cultural practices (King 1997). Accordingly it seeks to provide humans with a language by which to assess whether our actions are right or wrong, or better or worse, in terms of their implications towards both fellow humans and nonhumans (Light and Rolston III 2003). Typically it seeks to decentre the human as the superior being and break down the culturally hegemonic anthropocentrism that infiltrates Western society.

One of the first environmental ethicists to establish a more inclusive ethical framework was Aldo Leopold in his seminal book *A Sand County Almanac* (1949). In this piece, Leopold proclaimed that landowners should implement self-imposed limitations on the use of their land in order to preserve its natural integrity. Framed as a *land ethic*, Leopold sought to expand the moral consideration of humans to systems of nature – "the land" – in what he considered to be a natural progression of ethics away from inter-personal anthropocentric considerations to one that considered the broader communities of life (Light and Rolston III 2003). However, it wasn't until the early 1970s that the field of

environmental ethics and deeper philosophical reflection on normative ethical frameworks began to flourish following the establishment of the environmental movement in the years preceding (Palmer 2003b). A catalyst for this was the publication of *Silent Spring* in 1962 by Rachel Carson, in which she warned of the deleterious impacts of toxic chemicals and pesticides on communities of humans and nonhumans.

In the years following, an array of philosophical debates were developed in an attempt to crystallise a nonanthropocentric ethical approach for the Western world to adopt moving forward. Scholars such as Singer (1977, 1985, 1989), Naess (1986, 1973), Rolston III (1985), Routley (1973), and Taylor (1986) contributed significantly to debates around, for instance, animal rights, speciesism, biocentric equality and the intrinsic value of nonhumans. The resulting literature developed a number of ethical approaches, which can be viewed as a spectrum ranging from strong to weak anthropocentrism, to shallow and deep ecology (Kopnina 2012).

Deep ecology itself was initially established by Arne Naess (1973) as an environmental *philosophy* that sought to re-balance the human and nonhuman worlds and allow for a flourishing co-existence. Developed through advances in ecology and the natural sciences that confirmed our position within, and reliance upon, a healthy and functioning natural world, Naess sought to develop an environmental philosophy that went further and asked searching questions about human life and society (Grey 1993). Inspired by Eastern religions, deep ecology acknowledges the interconnectedness between humans and nonhumans as an assemblage of multispecies (Devall and Sessions 2005). It was not intended to replace other environmental ethics such as biocentrism or ecocentrism, but rather position itself as an all-encompassing philosophy that provides a commonality to the various nonanthropocentric perspectives and personal positions of individuals (Katz, Light and Rothenberg 2000). For Naess, the focus was on developing the movement in which to inspire individuals to take political action, and to guide ethical choices.

Explicitly rejecting anthropocentrism, deep ecology denounces environmental conservation and considerations that are driven purely by human interests (Attfield 2003). Framed as a form of *shallow* ecology, Naess (1973) argued that the protection of nonhuman natural elements, from individual species to whole habitats, for the purposes of protecting human interests and well-being fails to reflect the relational reality of humans as part of the biospherical web of life. Shallow ecologists prioritise human interests, and frame nonhumans in terms of their instrumental use as, for instance, a resource for consumption or well-being (Fox 1984). However, deep ecology is not anti-

human. The movement seeks a greater respect for all living beings, recognising the interconnectedness of humans with the nonhuman natural world.

Deep ecology seeks to promote the intrinsic worth of nonhumans and a sense of equality Naess (1973, 1986) framed as biospheric egalitarianism. Metaphysically, deep ecology breaks down the traditional dichotomies of rational modern science, and promotes a level of consciousness of the interconnectedness between humans and nonhumans (Devall and Sessions 2005). To this end, it places humans firmly within the messy systems and assemblages of nature – we are neither superior nor inferior, but merely another species, another element. It seeks a radical ethical repositioning that acknowledges this interconnectedness – an ethic of *holism* – and asks users to develop a sense of self-realisation, extending their sense of self "beyond the confines of their body to include others" (Palmer 2003b, 30). In doing so, users are able to learn about themselves as a being within the web, another "expression of life", fostering an awareness of their connections with, and subsequent care for, the natural world creating an ontologically expanded Self (capital 'S') (Naess 2005, 197). It is primarily concerned with humans re-establishing themselves as a part of Nature – "returning to our roots" – through deep questioning, and learning to defend Nature "as part of our Self" (Devall 1988a, 56).

With the foundations of self-realisation and holism in place, in 1985 Naess and George Sessions developed a set of eight principles guiding the implementation of deep ecology, to be known as the Deep Ecology Platform. These were later articulated by Devall and Sessions (2005, 203) as the following:

1. The wellbeing and flourishing of human and nonhuman life on Earth have value in themselves (intrinsic value), independent of the usefulness of the nonhuman world for human purposes.

2. Richness and diversity of life forms contribute to the realisation of these values and are also values in themselves.

3. Humans have no right to reduce this richness and diversity except to satisfy vital needs.

4. The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease.

5. Present human interference with the nonhuman world is excessive, and the situation is rapidly worsening.

6. Policies must therefore be changed. These affect basic economic, technological, and ideological structures.

7. The ideological change is mainly that of appreciating life quality rather than adhering to an increasingly higher standard of living.

8. Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes.

Though embraced by the environmental movement, deep ecology was subjected to a barrage of academic criticism in the same vein as other environmental ethics of the time. In particular, these nonanthropocentric philosophies were criticised for their blanket rejection of anthropocentrism. Naess, Devall and Sessions sought a re-positioning of human priorities, allowing for the mutual flourishing and peaceful co-habitation of human and nonhuman species. Watson (2005, 209) agreed, arguing that humans as a species were too destructive, too successful at reproducing and too powerful, and that we should not be permitted to live out our "evolutionary potential". However, setting apart humans from others as the single species that should be "thwarted in its natural behaviour" reinforces a divide between the human and nonhuman (Watson 2005, 208). This separation of humans from the remainder of the nonhuman world is indeed anthropocentric, and if we are to embody a nonanthropocentric position Watson argues we need to accept humanity's destructive potential as 'natural'. He argued:

> "If we view the state of nature, or Nature, as being natural, undisturbed, and unperturbed only when human beings are *not* present, or only when human beings are curbing their natural behaviour, then we are assuming that human beings are apart from, or separate from, different from, removing from, or above Nature.
>
> To avoid this separation of man from nature, this special treatment of human beings as other than nature, we must stress that man's works (including H-bombs and gas chambers) are as natural as those of bower birds and beavers (Watson 2005, 208)."

Further, Hayward (1997) argues that there are circumstances in which we simply cannot refrain from being human-centred. We are human, and thus our view of the world is shaped and limited by our inherent humanness. Rather, Grey (1993) suggests that if we value ourselves and acknowledge our reliance upon the natural world for progression, then acting anthropocentrically – with our own interests at heart – will need to include ecologically sensitive behaviour correlating with Norton's (2008, 1984) concept of weak anthropocentrism. Accordingly, these scholars argue that the term anthropocentrism is largely unhelpful and overtly simplistic. Rather than rejecting anthropocentrism, it is

suggested that a greater focus be placed on determining the long-term implications of our actions, and reflecting on the speciesism and human chauvinism that often clouds decision-making (Grey 1993; Hayward 1997). However, Sessions (2006) explains that Naess remains insistent that motivation for effective ecological activism is found within the process of deep questioning and finding oneself within Nature, whereby multispecies relations are explored and a broadened nonanthropocentric perspective developed.

One of the more vitriolic opponents of deep ecology has been Murray Bookchin. In his now infamous 1987 response to deep ecologists and Earth First! activist Dave Foreman, Bookchin (2005, 214-215) labelled the philosophy "vague, formless" and "an ideological toxic dump". For Bookchin, deep ecology was considered an attack on humanity. Acknowledging the ecological crises of the time, Bookchin, a social ecologist, argued these were a product of complex social issues that deep ecology conflated under the broad brush of humanity. In doing so, the philosophy dismissed issues associated with, for instance, capitalism and its "grow or die" market systems, and conflated the rich with the poor, the third world with the first etc. under an "ugly 'anthropocentric' thing that is overpopulating and devouring resources" (Bookchin 2005, 214). Developed by white male academics, deep ecology was also labelled patriarchal and dismissive of the role of women by Bookchin, and later other feminist academics (see Plumwood 2002; Lee-Lampshire 1996), in comparison to social ecology, which Bookchin (2005, 220) claimed to be "neither 'deep', 'tall', 'fat' nor 'thick'", but purely about the social. Bookchin also took aim at the philosophy's "eco-brutalism" tendencies, citing Foreman's consideration of letting nature regain balance in Ethiopia by allowing starvation to occur as a form of natural population control (Bookchin 2005, 214). Sessions (1988) responded, acknowledging that not all humans are *equally* responsible for the world's environmental crises, but that there was general consensus that humans more broadly were indeed overpopulating the planet, diminishing resources and degrading the biosphere.

Deep ecology, along with most nonanthropocentric environmental philosophies, has also received criticism for its apparent avoidance of the *built* environment. With its focus on the wilderness and wild nonhumans, deep ecology remains relatively silent on environmental issues and human-nature relations within anthropogenically modified landscapes, such as cities (Gunn 1998; Fox 2000b). Booth (2008) explains, in their bids to escape the confines of the anthropocentric worldview, deep ecologists – many of whom were naturalists and mountaineers – centered their philosophical thoughts on the *wild* nonhuman world deemed unaffected by humanity. In doing so, they rejected the urban and enforced a geographical dichotomy between the wild (natural, unaffected) + built (human-centered, manipulated) environments, disvaluing the built and its human and nonhuman inhabitants as non-natural (Light 2001; Booth 2008). In order to expand

oneself ontologically and view themselves as part of a greater ecological whole, Devall argued we needed to retreat back to the wild:

> "We let ourselves become colonized by mass media, by expectations in our culture. We are seduced by entertainments and promises of pleasures on city streets. We break away only by becoming self-conscious. Thus we have a paradox, in order to lose our *self* into the larger self, we must become more self-conscious in the midst of techno-scientific civilization. Without cynicism or sentimentalism we create an opening for discovery. Outside the ordered, bordered, fenced, domesticated, patrolled, controlled areas of our region, our wild self is waiting." (Devall 1988b, 70-71)

In light of these critiques there has been a call for deep ecology (and other forms of environmental ethics) to address what appears to be an urban blind spot. Whilst human spaces reflect a modified assemblage of entities, often lower in biological diversity and manipulated for human interests, they are still connected and influenced by the general spontaneity and dynamics of nature (Booth 2008). Urban environmental projects and systems can positively contribute to global environmental challenges, and assist humans in developing or triggering the attitudes and behaviours associated with a greater environmental consciousness (Light 2001; King 2000). The creation of urban community gardens, ecologically sensitive urban design and wetland restorations, biophilic urbanism and the growing movement around urban forests and wildlife corridors demonstrate the potentiality of the urban blending well with the nonhuman.

Additionally, human cities and spaces rely heavily upon the eco-services of nonhuman natural systems and as they continue to expand to facilitate population growth there is a need for philosophies such as deep ecology to return from the 'wilderness' and recognise *urban* natures and the human-nonhuman relations within them. The way we build our cities and live within them is of considerable importance for the continued preservation and flourishing of both humans and nonhumans. As Fox (2000b, 3) acknowledges, "the fate of the 'green bits' of the planet is now inextricably bound up with – indeed, effectively at the mercy of – the future of the 'brown bits'". Accordingly, there is a growing need to plan our cities in a manner that cultivates an ecological consciousness of urban dwellers, and the long-term flourishing of individual nonhumans and eco-systems.

However, environmentally ethical planning theories, let alone deep ecological perspectives, are undeveloped. Whilst scholars acknowledge the practice of land use planning is bound up in moral considerations and values, these are fundamentally human based (Campbell 2012). During the height of the deep ecology movement, Beatley (1989, 1991, 1994a, 1994b) noted that the anthropocentric morals subscribed to by the profession needed to be expanded to encompass the multispecies reality of urban spaces. Given land use planning is linked closely with habitat fragmentation and

degradation, he claimed there was a need for planners to develop a less humanistic ethic to support them in their decision making. As such, he argued planners should be aware of the ecological capacity of their decisions, avoid death-by-a-thousand-cuts scenarios through short-term decision making, promote community over individualism, encourage the use of biophilic or green urbanism into design, and allow all affected parties to participate in decision making, including nonhumans (Beatley 1991, 1994a). Whilst practical methods such as biophilic urbanism (Beatley and Newman 2013; Beatley 2011) and eco-cities (Gallanter 2012) have since provided practitioners with the inspiration and tools required to create more inclusive urban spaces for nonhumans, they are driven by the need to produce healthier cities for the primary benefit of the human occupants, thus reinforcing anthropocentric notions of nature and a human-nature divide. Sheppard (2006) argues with technological, scientific and economic developments continuing at pace, there is a need to develop a more intelligent (and ecologically sensitive) morality to guide holistic and more complex forms of more-than-human urbanism. Whether deep ecology has the potential to assist in achieving this, either internally within the discipline or though external political pressure through the environmental movement, remains to be explored within planning academia and empirical studies. Despite this, the recent relational turn in cultural geography examining the multispecies entanglements producing *urban* spaces – the *more-than-human city* – has provided a new theoretical lens in which to consider the relationships between the human and nonhuman, with the potential to break down rigid dualisms and the human exceptionalism that exists within the planning discipline.

2.5 Planning the More-Than-Human City

Planning with *things* other-than-human and exploring the more-than-human dimensions of cities has failed to ignite within the discipline of planning. Humans and the human perspective remains privileged throughout both planning theory and practice. Whilst *things* are considered in terms of processes (legislation; policy), outputs (plans; development) and consequences (social housing; public transport; active green spaces), they are deemed passive actors in the background (Beauregard 2012). Flora and fauna are subjected to moulding and negotiation through legislated regulations, explicitly shaping their reality and existence from a human perspective (Beauregard 2015; Hillier 2015). Although environmental planners may seek to develop wildlife corridors, fauna underpasses, biophilic and ecocentrically designed spaces to facilitate human-nonhuman co-habitation, there remains an “ontological exceptionalism of humanism” guiding theory and practice (Houston et al. 2018, 2). Planning has yet to theorise a multispecies reality in which nonhumans are active participants alongside humans in

creating cities and places, despite similar explorations into the nonhuman realm within the fields of geography and the environmental humanities.

An early attempt to re-imagine the city as a more-than-human multispecies affair was Wolch's notion of *Zoöpolis* (1996). Acknowledging the existing anthropocentrism within urban theory and the practice of urbanisation, Wolch called for the city to be re-naturalised to reflect the interconnectedness between the human and nonhuman. Specifically, she called for animals to be reintroduced into urban areas. Under this re-enchanted city deemed *Zoöpolis*, Wolch sought to reconnect humans with local natures facilitating a new ethic of care. One-on-one experiences with local nonhuman inhabitants were encouraged as an act of developing an understanding of their other-than-human ways of being, and forming interspecies relationships that would foster a sense of caring. These new relationships, argued Wolch, would invoke a sense of responsibility by urban dwellers to engage in political action defending local nonhumans, and substitute the traditional anthropocentric domination of nature with a broad respect. Moreover, it calls for planners and urban designers to re-evaluate their practice to be more eco-sensitive and to facilitate greater human-nonhuman interaction.

Following *Zoöpolis,* theoretical and philosophical debate on the more-than-human city developed through a relational turn in urban theory and cultural geography. Cities and other human spaces were no longer viewed as unnatural or solely the domain for humans, but rather a socio-ecological system reflecting an interconnected web of relations between the human and nonhuman (Karvonen and Yocom 2011). Unlike Wolch's call to invite the animals back in, the relational turn recognised the city as an already dynamic sphere of interspecies mingling; spaces of heterogeneous actors, including the technological, affecting each other and together co-producing the *built* environment (Hovorka 2008). Cities were no longer viewed as merely agglomerations of material resources, or solely as the product of human culture (Houston et al. 2018), but as the product of a metabolic relationship between both society and nature (Swyngedouw 2006). In this way, the human and nonhuman entities within built spaces are "stitched together" into a single hybrid socio-natural system (Braun 2005, 641). This reinterpretation brought nature back into the perspective of urban theorists, and no longer fixed nature to the realms of the wilderness and outside of human spaces (Whatmore 1999). Further, nonhumans were no longer considered passive actors, but active contributors in the production of these spaces (Houston and Ruming 2014).

Following the development of the relational perspective of cities, the production of human spaces were reconsidered as a process of co-shaping by the diversity of multispecies and multi-thing entities within (Hovorka 2008). Nonhumans were reframed as

counterparts within heterogeneous assemblages of entities, that come together to mould the material space around them (Lake 2017). Swyngedouw (2006) frames this as a process of welding nature, society and the city together into a multi-layered complex whole reflecting the diverse and dynamic entanglements within. Van Dooren and Rose (2012, 2) consider it a process of overlapping "storying", with the production of place reflecting a specific material mode of understanding, relating and *becoming*. Whilst Wilkinson (2012) argues multispecies interaction has historically always driven processes of urbanisation, the relational turn has brought into perspective the role of the nonhuman as an active contributor within this process. Rather than appearing as a mere backdrop, they are re-framed as co-producers with the capacity to influence human action, thus demonstrating agency (Ogden, Hall and Tanita 2013; Lake 2017).

However, the notion of agency has typically been framed as a characteristic of humans as rational and goal-driven beings. Pickering (1993) explains that humans have historically been ascribed with the ability to demonstrate agency as directed, rational beings acting with intentionality to bring about a particular future. The ability to reason – "to break free of their instincts, emotions, traditions and political and social structures" – has been central to the continued human-centric conception of agency (Pearson 2015, 711). Conversely, the perceived inability of nonhumans to think creatively, or to express a particular intentionality or rationale through (human + verbal) language has rendered their role within the world as passive beings subject to human manipulation (Murdoch 1997; Jones and Cloke 2008). Nonetheless, Jones and Cloke (2008) and Pearson (2015) argue this position is increasingly untenable in the ontologically expanded more-than-human world theorised under the recent relational turn in cultural geography.

From a relational perspective, agency has been reconceptualised as a visible effect on one entity from another, whether human or nonhuman. Latour (2005b, 71) explains, that "any *thing* that makes a difference" to another actor is considered an agent. Accordingly, an individual human's capacity to act is seen as a product of entanglement between themselves and another human or nonhuman entity (Fatimah and Arora 2016). Human action is not produced in a vacuum, but rather formed in response to the dynamic, messy imbroglios with other entities humans are entangled within (Pearson 2015). As a result, rationality and intentionality are removed as prerequisites and the conception of agency effectively more-than-humanised (Pearson 2015; Sayes 2014). Nonhumans are brought into the spotlight as potentially active actors, with an ability to exert an effect upon other entities, drive action, and thus co-shape the cities and other urban spaces around them (Lake 2017). In this vein, nonhuman agency can be viewed as the ability to destabilise, resist, influence, enable, and collaborate with human actors through a process of relation-building (Pearson 2015; Sayes 2014). This characterisation of nonhumans as

active participants within a socio-ecological, multispecies perception of the city, can be compared with the symmetrical perspective of the nonhuman promoted within actor network theory (ANT).

As developed by Callon, Law and Latour, ANT explores the heterogeneous entities that come together in networks or assemblages to produce knowledge or drive action. In terms of planning, ANT offers a theoretical framework to explore the practice of planning as a product of momentarily stabilised socio-material assemblages within the dynamic multidimensional city (Ruming, Mee and McGuirk 2016). Under ANT, and through the lens of the material turn, the planner is no longer considered an independent central actor but rather one element within a greater network of beings and entities. This includes technical material objects such as maps and plans that are considered translations of the relationships between social and material actors (Rydin 2014). These are often used to facilitate the development of artefacts such as assessments, approvals, reports and policy that are capable of being black-boxed and moved through space and time to mediate change on distant others (Rydin 2014; Ruming, Mee and McGuirk 2016). Planners, and other human stakeholders, are also inherently influenced by the physical attributes of the sites they are seeking to plan, or the nonhuman species inhabitants that are drawn into the association (Ruming 2008). Accordingly, ANT has been utilised in a number of planning studies to demonstrate how cities or other urban places are co-produced by actor entanglements, including the transformation of a waste water pond into an urban biodiversity zone by migratory birds and bird-watchers (Leino, Karppi and Jokinen 2017); the immutability and distributed agency of 'green' building standards on urban developments and developers (Goulden 2016); and the use of mapping software to translate the complex intermingling of endangered flora and fauna, developers, planners and conservation strategies (Ruming 2008). Thus, the production of place, and the subsequent practice of planning place, can be viewed as a product of dynamic multispecies and multi-*thing* connections and relationships.

Yet, despite the development of more-than-human concepts of the city and urban spaces more broadly, and the acknowledgement of nonhumans as co-contributors in the production of these spaces, the discipline of planning remains relatively anthropocentric in scope. A number of scholars have expressed criticism at the discipline's lack of engagement in other-than-human and post-humanism theoretical explorations (Houston et al. 2018; Beauregard 2015, 2012; Beatley and Bekoff 2013). From a practical perspective, the ontological separation of humans from nature limits the consideration of nonhuman interests in the process of land-use planning. The inability of nonhuman systems, or individual flora and fauna, to self-represent throughout planning

deliberations has further limited their recognition and involvement within active planning processes and remains a challenge to overcome (Lake 2017).

2.6 (Human) Representations of Nonhumans in Planning

Planning is a political arena swarming with power-full actors, negotiations and tactics. Planners often deal with division, conflicting values and rationalities in the (human) communities they serve. Local newspapers regularly contain stories of disgruntled 'Not In My Back Yard'-residents seeking to take on the pro-market developer, and questioning the integrity and/or intent of the local government planning department whose role, as has evolved over time, is to act in the 'public good'. According to Hillier (2000), the practice of planning abounds with the negotiation and formation of actor alliances between those who can affect, and those who are affected, together whom seek consensus or compromise on outcomes, discourses and power dynamics. Indeed many scholars argue the planning realm is a battleground where power relations, and the distribution of power, dictate discourse directions and development or policy outcomes (Forester 1989; McGuirk 2001; Albrechts 2003; Pløger 2001; Hillier 2000; Innes and Booher 2014).

The rise of communicative planning theory (CPT) in the 1990s sought to address uneven power dynamics experienced under technocratic, top-down modernist forms of planning that were based on instrumental rationality. It sought to democratise the process and empower those whose knowledge, forms of reasoning and value systems were previously unrepresented, and often discounted (McGuirk 2001), by a system that privileged rational decision-making based upon facts and technical interpretation (Richardson 1996). McGuirk (2001, 196) argued that CPT utilised Habermas' notion of communicative rationality to encourage deliberative planning practices, which recognised that "meaning, value, understanding and knowledge are generated intersubjectively and through deliberation that draws on diverse forms of knowing, reasoning and representation". Thus, a CPT-influenced system would allow the disenchanted and power-less to actively participate in planning deliberations and forums, where existing power differentials are momentarily (in theory) suspended to produce a 'level playing field' where new understandings and common ground among *human* actors can be forged (McGuirk 2001).

Whilst CPT dislodged the dominance of rational, technocratic systems of planning practice, it has yet to engage the more-than-human elements involved or affected by processes of urbanisation or encourage participation by humans with an epistemic claim to know these affected nonhumans, outside of technical and scientific experts (McGuirk 2001; Richardson 1996; Innes and Booher 2014). McGuirk (2001, 196) openly criticised

the epistemology underpinning modernist planning practice for privileging “techno-scientific analysis and deductive logic” as voiced through experts who subscribe to rational forms of reasoning. Utilising CPT, the mediation provided by planners should present an even playing field with respect to power, knowledge and rationality in planning deliberation, and open up the debate to those actors with alternative means of knowing (McGuirk 2001). Yet the inclusion of other-than-human species, or humans who provide alternative and often less-technical representations of such nonhumans through local knowledge and experience, remain disconnected from planning deliberations. Within planning practice and theory, humans retain ontological superiority, and nonhumans remain passive, material objects (Beauregard 2012). There are two factors contributing to this exclusion: a limited interpretation of the term stakeholder; and the capacity for humans to effectively translate nonhuman *noise* to *voice.*

According to Healey (1997), for planning activities to be successful a comprehensive exploration of actors with a stake in an issue and subsequent engagement with those stake-holders is vital. However, the inability of other-than-human species and nonhuman natures to participate in language based discourse restricts their ability to self-represent and identify themselves as stakeholders in planning matters affecting them (Brown 2017; Boström and Uggla 2016; O'Neill 2001, 2006). Accordingly, the identification of stakeholders has traditionally been limited to the affected *human* actors, or humans seeking to *represent* what are perceived to be affected nonhumans (Starik 1995; Laine 2010). Metzger (2013) thus argues that the process of identifying stakeholders in any given situation is not only an issue of epistemology, but ontology. It is about particular humans holding a perspective that is open to identifying a “slumbering potentiality” of nonhuman stakes “which can be located, uncovered, and activated through diligent stakeholder analysis and follow-up” (Metzger 2013, 782). Consequently, as mute actors, nonhuman species and nature assemblages are left open to a myriad of potential representations based on the various epistemological and ontological perspectives of the humans that are able, willing, or privileged to participate in planning processes (Castree 2013).

The most dominant human representation of individual nonhumans, species or natures have been grounded in modern science. Without a clear mode of authorising a proxy representative for themselves, legitimate representations of nonhumans are typically those founded on an ‘objective’ epistemic claim, such as knowledge developed through traditional scientific practices (Boström and Uggla 2016; O'Neill 2001; Brown 2017). As a form of translation that is developed through systematic observation and seen as directly opposite to ‘irrational’ and emotional translations, scientific representations have developed a relatively authoritative standing in Western society (Milton 2002; Tironi

2015). The knowledge generated is typically believed to be objective and free from bias (Berglund 1998). As such, scientific representations have been adopted by both land developers and conservationists alike to strengthen and legitimise their political positions and practices within land use planning (Tuckwell 2012; Hillier 1999). Further, Innes and Booher (2014) argue in deliberative planning processes, laypeople's knowledge is often dismissed as emotional, misinformed or self-interested anecdotes lacking the objectivity provided by the Sciences. However, despite their perceived objectivity and aim to reflect reality, scientific translations are often moulded and manipulated by competing stakeholders under highly political contexts creating multiple, and at times conflicting, interpretations. In her study of the use of scientific translations by conservationists and developers, Tuckwell (2012) concluded that coupling these with alternative localised forms of knowledge developed through long-term relations strengthened the legitimacy of representations.

Indeed, alternative representations are often developed by those with divergent other-than-science epistemic understandings or considerations of nonhuman natures deemed affected (Metzger 2013). These alternatives may reflect differences associated with religion, individual experiences and relations with nature. Further, alternative representations may be based on re-interpretations or manipulations of existing traditional scientific translations as guided by individuals' emotions, political and moral beliefs, or to legitimise or prop-up less-scientific translations (Tuckwell 2012). Accordingly, the act of representing nonhumans is bound up in value-laden choices and justifications about what is worth including in a translation and what is – consciously or not – excluded (Castree 2013). They are inherently political, reflect existing biases, and highly contestable (Hillier 1998). As such, we need to approach representations with an air of scepticism and explore the circumstances under which spokespersons develop a capacity to represent particular nonhuman individuals and assemblages (Latour 2004b).

For Metzger, the act of translating *noise* into a coherent *voice* is fundamentally a relational process. Voice is produced through a series of material arrangements and relations between humans and nonhumans, resulting in a product or construction (Moser and Law 2003), which Metzger (2014) deems an *act of articulation.* Thus, representation is not about re-presenting, but about "representing relations" (Tanasescu 2014, 46). This capacity for human translation, however, is reliant upon the ability to *hear* or being open to receiving transmitted messages in what Latour (2004a, 206) describes as the body "learning to be affected" – that is, learning to be sensitive to the more-than-human world, and being affected by it, rather than simply being in it. In order to achieve this, Metzger (2016, 2014a) argues we need to break down modernist *a priori* ethical and ontological standings that segregate humans and nature, and the assumption that only human

interests are worthy of consideration. Humans need to be open to the concept that they are a part of nature, they are within it, and affected by it. Thus the process of translation can be viewed as an assemblage of communication, in which the (nonhuman) transmitter and the (human) receiver engage and mutually affect one another developing a *voice* and "making-hearable", and thus politically accountable, the mute nonhumans represented (Metzger 2014a, 199). Castree (2013) describes this process as a series of sense-making acts that transform specific human-nonhuman relations into a form that can be shared with others through descriptions, explanations, appreciations, forecasts, recreations, assessments, critiques and so on.

Still, some scholars warn that there are limits to the ability of humans to accurately and wholly represent the non-human. Neimanis (2015) argues that the privileged *we* are arrogant in believing that our representation can be assumed as knowing exactly what the mute others want or need. No human can ever fully articulate the "other worldliness" and the "wildness" of the other-than-human, regardless of their culture or spirituality (Sandilands 1999, 180). There is an excess that is simply unspeakable in the human tongue. Any translation that claims to discursively encapsulate the respective nonhumans wholly is argued by Sandilands (1999) and Whitworth (2000) to misrepresent this *wildness* – their unique other-than-human ontology and perspective of the world. We need to acknowledge and be wary of what is being *lost in translation* when we translate such nonhumans into a format capable of being channelled through the human tongue (Neimanis 2015).

Despite these flaws, Sandilands (1999), Whitworth (2000) and Neimanis (2015) acknowledge there is a place for the representation of nonhumans. Failure to provide adequate representation risks further colonisation and degradation, and fails to dislodge the dominance of particular social constructions of nature that remain unchallenged (Sandilands 1999). Accordingly, there is an ethical and political need for representations despite the risk of mistranslation. Critical to minimising this risk is acknowledging the limits of our knowledge, and improving the democratic nature of translation by promoting the use of multiple representations (Alaimo 2010). These should be derived from the numerous human-nature relations that exist and the various epistemic claims to *know* the nonhumans in question (Neimanis 2015). Planners must be aware of their own personal experiences, as well as being aware of the multiple human and nonhuman experiences and actions (Lake 2017). However, we must remain cognisant of the limits of human speech to accurately reflect the reality of nonhumans, and acknowledge the holes in our understanding (Sandilands 1999). As such, there must be an acknowledgement of the inability to verify or validate particular interpretations of human-

nature relations and a need to remain suspicious of any human claiming to speak on behalf of nonhuman species and nature assemblages (Whitworth 2000; Latour 2004b).

Additionally, the ability or capacity for nonhuman species or assemblages to affect humans is not equal. Some nonhumans are particularly effective at focusing our attention, triggering emotional reactions and driving action, while others find it more difficult to be heard. Metzger (2015) argues that we – the collective human – need to acknowledge that nonhumans are, indeed, speaking to us at all times through material semiotics, if only we learnt to listen. Whitworth (2000) suggests nonhumans are always trying to tell us something, such as a wilting plant suffering from a lack of water, or the changing migration patterns of a species as a result of habitat loss or climate change. However, the material signals or *affordances* of nonhuman individuals, species or habitats vary in their ability to affect humans, whether emotionally, physically or intellectually (Lorimer 2007). Further, the capacity of individual or communities of humans to be affected by these affordances varies depending on cultural contexts. Nonhuman natural entities that are able to trigger positive emotional human reactions in response to their distinctive aesthetic qualities are likely to be more effective at developing relations with human interpreters. Flagship species – those charismatic species that act as a figurehead for broader nature-assemblages and a rallying point for humans – clearly are more impactful than other species, and thus are more likely to be heard and represented by humans (Lorimer 2007). Accordingly, it remains unclear as to whether we are capable of developing an *equitable* method of engaging meaningfully with, and representing, the other-than-humans that share places.

Nonetheless, as we begin to view cities and what are perceived to be human spaces as "complex compounds of entangled subject-object relations and often friction-ridden nexuses of strong attachments", there is a growing ethical, political and philosophical argument to open up the process of representing nonhumans (Metzger 2014b, 1002). Bennett (2009) argues that in this post-humanism era where the human is inextricably linked to the other-than-human, democracy should no longer be viewed in the human sense but as a process of the ontologically heterogeneous *public* uniting around a problem. Accordingly, we need to implement new procedures for acknowledging and making perceptible the nonhuman perspective and listen more carefully to "their outbreaks, objections, testimonies and propositions" (Bennett 2009, 108). From a planning perspective this requires a deprivileging of the scientific as the unchallenged objective representation of nonhuman nature, and the implementation of procedures that acknowledge affected nonhumans and the multiple epistemic claims speaking to this stake as an affected being (Metzger 2016; Sandilands 1999).

2.7 Conclusion

This chapter explored the theoretical and philosophical thought surrounding human-nature relationships within urban environments and the practice of land-use planning. The dominant discourses of nature within the discipline of planning reflect the anthropocentrism and elevated status of the human typically found within the Western world. However, the recent relational turn in cultural geography has initiated scholarly debate on the city as a product of complex and dynamic human-nonhuman interactions. The *built* environment can be viewed as being co-produced by the multiple human and nonhuman entities that are constantly affecting, moulding and manipulating one another (Hovorka 2008). Accordingly, the production of the urban can be reimagined as an output of these dynamic multispecies, multi-thing interactions (Swyngedouw 2006; Braun 2005). This perspective challenges historic anthropocentric interpretations of the city and other human spaces as void of nature, and subsequently challenges the practice of planning as an entirely human affair.

As a *more-than-human* affair, the practice of planning is being further challenged by some scholars to acknowledge affected nonhumans as valid stakeholders in deliberative processes. However, the inability of nonhuman nature to converse in human language and self-represent in planning negotiations forces them to rely on representations put forward on their behalf by various human actors (Brown 2017; Metzger 2013). Whilst this process has been labelled problematic by some with concerns over manipulation and misrepresentation, a failure to adequately represent the interests of affected nonhumans is argued to result in further degradation and colonisation (Neimanis 2015; Whitworth 2000; Sandilands 1999). Thus, there is a political and ethical requirement for new forms of representation. Typically, representations based on traditional scientific methodology have been privileged as objective and free of emotional attachment, thus securing an authoritative standing within planning practice over time (Tuckwell 2012). Metzger (2014a) argues a need for planning to acknowledge a wider range of legitimate epistemic and relational claims to *know* the nonhumans affected and thus represent their needs. Broadening the range of representation will assist in mitigating the risk of misrepresentation occurring and support greater ecologically sensitive development outcomes.

Critical to this line of thinking is breaking down the “ontological exceptionalism of humanism” (Houston et al. 2018, 2) and developing a capacity to be individually affected by nonhumans (Latour 2004). Metzger (2014a) argued we need to interrupt the modernist dualistic thinking that segregates the human from the nonhuman and develop an awareness of the interactions and interrelations between ourselves and material

actors. Developing this sensitivity to the nonhuman world permits humans to translate so-called material semiotic *noise* into human *voice*, “making hearable” the nonhumans that are affected and thus hold a valid stake in a planning matter (Metzger 2014a, 199).

This increased sensitivity shares similarities with deep ecology’s ontologically expanded Self and rejection of the anthropocentric paradigm. Naess (1973; 1986) explicitly promotes a level of consciousness that acknowledges the interconnectedness between the human and nonhuman worlds, and subsequently a greater holistic appreciation of nature. By developing a greater awareness humans are able to act in a more ecologically sensitive manner, understanding through heightened sensitivities and deeper relations precisely the implications of our actions upon the other-than-humans within nature. However, deep ecology has been criticised for its apparent urban blind spot – limiting its philosophical debates to the wilderness and implicitly disregarding and disvaluing urban nature assemblages in the process (Fox 2000; Gunn 1998; Light 2001; Booth 2008). Nonetheless, the philosophy has proven itself to be successful at engaging with the environmental movement and driving cultural change as an ethical framework.

Philosophically, deep ecology has provided a nonanthropocentric ethical framework and a political platform for the environmental movement to drive change in society. Theoretically, the relational turn in cultural geography and the development of the more-than-human city debate has resulted in a recent push for greater representation of nonhuman interests in planning matters and a deeper understanding of human-nature relations in the urban. Acknowledging that the practice of planning is fundamentally an ethical and political activity, this dissertation explores whether the representation of nonhuman nature by actors with an increased sensitivity to nonhumans and with alternative epistemic claims to traditional scientific practices can result in planning processes shifting into an environmentally ethical, if not deep ecological, space.

Chapter 3 Theoretical Framework and Research Design

3.1 Introduction

This chapter provides an outline of, and discusses, the theoretical framework and research program underpinning the dissertation. It is aimed at providing the reader with an understanding of the choices made throughout the research project, and providing justification and explanations for those choices. The chapter begins with an exploration of actor network theory and discourse analysis as the two theoretical frameworks guiding the research design. The theories will be introduced and justification provided for their use, including an introduction to some of the key concepts.

Following this exposition the design of the research program will be detailed, including the case study approach and collection of qualitative interview, media and documentary data. The two forms of analysis undertaken throughout the research project, actor network and discourse analysis, will also be explained including the approaches taken and how the two theories are complementary in nature. The chapter concludes with a reflective discussion on some of the ethical issues and research challenges experienced throughout the project.

3.2 Theoretical Frameworks

3.2.1 Actor Network Theory

The previous chapter highlighted the dichotomous nature of, principally, Western thinking in relation to humans and nonhumans; a prevalent, engrained position that disassociates humans from the messy, interconnected material world of human-nonhuman relations. As a result, fields of research, such as the science of sociology, have historically sought to explain the 'social' explicitly in terms of human relations. Such a position simply reaffirmed existing dualisms. Seeking an alternative methodology for viewing and analysing the world, the proponents of actor network theory (hereafter, ANT) – Bruno Latour, Michel Callon and John Law –established a new approach, which would radically ground humans within the material realm.

With its roots in the sociology of scientific and technology studies, ANT contends that any action undertaken or knowledge produced can be attributed to the formation of heterogeneous networks. These networks, or assemblages, consist of human and nonhuman actors, the latter including, but not limited to, sentient beings and insentient objects, things, artefacts, documents, technologies and the like. However, rather than simply considering the final output of such networks, ANT focuses its attention on the

complex and intriguing processes involved leading to the creation, and stabilisation of, networks (Comber, Fisher and Wadsworth 2003).

Under ANT, the world as we understand it consists of a myriad of networks and relations between humans and nonhumans. Such networks are constantly in flux, with actors negotiating, enlisting, ordering, contesting, provoking and mobilising others in order to find a moment of stabilisation or cohesion where an action can take place to fulfil the network objective and produce even (if only momentarily) visible results (Bowler 1999). Thus, ANT allows for studies to investigate and illuminate the power relations between such actors, and their reciprocal influence (Boerboom and Ferretti 2014). In doing so, ANT is able to demonstrate the inseparable relationship between humans and nonhumans, often in real-world empirical studies and, in particular, illustrate the influence and agency of nonhumans. It suggests that no entity can exist in isolation from others; a point Lockie (2004, 50) makes, stating, "action, intentionality, consciousness, subjectivity and morality all derive from relations between entities rather than from either individuals or totalities".

ANT's focus on multiplicity with regards to the mode of actors, enables researchers to render visible the other-than-humans that are active in shaping the world around us. ANT is acknowledged for its ability to break down the rigid dualism between the human and nonhuman, encouraging analysts to extinguish any a priori assumptions and treat actors equally and symmetrically. Any being or entity can hold a passive or active role in the formation or dissolution of a network. This focus on symmetry has garnered the theory praise from Jóhannesson and Bærenholdt (2009, 15) who commended its capacity to highlight "the frailty of the modernistic worldview" and Bueger (2013, 338) who argues ANT will "liberate research from the many straight-jackets of modern social science". Nimmo (2011, 108) further acknowledges ANT's prominence as a reference point for scientists seeking to recognise the important role of nonhumans within social life.

From a research perspective, in order to understand the world through the lens of ANT, the researcher is encouraged to trace associations in a methodology known as the *sociology of translation* (Callon 1986). The result is often thick and descriptive narrative-like passages that detail the multiple stages of translation, or relation-building, actors find themselves weaving in and out of in empirical case studies (Taylor 2011; Jóhannesson and Bærenholdt 2009). Callon's (1986) study of scallops in St. Brieuc Bay remains an archetypal demonstration of the method, succinctly illustrating actors problematizing issues, consolidating identities, enrolling others and mobilising their support around the common goal of a network. Thus, as Latour (2005b, 8) notes, ANT repositions what has traditionally been the *sociology of the social* towards a *sociology of associations*.

This research project seeks to explore the role of nonhuman nature as a stakeholder in planning processes, and the representations of nature put forward by environmental activists in cases of contentious urban development proposals. Accordingly, underpinning the research with the theoretical concepts of ANT provides an opportunity to investigate and analyse the particular relationships between humans and nonhumans in the cases of the Underwood Avenue bushland the Mangles Bay marina. In particular, ANT allows for the analysis of processes and strategies through which nonhuman nature enrol environmental activists to support and represent their interests, and in turn how activists enrol and mobilise others (human or nonhuman) towards their conservation goal. ANT provides an opportunity to unpack these heterogeneous conservation-networks and explore the political agency of 'flagship' nonhumans, demonstrating how other-than-humans are indeed already participating in, and influencing, planning processes, despite an inability to communicate in traditional human terms. Further, ANT allows for the relationship between these nonhumans and activists to be explored, and whether these pro-conservation networks are able to generate significant political pulling power to influence outcomes and shift planning processes into a less anthropocentric space.

Defining Actors

ANT seeks to recognise the range of diverse entities/actors/actants[2] involved in network creation and stabilisation. These entities, whether they be social, technological, material or natural, are all considered to be capable actors (Latour 2004b). From a development planning perspective, this broadens the term stakeholder to include actors such as the proponents, decision-makers, politicians, affected communities, maps, plans, policies, legislation, the specific landscape characteristics, as well as individual flora, fauna, climatic features etc. (Rydin and Tate 2016). These are all recognised as actors with the ability to significantly impact the progression, or deterioration, of a development-oriented network (Boelens 2010). ANT also provides a framework to order actors into particular categories based on their dominant characteristics. For instance, actors that are deemed to be unpredictable in terms of their impact on other actors and within networks are known as *mediators* (Boerboom and Ferretti 2014). Capable of disrupting, transforming, translating, distorting and modifying meaning and the direction of a network, Latour (2005a) describes the opinions, passions and attitudes within conversations as mediators that are unpredictable. Conversely, *intermediaries* transport meaning with

[2] Some ANT analysts and theorists use the term 'actant' in place of 'actor' as a means of enforcing symmetry between the human and nonhuman. The term 'actor' when used in relation to nonhuman entities is interpreted by some, including Latour (2004b, 75), as anthropomorphising nonhumans, and thus reinforcing the human centric perspective ANT seeks to breakdown.

seemingly little complication and distortion, such as technical artefacts, documents, currency and legislation.

ANT accepts that all actors are capable of involving themselves within the relational process of network building. However, it is also acknowledged that actors themselves are the result of relation building and are founded in networks (Jóhannesson and Bærenholdt 2009; Ruming 2008). Law (1999, 3) states that entities are shaped as a direct "result of their relations with other entities", and are thus unstable, dynamic and constantly being re-arranged. To speak of an actor as if they are a consistent or solid entity is therefore misleading, for they too are often in a state of ordering, seeking stabilisation (Jóhannesson and Bærenholdt 2009). Therefore, to define an actor means to identify the sets of relations, or networks, that make it an actor (Tait 2002). Such a philosophy reinforces ANT's notion of symmetry, that human actors are no more special than their nonhuman counterparts. Rather, all entities are merely hybrid personas constructed through relational processes (Law and Mol 1995).

Callon's Methodological Principles

In his seminal article examining the relationship between scientists, fishermen and sea scallops, Callon (1986) outlined a number of key principles to ANT. The first of these is *agnosticism,* referring to the investigators need for impartiality during their observations and analysis. The researcher is to remain impartial when observing or describing the resources or language utilised by actors that seek to define other actors, groups and relations; they are to be free of judgement (Tait 2002; Callon 1986). Further, analysts are encouraged to pay equal attention to all the actors involved in network configurations and negotiations, whether they be human or nonhuman, sentient or insentient (Tait 2002). Researchers should refrain from pinning down actors with their perceived identities and roles prior to their official enrolment where such details are fixed after negotiations (Callon 1986). Callon (1986, 4) stresses that, "no point of view is privileged and no interpretation is censored" under the principle of agnosticism in an ANT study.

The second principle, and one of the more widely known, is that of *generalised symmetry*. Driven by ANT's anti-dualism philosophy, the principle requires investigators to speak of both the social and material, human and nonhuman in equal terms. They are to be explained together. ANT takes the view that nonhumans are capable of influencing humans, or configuring human relations, to the same degree as humans are able to influence nonhumans (Bowler 1999). Thus, ANT acknowledges, and seeks to illuminate, the power and agency of nonhumans (Burgess, Clark and Harrison 2000). It acknowledges that the world is created through a vast array of heterogeneous relations, of which the natural and technical are often not fully represented in typical sociological

accounts. Callon (1986), seeking to respect nonhumans, requires investigators to use a single repertoire when describing the actors of a network, in order to broaden the lens of sociological enquiry to reflect the significant role of the nonhumans in everyday life. ANT sought to break down the rigid dualisms of modernity and this is reflected in narratives that accurately portray the role of both human and nonhuman elements and their relations (Taylor 2011).

Following on from this, Callon's third principle, *free association*, posits that actors can come together across what is thought to be existing divides such as local-global, cultural-natural or social-technical (Callon 1986; Burgess, Clark and Harrison 2000). Callon argues that we must abandon all *a priori* distinctions between, for instance, the natural and social and begin to acknowledge the potentialities of 'hybrid' (Latour 1987) or 'cyborg' (Haraway 1987) relations. Callon (1986, 4) considers such divides as "conflictual, for they are the result of analysis rather than its point of departure". Rather than imposing pre-existing "grids of analysis", researchers should take a more holistic point of view, following actors and describing the way they define and associate with other entities, as it happens on the ground (Callon 1986, 4).

In applying the above principles, an ANT analysis is able to trace and report upon the power relationships that are forged through the relationship building and negotiations between various actors, and the dynamic and messy hybrid alliances that emerge as a result. Combining these principles with Callon's sociology of translation enables researchers to perform a structured analytical ANT account.

The Sociology of Translation

Whilst there is no particular method associated with implementing an ANT analysis, the most commonly referred to practice is what Callon (1986) refers to as the *sociology of translation*. This process allows investigators to identify actors, mediators and intermediaries; describe how networks come into being by documenting strategies for enrolment and the power relations in play; the negotiations undertaken prior to network stabilisation; and the moments of dissidence, where actors do not conform and networks destabilise (Boerboom and Ferretti 2014). It is a process in which an investigator can observe how actors communicate and connect, how certain actors come to possess greater power and influence over others, or the ability to represent silent actors (Callon 1986; Jóhannesson and Bærenholdt 2009). Additionally, the process enables investigators to witness nonhumans as legitimate and equal members of a network, with the potential of demonstrating agency and holding positions of power. Effectively, it provides the researcher with a methodological toolkit for an observation-based investigation and analysis of the events leading up to network stabilisation (Law 2009).

Observation here is key. The intention behind an ANT analysis is to observe the behaviours of actors and their ability to connect and form networks to fulfil their objectives, rather than imposing pre-existing theories of social ordering upon what are unique controversies. As a result, the investigator is required to sit back and observe, often long after the action has taken place. As Latour (2005b, 23) notes, "the task of defining and ordering the social should be left to the actors themselves, not taken up by the analyst", and that "the best solution is to trace the connections *between* the controversies themselves rather than try to decide how to settle any given controversy" (emphasis in original). Subsequently many ANT studies are steeped in the analysis of historical documents that enable researchers to follow the linkages, using Callon's methodology.

Four stages comprise Callon's sociology of translation, including problematisation; interessement; enrolment; and mobilisation. These moments characterise particular phases in the process of enrolment, however, this is not an exact science and Callon (1986) acknowledges that they often overlap. Indeed this is where the observation can provide fascinating insights, as investigators can often witness multiple, simultaneous interactions between actors that can fluctuate between progressing and transgressing network stabilisation. However, in order to achieve the objectives of the network, it is implied that an actor network will navigate through these four moments prior to stabilising, and potentially thereafter to remain stabilised.

The first stage of Callon's (1986) sociology of translation – *problematisation* – focuses on defining a problem or an issue to be solved, and a vision or an end goal that the lead actor/s and the network seeks to achieve. This early point in network conception requires a controversy or dilemma to spark actors into action. As a result, this early stage tends to form the starting point for many ANT analyses (Rydin and Tate 2016).

Additionally, problematisation involves a lead actor identifying the relationships that need to be forged with other actors in order to develop a network that can achieve the desired goals according to an initial program of action (Magnani 2012). The lead actor is required to demonstrate or convince additional actors that this problem is their problem too, and that the solution proposed is in their interest (Fox 2000a). Further, typically the lead actor will define themselves in such a manner that they are considered indispensable to the network. That is, without their presence and leadership, the goals and solutions remain unattainable. Callon (1986) describes actors in such positions of power as *obligatory passage points*, where the only way for a network to achieve its goals is with their involvement.

However, it is worthy of mention that often there may be multiple obligatory passage points within a network configuration. For instance, Rydin (2013) describes how the multiple approval points during a complex planning process are obligatory passages networks are required to navigate through in order to progress. In such a situation the actors must navigate their alliance through the approval process, a lengthy passage point of its own, where negotiations occur until an outcome is achieved, whether that be the acceptance of the existing actor network and problematisation or a re-modelled version (Rydin 2013). The identification of these additional obligatory passage points is undertaken during the following stage.

Problematisation can therefore be seen as a necessary two-step stage, which lays the foundation for network success into the future. It sets the scene for the creation of an alliance of actors who each are clear in the direction of the network and its end-goal. As Callon (1986, 8) describes it, problematisation is characterised by the formation of a "holy alliance" of actors, that can get the job done.

Following problematisation, actors are brought into the network and their purpose or role identified. Callon (1986) identifies this stage as *interessement*; the etymology of which is taken from the word *inter-esse*, meaning to lie between. An actor, or a group of actors, seeks to stabilise the network configuration by identifying or imposing specific roles upon the interested participants. A range of techniques may be utilised in order to achieve this, including persuasion, seduction, solicitation or pure brute force (Callon 1986).

In addition, interessement involves confirming that all enlisted actors agree to the proposed programme of action; that is the prescribed goals of the actor network and the intended roles of each actor (Fox 2000a). Part of this also involves demonstrating that alternative options, or alternative actor networks, are or will be insufficient or incapable of achieving the desired outcome (Horowitz 2012; Magnani 2012). Upon confirmation that an enlisted actor accepts their role and the proposed course of action, they are classified as *enrolled*.

The actors accept their defined identities and roles, the prescribed objectives of the network and accept that other networks are unsuitable or unable to deliver the desired outcome (Ruming 2008). From here the actors begin to act in accordance with the agency prescribed to them by the enrolling actor (Woods 1998). However, in reality enrolment is difficult to achieve and relies on successful negotiations within the interessement stage, and continued diplomacy amongst actors who begin to show signs of dissidence or cold feet (Callon 1986).

An actor network may never find itself in a position where all actors are enrolled and in a position to proceed. Rydin and Tate (2016) also acknowledge that negotiations must be context-specific and provide benefits that are in tune with the interests of individual actors. For instance, they suggest that a developer negotiating with a local group of activists, whose interests are biodiversity conservation or the retention of a particular skyline, will need to provide different concessions to an adjoining neighbour, who may be more concerned about the development setting an unwanted precedent (Rydin and Tate 2016). In such an example it is clear how a lead actor, in this case a developer, would be required to negotiate differently in different circumstances, utilising various methods of persuasion that result in the successful enrolment of the required actors.

However, enrolment is not limited to a lead actor or a single entity. Part of the interessement and enrolment stages is the enrolling actor setting the parameters of agency for enlisted entities (Rydin and Tate 2016). Thus, an actor may be enrolled for the specific purpose of enrolling others by translating the benefits of joining the network (Latour 2005b). In Rydin and Tate's example, for instance, a developer may enrol a specific consultant to engage with the local activist group or the adjoining neighbour in order to undertake the negotiations on their behalf. And of course, there will be moments where negotiations fail and the benefits of network assimilation are unconvincing, resulting in actors enlisting in competing networks. Enrolment is never guaranteed. Actors that are able to successfully enrol others into their network, utilising their influence or persuasive abilities, are thus considered to be rather powerful (Burgess, Clark and Harrison 2000).

Should the enrolment of all required actors be completed, the network will move into the final stage: *mobilisation*.

Mobilisation is considered to occur when the process of translation has led to consensus and the formation of a cohesive alliance (Boerboom and Ferretti 2014). Such an alliance presents as "credible and indisputable" and a "unit of force" acting as one towards their intended goal, often represented by a few select actors within the network (Callon 1986, 14). These actors become spokespeople or representatives who, as actions take place, are able to communicate on behalf of their fellow network actors with the use of visual aids or documents such as a development approval (entities known as *immutable mobiles*) and eventually implement the proposed course of action (Fox 2000a; Magnani 2012).

As such, mobilisation represents the displacement and assemblage of the required actors necessary for the stabilisation of a compact, sturdy network that is able to successfully deliver its intended outcomes (Callon 1986; Wallace 2012). Thus, the term

mobilisation refers to the network's characterisation as a mobile unit that is able to be moved through space and time (Callon 1986). The term *black box* was utilised by Latour (1987) to describe such manoeuvrable, fully-functioning mobilised networks that on the surface appear neat and unified, hiding within the complex and messy relations underpinning its stability. This manoeuvrability, of course, is only the case whilst the actors remain enrolled and resist the temptation of competing networks, and if networks are able to come to a cohesive point of mobilisation in the first instance.

Mobilised actor networks are indeed precarious. Actors require constant reassurance and re-negotiation to ensure that their identity, role and goals remain aligned with the alliance. The threat of betrayal or dissidence is real, as actors find themselves attracted to, or already involved in, alternative (and at times opposing) networks, or perhaps begin to view their identity or position within the network in a different light that is no longer compatible (Magnani 2012). Networks may need to rearticulate their goals in order to fend off the threat of betrayal, or may break down as other actors lose confidence and the betrayal takes on a snowball effect. Thus the unpredictable nature of actors renders the work involved in maintaining a stable, mobilised network as indefinite (Horowitz 2012). Callon (1986) refers to these cases of betrayal as a potential fifth 'moment' of translation, illustrating the dynamic nature of networks and the power individual actors have in their stability or instability.

It should also be noted that whilst Callon's methodology sets out a seemingly clear and linear process, in reality the unification and mobilisation of networks is a complicated and messy procedure laden with issues of power and politics. It's rarely a smooth process. However, from a research perspective, these complexities provide for some interesting analysis.

3.2.2 Discourse Analysis

In addition to utilising an ANT framework, the research program employs a discourse analytic technique to examine the discursive representations of nonhumans and local natures constructed within the two case studies. Discourses can be understood as the "sum of communicative interactions" reflecting a particular arrangement of ideas, concepts and beliefs that give meaning to real-world phenomenon and, subsequently, constitute the social world (Sharp and Richardson 2001, 195; Hajer and Versteeg 2005; Dittmer 2010). The way we talk or write about the world around us is not a perfect mirror image translation, but rather an account tinctured with underlying cultural and religious beliefs, personal thoughts and feelings, and individual experience (Willig 2014). It is through these discourses that objects, things and phenomena are ascribed meanings (at times multiple, and conflicting), dictating the actions society takes in response

(Jørgensen and Phillips 2002). However, it is not simply the words spoken or sentences written that constitute a discourse. Rather, the meaning of our texts – essentially any *thing* that can be read or heard – depends on the discursive context in which they are embedded, acting as a reference or a "conceptual backcloth against which our utterances can be interpreted" (Burr 2003, 66). Language in use is structured according to the various discursive patterns common, or particularly dominant, within society at a given time. It is the analysis of these patterns that forms the basis of a discourse analytical approach (Hajer and Versteeg 2005; Jørgensen and Phillips 2002).

Whilst there is no universally 'correct' or universally applicable approach, discourse analysis has broadly been defined as a method of interrogating the use of language (or other forms of semiosis) in particular contexts (Gee 2014; Rapley 2007). The analysis of talk and text allows the researcher to develop an understanding of how particular realities are reproduced and represented in language *beyond* the individual person (Taylor 2013). It seeks to highlight the social, historical and cultural contexts that underpin the way people use language to speak about a particular phenomenon, a particular understanding of the world or a particular experience within it (Willig 2014, 341). Language produces "versions and visions of reality as codes and conventions embedded within particular cultural contexts", and, accordingly, the analysis of discourse can provide insight into the socio-cultural characteristics of particular actors and the cultural factors that have led them to prescribing to a particular construction of an issue or experience (Forester 1996, 33 cited in Willig 2014, 4).

Further, there are social consequences of discourses which may be traced through analysis. Particular framings of phenomena may encourage, or discourage, particular actions or responses to certain situations from society, may assist in the creation of particular social identities or ways of relating (Jørgensen and Phillips 2002). Jørgensen and Phillips (2002) present, for example, the case of a river breaking its banks and flooding an urban area. The flood is a material fact with real-world consequences. However, the meaning ascribed to the flood through discourse dictates the course of actions undertaken by the affected humans. For instance, those who frame the flooding as the impact of global warming may take political action on climate change and national environmental policy. Those who frame the flooding as political mismanagement and the government's failure to install adequate flood defences may lobby for the construction of a seawall. Further still, those who frame the flood as an act of God may search for answers within the Bible and through prayer. Each discourse assigned a particular meaning to the natural phenomenon resulting in individualised courses of action and subsequent consequences. Hajer (1993, 47) describes these discursive variances as

“story lines”, in which “actors try to impose their view of reality on others, suggest certain social positions and practices, and criticise alternative social arrangements”.

Accordingly, the analysis of meaning ascribed to natural phenomena through language-based discourse is particularly important in, for instance, environmentally controversial planning moments. The manner in which society makes sense of the situation and translates the phenomena into talk and text forms the foundations for a particular response (Hajer and Versteeg 2005). The framing of nature in terms of the “spaceship-ness of the Earth, the greenhouse-ness of climate change, or the disease-ness of pollution” will influence the action society takes (Myerson and Rydin 1996, 25), including the development or revision of particular statutory provisions or policy, the function or capacity of institutions, and the meanings or attitudes associated with specific natures (Hajer and Versteeg 2005; Sharp and Richardson 2001; MacCallum 2009). Accordingly discourse analysis is particularly useful in highly contested environmental controversies as it allows the researcher to witness how a multitude of actors each attempt to influence the definition of a problem based on their experience, and socio-cultural characteristics (Hajer and Versteeg 2005). As such, discourse analysis has been noted as particularly useful within the environmental and planning fields, where often there is a diverse array of (typically conflicting) human actors using discursive “story lines” to pitch a certain representation of reality, in an attempt to shape policy, shift power and influence decision making (Hajer 1993, 47; Hajer and Versteeg 2005; Portugali and Alfasi 2008; Healey 1992).

The analytical focus on giving meaning to phenomena through language situates discourse analysis firmly within the epistemological position of social constructionism. Under this epistemology the researcher takes an anti-essentialist ontological position, accepting that there are multiple socially-constructed realities rather than a single reality or a universal truth (Gergen and Gergen 2007; Flick 2014a; Hajer and Versteeg 2005). Data provides researchers with the ability to understand these multiple realities, not as mirrored reflections of “how things really are”, but as particular constructions generated under certain cultural, societal and historical contexts (Willig 2014; Sharp and Richardson 2001). Jacobs (1999) reiterates the aim of the discourse analyst is not to discover a positivistic ultimate truth, but rather to clarify and provide explanation for social action by unpacking the underlying factors producing discourses. A symmetrical approach to discourse analysis is encouraged when used in conjunction with actor network theory, opening up the examination of discourses to include the other-than-human elements involved in their construction and the subsequent influence on the ontologically expanded ‘more-than-human’ world.

From an actor network theory perspective, discourses can be imagined as actors deployed strategically to mediate or influence relations and the development or advancement of networks (Nimmo 2011). As *mediators*, Latour (1996, 373) describes these discourse actors as "thick, rich, layered and complex" translations of particular associations. Whereas traditional discourse analytical theory considers discourses as embedded within, as well as created from, relations and practices between various human actors, actor network theory encourages the examination of nonhumans and their role in the construction of discursive text and talk (Nimmo 2011). Discourses can be recast as a process of human actors giving meaning through, for instance, language to a particular relationship they hold between a local nature or an individual other-than-human actor, allowing their relationship, experience or knowledge to be transmitted through space and time as a representation of their personal more-than-human reality. Thus, analysing and tracing the various discourses deployed in contested planning processes can assist in uncovering the relationships between particular actors (human and/or nonhuman), the influence of these on network shifts and evolutions, and the agency and political strength behind particular human or nonhuman actors and their discursive representations within the more-than-human world.

Accordingly, a constructionist discourse analytical approach has been utilised for this research dissertation, focusing on the ways in which the realities of nonhumans and natures are co-constructed by local conservation actors, and other stakeholders, through a process of relation building (Potter 1996). This symmetrical constructionists approach aligns with actor network theory's attempt to quash distinctions between the social and material and to recognise the role of the nonhuman in shaping the world. This particular approach also differs from Foucauldian discourse analytic techniques, with less emphasis on the dynamics of power, ideology and knowledge and, rather, an investigation into how local natures are represented in language as constructions co-developed with nonhumans as a result of personal experience and knowledge, cultural and social contextual factors (Phillips and Hardy 2002). Taking a constructionist approach further allows for the examination of how the multiple representations of the same nature, or the same individual nonhuman, for instance, is constructed by different human actors as a result of varying contextual factors and relations (Burr 2003). Additionally, the approach utilised focuses on the issues, themes and ideas deployed through discursive talk and text, rather than a strict focus on grammar and linguistics as commonly practiced in some forms of discourse analysis (Gee 2014).

3.3 The Research Program: Design, Data & Analysis

Utilising a case study approach, the research program of the dissertation was designed and implemented as shown in Figure 3.1, with the aim of sourcing qualitative interview and documentary data for each of the FUAB and HOPP cases. Qualitative research methods are commonly applied when a project seeks to gain an in-depth understanding of people and their thoughts, feelings, perceptions and beliefs (Hennink, Hutter and Bailey 2010). As an approach to studying things in their natural settings (Denzin and Lincoln 2011), qualitative research has a strong focus on the social world, and generating an understanding of human behaviour through complex descriptions and interpretations of a phenomenon or problem (Lichtman 2013). Developing intricate insights into specific aspects of the social world, qualitative research has proven particularly valuable in those interested in the social dimension of planning (Silverman 2015). For this research, interested in the *more-than-human* dimension of planning, a qualitative strategy to data collection provided the material required to explore and analyse the relationships between local human and nonhuman actors, and the subsequent discursive representations of nonhumans, in the cases of the FUAB and HOPP.

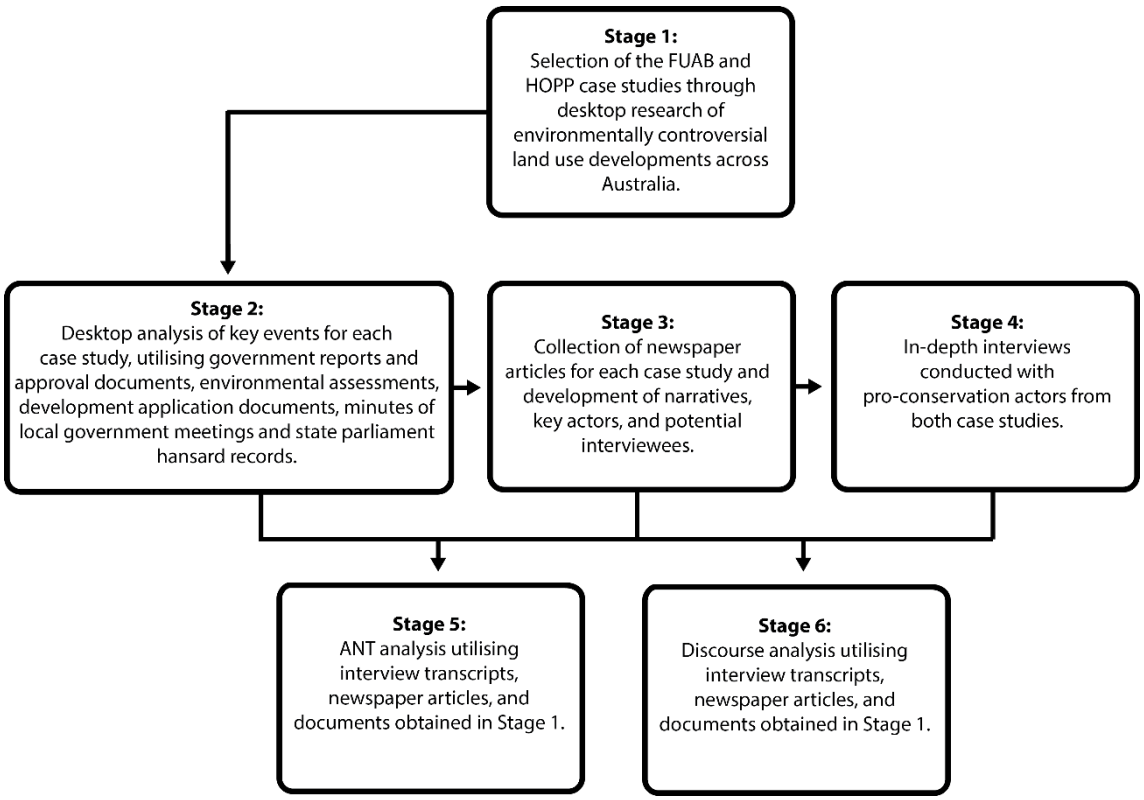


Figure 3.1: Outline of the five stage process undertaken throughout the research project following the selection of case studies.

Following the selection of case studies, the data generation component of the research was undertaken in three distinct stages, with each feeding into the next. Stage 2 involved a preliminary desktop analysis of the key events for each case study. Utilising publically accessible government reports and approval documents, environmental assessments, development application documents, minutes of local government meetings and state parliament Hansard records, an early timeline of proceedings and an initial tracing of network associations were developed. This timeline set the search parameters for the third stage, which focused on the collation of newspaper articles and 'letters to the editor' relating to each case study. The articles and letters assisted further in forming an understanding of the narratives in each case study, and developing an in-depth understanding of the key human and nonhuman actors, and their relationships. The data obtained during these stages of the research project assisted in producing a list of potential interview participants for the fourth stage. Participants were identified as key members of their respective pro-conservation campaigns, or long-term supporters, through their letters to the local newspapers, submissions to government agencies, or through active discussions on social media platforms. Additional participants were identified through a snowballing technique. The data generated from these three stages was extensive, and collectively provided a solid foundation on which to commence the ANT and discourse analyses in the final stages of the research program.

The following sections discusses in detail the design and implementation of the research program, as conducted to complete the dissertation.

3.3.1 Case Studies

As a method, case studies are particularly beneficial for qualitative research, as they permit the researcher to immerse themselves in real-world scenarios. The intention is not necessarily to develop generalizable results. Rather, case studies allow researchers to critically examine multiple real-world perspectives, assisting in the development and contribution towards theory, which itself has the potential to be generalised across further studies (Lichtman 2013; Yin 2014). Further, they have the capacity to illuminate what is actually happening within a given setting and the unique contexts surrounding individual cases, allowing researchers to develop "concrete context-dependent knowledge and experience" (Duminy 2015, 443). They allow taken-for-granted knowledge and concepts to be challenged, and the development of a "nuanced view of reality" (Flyvbjerg 2011, 303). Whilst the context-dependent and non-generalisable nature of case study research has formed the basis of much of its criticism, Flyvbjerg (2006) argues that,

> "A scientific discipline without a large number of thoroughly executed case studies is a discipline without systematic production of exemplars, and a discipline without exemplars is an ineffective one. Social science may be strengthened by the execution of a greater number of good case studies". (Flyvbjerg 2006, 219)

Case study research is common in the field of urban planning as it allows researchers to examine a phenomenon within its spatio-temporal context and with great depth (Yin 2014; Muir 2008). Delving deep into a specific case allows the researcher to examine issues of power, the (often contested) values underlying planning practice, and the ethics informing decision-making activities (Duminy 2015). Flyvbjerg (2004) further argues that in-depth analyses of case studies and learning from on-the-ground scenarios has the ability to reorientate planning away from rationalist expert-driven approaches, towards a pragmatic, less utopian practice.

Case studies have also commonly been used in research investigating the relationship between humans and nonhumans, particularly under the framework of ANT. Whilst the theory has no specific 'methodology' and is, rather, described as a toolkit (Law 2009), researchers utilising an ANT approach are typically immersed deep into a case study, closely tracing associations between the various human and nonhuman actors (Nimmo 2011). Law (2009) argues that whilst ANT can be theorised in the abstract, it is through empirically grounded case studies that understandings of ANT, and its impact on practice, is developed. Callon's (1986) study of human-scallop interactions is a seminal example, with more recent ANT research focusing on, for instance: sea eagle and human collectives in resistance against wind farms in Norway (Solli 2010); the relationship between humans, waste and waste management technologies in regional Italy (Magnani 2012); human-moose interactions on transport corridors in Sweden (Metzger 2014a); and the politics and actor networks of humans hunting nonhumans in rural England (Woods 1998).

This research seeks to contribute and enhance existing understandings of human and nonhuman relations within the field of planning, and how the interests of nonhumans are represented by various human actors or communities of humans in participatory planning practices. Within this there are also theoretical contributions to be made within the realms of ANT, and across the concepts of the political agency and power of nonhumans in planning processes, and the ethics of the existing anthropocentric handling of nonhumans in planning practice. Indeed the complexities of the two case studies constituting this research demonstrate that the relationships between humans and nonhumans and their representation within planning processes is not easily generalisable across time and space. Each case is undeniably unique in its complexities – the actors at play, the social, cultural and political contexts. However, the theories

discussed and developed in relation to the case studies presented in this thesis will assist future research in better understanding other phenomena and further open the planning academia to theoretical perspectives on human-nonhuman interactions in planning practice.

The two case studies selected for the research project were deemed to be typical of the kinds of environmentally controversial urban development proposals that historically have invoked a local, pro-conservation response. Lichtman (2013) suggests cases should be selected because they are either typical of a particular phenomenon, an exemplary example or an atypical, unique scenario. Whilst this selection process is somewhat subjective, the primary aim is to ensure that the cases selected are individually dynamic and rich in detail – a research approach Baxter (2010) defines as *idiographic*. Given the scale of response from local (human) community members regarding both the Underwood Avenue and Mangles Bay developments, the cases have certainly produced an abundant supply of complex data to analyse. As live cases, they provided an opportunity to engage with current participants, in addition to complex and compelling moments in the past to unpack and explore. Both cases also featured a number of nonhuman actors, whom clearly played a prominent role in the planning processes for each development proposal. Other potential case studies either lacked the level of complexity offered by the FUAB and HOPP, or were too complex in terms of the networks and associations and less achievable in the timeframe permitted for the dissertation. By selecting two cases, the research is able to explore the relations between local activists and nonhumans across two real-world scenarios, providing additional data and analysis to develop theory.

3.3.2 Archival Documentary Data

The first set of data for the research program was a range of documents. Document materials can provide a large quantum of data in the form of written, visual, digital and physical matter such as public records, census data, policy records, media, government document and minutes of meetings (Merriam and Tisdell 2015). Lichtman (2013) stresses the importance of, in particular, written materials as an additional source of data with extractable meaning valuable for analysis. As a means of communication, Flick (2014b) reminds researchers to consider why a document was produced in the first instance, for what communicative purpose, by who and for what audience? Rather than being seen as factual interpretations and "information containers", they are useful at providing contextual information (Flick 2014a, 259). As particular interpretations of reality, documents are insightful translations that can provide researchers with an understanding of the factors underlying the construction of phenomena.

In terms of this dissertation, the collection of documentary data was a critical element of the research strategy. Whilst both case studies remained active at the commencement of the research and were actively, albeit slowly, progressing through the planning system, significant moments of controversy had already occurred. Accordingly, a large proportion of the research was focussed on tracing actor-relations and network activities that had taken place in the past and were not traceable as a live phenomenon. Many ANT studies trace live controversies; however Nimmo (2011) puts forward a case for analysing historical events utilising local media and documentary data, whilst acknowledging the limitations and potential ontological traps of these human produced translations. This includes conducting the analysis with the principle of generalised symmetry at the forefront, allowing the researcher to consistently acknowledge the human-centred perspective projected within such texts and the nonhuman frame potentially purified. Further, Nimmo (2011) reminds us that such texts are active actors themselves, with the ability to mediate relations between other actors and influence the dynamics of networks. Thus, researchers investigating historical events should utilise texts as a method of tracing the relations the texts have inscribed, the influence of this inscription on network dynamics and actor-relations, and the potential 'purifications' the inscription produces – what perspectives are left out? The task of the researcher is to be the "ethnographer of the text" with a generalised symmetry awareness, and follow the associations outwards (Nimmo 2011, 116).

A range of documentary sources were obtained for each case study. These included documents submitted to decision-making authorities by development proponents, including environmental reports, community consultation findings, detailed planning proposals and any other supporting documentation. Documents produced by federal, state and local government agencies such as assessments, reports with recommendations and appeal documentations were also collected, plus transcripts of Hansard and parliamentary committee reports. Documents produced by the local activists were also sourced including alternative environmental assessments, submissions to government agencies and alternative development proposals. In total thirty-five (35) documents were analysed for the Underwood Avenue Bushland case study, and a total of forty-seven (47) for the Mangles Bay Marina. The majority of these documents were identified and obtained through internet searches or through participants of the research. In some instances where documents were no longer publically available, or had never been, requests were submitted to the relevant government agency in order to obtain a copy. This included an email request to the City of Nedlands to obtain copies of Council meeting minutes that were no longer available on their website. In two further cases, , formal Freedom of Information requests were submitted to the Western Australian Department of Planning regarding the approval

documentation for the subdivision of Lot 4 Underwood Avenue, and to the Australian Government Department of Environment and Energy for various documents regarding the University's application for approval under the federal *Environmental Protection and Biodiversity Conservation Act 1999.* In both instances, these documents were provided with no concern shown by the relevant agencies, with only personal information redacted.

3.3.3 Local Newspaper Media

The second set of data obtained for the research program was newspaper articles from the local *Subiaco Post* and the *Weekend Courier* for the FUAB and HOPP campaigns respectively. Local newspaper media became a key resource throughout the research. These newspapers were not only useful for tracing network associations across time and through the past, but were used heavily by local activists as a mode of public communication. It was evident from scanning the local newspapers the local activists relied on 'letter to the editor' forum within to express their views and enrol support for their campaign. Accordingly the newspapers became an important resource for analysing the discourses of nature deployed publically by local actors, but also as a method of mapping out the stages of network development, moments of controversy, developing an early understanding of the political agency of certain human and nonhuman actors and important actor-relations. Each hard-copy weekly edition of the two newspapers, obtained from the State Library of Western Australia, were physically scanned to identify any editorial article, advertisement or 'letter to the editor' relevant to each case study. For the Underwood Avenue Bushland study, 601 articles and letters were recorded from 1999 until October 2016. A total of 404 articles and letters were recorded relating to the HOPP campaign, from 2005 to October 2016. Other local newspapers and the state-wide *The West Australian* were also utilised, but to a lesser extent given their limited coverage compared with the *Subiaco Post* and the *Weekend Courier.*

3.3.4 Interviews

The third set of data was obtained through semi-structured in-depth interviews with pro-conservation actors across both case studies. Interviews are a commonly prescribed data collection instrument within qualitative research projects due to their ability to obtain detailed and focused insights from individuals about particular experiences and issues (Silverman 2015). They provide researchers with access into the social world – about the events, realities, experiences and moments within them, and how these are perceived by participants (Miller and Glassner 2016). Whilst the formality of an interview results in an unnatural interaction where participants are somewhat provoked, the

process permits researchers to explore and obtain personal perspectives, opinions, and motivations assisting with the development of knowledge (Miller and Glassner 2016; Dunn 2010). A semi-structured technique of interviewing was selected, allowing for a guided, but free flowing, conversation that permitted and encouraged participants to explore in depth their thoughts and experiences. In comparison to a structured approach, semi-structured interviews provide the interviewer with the flexibility to redirect the flow of conversation, to nudge and provoke further responses, whilst also providing some rigidity as opposed to unstructured interviewing techniques, such as oral histories (Dunn 2010). The process of interviewing provided rich, detailed responses from participants that assisted in undertaking a more thorough analysis, particularly in relation to the discourse analysis.

Ten (10) interviews were conducted with people within the FUAB campaign, and a further eleven (11) from within the HOPP team. Participants were initially identified through various campaign materials available on websites and social media, with initial contact being made through contact details publically available via campaign websites or through personal contacts. Following the initial interviews with each campaign, a snowballing technique was used with participants identifying additional potential candidates until it was felt that content saturation had been reached. This proved to be particularly successful in the case of HOPP.

The purpose of the interviews was threefold. From an ANT perspective, the interviews were a method of clarifying timelines and events, modes of network operation and further understanding strategies for enrolment and mobilisation, and whether participants perceived these to be successful. The questions, as found in Appendix 4, were designed to be exploratory in order to delve into each participant's personal experience within their respective campaign, and their experience and role as an activist. The purpose of these questions were to explore how participants perceived themselves and their role, and the perceived authority of their local knowledge in a planning system which prioritises rational, scientific translations as a source of knowledge in decision-making processes (Tuckwell 2012). The questions also allowed participants to explore this barrier, if it was indeed perceived to be one, and how they worked to overcome it. From an ANT perspective, these questions also provided further insight into how the networks employed particular strategies to overcome barriers and to seek the support of political agents in order to advance their conservation end-goals.

Secondly, the interviews were used to develop an understanding of the underlying motivation driving each participant to act or be involved in their respective campaign, and whether there was any evidence that this was linked to a particular environmental ethic.

Adapting to a framework configured by Vining, Merrick, and Price (2008) questions were designed to gain an understanding of the relationship between humans and the nonhuman natural world. Participants were asked to describe what a natural and unnatural environment meant to them, and to explain, in their opinion, the status of the current relationship between humans and nonhumans. Participants were also prompted to speak about their personal relationship with nature, and how they connect or experience nature. These questions allowed participants to provide rich responses, laden in personal narratives and emotion, enabling a greater understanding of the motivating force behind their involvement in their campaign and how they perceived themselves to be representing the nonhumans they deemed affected by the relevant development proposal. The interviews, thirdly, contributed to the discourse analysis in conjunction with the media and documentary data, in the examination of how pro-conservation actors were translating their relationships with local natures into language.

Interviews were also initially intended to take place with a range of decision-makers from various government agencies. However, attempts to recruit participants failed as many government officers involved in the specific assessment of each case study were either no longer employed by the department, or in some cases, declined to comment. Whilst this meant a lost opportunity to develop an understanding of how the pro-conservation networks were interpreted and managed by specific decision-making authorities or their officers, alternative evidence for how government institutions framed nature was available broadly through publicly accessible assessment reports and approval documentation.

The audio files were transcribed in full and relayed back to participants for confirmation they accurately represented their thoughts and ideas. The transcripts were then utilised as reference points for the ANT network analysis, as well as being uploaded to NVivo as a primary source for the discourse analysis. The interview schedule is located in the Appendix.

3.3.5 Tracing Network Associations

Following the collection of data, two forms of analysis were undertaken. In the first instance, the data collated was analysed through the lens of ANT to assist in piecing together the actor networks that formed, and processes at play, within the controversies of the two case studies. Utilising the newspaper and documentary data, a schedule of events was formulated to assist with piecing together the narrative of each case study and when, where and under what circumstances particular actors were involved. In both case studies the local newspaper were a critical communications tool, utilised as a method of sharing development proposals or campaign updates. As such, the articles

were closely inspected to identify which actors were present in the media, and at which particular times. Initially the data was tabulated in an Excel spreadsheet allowing for a visual representation to be created illustrating the arrival and departure of key actors, as depicted in the media, shown below for the HOPP case in Figure 3.2.

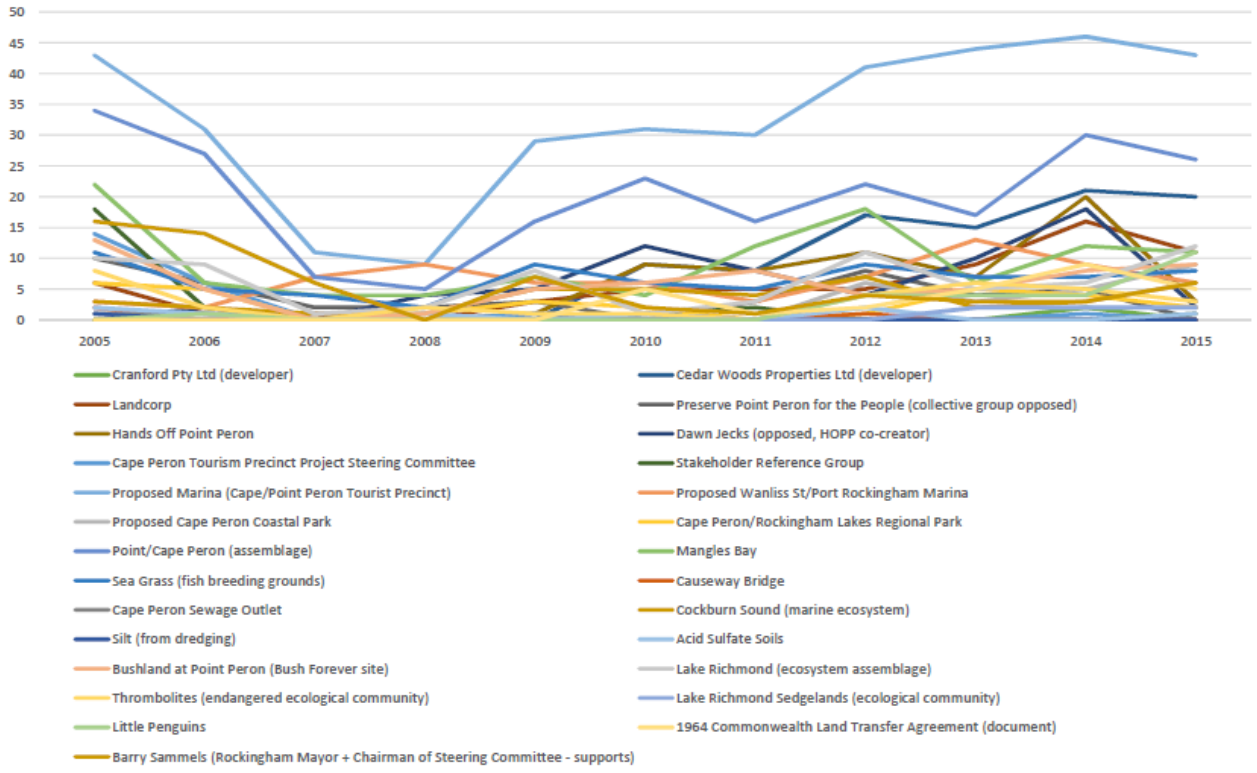


Figure 3.2: The actors present within the *Weekend Courier* each year from 2005-2015 in relation to the HOPP case study.

The data feeding the graph could be configured to focus on any number of specific actors in order to ascertain closer relationships. Further, when correlated against the schedule of events, the visual representation indicated the actors with particular agency or political power during certain stages of the planning process, and how particular processes or network-representations of certain actors were associated with the diminished or inflated agency of other actors.

For example, Figure 3.3, generated from the Underwood data, highlights the rising influence of the endangered Carnaby's Cockatoo in the years following its first appearances at the bushland site. The visualisation illustrates the link between the rise in Carnaby's appearances and Marg Owen - a leading FUAB activist who regularly photographs flora and fauna within the bushland and sends them into the *Subiaco Post* with a short narrative. Indeed, after the Carnaby's started roosting nearby and foraging within the bushland, Marg would regularly send photographs of the birds into the newspaper with a passage explaining their reliance on the site as foraging habitat.

Arguably, it was this representation of the Carnaby's that allowed the community to form a greater understanding of the bird and the potential implications should the site be cleared for development. Marg Owen and the FUAB team had for years spoken of the various species that would be impacted by the development, yet it was the Carnaby's that connected with the community. This resulted in the bird being enrolled as a key actor – a flagship species – in the campaign to protect the bushland site, as will be discussed in Chapters 4 and 7. Accordingly the visualisation was able to highlight the rise in influence of the Carnaby's and a possible relationship with Marg Owen, which was afterwards confirmed upon further analysis of the articles, documents and interviews.

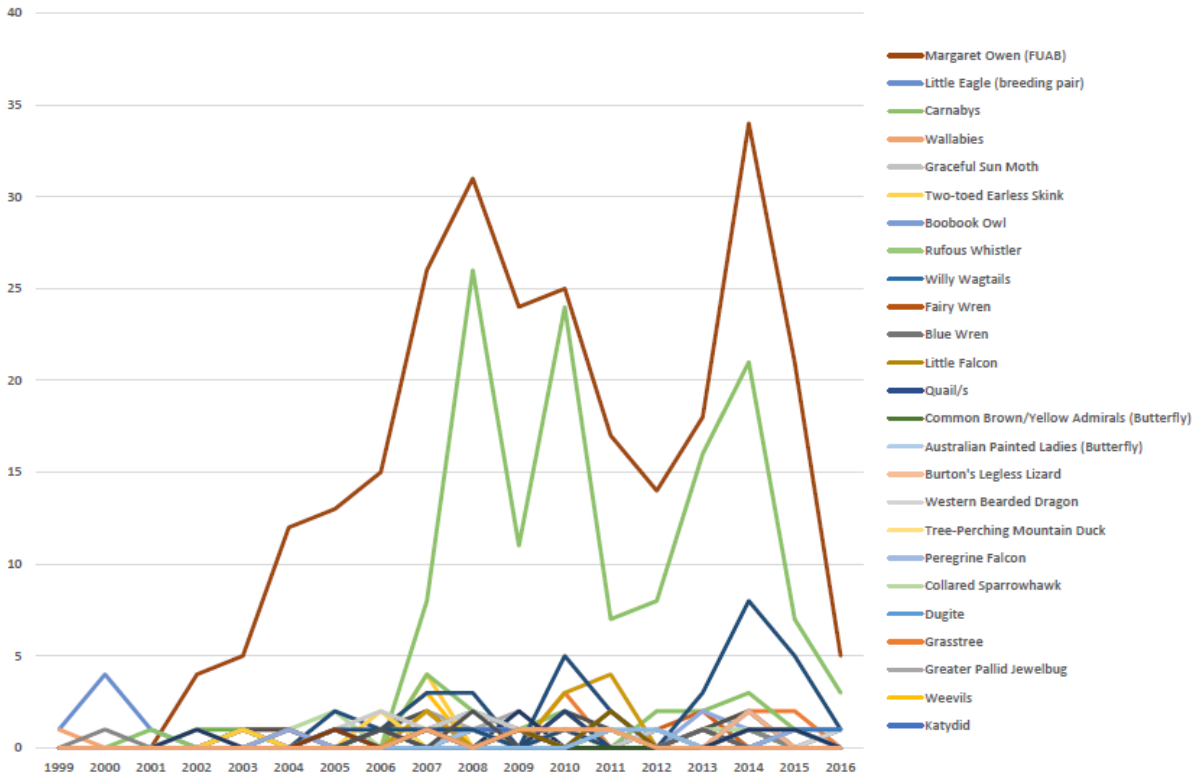


Figure 3.3: Analysis of media appearances for the Carnaby's Cockatoo indicates a dramatic rise in agency capabilities.

Upon completion of the media analysis and the schedule of events, the narrative for each case study was produced detailing the chain of events underpinning the development and progression of the pro-conservation and pro-development networks. An ANT analysis was incorporated into each narrative, tracing the relationships between the activists and the impacted nonhumans, and illustrating how the competing networks strategized and operated to form alliances, shift discourses, translate knowledge and mobilise supporters to secure an outcome in their favour.

Given the significant reliance on historical documents, which can be viewed as specific translations of events and perspectives of the past by certain actors, it was important to remain aware of context. As discussed earlier, Nimmo (2011) defends the use of historical documentary data as a valid source for ANT analysis, provided the researcher remains aware of the often human-centric perspective these documents promote, acknowledge the documents as potential mediators themselves, and remain focused on the principle of general symmetry and the task of tracing associations. Interviews with activists were also used to confirm certain events and network strategies. Again, utilising ANT it was important for me to acknowledge the particular perspective these activists bring, in addition to my own, and how this might cloud my analysis. The ANT analysis further demonstrated the varying agencies of nonhumans and how this can be capitalised by local actors to facilitate further enrolment and mobilisation of human actors and obligatory passage points. To this end, the analysis has enabled an exploration into how successful the pro-conservation actors were at steering their respective network, and whether their representations and network strategies assisted in attaining the political power required to influence the planning processes and attain environmentally ethical development outcomes.

3.3.6 Analysing the Discourses

Following the ANT analysis, a constructionist discourse analysis was used to examine the twenty-one (21) in-depth interviews undertaken across the two case studies, in addition to a large proportion of the local newspaper articles and technical documents obtained. The analysis examined the data to develop an understanding of how representations of nonhumans and local natures were constructed by both pro-conservation and pro-development actors across both case studies. In particular, the analysis sought to explore how the various constructions of nonhumans were influenced by personal relationships with nature, the existing discursive landscape and cultural perspectives. Discourses were also examined in terms of their underlying anthropocentrism, to assist in identifying whether the discourses of the various actors were framed in an environmentally ethical manner, to what degree, whether (or how) this has shifted throughout the course of the campaigns, and the circumstances/influences surrounding such a shift. Further, the analysis has been used to assist in identifying the potential underlying motivation for actors, and whether their personal ethic falls within the realms of nonanthropocentrism, such as deep ecology. Additionally, from an ANT perspective discourses can be considered mediators strategically deployed by networks in order to assist in mobilising others. Thus, analysing the way human actors promote or suppress particular discursive representations or constructions of the nonhumans within

each case study, can assist in understanding the motivations and strategies of particular actors and networks.

As a formal and unnatural interaction between two people, interviews and their transcripts require a level of critical reflexivity, particularly when used for discourse analyses. Willig (2014) notes, the researcher is required to pay as much attention to their own contribution to the interview process as their participant, and to recognise that the questions set the discursive context in which the participant's answers are made. Acknowledging that the interview questions posed will influence the participant's discursive framings of nonhuman nature to a certain extent, the interview transcripts still provided an interesting comparison to the discourses presented by activists in the local media and documents. The interviews were in a relaxed setting, allowing participants to speak freely, albeit perhaps influenced by my own framings, about their personal relationships with nature. Conversely, within the documentary sources the activists appeared more restrained and strategic in their discursive framings, presenting a less progressive, more conservative and anthropocentric representation. The combination of the interview transcripts and documentary sources thus allowed for an enriched analysis.

As Gee (2014) notes, there is no universally applicable or correct method to a discourse analysis. It is rather a perspective from which to approach texts, typically with a set of questions in mind. For this research project, the approach to the discourse analysis was a semi-structured exploration utilising a descriptive and analytical approach to coding.

Silverman (2015) describes the practice of coding as a fundamental element in qualitative analyses, involving the systematic sorting of data. An analytic coding structure was developed specific to this project, based upon the various representations and social-constructions of nature typically found within a planning context, as guided by the literature review. Additional descriptive codes were included, highlighting, for instance, the types of actors present in the texts and whether pro-conservation actors described themselves as 'activists'. The newspaper articles, interviews and documentary data were loaded into NVivo, separated by case study, and coded against the structure using a line by line interrogation approach that Willig (2014) encourages. Given the large quantity of newspaper articles for each case study, the coding was conducted until it was apparent saturation had been reached. This was approximately three quarters of the newspaper articles. Saturation was tested by sampling the remaining articles at random for any new coding opportunities. This test revealed no new themes, and it was deemed that saturation point had been reached.

Upon completion of the first round of coding, a second manual round of coding took place to further break down some of the complex discourses presented in the interviews, media

and documentary data and to assist in developing a deeper analysis. Waitt (2010) describes the process of coding for discourse analyses as an iterative process, with codes changing as the analysis develops and others becoming redundant. In this instance, it was apparent that the heritage, risk and colonial discourses of nature were largely redundant. However, the commodity and romantic discourses required breaking down further, which was done manually upon reviewing the initial results of the NVivo coding. Upon completion of the second round of coding I felt a connection with the analysis that allowed me to commence writing and begin to piece together the analysis discussion in line with my research objectives.

3.3.7 Ethics

The research was conducted in accordance with the Australian Code for the Responsible Conduct of Research (National Health and Medical Research Council 2007), which requires researchers to comply with the ethical principles of integrity, respect for persons/participants, justice and beneficence.

Lichtman (2013, 57) argues at the core of research ethics is the principle of “do no harm”, ensuring that participants are not physically or psychologically harmed as a result of their participation. For this research project, the primary interaction with human subjects were through one-on-one interviews. Throughout my personal interactions with interview participants, and whilst developing the interview schedule, I was conscious of conducting low-risk research, minimising any potential risk of stress, embarrassment, economic loss, exposure to prosecution, or psychological distress to participants.

Interview participants were fully informed of the research objectives with the use of information sheets and further clarification one-on-one prior to each interview. Participants were required to complete consent forms after being informed of their right to withdraw from the study at any given time, should they ask to do so. Whilst most of the activists were known to government agencies or the development proponents, many were less comfortable claiming the title ‘activist’ and had maintained a low public profile in terms of their support for their respective pro-conservation campaigns – with the exception of Marg Owen in the FUAB case study. Accordingly, a decision was made prior, and participants suitably informed, that each would remain anonymous throughout the research to secure their identity except when activists were being quoted from public sources, such as newspaper articles. This included any written transcript, presentation or publication. Names, and where required other identifiable information, were redacted from transcripts and replaced with participant codes, such as “FUAB5”. Further, interview participants were provided an opportunity to review the written transcript of their interview

and to make amendments as they saw fit. Copies of the information sheet and consent form are located within the Appendix.

The documentary data and newspaper articles were retrieved from publicly accessible sources. This included government department websites for planning documents and retrievable newspaper editions of the *Subiaco Post* and *Weekend Courier* at the State Library of Western Australia. Where documents were not available publically and it was decided they were potentially valuable to the research a Freedom of Information request was submitted to the relevant agency to secure a copy, in accordance with the relevant state or federal legislation. These documents were received with little concern from agencies, with most private information about human actors redacted. Where authors of newspaper articles, 'letters to the editor' and planning documents are publically available, they have been named in the research project. The dissertation does not divulge whether authors of articles or letters are also interview participants.

Human Research Ethics Committee approval was sought and received from Curtin University following the approval of candidacy. A copy of the approval is located within the Appendix.

3.3.8 Reflecting on the Process

Critical to the practice of qualitative research is self-reflection and reflecting on the process. Lichtman (2013) argues, qualitative research is a circular process of data collection, analysis, further collection and further analysis. Each stage of the process is influenced by the stage prior, and thus reflecting on challenges and limitations allows researchers to enhance their output. The following section discusses some of the challenges experienced whilst implementing the research program for this dissertation.

Challenges of Actor network Theory

Using ANT as an analytical framework for the research resulted in a number of challenges. Firstly, it was decided early in the research process to select case studies that were live and still evolving in order to improve access to documentary data and to be able to speak with participants that were still actively involved in their activism. Further, live case studies allowed for the research to follow closely the development approval process and to actively respond and engage with changing actor and network dynamics. However, in choosing these live case studies there was a known risk that throughout the course of the research there may indeed be no final outcome – the networks of actors in operation may never mobilise sufficient political support to reach an end goal, due to various circumstances. Indeed, this was the situation for both case

studies and a decision had to be made to draw a line and complete observations and the tracing of associations at the end of 2016.

It is often the case in ANT enquiries that complex network arrangements never reach their end point and are constantly in a state of flux, responding to a barrage of dynamic and unpredictable processes and obstacles that prevent mobilisation and black-boxing – this does not diminish the value of the case studies to the research. On the contrary, it provides quite an interesting point of analysis, particularly in the case of the Underwood Bushland, which after a period of almost twenty years has yet to be resolved. Still, there remains a sense of incompleteness. The research was unable to follow the cases to their end point, and observe, *if* a particular network was able to reach its end goal, how it achieved this, the inter-actor relationships and strategies involved, the influence of the environmental activists and their alternative representations of nature, and the greater influence of this outcome on the environmental ethics of the planning processes involved. Nonetheless, time limitations placed upon a PhD research agenda prevented following both cases to their completion, which, in the case of the Underwood Avenue bushland, remains ongoing at the time of writing this chapter.

Additionally, the richness of the case studies selected presented a generous quantity of intriguing networks and controversial moments worthy of research attention. However, for the sake of brevity and to sufficiently focus the research a decision was made to focus purely on networks, events and actor-interactions featuring the environmental activists in question, the proponents and immediately affected nonhuman nature. For instance, whilst the influence of the waste water management plant, including its affiliated odour and odour buffer zone, were particularly intriguing in the case of the Underwood Bushland, it was decided to refrain from exploring its influence further and to set it aside for a potential future project.

Availability of Data

Initially the historical data collected for each case study was going to be complemented with observational data that would seek to follow each case live throughout the research period. However, upon commencing data collection it became apparent that both case studies had entered a period of relative dormancy as a result of approval processes being delayed and there was little action to observe. Subsequently, the level of local activism for each case study diminished, reflecting the ebbs and flows of energy emitted from local (human) communities in long-standing controversial development proposals. To date, both proposals are yet to be implemented due to the pro-development networks failing to obtain the full suite of approvals required to commence construction. As such a decision was made to acknowledge, as is often the case, that the process of network

stabilisation for either the pro-development or pro-conservation networks of each case study was unlikely to occur – at least not throughout the course of this research agenda – and that the research would focus largely on the historical elements and the development of networks thus far utilising interviews and archival data.

Critical Reflexivity

Reflexivity – the process of researchers critically self-reflecting on the influence they may have on the research process – is an important aspect of rigorous qualitative research (Lichtman 2013). Through reflexive thought, researchers acknowledge their personal biases including social, historical and cultural circumstance and how this may inadvertently influence the research design, practice or participants (Hennink, Hutter and Bailey 2010). In particular, for qualitative research and the subjectivity involved in its analysis, it is important for researchers to acknowledge to their audience that they are not value-free and that their analysis will indeed reflect their own values and pre-conceived thoughts and feelings about the world (Flick 2014a). Reflexivity may also allow researchers to understand further their ingrained biases and encourage a self-aware, reflective piece of research (Hennink, Hutter and Bailey 2010).

As a researcher who has practised in the profession of planning in Western Australia, participated in environmental activism locally, and developed close relationships with a number of the research participants (both human and nonhuman), I was attentive to my own prejudices, developed through personal experience over the years. In order to do justice to the research, I sought to maintain a critical edge to my analysis, pushing deeper and remaining open to the prospect that my research findings may challenge my pre-existing thoughts and feelings on environmental activism and on the individual case studies. As an environmental activist I believed my activities were leading to positive outcomes that aligned with my core values. However, as a researcher, I needed to prepare myself that my findings may (or may not) demonstrate otherwise.

What I found more difficult, and somewhat surprising, was managing how my western socio-cultural upbringing inadvertently affected the way I would frame my writing, which at times was instinctively anthropocentric in nature. Through editing and receiving feedback, my supervisors and I would note instances where I too had anthropocentrically framed nature – despite critically analysing how human actors within the case studies were doing exactly the same. In hindsight this reinforces the notion that ingrained socio-cultural traits are indeed difficult to shift and alter what appears to come naturally. With the assistance of Callon's ANT principles I felt I was able to retrain my brain, to a certain degree, in order to view the human and nonhuman actors of the two case studies on an symmetrically and attempt to release any *a priori* expectations of how each actor would

perform within their given situations. I feel this is a skill that any scholar working with ANT approaches to analysis needs to hone in order to effectively and critically trace the associations of complex networks with a diverse array of actors. Further, Webb (2016) reminds me the narratives I reproduce for the purposes of this dissertation will at times intentionally and sometimes unintentionally privilege or advance particular storylines in order to fulfil the conventions of, in this instance, a PhD (word limits; narrowed focus etc.). As a result, particular actors' perspectives may be excluded, muted, skewed or misinterpreted, affecting the overall network analysis. I acknowledge here that remaining cognisant of the full picture was indeed difficult, with the complexity of the two case studies overwhelming at times. At this point I wonder whether any ANT analyst can ever fully free themselves of bias, whether it may be imposed, or hidden within.

3.4 Conclusion

Chapter 3 presented the dissertation's underlying research strategy including the theoretical frameworks utilised, and methods of data collection and analysis. ANT and discourse theory were introduced as frameworks collectively guiding the research, which is qualitative in its approach. With a focus on the FUAB and HOPP case studies, data was collected from a range of sources including in-depth semi-structured interviews with pro-conservation actors, newspaper articles and documents from a range of government agencies and other network actors. Two forms of analysis followed, including an ANT 'sociology of translations' approach and a discourse analysis, utilising an analytical coding structure on the social constructions of nonhuman nature. The research program developed allowed for the immersion into, and analysis of, the FUAB and HOPP pro-conservation campaigns, and how the representations of nonhumans by local activists in these cases influenced the planning processes and the subsequent realities of the nonhumans and local natures represented. The following two chapters present the findings of the ANT analysis for each case study, followed by a chapter discussing the discourse analysis findings.

Chapter 4 The Underwood Avenue Bushland

The following chapter presents the case of the proposed subdivision of the Underwood Avenue bushland by the University of Western Australia (the University) and the conservation campaign by the Friends of Underwood Avenue Bushland (FUAB). Utilising the documentary, newspaper and interview data collated, associations between actors have been traced to develop an understanding of the formation and progression of the pro-development and pro-conservation actor networks. The narrative has been structured chronologically to allow the reader to follow the dynamic ebbs and flows of the two networks from 1999 to 2016. The structure also enables a developed understanding of the relationship between the human actors of the FUAB and the nonhumans of the Underwood bushland they are seeking to represent in the planning processes.

4.1 Setting the Scene – Actors & Network Configurations

The Underwood Avenue bushland is an area of approximately 32 hectares, situated within Lot 4 Underwood Avenue, Shenton Park. The site, amongst others, was donated to the University of Western Australia by the state government in 1904 and, despite being used for various research purposes, has remained in relatively good environmental condition with little human impact.

Situated in between two significant urban bushland sites, Bold Park and Kings Park, the Underwood Avenue bushland has been considered an important connector in the western suburbs ecological corridor. The vegetation ranges in form from Banksia woodlands, to patches of remnant Jarrah and Tuart, together which supported a range of species in the understorey and significant bird, reptile and insect populations.

In December 1999 the University in collaboration with their planning consultant submitted plans to the state planning agency to subdivide the bushland. The proposed subdivision included a freehold residential development component for approximately 200 dwellings and an 8.5 hectare conservation reserve.

Figure 4.1: The initial concept plan for the University's subdivision of Lot 4 Underwood Avenue, Shenton Park (ATA 1999).

The University's decision to develop the bushland, which it had owned and managed for close to 100 years, came as a surprise to much of the local community. The University's website claimed the land was donated with the intention of funding educational activities, and subsequently they had an "obligation" to fulfil its financial potential (UWA 2016). The local newspaper, the *Subiaco Post*, claimed this potential to be in the range of $50 million (October 9, 1999). In a competitive tertiary education market, with decreasing federal government funding, the intention of the University was clear; the bushland was more valuable developed than as a place of conservation. To this end, the goal of the University was to unlock the perceived financial capital of the bushland through a process of subdivision, to which a basic problematisation could be formed; the first stage in Callon's (1986) sociology of translation whereby the key issue driving a network's agenda is defined.

As part of this problematisation, the University was required to form an alliance of actors and a program of action in order to achieve the approval of the proposed subdivision. In the early stages, this alliance featured both human and nonhuman actors including; the bushland at Lot 4 Underwood Avenue and collectively the flora and fauna that reside within; the University's planning consultant Chappel Lambert and Everett (CLE); their environmental consultant Alan Tingay & Associates (ATA); the local government authority; the state planning agency; and the adjacent Subiaco Waste Water Treatment Plant (SWWTP), its affiliated odour and odour buffer zone and the operator of the plant the state water corporation. In order to develop the land, and to access its perceived economic benefits, the University would be required to enrol and mobilise the support of these key actors. As Callon (1986, 8) states, the University would be required to form,

stabilise and then mobilise a “holy alliance”, as depicted in the process chart in Figure 4.2 below.

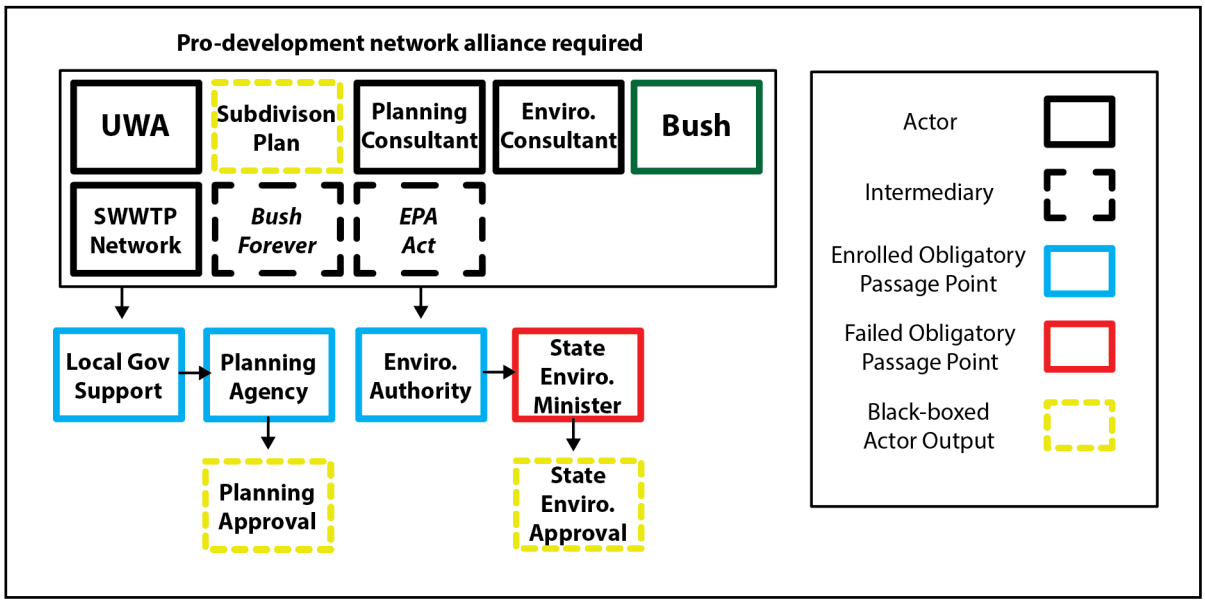


Figure 4.2: The alliance of actors required by the University in order to proceed with the proposed development.

In accordance with the local government authority’s black-boxed *intermediary*[3] *Town Planning Scheme No.2* (1985), the land at Lot 4 Underwood Avenue was zoned as ‘development’ and required a comprehensive plan in the form of an Outline Development Plan (ODP) to be approved by the City and endorsed by the state planning agency prior to any subdivision being approved[4]. The first draft ODP was submitted to the local government in April of 1999 and the first subdivision plan submitted to the state planning agency in December of that year. These approval processes represent two early obligatory passage points the University’s network would be required to navigate through in order to mobilise the support of key decision-making actors. As the following chapter will detail, the University would struggle through these key network negotiations.

In preparing the draft subdivision plan, the University’s network had consulted with the state planning agency, who were preparing the draft *Bush Forever* policy; a strategic vision of identifying and protecting (where possible) significant parcels of remnant urban bushland throughout the Perth metropolitan region (Ministry for Planning 2000). The Underwood Avenue site had been formally recognised under the policy *intermediary* as

[3] Considered by Latour (2005) to be a vehicle for transporting meaning without transformative affects.
[4] In Western Australia the state has retained the responsibility for some land-use planning functions, including decision-making authority for the subdivision of land.

site 119, and noted as requiring a 'negotiated planning solution'. This was an option designed for remnant bushland in private ownership that required a balanced outcome between urban development and conservation. An 8.23 hectare 'L' shaped conservation area along Selby Road was determined between the university and the state to be a suitably balanced outcome. In December 2000 this solution was formally acknowledged by the state in the final *Bush Forever* report (Ministry for Planning 2000). In January 2001 the state environment authority released the *Bush Forever Assessment Bulletin 1007*, endorsing the policy, and implied negotiated solutions would not require a formal assessment under the *Environmental Protection Act 1986*.

Environmental health considerations were also a factor the University had to consider due to the proximity of the SWWTP assemblage. Under the *Environmental Protection Act 1986*, the odour emitted from the sewerage plant led to the creation of an odour buffer zone covering a significant proportion of the site, and preventing the establishment of any human-habitable land uses. It was this restriction that arguably had prevented the University from pursuing development options up until this point. However, after many years of negotiation the University and the state water corporation signed a legal agreement in 2007 confirming tax-payer funded upgrades would occur reducing the odours emitted and, therefore, allowing for a reduced buffer zone. The reduction would permit residential development over a greater proportion of the site than previously permitted. Accordingly, by 2007 the SWWTP assemblage can be considered as accepting their revised role in the network and their power diminished[5].

Following the initial announcement of the University's intention to develop the bushland, a community based conservation campaign began to form. At the core of this pro-conservation network were local residents with established relations with the Underwood bushland. For some, this was a proximity relationship having lived adjacent to, or nearby, the site for many years (interview with FUAB1; FUAB2; FUABSUPP6; FUABSUPP1). Others had a more intimate relationship and visited the site regularly or volunteered with the Friends of Shenton Bushland in the management of the nearby bushland reserve that was ecologically similar (*Subiaco Post*, October 9, 1999). The pro-conservation campaign would eventually be led by the Friends of Underwood Avenue Bushland, with the aim of preserving the bushland site in its entirety. The pro-conservation network would require either the enrolment of the University, key decision-making agencies or the state government in order to secure the site's preservation. Alternatively, they would be required to destabilise the University's pro-development network and block the

[5] Given the complexity of the case study and the focus of this dissertation on nonhuman flora and fauna, this chapter will not focus on the negotiations between the University's network and the SWWTP assemblage.

approval of the proposed subdivision. To this end, the pro-conservation campaign would be required to agitate and negotiate to enrol sufficient support or instil a level of dissidence in key actors.

The focus of the chapter hereafter is to provide the reader with a chronological narrative of the key events in the case of the Underwood bushland, illustrating how both the pro-development and pro-conservation networks operated to advance their agendas.

4.2 1999-2001: Early Dynamics & Community Opposition

As you drive down Underwood Avenue in Shenton Park with the built environment of suburbia penetrating your gaze in all directions, it's a welcome relief to suddenly find yourself passing by a large remnant patch of bushland. The site, formally known as Lot 4 Underwood Avenue, had remained fenced off from public access for several years and been utilised primarily as a research space for the University. This restricted use allowed the site to remain relatively undisturbed and in a seemingly pristine, unaffected state. So accustomed to the urbanisation of native bush blocks in the Perth region, it may come as a surprise to those passing and local residents that Lot 4 is privately owned and yet undeveloped. As a result, when the University's planned development of the site became public there was an immediate and vocal opposition seeking to protect the remnant bushland parcel from transforming into the familiar rooftop lined landscape of the western suburbs.

The first public announcement of UWA's proposed subdivision of the Underwood bushland was published in the *Subiaco Post*, a local independent newspaper, in October 1999. Quoted in the article, the University's property manager Wayne Brown claimed the 21 hectare residential development with an 8.5 hectare conservation reserve would raise $40-50 million for the University (*Subiaco Post*, October 9, 1999). However, local conservation group the Friends of Shenton Bushland were concerned the development would fragment the bushland, reducing access for its inhabitants and increasing the risk of degradation and invasive species infiltration. The University's environmental consultant claimed otherwise, arguing that:

> "It is possible to retain the environmental values of the bushland by formulating an environmentally sensitive subdivision design at the planning stage of the development. This has been achieved in the Chappell & Lambert Concept Plan for the site by retaining areas of vegetation which are representative of the bushland and which are in good to very good condition" (ATA 1999, 17).

Soon after breaking the story of the University's plan, the *Subiaco Post* quickly became a broadcaster for public opposition towards the proposed development. The early stages

of the community-led pro-conservation movement were visible with individual citizens voicing their opinions, stating their disapproval and sharing their own perception of the bushland's future:

> "This 30-hectare site has a fine diversity of jarrah, tuart and banksia woodland. Some of it is sadly neglected and in need of care. However, as a whole, it provides food and shelter to a wide variety of birds, reptiles, insects and possibly mammals" (Boase-Jelinek 1999a, 83).

> "A plastic replica of an animal cannot replace a living creature, and a man-made reproduction can never match the beauty of nature" (Kalamaras 1999, 2).

> "This area contains jarrah, tuart and banksia woodlands, plus a diverse variety of plants, birds and animals. It is a link between King's Park and Bold Park. We have already lost so much of our urban bush and old-growth forest. It amazes me why we always have to fight so hard to protect what is so valuable" (Collinson and Collinson 1999, 12).

> "Over time, the remaining 8.5 token hectares of uncleared bush will become degraded and eventually unsustainable. What a loss. The development of this bush will also destroy the ecological balance in the area, placing pressure on Bold Park and King's Park, threatening plants and wildlife in these parks and the region as a whole" (Payne 1999, 2).

Through its 'letter to the editor' section the newspaper provided the platform necessary for locals to voice their opposition and develop momentum for the conservation of the bushland. This ability would later become a key component to strengthening the community-led pro-conservation network by elevating and distributing the activists' alternative representation of the bushland's inhabitants and their alternative vision for the site. By distributing the messages of the local community, the newspaper is what Latour (2005a) considers an *intermediary*. However, when taking into account the power of the newspaper to publish (or not) particular letters, the placement of letters and any other editorial decisions made, in addition to producing its own journalistic articles that could transform meaning through extrapolation or distortion, its role can be reconsidered. In these instances, the newspaper can be considered a *mediator* – disruptive, transformative actors capable of shifting network dynamics (Latour 2005a). Thus, the *Subiaco Post* as an actor had a significant role to play, and one that needed to be carefully managed and utilised by the competing campaigns.

Following the initial surge in opposition, in January of 2000 the Friends of Underwood Avenue Bushland (FUAB) were officially formed, bringing concerned citizens together who would go on to lead the campaign against the University's proposal. The FUAB, with the view their local knowledge reflected a more personal and intimate understanding of the nonhuman inhabitants, would seek to enrol the support of the local community,

decision-making bodies and, in due course, the UWA into their pro-conservation network. In doing so they would be able to shift the intended use of the bushland from a residential development to a site of conservation. Thus, the problematisation that was the catalyst for the establishment of the FUAB-led pro-conservation network, and its conservation end-goal, were largely self-evident. However, enrolling sufficient support to destabilise the University-network to prevent the issuing of development approvals, utilising predominantly local qualitative knowledge, would prove difficult.

In an effort to strengthen their public plea, Daniel Boase-Jelinek emphasized the narrative of a breeding pair of Little Eagles who were known to roost on-site:

> "One of the last remaining pairs of Little Eagles living in the Perth metropolitan area could be about to be evicted from its home" (Boase-Jelinek 1999b, 12).

The *Subiaco Post* boosted Boase-Jelinek's emotive plea by calling on naturalist Eric McCrum's more authoritative 'expert' opinion. In response to Boase-Jelinek's comments, McCrum stated:

> "I endorse the letter from Daniel Boase-Jelinek. Little Eagles live where there are tall trees to use as lookouts… Breeding has only been recorded in areas near Perth, Rockingham, Northam and Tammin. So *all* breeding sites are valuable" (emphasis in original; *Subiaco Post*, December 4, 1999, 12).

By focusing on the Little Eagles within the Underwood-network, the local activists were able to communicate their pro-conservation message to the inexpert local public in an increasingly urgent, concerned tone. The Little Eagles were effectively enrolled and interressed by the FUAB into a public engagement role – the flagship species representing the bushland's eco-system of nonhumans – with the task of enrolling the local community of humans into the conservation campaign with the assistance of FUAB's translations. As a powerful bird of prey, that sat on top of a cohesive ecosystem constructed with an array of complex vegetation systems providing habitat for birds, reptiles, amphibians and insect, the loss of the Little Eagles was presented as the bushland losing a vital ingredient to its uniqueness and stability. Something that neatly represented the "impending doom" (Boase-Jelinek 2001, 54) of the entire network of species that resided within the bushland. To this end, the local activists' strategy for enrolling support into their pro-conservation network was focused on provoking an emotive community response to the UWA's perceived unethical, profit-driven approach. For example, as Boase-Jelinek stated:

> "If you are keen to stop the University of WA *destroying* the Underwood Avenue bushland and *evicting* the little eagle, come and join the Friends of Underwood Avenue Bushland" (emphasis mine; Boase-Jelinek 2000, 12).

Figure 4.3: Protestors from the FUAB placing white crosses outside of the bushland for the lives of the inhabitants likely impacted by the planned development (*Subiaco Post*, August 12, 2000, 12)

Following the initial media coverage and intense opposition, alternative proposals were floated by various personalities. In an interview with the *Subiaco Post*, environmentalist Dr John Walmsley supported the FUAB's quest to preserve the bushland in its entirety and suggested the University would be better placed financially by capitalising on the educational capacity of the site (*Subiaco Post*, 12 February, 2000). Councillor Fielding from the City of Nedlands also supported the preservation of the bushland (Fielding 2000), and Mayor John Paterson called on the state government to facilitate a land swap that would enable the preservation of the site without financial implications for the University (*Subiaco Post*, 16 December, 2000). Mr Paterson, Colin Barnett (the local member of parliament), and Julie Bishop (the local federal member of parliament) would go onto sign the FUAB's 6000 signature petition (Gates 2000) – an intermediary deployed to translate the level of community support for the retention of the Underwood bushland, and facilitate the interessement and enrolment of the state government into the FUAB's network.

At the same time, the FUAB submitted a third-party request for the state environment authority to assess the University's proposed development (Thorning 2001). As permitted under Part IV of the *Environmental Protection Act 1986,* in August of 2000 the environment authority received the request and shortly after confirmed it would be evaluating whether a formal assessment of the proposal is required – thus introducing the authority as a new actor into the equation and an *obligatory passage point*[6] that would test the resilience of ATA's environmental assessment. Whilst not unpredictable, the

[6] Callon (1986) describes actors that are obligatory passage points as powerful agents that are required to be enrolled in order for a network to achieve its end-goal.

strategic move by the local activists was impactful. Utilising the agency of the legislative intermediary to trigger a state environmental assessment, the activists sought to undermine the University's network by questioning the accuracy of pro-development network's translation and representation of the bushland's nonhumans. In doing so, the FUAB were seeking to undermine the legitimacy of the University's environmental consultant's translation, and their representation of the Underwood other-than-humans prior to development, and ability to flourish post-development. If successful, the FUAB would hamper the pro-development network's ability to navigate confidently through the environmental obligatory passage point, and obtain the approval required to progress the network.

Throughout the following six months two further versions of the ODP were submitted to the state environment authority to appease their initial concerns regarding the shape and size of the proposed conservation area. The third version resulted in a square 8.5 hectare conservation pocket in the south-east corner, and thus a redefined role for the nonhumans post-development. The proposed plan of subdivision was amended accordingly and submitted to the state planning agency to further the subdivision approval process.

Figure 4.4: The third version of the University's proposed development at Lot 4 Underwood Avenue (CLE 2007)

As part of the assessment process, ATA's environmental assessment report of the Underwood Avenue site was referred to the state conservation agency, who claimed the significance of the bushlands environmental values had been misinterpreted:

> "The report is characterised by a series of unsubstantiated or poorly constructed discussion of the conservation attributes of the bushland that effectively undervalue the significance of the bushland in Lot 4 recognised in the Site" (DEP 2001, np).

In their formal response, the conservation agency concluded:

> "the area proposed to be protected, at 8.5 ha bushland (26.5%), plus 2.01 ha Tuart stand in POS, is arguably somewhat below the area that could reasonably be expected to be retained as bushland through an Urban Negotiated Planning Solution (NPS) outcome of the Development Application for the 32.05 ha site that was considered Bush Forever at the time…" (Whisson 2001, np).

In concurrence with the government's internal consultation period, the UWA was required by the state environment authority to initiate a four-week public submissions period on the proposed development, its impact on the bushland's biodiversity, and the potential impact of the adjacent SWWTP on future residents. Through public submissions the FUAB would have an opportunity to further persuade the state environment authority that the pro-development network's representation of the nonhumans at Underwood was misinterpreted, and their alternative view formed a more accurate depiction. Boase-Jelinek continued to use the distributive power of the *Subiaco Post* and emotive language to enrol local humans into the conservation campaign:

> "What is going to happen to the animals? On a recent visit we saw a little eagle soaring over the bushland near the nest where it may have hatched just over a year ago. We also saw several families of wood ducks making nests in hollow trees. Not long ago hatchlings of the Gould's monitor lizard were discovered within the bushland. We wondered about the future of the frogs, lizards and the tiny birds we could hear singing merrily in the bushland, oblivious to their impending doom… it is now up to the community to save this bushland, and the animals that live in it" (Boase-Jelinek 2001, 54).

In November 2001, the state environment authority concluded their investigation and published their findings in *Bulletin 1034*. In excess of 70 submissions were received, in addition to a number of petitions. In its report, the authority stated:

> "… as substantial information has been provided and the EPA has received considerable comment from the general public, it is not considered necessary to undertake a 'traditional' environmental impact assessment through a Public Environmental Review or a Environmental Review and Management Program process. In recognising the special nature of this proposal, the EPA is setting the level of assessment as 'Formal Under Part IV'" (EPA 2001, 1).

By setting the level of assessment to Formal, the state Minister for Environment would be required to determine the application, as guided by the environment authority's assessment and recommendations.

The authority further noted, “It is not acceptable to proceed with residential development [as proposed] at the proposed location” (EPA 2001, 13) due to a lack of certainty regarding the potential impacts of the odour and the inadequacy of the proposed conservation area. The environment authority recommended that a larger, “but not substantially so”, parcel of bushland should be set aside for conservation purposes, and that more accurate odour emission and meteorological data be submitted after upgrades have occurred to the waste plant (EPA 2001, 14). Accordingly, in its current form the authority recommended that the Minister withhold from issuing environmental approval (EPA 2001, 14).

Subsequently, the University-led network’s perceived inadequate translation and accountability for the nonhumans of Underwood resulted in their attempted enrolment and mobilisation misfiring. The University submitted an appeal against the environment authority’s findings, subjecting themselves to an appeals obligatory passage point and the discretion of the Appeals Convenor – yet another actor to enrol and mobilise. Further, negotiations with the local government regarding the draft ODP stalled as the *Environmental Protection Act 1986* prevented the Council from determining an outcome prior to the state Minister for Environment authorising implementation of the development. Thus, the environment authority’s obligatory passage point represented a significant hurdle for the University, and one that had quickly taken priority given its ability to substantially undermine the mobilisation of actors required for the University to secure its preferred development outcome.

Conversely, with the assistance of the *Subiaco Post* as a mediator, the FUAB’s network had been relatively successful in disrupting the approvals process for the University. The authority and power of the University, rich with resources, reputation and political persuasion, had been challenged by the FUAB from an early stage. They had managed to promote an alternative discursive representation of the bushland’s nonhumans, focusing on their inherent intrinsic value and the site as an occupied space for the lives of many. However, whilst the FUAB had managed to garner significant community support and to sway the state environment authority, they had failed to enrol the University into their conservation proposal, or the state government into the land-swap proposal. Thus, at this stage, both the University and FUAB networks were yet to substantially progress their networks (see Figure 4.5). Further, the representation of the nonhumans of Underwood remained contested, with each campaign using epistemic claims to *know* the nonhumans of Underwood and the level of development they could sustainably manage.

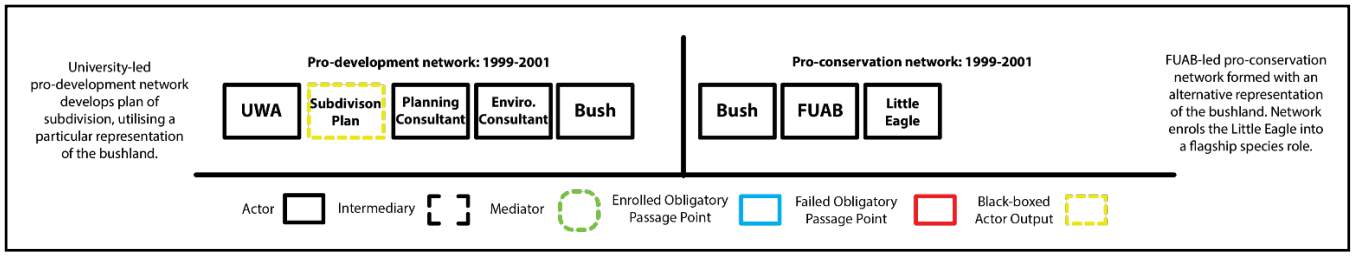


Figure 4.5: Alliance of key actors for Underwood networks at the completion of 2001.

4.3 2002-2004: Refusal of Subdivision & Environmental Approvals

Commencing what would become an eventful period, 2002 started with a bang as up to 25 hectares of the bushland was subjected to an intense fire. The *Subiaco Post* later reported the arson squad was investigating the cause, with claims made the fire had been lit from three individual locations (*Subiaco Post*, 26 January, 2002). Two-thirds of the bushland had now been affected, concerning conservationists the biological value of the site as perceived by decision-makers may be compromised. Blame was not pointed towards the UWA, although the timing was noted:

> "An arsonist has seemingly removed the need for a full environmental assessment of the bushland at the corner of Selby Street and Underwood Avenue… UWA could turn this around and give its tarnished image a polish by dropping all plans for development and assisting in the rehabilitation of this rare remnant of urban bush" (Farren 2002, 10).

Daniel Boase-Jelinek wrote to the *Subiaco Post* stating his worst nightmare had come true:

> "…for the past two years I have had many sleepless nights worrying about the future of those animals and dreading the day that their bushland home is destroyed. All those fears have now been realised and I can hardly bear to go past the place at the moment because of those thoughts. I imagine the ones that survived the fire desperately searching for shelter and food and being killed by cars or predators" (Boase-Jelinek 2002, 10).

However, with an ongoing presence in the *Subiaco Post* and protests on-site (see Figure 4.6), community support for the conservation campaign appeared to be strengthening. In March, the *Subiaco Post* reported that of the 404 residents living within a 5km radius of the site, 82% opposed the development (*Subiaco Post*, March 2, 2002; Government of Western Australia 2002). The result, which acted to send a message to decision-makers, served not only as a morale boost for the FUAB but demonstrated the power of their activism in driving community support and politicising the campaign.

Figure 4.6: University students protesting against the University's proposal, outside the bushland (*Subiaco Post*, May 25, 2002)

Further, the results of the survey came at a time when the University had been construed by activists as self-interested given their forceful and public attempt to have the state water corporation fund a million dollar tax-payer upgrade of the SWWTP. The deputy Vice Chancellor of the University, Alan Robson, broke the University's silence stating that the proposed development sought to benefit "future generations" by providing a revenue stream which they will use to "enhance the international competitiveness of the university and its graduates and therefore our state" (Robson 2002, 16). Robson's response reinforced the University's problematisation, and the role of the bushland-system in their network as an economic commodity awaiting colonisation and 'improvement'.

In June the Appeals Convenor released his findings into the seven appeals made against state environment authority's *Bulletin 1034* (Carew-Hopkins 2002). In addition to the University appealing the recommendations of the authority, a number of environmental groups including the FUAB made appeals on a variety of matters relating to the assessment of the bushland's biodiversity. The University counter-argued that the state's environment authority had already given sufficient consideration of the site's environmental factors and should have been more explicit when requesting additional pockets of conservation. However, given the complexity of the site, the Appeals Convenor recommended that the state Minister for Environment order the authority under the *Environmental Protection Act 1986* to reassess and "more fully consider" the extent of bushland worthy of conservation (Carew-Hopkins 2002, 19).

In doing so, Carew-Hopkins recommended for the University-led network to re-enter the environment authority's obligatory passage point and re-negotiate the terms of its

development proposal. The finding would allow the University time to reconsider its subdivision configuration prior to re-entering negotiations, and to work with the environment authority to find a solution that would entice them to enrolling into the network. Conversely, the finding also gave the FUAB-network, and their allies, an opportunity to further convince the state authority of the environmental values of the site and to reaffirm the authority's stance.

Following the Appeals Convenor's recommendation, in August of 2002 the state planning agency resolved to refuse the proposed subdivision due to the ongoing environmental issues. Despite not being refused on technical planning grounds, this remained a significant setback for the University's network. The decision would also serve to strengthen the resolve of the FUAB and their efforts to undermine the integrity of the University's proposal, and their translation of the bushland. Later that month the University submitted an application with the state administrative tribunal to appeal the decision – an additional obligatory passage point to which the relevant human parties could negotiate, deliberate, and dictate the terms of their enrolment and the future of the Underwood inhabitants.

After several months of mediation, the tribunal facilitated an agreement – a tentative enrolment – between the University, the state planning agency, state environment authority, and the state water corporation that attempted to bridge concerns relating to the environmental values of the bushland, the *Bush Forever* policy and the odour impacts of the SWWTP. Whilst the details of the agreement pertaining to the odour remained unclear, the University and the environment authority had come to an arrangement to redesign the conservation area from an 8.5 hectare square design to a 12 hectare 'L' shaped configuration known as the 'linkage' option (CLE 2007). This new layout was deemed to satisfy the "not substantially so" increase in bushland conservation the environment authority had requested in their previous report, whilst satisfying the *Bush Forever* policy (EPA 2001, 14). With all actors aligned, the University looked to be in a position to achieve network mobilisation. Accordingly the University requested the state environment authority to suspend their re-assessment of the square configuration, and in December they submitted the re-designed proposal to both the state planning and environment agencies as part of a new 'superlot' subdivision application, as shown in Figure 4.7 (CLE 2007; Millington 2004).

Figure 4.7: The 'superlot' subdivision proposal of Lot 4 Underwood Avenue (EPA 2003)

Whereas the previous subdivision proposal focused wholly on the 32 hectare portion of the site abutting Selby Street, the ‘superlot’ design sought to split the entire 62 hectare site into three ‘superlots’ as guided by the environmental constraints and the draft ODP. Lot 1 fell entirely outside of the odour buffer zone, and thus reflected land that was the most developable in the short term. Lot 2 was earmarked for residential development but was restricted until upgrades occurred to the SWWTP and odour emission testing supported a reduced odour buffer zone. Lot 3 contained the University’s existing research facilities and land with long-term development aspirations. The clearing and development of Lots 1 and 2 would depend on the ability of the state water corporation, and compliance with their enrolment, to reduce odour emissions (Millington 2004, 5). The re-design reflected the University’s flexibility in considering the needs and concerns of its actor-partners in an effort to facilitate the required alliance.

Upon completion of a four-week submission period and further analysis, the state environment authority released their report and recommendations under *Bulletin 1099* (2003), recommending that the state’s Minister for Environment approve the proposed development. The recommendation was subject to conditions including a requirement to conserve an extra 2.6 hectares adjacent to the proposed conservation area until the ‘completely degraded’ land had been suitably rehabilitated to ‘good’ or better. The authority were of the opinion that the bushland preserved would likely be sufficient at ensuring the existing diversity (not quantity) of nonhuman fauna and flora would survive onsite with available connections to surrounding ecosystems (EPA 2003, i). To this end,

the authority had supported the pro-development network's translation of the needs of the bushland's nonhumans.

However the FUAB were not satisfied with the authority's assessment, with the *Subiaco Post* describing the group as "anxious" that their concerns were being ignored (31 May, 2003). Sensing a negative outcome, in April Mr Boase-Jelinek called on supporters to prepare for the slaughter and to act to save the "many frogs, lizards, snakes, possums, birds and plants that call the Underwood Avenue bush home" (Boase-Jelinek 2003, 2). Later he cried, "people will be lying down in front of bulldozers over this" (*Subiaco Post* 2003). The FUAB, amongst others, later submitted an appeal against the assessment, in accordance with the power prescribed under the state's environmental legislation (Millington 2004).

Meanwhile, Margaret Owen, a prominent member of the FUAB, began sending in regular letters to the *Subiaco Post* documenting her weekly encounters with nonhumans at the Underwood bushland. Marg, as she is affectionately known locally, lacked the activist-tone familiar from Boase-Jelinek's letters. Rather, aided by her photography she simply discussed fascinating features and the daily antics of the flora and fauna she would discover in her walks through the bush:

> "One Friday, as I entered the bush I heard a great commotion: a frightened tawny frog-mouth was in a banksia, surrounded by about 20 ravens. A few magpies and butcher birds were getting in on the act also. A raven flew on to the tawny frog-mouth's back and pulled a feather. The frog-mouth flew off" (Owen 2003a, 12).

By shining a light on the nonhuman inhabitants of the Underwood bushland, Marg was introducing to the inexpert public the flora and fauna that had only previously been represented in technical environmental reports and painted with a broad brush by other actors. By providing imagery, a story, and a voice for the mysterious nonhuman stakeholders collectively forming the finely balanced ecological-network of the Underwood bushland, Marg was translating the lives of individual nonhumans to increase their accessibility to the local human community. Regarding the awakening spring flora, Marg wrote:

> "In the bush at Underwood Avenue, Floreat, the cowslips are in bud, and I can hardly wait until the buds open. It is easy to overlook the greenhood, jug and donkey orchids because they are flowering amid an embarrassment of colour - from flowering plants such as the Swan River myrtle, star of Bethlehem, pepper and salt and the great variety of pea flowers. Some of the hibbertia (buttercups) have dropped their petals to the ground making a little carpet of yellow. The cats' paws look like groups of freefalling parachutists, with arms and legs outstretched" (Owen 2003b, 10).

Figure 4.8: Orchids in the Underwood Avenue bushland (Owen 2003b).

Marg described the dynamism of the bushland, should people simply stop and pay attention:

> "On my weekly wanderings in Underwood Avenue Bushland, I experience great excitement and delight. Two weeks ago a big dugite crossed my path, so now, when in that vicinity, I make my presence felt. A few days ago I saw a collared sparrow hawk twice. When I was but 20m from Selby Street, suddenly from 2m in front of me a pair of quail suddenly exploded upwards and away" (Owen 2003c, 12).

The letters translated great detail about the lives of the nonhuman inhabitants:

> "Robot-like wasps are often seen in Underwood Avenue bush, usually on the flowering spike of a balga or grasstree. The inside of the spike is often quite soft, and I believe these wasps can sense an insect larva inside. The wasps parasitise the larva by inserting their ovipositors into the spike, where a larva lies. On this occasion, there were three female wasps on the spike. When two of them came face to face, they both reared up. Two ended up getting their ovipositors into the spike" (Owen 2004a, 8).

And pointed towards the obvious disconnect between them, and us:

> "The *community of humans* is invited to meet at Lake Jualbup, Shenton Park, on Saturday February 7 at 3pm to work on strategies to save the *community of*

> *creatures* and *their* habitat, which is Underwood Avenue Bushland" (emphasis mine; Owen 2004a, 8).

Marg discursively represented the network of Underwood other-than-humans in a manner that indicated the pro-conservation network's apparent less-anthropocentric, more environmentally ethical position regarding the proposed development of the bushland. Her less threatening or 'activist-like' style of presenting this discourse appeared to be an either purposeful or accidental change of strategy by the FUAB to enrol greater community support into their pro-conservation network.

Additionally, the group sought to discredit the University's network problematisation driving their proposed development, by claiming the University were set to receive a supplementary $43 million in commonwealth funding (*Subiaco Post*, March 13, 2004). Boase-Jelinek claimed that the National Tertiary Education Union had produced figures identifying the additional funding, plus improved results from investments. It was also claimed that the money raised from the land sale would only equate to less than 1% of the University's annual revenue, questioning why the University had been so incessant in their pursuit of approvals (*Subiaco Post*, March 13, 2004).

Meanwhile, whilst awaiting for the state's Minister for Environment to make a determination on the state environmental approval, the University turned their attention to receiving their federal environmental approval. In their application, the University noted that the Underwood Avenue bushland contained habitat that may support the Carnaby's Cockatoo and the Peregrine Falcon – both of which were listed as *threatened* under the *Environmental Protection and Biodiversity Conservation Act 1999*, black-boxing their right to be considered more thoroughly within the planning system. However, the University qualified this statement by claiming the two bird species had extended relationships with other habitats, decreasing their reliance on the Underwood eco-network:

> "The Peregrine Falcon and Short-billed Black Cockatoo are unlikely to rely upon the site in their pattern of movement within or through the Perth Metropolitan Region as the Short-billed Black Cockatoo is known to utilise native bushland and suitable vegetation along roads and within backyards and the Peregrine Falcon would use the larger trees that exist in other similar bushland areas nearby (e.g. Bold Park, Kings Park, Shenton Bushland) which provide suitable perching habitat" (ATA 2004, 7).

The University also noted two migratory birds, the Rainbow Bee-Eater and the Fork-Tailed Swift, were likely to occur within the bushland but that the proposed development would not "substantially modify, destroy or isolate an area of important habitat" for the two species, thus translating their needs as compatible with their proposed development

(ATA 2004, 8). Four populations of *Jacksonia sericea* were also noted as residing within the bushland (ATA 2004). In May the federal environmental authority determined that the proposed development was a 'controlled action' under the federal Act, and thus required formal approval signalling an additional obligatory passage point for the University to traverse (Department of Environment and Heritage 2004).

A few months prior the state Appeals Convenor completed their review and found that the level of assessment undertaken by the state's environment authority and the 'linkage' conservation configuration in the 'superlot' subdivision plan was acceptable (Millington 2004). The University had successfully negotiated a path through the appeals process. With the environment authority and Appeals Convenor enrolled, a positive endorsement by the Minister would secure state environmental approval, opening a path for subdivision approval to follow.

However, in June the state's Minister for Environment, Judy Edwards, chose to refuse the University's proposed development – a decision that was met with dismay by the University and delight by the Friends group. In her media release, Minister Edwards noted the high environmental values of the site and was not convinced that the current layout resulted in a positive environmental outcome (Government of Western Australia 2004). Further, the Minister expressed her concern regarding the ability of the University to successfully rehabilitate sections of the bushland for conservation (Government of Western Australia 2004; Callaghan 2004). The level of community support for the retention of the bushland was also noted (Government of Western Australia 2004). However, the Minister made it clear that she was not opposed to development on the site if the balance between conservation and development could be achieved (Government of Western Australia 2004). The move demonstrates how an actor, with a seemingly defined role, can contract 'cold feet', query their role and be seduced into a competing network in an act of dissidence (Callon 1986). The activism by the FUAB and their politicisation of the proposed development had proven successful at instilling dissidence in the Minister, who opted to ignore the advice of the state's environment authority.

Alan Robson, since promoted to Vice Chancellor of the University, told the *Subiaco Post* of his disappointment, and that he "thought (they) had reached a negotiated agreement" (19 June, 2004, 3). In response Boase-Jelinek from FUAB suggested that the "old boys' network" had let the University down, and that they should have cooperated with the community from the outset to achieve a pro-conservation result (*Subiaco Post*, 19 June, 2004, 65). However, according to CLE, the University's planning consultant, the only weak link in the network was the Minister for Environment, with the chairman of the state

planning agency indicating strong support for the 'linkage' conservation configuration (CLE 2007). Although the network failed to see itself through the environmental approval obligatory passage point, it had made significant progress in enrolling the required actors for mobilisation. If it could continue the process of negotiation with the state's Minister for Environment and see itself through the obligatory passage point, it would likely find success.

In the meantime, the FUAB-led network would celebrate the University's setback and claim it as a win for their campaigning efforts. Marg Owen used her encounter with a rare species of frog to thank the Minister, and to highlight the many still unknowns of the bushland and thus the value of retaining it:

Figure 4.9: Marg's photo of the turtle frog (Owen 2004b).

"Last Sunday, I walked into the bush and noticing an old banksia cone on the ground, I turned it over. What to my wondering eyes should appear, but a very strange creature. It almost looked like a miniature inflated rubber glove, just 1cm in diameter. The little creature had four short unwebbed, fingered legs. I thought it might be a turtle frog… I was so privileged to see this creature, so rarely seen. I am sure there is still a lot to learn about turtle frogs. Congratulations to Judy Edwards for her decision to save this beautiful bushland" (Owen 2004b, 12).

The period ended with the University's pro-development network enrolling the support of a number of key actors after traversing through the state environment authority, state administrative tribunal and appeals obligatory passage points and strengthening its support with decision-making agencies (see Figure 4.10). Notwithstanding this success, the state's Minister for Environment chose to act against the recommendation of the authority and refuse environmental approval for the development. The act of dissidence resulting in the University's network stumbling moments prior to securing its first approval. The hesitation of the Minister was celebrated by the FUAB and the pro-conservation network as a win for their activism and campaign to preserve the bushland. Bolstered by Marg Owen's photographic and narrative translations regularly published in the *Subiaco Post*, the pro-conservation network was gaining traction in building both community and political support.

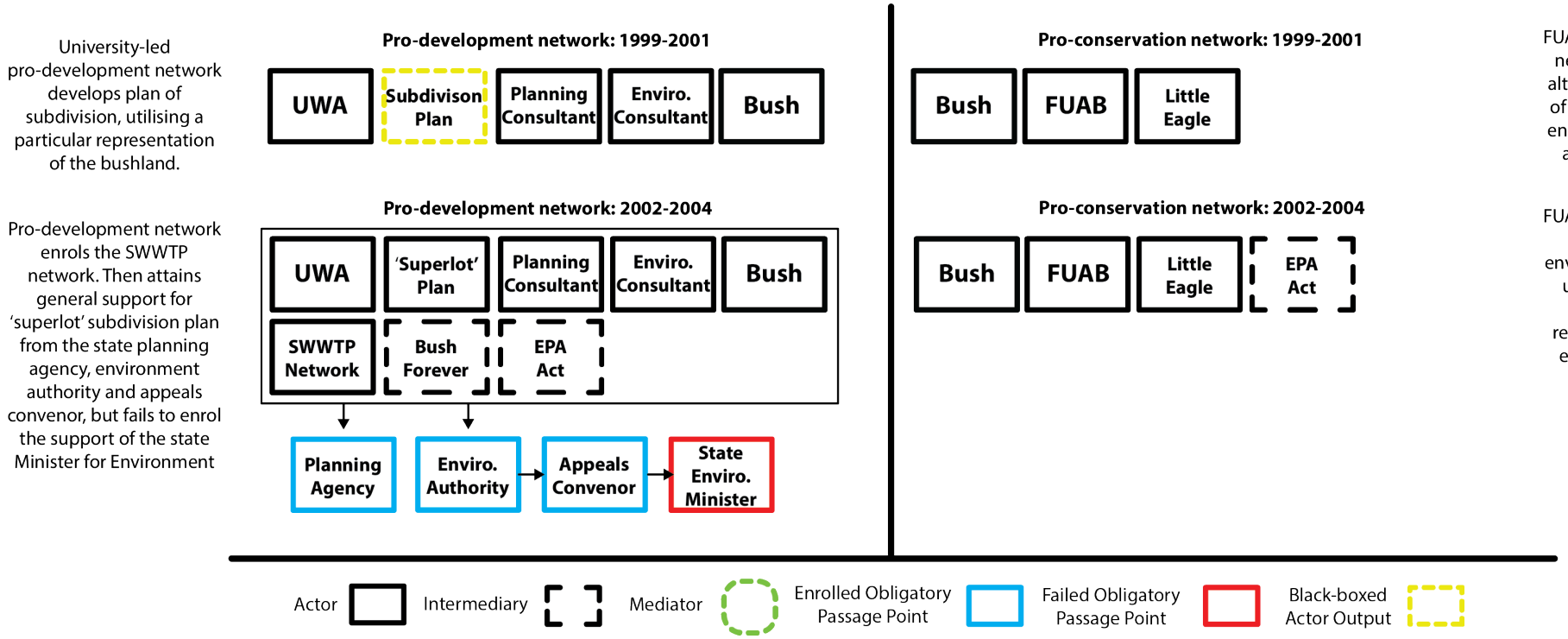


Figure 4.10: Alliance of key actors in Underwood networks at the end of 2004.

4.4 2005-2009: The University's setbacks, Marg Owen and the Carnaby's Cockatoo

Following the refusal of the environmental approval by Minister Edwards it appeared the University retracted to private negotiations. In their absence, Marg Owen continued to educate the community about the nonhumans of Underwood, including:

Fungi:

> "I found this fungus (red fingers), which smells like rotting flesh, in Underwood Avenue bushland. It starts as a white, jelly-like 'egg' and the fingers, which have a brown slime on the inner surface, emerge from the egg. The slime contains the spores. The fungus was covered in flies but they flew away when I approached, so I waited until they returned for the photograph. The flies were certainly attracted to the fungus" (Owen 2005a, 10).

Insects:

> "On this spring-like day in the bush, you wouldn't be dead for quids. It wasn't long before I was transfixed, gazing in wonder at some prehistoric-looking bugs, which I have since found out to be nymphs of a species of tree-hopper. They are common in Underwood Avenue and live on tree trunks. One of their amazing features is that they have two very long 'frayed' waxy filaments coming out of their posteriors" (Owen 2005b, 12).

Spiders:

> "I touched the top of the bark and the strip fell. At the bottom of the strip was a large hairy grey huntsman spider holding a pinkish looking large spider upside-down beneath her, imprisoned by fangs… From underneath the bark, the aggressor pulled and pulled but pinky did not let go. Then a big, hairy grey leg, belonging to the aggressor, came from beneath the bark, grasped the pink leg, yanked it off the bark and both were gone" (Owen 2005c, 18).

And transient bird species, such as the Rainbow Bee-Eater (see Figure 4.11):

> "The rainbow bee-eaters have returned to Underwood Avenue Bushland and the Perth area from northern Australia and Papua New Guinea. They tunnel into the ground up to 1.6m and make a chamber at the end for the eggs. Last year, foxes dug through the ground into the chambers and took all the babies from every chamber. Foxes do terrible damage to our wildlife, as does bulldozing bushland out of existence. The University of WA is proceeding with its plans for such destruction" (Owen 2005d, 26).

Figure 4.11: Rainbow Bee-eaters captured by Marg Owen in the Underwood Avenue bushland (Save Underwood Bush 2018)

By the end of 2005, Marg had 34 articles published in the *Subiaco Post*, representing the existence of 44 species of flora and fauna within the bushland. Her stories were now regularly appearing in the newspaper, subtly and sometimes not-so-subtly promoting the conservation of the bushland. Readers began to appreciate her less-conventional activism:

> "Everytime I read one of Margaret Owen's heart-lifting letters about life in the Underwood Avenue bushland, I determine to write to you to thank her. This time I'm doing it. It is such a pleasure reading her observations and analyses. Long may she continue to send you her bulletins on this fascinating nether world" (Lang 2005, 27).

Lang's use of the term *nether world* also pointed to the disconnect so often found between humans and nonhumans in, primarily Western, society. The creatures Marg speaks of, the photos and her accompanying narratives demystify, if only partially, the lives of the nonhumans that inhabit the Underwood Avenue bushland. The narratives often anthropomorphise the creatures, romantically translating their lives and behaviours into a form readily understandable by the local human community. By doing so, Marg is able to evoke an emotional response, potentially triggering a moral dilemma in those who feel uncomfortable sitting idly whilst the future of the bushland is deliberated by humans. The discourse of nature as a resource for human utilisation becomes further unsettled. The persistence of Marg in a period of relative calm, allowed the FUAB

network to remain present in the community, and in the eyes of the University, politicians and decision-makers.

Following the failure of the 'superlot' subdivision and its 'linkage' conservation layout to obtain environmental approval, the University opted to resurrect and revise their initial subdivision application. The revised design, as shown in Figure 4.12, utilised advice reported by the environment authority in *Bulletin 1034* (2001), and mediation between the state planning agency and the state water corporation through the administrative tribunal. As a result of agreed upgrades, the revised plan reflected a reduced odour buffer zone, minimising environmental-health complications for much of the land. The conservation area consisted of 10 hectares spread over two disconnected parcels (8 hectares and 2 hectares), which focused on protecting the highest quality and biodiverse rich sections of bushland (ATA 2007; ATA 2007a). Subsequently, in October 2006 the University requested the state's environment authority reactivate Assessment 1403 (previously suspended by the University in 2002) utilising the amended plan (EPA 2007).

Figure 4.12: The 'quality/biodiverse' subdivision configuration of Lot 4 Underwood Avenue (EPA 2007).

To reflect the University's change of tact, they withdrew their application from the federal environment authority and submitted anew with the above amended plan.

When comparing the supporting documents between both applications, it was evident the legislative status of particular nonhuman inhabitants within the bushland had changed. The Carnaby's Cockatoo had moved from a *threatened* status to *endangered*, whilst two additional species were noted as *vulnerable* – the Baudin's Black Cockatoo and the Chuditch (ATA 2004; ATA 2007b). The White Bellied Sea Eagle, Great Egret

and Cattle Egret in addition to the Rainbow Bee-Eater and the Fork-Tailed Swift are also noted as additional migratory species that may utilise the bushland. Four populations of *Jacksonia sericea* remained the only 'Priority 3' important flora found within the bushland (ATA 2007a).

Later, the state environment authority released their report offering support for the proposed development and requesting, yet again, the Minister for Environment endorse their recommendation and issue approval (EPA 2007). The EPA were of the opinion that the modified proposal preserved the "best available habitat" and that the biodiversity of the site would be adequately conserved (EPA 2007, ii). The Friends were "appalled by the inadequate assessment", claiming many "important environmental values were not considered" (Gates 2007, 8). With regards to odour, it was noted that upgrades to the SWWTP and subsequent emissions testing had provided the environment authority with sufficient confidence that residential development could occur outside of the buffer zone (EPA 2007, ii). The authority had remained faithful to the University's network, despite attempts by the FUAB to inspire dissidence. Nonetheless, the report would again be subject to a number of third party appeals.

While the University waited for the appeals to be heard, Marg Owen continued to educate the community of the existence of many fascinating flora and fauna in Underwood:

> "Ah, the tranquillity of the bushland… It is harvest festival time in Underwood Avenue bushland. A small number of balgas have put up tall, flowering spikes, some over 2m high… The greatest number of butterflies about the spikes are the Australian painted ladies, but the common brown and yellow admirals are also present" (Owen 2007a, 24; see Figure 4.13).

> "The glandular hairs on the leaves of the drosera catch and encase small insects and the plant is able to absorb the nutrients from the insects. There is one insect, however, which is able to live on the drosera without being caught. This is the tiny fantastically camouflaged klepto-parasitic bug, which previously I have spotted moving fast over drosera stems…" (Owen 2007b, 12; see Figure 4.14).

> "It was hardly possible to miss this spectacular display of macrozamias in the Underwood Avenue bushland, and I wondered at the energy involved in the production of the five great cones. The macrozamia is from an ancient lineage starting about 260 million years ago. There are separate male and female plants, putting up its cones on which the pollen is held" (Owen 2007c, 12; see Figure 4.15).

Figure 4.15: Macrozamia cones in Underwood (Owen 2007a).

Figure 4.14: Australian Painted Ladies in the Underwood bushland (Owen 2007b).

Figure 4.13: The klepto-parasitic insect at Underwood (Owen 2007c).

Simultaneously the community questioned the University's environmental integrity for continuing to pursue the profiteering of the bushland:

> "UWA is the second wealthiest university in Australia, due to the 1600ha of endowment land given to them over 100 years. This is one of the last areas 'undeveloped' and so UWA can afford to be much more generous and community-minded by saving this land for our future" (Gates 2007, 8).

> "It is sad to see the University of WA refusing to listen to reason regarding the Underwood Avenue Bushland… The university administrators are apparently blinded by the big dollar signs they see in the property boom" (Hartley 2007, 2).

Following the latter, Deputy Vice Chancellor of the University, Margaret Seares, promptly replied:

> "It is disappointing that Mr Hartley seems to think the intention of the University is limited to making money, without ascertaining where or how funds raised will be spent. In fact, the funds will go towards exactly the mission that Mr Hartley espouses for UWA, i.e. serving the community by providing a quality education for our students and quality resources for researchers" (Seares 2007, 32).

Seares' reply triggered further response from the community, with Leah Segal stating:

> "It is tragic that a university should, in this day and age, be involved in such a reprehensible way of raising money" (Segal 2007a, 22).

The University's reasoning for pursuing their development plans would continue to be questioned and debated publicly in the *Subiaco Post*, with the FUAB supporters seeking to discredit the University's problematisation in an effort to strengthen support for their own network, which was continuing to grow with the help of Marg Owen.

> "Whilst UWA has provided only three reasons for destroying the bushland – money, money, more money and even more money – Margaret Owen, with her magnificent series of letters in the POST, has provided 101 reasons and more for saving it" (Monks 2007a, 8).

In 2008 the Appeals Convenor found that the state's environment assessment had been generally sufficient and that black cockatoo habitat lost could be replaced elsewhere (Middle 2008). Claims by third party appellants that the proposed development did not recognise the environmental significance of the site and protect the most valuable pockets were dismissed on the basis the proposed conservation areas struck a balance between protecting variety and quality of vegetation on a site that was zoned for development, and noted as a 'negotiated planning solution' in the *Bush Forever* policy (Middle 2008). The decision reaffirmed that the fate of the bushland was largely pre-determined by its 'development' zoning under the black-boxed local government's *Town Planning Scheme No. 2* and *Bush Forever* policy, despite its environmental value. Accordingly, the enrolment of the state's environment authority and the Appeals Convenor into the University's network reinforced the existing anthropocentric translation of zoned nature-assemblages as a commodity for economic benefit. The University awaited the Minister for Environments determination.

Meanwhile a powerful and disruptive actor was beginning to emerge in the Carnaby's Cockatoo. Their endangered status under the *Environmental Protection and Biodiversity Conservation Act 1999* had given them agency to be one of few nonhuman stakeholders independently considered in land use planning throughout Western Australia via the federal and state environmental approval process. This legislative protection, black-boxing their status as a priority species, gave them potential to significantly disrupt the ability of the University's pro-development network Their increased population in the suburbs of Perth communicated a message of habitat loss, finding new food sources and dealing with new threats in an unfamiliar terrain. Whilst the Carnaby's was not the only endangered species to utilise the bushland as habitat, the affordances they emitted – their audible call, mobility through the suburbs, and physical presence – enabled them to easily connect with local humans and broadcast the plight of the Underwood system of other-than-humans more broadly. As a powerful actor, the pro-conservation network would enrol the Carnaby's into a flagship position, utilising their agency to progress their

conservation agenda and develop further a narrative encompassing the link between urbanisation and biodiversity loss.

Wayne Monks was the first to submit a letter to the *Subiaco Post*, concerned about the University's proposal on the Carnaby's Cockatoos:

> "The destruction of habitats, such as that at the Churchlands campus of Edith Cowan University, and the potential destruction of banksia (prionotes) woodlands, proposed by the University of WA at Underwood Avenue, will create permanent, irrecoverable damage to the species (Carnaby's) and threaten the fine balance and cohabitation between humans and fauna and flora" (Monks 2007b, 34).

Marg Owen later reiterated Monks plea:

> "Carnaby's Cockatoos are in danger of extinction and the loss of a large bushland area for housing would have a significant impact on their food availability and possible future breeding sites" (Owen 2007d, 28).

The Carnaby's Cockatoo, as shown in Figure 4.16, would thereafter appear in just under half of all *Subiaco Post* articles featuring the University's proposed development in 2008. Their raucous behaviour, audible call, and large mobile flocks allowed the Carnaby's to imprint themselves on the local community. They were one of few noticeable nonhuman inhabitants of the bushland that were able to permeate into the surrounding suburbs and form bonds with local humans. Thus the representation of the Carnaby's, their habitat needs, and discursive framing of decline and endangerment, became a central tenet for the FUAB-networks strategy to enrol political and community support – one that had great success:

> "This last remnant is so important to the survival of the white-tail cockatoo[1] and other species of birds, plants and insects" (Graham 2008a, 28).

> "A very large area of native bush, important for the preservation of bush corridors for native flora and fauna (including foraging sites for the endangered Carnaby's Black Cockatoo), will be lost forever" (Anderson 2008, 28).

> "Endangered Carnaby's cockatoos will struggle to survive as the land will be depleted of essential foraging habitat if the trees disappear" (Monks 2008, 26).

> "If this development goes ahead we can say goodbye to the white-tailed black cockatoo and all the other birds which feed and nest in this area" (Graham 2008b, 26).

[1] Locals often refer to the Carnaby's Cockatoo as the 'white-tailed' black cockatoo to differentiate between a similar species, the Forest Red-tailed Black Cockatoo, which locals refer to as 'red-tails'.

> “Once virgin habitat is lost, it can never be recovered. Clearing and fragmentation of habitat make it difficult, if not impossible, for many species, such as the black cockatoo, to continue living” (Hardisty 2008, 12).

Figure 4.16: A male Carnaby's Cockatoo eating Banksia prionotes in the Underwood bushland (Owen 2007d).

The ability of Marg Owen to photograph their antics and broadcast through the *Subiaco Post* would allow the FUAB to capitalise on the growing community bond and concern for the endangered bird. Marg and the FUAB were able to strategically utilise a discourse of decline for the Carnaby’s as a mediator to instil dissidence in decision-makers, and further reduce community confidence in the University’s ability to sensitively develop the bushland site. Further, Marg’s dedicated observation of the cockatoos and daily counts of flock numbers enabled her to develop local knowledge – a local translation that could challenge the pro-development network’s interpretation.

The power of the Carnaby’s did not go without notice by the University either, with the then Vice Chancellor, Alan Robson, suggesting they were in for a “battle” to convince decision-making authorities, and to a lesser extent the community, that their development proposal reflected the needs of the birds:

> "There's been a battle with the Water Corporation over odour pollution and then we've sorted that out, and we've got Carnaby's cockatoos which I'm confident we will sort out with the federal government" (Wilkie 2009, np).

Whilst the odour from the SWWTP was also a powerful nonhuman actor, the agency of the Carnaby's could not easily, and ethically, be diminished by the University through actor-negotiations. Rather, the University-led network sought to question the legitimacy of the Carnaby's endangered status (*Subiaco Post*, 3 May, 2008). In their report to the federal environment authority, the University's environmental consultant questioned the species' legislative status given population figures approximated 60,000 breeding birds (ATA 2007). Further, they claimed that much of the data on the birds was anecdotal, inferring its illegitimacy (ATA 2007). The increasingly vocal opposition also led to increased calls of support for the University's right, as a landowner, to develop – reinforcing existing anthropocentric human-nature relations:

> "In light of what is happening to the University of WA at Underwood Avenue it is totally believable that conservation groups, local councils or the government could threaten the rights of any Australian who owns freehold land" (Sandford 2008, 10).

> "Who will compensate any one of us if the Carnaby cockatoo or the lame-footed smelly rat or any other "endangered" species makes its home in our backyard? The cockatoos are happy. The noisy minority groups are happy. But in time, freehold title will mean diddly squat in this country and let's see who is happy then!" (Holmes 2008, 10).

However, in light of the growing FUAB movement, in May of 2008 then Opposition Leader and local Member of Parliament Colin Barnett wrote to the new state Minister for Environment, David Templeman, pledging his support for the bushlands retention. Mr Barnett detailed the rarity and uniqueness of the bushland and his desire to have it saved. Mr Barnett explained how he had "come to appreciate the special significance of the Underwood Avenue site" and in particular the "Jarrah, Banksia and Tuart woodland, which is without comparison on the Swan Coastal plain" (City of Nedlands 2009, 121). The Opposition Leader recognised the University had a right to develop its land, but that the matter was "quite complex". Thus he called on the government to "negotiate with UWA, with a view to acquiring the site and paying reasonable compensation" (City of Nedlands 2009, 122). Whilst enrolling such a high profile actor into the pro-conservation network could be seen as a significant advancement, Mr Barnett's support – four months before a state election – had to be taken with a grain of salt.

In September of 2008 local government Councillor Max Hipkins also publicly aligned himself with the FUAB. Councillor Hipkins, who would later become Mayor, moved a motion to rezone Lot 4 Underwood Avenue from 'Development' to 'Public Purposes – University' under *Town Planning Scheme No. 2* (City of Nedlands 1985; City of Nedlands 2008). Councillor Hipkins shared Mr Barnett's view that the land was too valuable environmentally to permit development. Additionally, Councillor Hipkins was not

convinced that the odour emitted from the waste plant could physically abide by a designated buffer 'line' (City of Nedlands 2008, 38). The Councillor argued that by rezoning the site the environmental values of the bushland would be protected without the need for the government to purchase the land. An alternative motion was put forward by Councillor Argyle, seeking to negotiate a better outcome with the University. This failed, and Councillor Hipkins motion was carried 7/1, effectively enrolling the support of the local government's Council into the pro-conservation network and the opening up of the black-boxed planning scheme that zoned the bushland site for development. The moment was both a significant and a politically satisfying achievement for the pro-conservation network.

Whilst awaiting an outcome from the state Minister for Environment, the University's application for federal environmental approval was progressing. The University had offered to provide several offsets in exchange for the clearing of Carnaby's Cockatoo habitat including a 50 hectare farm in the Wheatbelt to be revegetated; a $100,000 PhD scholarship on black cockatoo research; 20,000 seedlings for the Underwood Avenue site and a conservation body to manage its rehabilitation (Callaghan 2008; UWA 2010). The offsets and further clarification of the proposed development was sufficient for the local government's Council to switch their allegiance from the FUAB to the University's network and to revoke their previous decision to rezone the land, much to the disappointment of Councillor Hipkins (City of Nedlands 2008). Still, in December of 2008 the federal environment authority published their recommendation to refuse the proposed development, citing an unacceptable impact on the local population of Carnaby's Cockatoos (DEWHA 2008, 15). Two days later the University withdrew their application prior to the federal Minister officially endorsing the refusal. Marg Owen reminded the University of the many that already call the bushland home:

> "The bushland is already housing many species of reptiles, raptors, parrots, cockatoos, small birds, insects, spiders, frogs, fungi, banksias, tall jarrahs, tuarts and marri trees and flowering plants, including orchids. The bushland is alive and occupied" (Owen 2009, 26).

By the end of 2008 the University was a decade in and with no approvals in place. They had failed to receive federal approval, were still awaiting a determination on the state approvals, and were facing a currently supportive, but volatile and indecisive, local government Council who had yet to progress their draft ODP. Subsequently, in January of 2009 the University initiated an appeal in the state's administrative tribunal against what they considered was the local government's 'deemed refusal' of the draft ODP and a development application for earthworks. Whilst the tribunal dismissed the two cases, the presiding member noted that:

> "… the University and other stakeholders had become embroiled in a quagmire of applications, plans, environmental referrals, environmental assessments, environmental bulletins, environmental appeals, planning appeals/reviews and Ministerial decisions. Extraordinary amounts of public time, effort and money had been expended, and the inconsistent, indeterminate and, apparently, never-ending processes reflected very poor public administration of planning and environmental laws" (Parry 2009, 5).

The tribunal implored all (human) stakeholders to sit down and nut-out a way forward to allow all parties to "awake from the 'Kafkaesque nightmare'" they found themselves in (Parry 2009, 24). A 'Kafkaesque nightmare' generated in part by the FUAB's activism and their representation of the flora and fauna that challenged the authority of the pro-development network's more traditional, scientific translation.

A few months later the new state Minister for Environment, Donna Faragher, under Colin Barnett's recently elected conservative government, determined to uphold the third-party appeals made against the environment authority's assessment in relation to the clearing of, specifically, Carnaby's Cockatoo habitat. Ms Faragher noted:

> "… the proposal would result in the loss of up to 25.27ha of foraging habitat for Carnaby's Black Cockatoo, which would be an unacceptable impact due to (among other things) the site being a critical corridor for the species" (Faragher 2009, 2).

The future of the bushland site now clearly rested in the Carnaby's ability to block the development, as an endangered species given agency under black-boxed environmental legislation. Providing a life-line to the University, the Minister requested they provide her with additional information to demonstrate how the proposal could be implemented in a manner that did not have a significant impact upon the species. The Minister withheld her decision on the application until the additional information was received. Meanwhile the local government Council, driven by Councillor Hipkins, had again betrayed the University's network and moved a motion stating they did not support the proposed development (City of Nedlands 2009a).

The year was again ending with the bushland's future remaining unclear, but with outcomes favouring the FUAB-led pro-conservation network. The rise of the Carnaby's Cockatoo had proved to be a significant and powerful actor that had, so far, disrupted the University's attempt to navigate through the environmental approval obligatory passage point. Whilst maintaining support from the state environment authority and the Appeals Convenor, the state's Minister for Environment had again failed to fall in line with the role outlined by the environment authority – to approve the University's development. Whereas the FUAB were strengthening, the University's network had again failed to progress (see Figure 4.17).

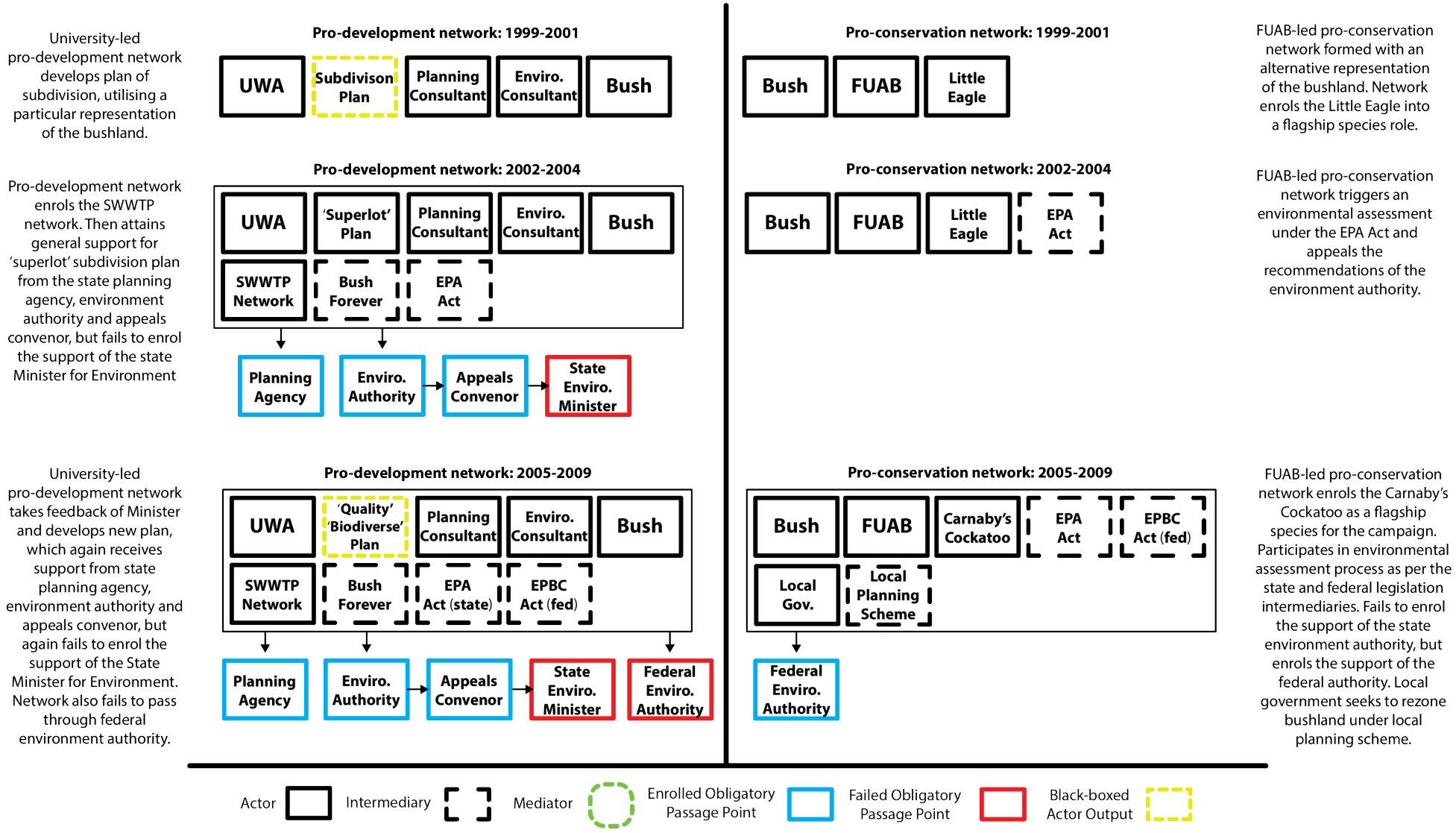


Figure 4.17: Alliance of key actors in Underwood networks at the end of 2009.

4.5 2010-2016: Partial Network Stabilisation for the University

It had been over a decade since the University first submitted plans to develop the Underwood bushland and yet they had not been able to secure any approvals. The growth of the pro-conservation campaign led by the FUAB had garnered significant community support, utilised the agency of the Carnaby's, and delivered a local heroine in Marg Owen. However, the University's ongoing negotiations with government agencies would soon pay dividends.

Firstly, the local government's Council would begin to settle on a firm pro-development position. After voting to rezone the land in September 2008, revoking the decision in December 2008, moving a motion reaffirming their pro-conservation position in December 2009, the Council again moved a motion stating that they no longer held the view that the proposed development should not proceed (City of Nedlands 2010). After receiving additional information and clarification by the proponent, the Council changed their view and supported the proposal, recommending to the Appeals Committee a number of approval conditions (City of Nedlands 2010).

The decision was met with community dismay in the local *Subiaco Post*, with many appearing disenfranchised and questioning the democracy of a system that failed to uphold the community's long-standing view:

> "… its latest backflip, in an entirely non-transparent and undemocratic process, leaves me wondering what its true agenda is and why it has done this big turnaround in policy. Shame on those councillors who, appear to me to have buckled to the tactics of UWA which has been so successful over the years in silencing its critics… I hope they can look their children and grandchildren in the eye after this decision and feel proud of themselves" (Anderson 2010, 2).

> "I had thought the council was the last hope for the bush, but now it seems to be putting development of any sort above care for the environment" (Segal 2010, 2).

> "Apart from the loss of habitat for the endangered Carnaby's black cockatoo, the association is deeply concerned about the lack of transparency, accountability and due process evidenced by this about-face" (Eastwood 2010, 36).

Issues pertaining to transparency were further fuelled by reports that the University had met with Councillors prior to their decision to support the development, and that Councillors opposing the development were prevented from debate (Callaghan 2010).

Meanwhile Marg Owen continued to focus on lifting the public profiles of the many nonhumans present within the bushland, with published articles on huntsman spiders;

fairy wrens; western bearded dragons; macrozamias; mountain ducks; and of course the Carnaby's Cockatoos. Regarding the latter, Marg noted:

> "Ron Johnstone, the WA Museum's curator of ornithology, told me that if we lost this flock of cockatoos in the western suburbs through clearing our banksia, jarrah and tuart woodlands, we would never have cockatoos back in the area" (Owen 2010a, 40).

Shortly after this, the state's Minister for Environment, Donna Faragher released her determination on the project. After receiving additional information, assurances from the state water corporation, the local government and the state planning agency, and after securing an additional 3.9 hectare conservation parcel, Ms Faragher supported the proposed development and issued state environmental approval for the plan shown in Figure 4.18 (Faragher 2010; EPA 2010). The additional conservation area in combination with the bushland retained in public open space resulted in 47% of the existing bushland being preserved (Faragher 2010).

Figure 4.18: Approved subdivision layout including additional conservation area (Office of the Appeals Convenor 2010).

The environmental approval then allowed the state's planning agency to issue a determination on the subdivision proposal. The agency supported the officer recommendation to approve the University's subdivision subject to conditions, for a four year period.

Following intense public scrutiny at the hands of the *Subiaco Post*, in a matter of months the University had secured the support of the local government Council, the state Minister for Environment, the state planning agency, and successfully navigated its network through two obligatory passage points (see Figure 4.20). The approvals would act as immutable mobiles – fixed (for four years) and mobile translations of the proposed development and its accepted potential impacts on the environment.

Noting that the federal environmental approval was the University's last hurdle, the FUAB began lobbying local federal Member of Parliament Julie Bishop, and encouraged supporters to write to the federal Minister for the Environment, Tony Burke. However, quickly the community outrage dimmed and Marg Owen largely remained the only person writing to the local newspaper about the fate of the Underwood Avenue bushland and its inhabitants.

Throughout the following four years the FUAB and Marg Owen continued their activism, waiting for the University to submit their application to the federal government for their third and final approval. Marg published a further 52 articles in the *Subiaco Post* in these years, bringing to the forefront the various orchids, insects, birds, raptors, reptiles, spiders, fungi and frogs discovered in her travels through the bush. The Carnaby's continued to capture the attention of the community both near and far, and remained the flagship species of the Underwood campaign. Using photography and narrative, Marg consistently broadcast to the community their reliance on the Underwood bushland and their general decline:

> "These birds are precious and are struggling to even persist into the future. Let us appreciate them and our unique banksia, jarrah and tuart woodland" (Owen 2011a, 36).

> "We are watching three cockatoo species die out" (Owen 2012, 34).

And, in late 2011 the Carnaby's were joined at Underwood by the Forest Red-tailed Black Cockatoo who, for the first time, were observed roosting in the area. It signified further habitat fragmentation throughout the surrounding regions, and the continuing displacement of black cockatoos generally. Whilst the arrival of the Red-tails, listed as vulnerable under the *Environmental Protection and Biodiversity Conservation Act 1999,* would result in food resources being stretched thin, it also signified the arrival of another powerful nonhuman actor that had the ability to fascinate, enchant, and charm local humans. With their arrival they, too, communicated a message of habitat loss that was quickly broadcast by local journalists with headlines such as, "Our cockies are doomed" (Callaghan 2011, 9), and, "It's a cockatoo crisis – conservationists" (Christian 2012, 32). Through the vivid photography of Marg Owen, the FUAB demonstrated the strategic importance of pockets of remnant urban bushland for the survival of the many nonhuman species that continued to rely upon their untamed wildness for food, shelter, and breeding.

Six years after the University received state approvals, they were yet to obtain their third and final approval from the federal government. With the arrival of the Red-tails, further documented declines in the Carnaby's, and a growing community movement, navigating

through the federal environmental obligatory passage point had become increasingly challenging for the University. Despite these new dynamics, in October of 2014, the state planning agency resolved to extend the subdivision approval for an additional four years without significant fanfare (WAPC 2014). In June of the following year, the University requested that the state's Minister for Environment authorise a section 46 review to extend the environmental approval to align with the timing of the subdivision approval (Office of the EPA 2015). The environment authority subsequently provided a temporary one year extension, but have yet to provide a recommendation to the Minister on the formal request for a further extension.

Meanwhile, with the broadcasting powers of social media the FUAB's movement was continuing to expand. Utilising Marg's photography, the FUAB were able to broadcast their conservation message to a wider audience than the *Subiaco Post* and increase pressure on both the University and the state government for a pro-conservation outcome. The FUAB continued to circulate petitions, organise rallies, and lobby politicians in their efforts to promote their translation of the bushland as an ecologically significant and biodiverse rich site.

Figure 4.19: Signage promoting the FUAB's campaign during the annual City to Surf fun run along Underwood Avenue (Save Underwood Bush 2018).

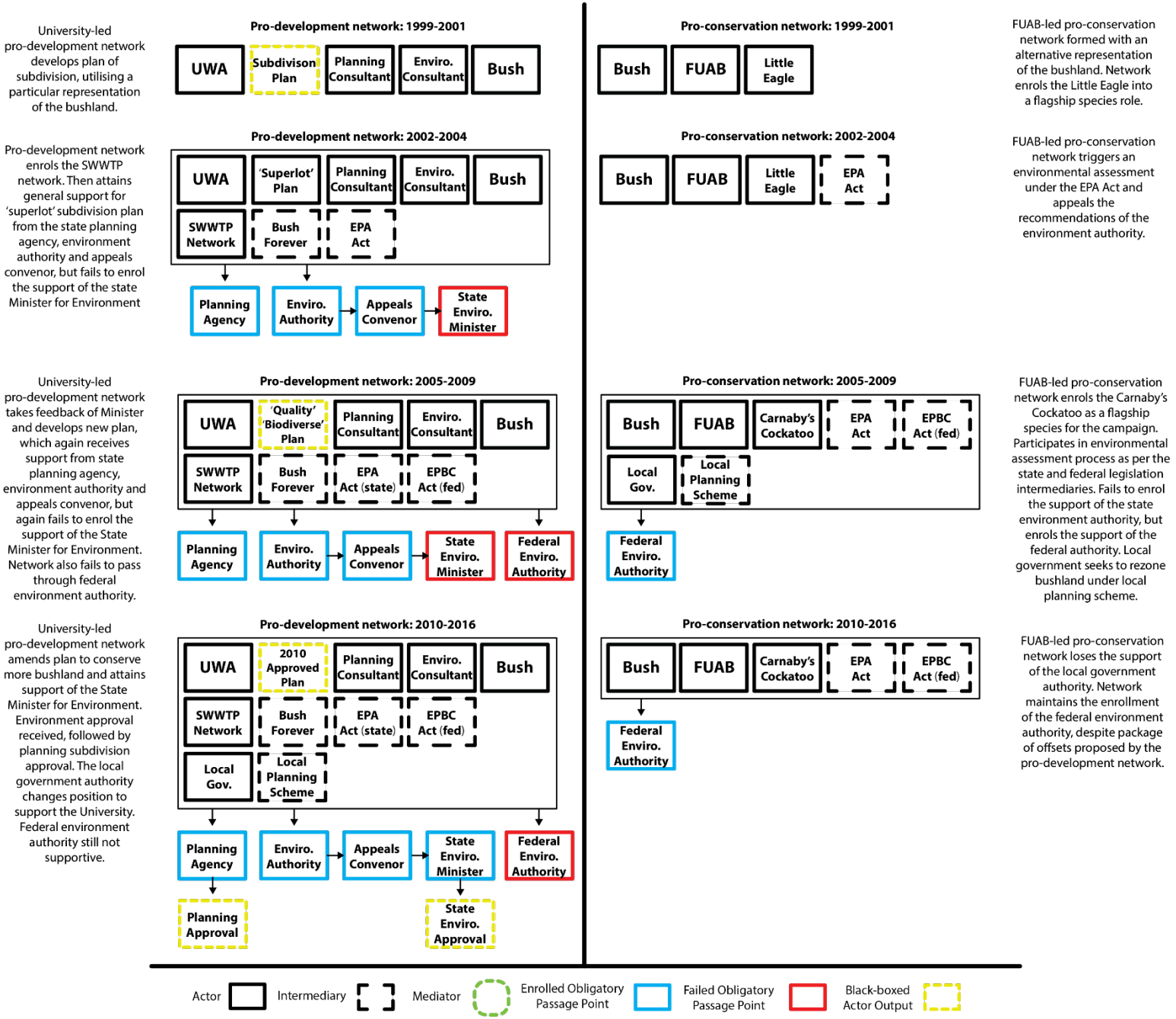


Figure 4.20: Alliance of key actors following the issue of state approvals in 2010.

4.6 Summary

The chapter has presented the case of the Underwood Avenue bushland and the complex more-than-human networks involved in the politics of the University's attempts to subdivide the site. The case study has demonstrated the diversity of human and nonhuman actors involved in this particularly controversial urban development matter, and how the representations of the affected bushland nonhumans were produced as a process of translating human-nature relations. Both the University-led network and the FUAB's pro-conservation network deployed competing translations of the bushland and its inhabitants in their efforts to negotiate with, enrol, and mobilise key decision-makers.

By 2010 the University had successfully enrolled and mobilised a number of actors, but had failed to bring together the stable alliance required to implement its proposed development. Utilising their array of technical experts, the University had managed to slowly negotiate its way through a number of obligatory passage points resulting in a subdued SWWTP-network, a supportive state planning agency and environment authority, and several obliging Appeals Convenors. The negotiations resulted in a number of design modifications throughout the years, resulting in a slightly lower lot yield and a higher percentage of open space and conservation zones, in addition to a range of offsets to counter the impact on the local Carnaby's. Despite this, the University's network failed to enrol the support of the federal environment authority, who perceived the development as detrimental to the sustainability of the endangered cockatoo. Attempts to extinguish the agency of the Carnaby's were made, utilising technical scientific evidence pointing towards a healthy population size and alternative habitat venues nearby. Nonetheless, the University's attempts failed and they were unable to mobilise the support of the federal environment authority and the federal Minister for Environment. As a result, the University's network reached a block, which to date, has yet to be penetrated.

Whilst the FUAB had failed to prevent the University's network from obtaining state approvals, they had proved to be a significant hurdle. Utilising local media to deploy translations of the bushland assemblage as a valuable ecological asset, they were able to enrol the broad support of the wider community, placing pressure on local politicians. Marg Owen's anthropomorphised translations of the lives of individual inhabitants piqued the interest of the community and illuminated the daily dynamic multispecies interactions within. Further, capitalising on the agency of the Carnaby's and by constructing a discourse of decline, the conservationists successfully promoted dissidence in a number of key decision-makers. The pro-conservation network had slowly and evasively infiltrated the political system of the planning process and actively sought to dismantle

the University's translations of the bushland and the Carnaby's. This placed pressure on the reputation of the University, who responded with attempts to reaffirm its financial problematisation and perceived responsibility to tap into the economic value of the bushland site as a solution. Upon enrolling the support of the federal environment authority, the FUAB have continued to develop their local knowledge of the bushland and its inhabitants in order to retain pressure on the state government to place the bushland into the conservation estate.

As of 2018, the University has yet to reapply for federal environmental approval and is seeking to maintain stability of the alliance of actors it has mobilised thus far. This includes convincing the state environment authority to support their request for an extension to the existing approval, and negotiating a second extension for the subdivision approval that is due to expire in mid-2018. However, in late 2017 the environment authority communicated to the FUAB they would not be recommending the Minister provide an extension given the further decline of the Carnaby's Cockatoos and the listing of the banksia woodlands as a threatened ecological community by the federal government (Margaret Owen pers. comm. 2017). This presents an opportunity for the pro-conservation network to enrol and mobilise the state environment authority and Minister for Environment and have the bushland preserved in perpetuity. Accordingly, neither the University-led pro-development network nor the pro-conservation campaign have yet succeeded in achieving their end-goals, but remain active in their efforts to do so.

The Carnaby's have continued to captivate the people of Perth as their populations encroach further into suburbia. The discourse of decline instigated by conservationists has enabled the species to drive conservation campaigns elsewhere, placing pressure on the government to put measures in place to protect the species. As a result, the species has become a flagship species for the broader conservation movement in the Perth region, increasing its political agency as a stakeholder and increasing community awareness of the biodiversity loss associated with the urbanisation of remnant bushland.

Figure 4.21: A Carnaby's Cockatoo mascot greeting then Premier Colin Barnett during the 2017 state government election (Save Underwood Bush 2018).

Chapter 5 The Mangles Bay Marina

5.1 Introduction

Chapter 5 presents the second case study of the dissertation: the proposed Mangles Bay Marina, situated in the southern region of the Perth metropolitan area. Whereas the Underwood Avenue case featured a private landowner seeking approval to develop land, the Mangles Bay case is a government led project seeking to develop and privatise coastal land previously reserved for public recreation. As a result, the community led conservation campaign by Preserve Point Peron (PPP) and Hands Off Point Peron (HOPP) was also tinged with an element of social justice. As per the previous chapter, a chronologically ordered narrative will be presented from 2005 to 2018, highlighting key moments for both the pro-marina and pro-conservation networks, and how they navigate through the planning system representing the local nature assemblages of Cape Peron and Mangles Bay.

5.2 Setting the Scene – Actors & Network Configurations

Cape Peron is situated south of Perth within the City of Rockingham, Western Australia. Like much of the WA coastline, the area has been retained as a place of conservation and recreation, with some small holiday and camping accommodation. To the north Mangles Bay abuts the cape and sits within Cockburn Sound. South of the cape the Shoalwater Islands Marine Park is an A-Class[1] reserve providing a protected habitat for a range of marine and terrestrial fauna, avifauna and flora. Inland, Lake Richmond – a freshwater lake unusually close to the ocean – provides further habitat for numerous birds and an endangered community of Thrombolites – dome shaped structures constructed by "microorganisms that resemble the earliest life on Earth" (DPAW 2016).

[1] In Western Australia 'Crown' land can be reserved for various public purposes. Reserves requiring the highest level of protection are classified as A-Class. This is typically used for areas of high conservation value, such as National Parks (Landgate 2018).

Figure 5.1: The beach of Mangles Bay along the Point Peron coastline (Quinn 2016).

Figure 5.2: A view of Lake Richmond, the freshwater lake situated near the proposed Mangles Bay marina site (Quinn 2016).

Since the 1970s a number of proposals for a marina based at Mangles Bay had been floated and subsequently withdrawn for various reasons, including environmental concerns. From the late 1980s proposals sought to replace existing moorings within the bay with an offshore marina, to serve the growing population in the Rockingham region and reduce mooring scars on seagrass beds. However, in 1993, 1998 and 2002 the EPA considered the area of seagrass needed to be excavated to facilitate construction was environmentally unacceptable, despite each revised proposal seeking to address the

issue (EPA 2006). The EPA highlighted the ecological function of the seagrass meadows, which provide critical habitat to fish stocks within Cockburn Sound, and noted since the 1970s there had been little natural recovery and repair of existing meadows (EPA 2006).

In May of 2003, a severe storm battered Cockburn Sound resulting in a number of boats breaking their moorings in Mangles Bay, causing significant property damage (Cockburn Sound Management Council 2003). Following the storm, support for a marina that would provide safe harbour for vessels strengthened and quickly became a local election issue during the 2004 federal election. Local conservative candidate and president of the Rockingham Marina Action Group, Phil Edman, spearheaded the campaign. Following defeat at the federal election, Edman was successfully elected to the Rockingham City Council. In this position Edman would develop key relationships with the local mayor, Barry Sammels, and the local centre-left state politician Mark McGowan.

McGowan would go onto successfully lobby his colleague, the state's Minister for Planning, Alannah MacTiernan, for an initial grant of $250,000 to fund an impact study (Government of Western Australia 2004; MacTiernan 2003). Following a one-on-one meeting with then Prime Minister, John Howard, in 2004 Edman had proven to be an influential actor, securing a further $250,000 grant from the federal government (Government of Western Australia 2009). With the support of the City of Rockingham, Edman had triggered a revitalised attempt at a proposed Mangles Bay marina.

Named the Point Peron Tourist Precinct, the project was promoted as a solution to the perceived unsafe boating facilities currently provided in the area and could assist in boosting the local economy through tourism. The then Rockingham Planning and Development Taskforce would lead the initial project investigations with the assistance of the Cape Peron Tourist Precinct Project Steering Committee, as chaired by Barry Sammels (Government of Western Australia 2005; Strategen 2006). The project formed part of a broader attempt by the state government to revitalise the Rockingham region, but had no further funding committed following the completion of the impact study. The pro-marina network had formed with an initial alliance of local, state and federal government actors, with a clear goal of developing a new marina facility in the Point Peron region.

In order for the network to progress it would require the support of a number of key decision-making agencies through planning and environmental approval obligatory passage points. Critical to the success of the network would be obtaining the support of the state environment authority by demonstrating the project would not have a detrimental impact on the local seagrass meadows and other marine and terrestrial

nonhumans and nature assemblages. The network would also be required to maintain support of the local government and enrol the state planning agency when developing the structure plan for the site and seeking an amendment to the zoning under the regional planning scheme. The alliance of key political actors required for the network to achieve its goal of implementing the proposed marina is illustrated in Figure 5.2 below.

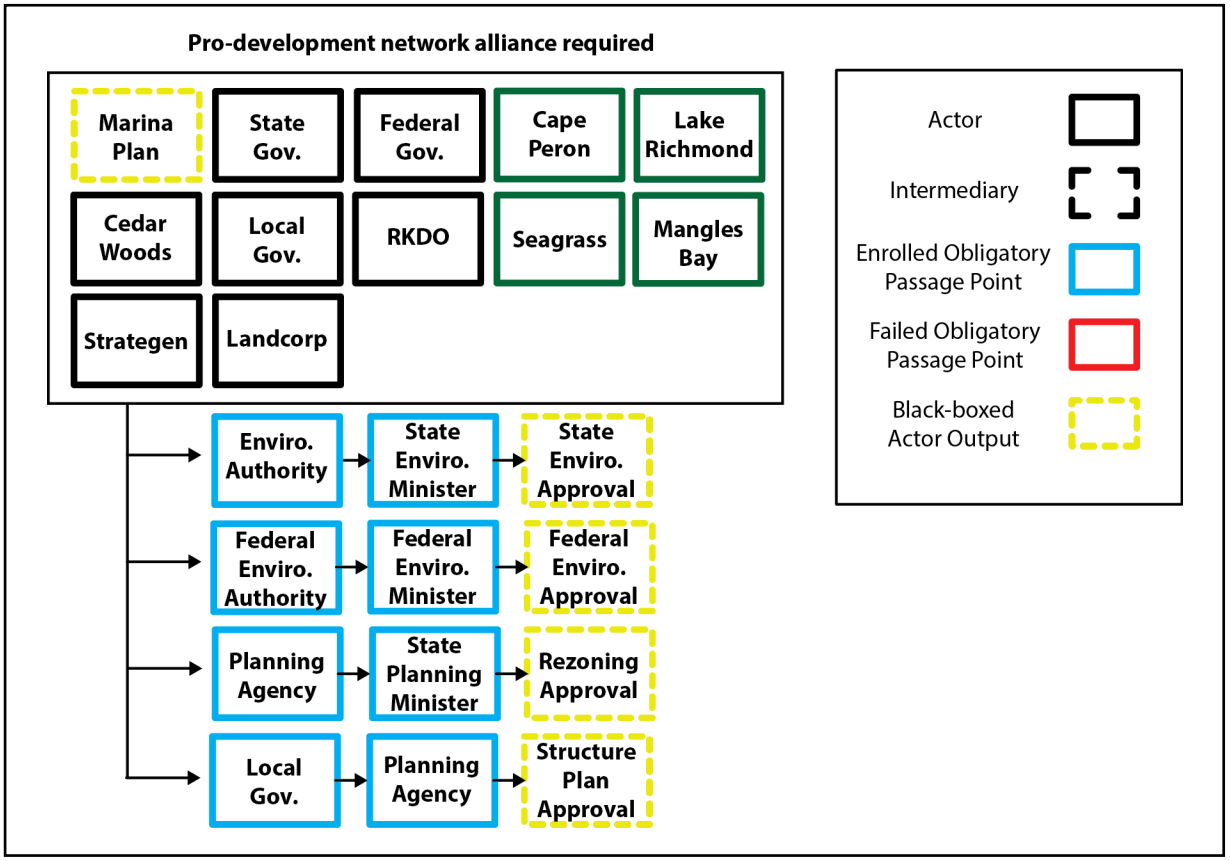


Figure 5.3: Alliance of key actors required by the pro-marina network.

In 2005, a group of local environmentalists affiliated with the nearby Naragebup Environment Centre formed Preserve Point Peron (PPP) with the aim of lobbying and writing submissions against the proposed marina in the region. PPP would drive the pro-conservation network from the outset by participating in the stakeholder engagement sessions and increasing community awareness of the environmental implications of the project. As the project progressed and the pro-conservation network expanded, Hands Off Point Peron (HOPP) would be formed and operate alongside PPP. Led by environmental activist Dawn Jecks, the group sought to increase pressure on the government through direct action, such as protests and rallies, and provide a greater focus on the social and economic implications of the project. Both PPP and HOPP were formed and led by local residents who had developed long-term relations with the Point

Peron natures. As a publically accessible coastal environment, many of the conservationists utilised Mangles Bay for recreational purposes, and as a place to connect with the local marine ecosystem. The activists appeared to have a strong sense of attachment to the region; it formed part of their sense of place and a key connector to nature. In order for the region to be protected from development, the network would be required to either shift the position of the state government or enrol the support of key decision-making agencies to block the progression of the pro-marina network.

The focus of the chapter hereafter is to detail the chain of events between 2005 and 2018 for both the pro-conservation and pro-marina networks, and how each navigated a path to achieving their respective goals.

5.3 2005-2008: Development of the Mangles Bay Marina Concept and Early Opposition

> *"…It's just surrounded by a sea of houses and now they want to wipe out all of that section. And I said to one of the councillors, 'Well what's going to stop them from moving out there and out here?' and she said, 'Nothing, that is the next step'."*
>
> (Interview with HOPP14, October 19, 2016)

The prospect of a marina within Mangles Bay had divided the local Rockingham (human) community for decades. As a coastal playground for locals and the broader Perth population, Mangles Bay was a space to connect with the local marine and terrestrial natures. It was a sentimental area for many. With this sentiment came a great sense of protection. Protecting Cape Peron and Mangles Bay was not only a matter of environmental integrity and protecting a place of perceived beauty, but integral to securing a way of life and a sense of place (see Higgins 2005; Edwards and Edwards 2006; Sykes 2006; Unknown 2009; Jecks 2006; Lowe 2010). For others, the area was considered run down, unkempt, weed-infested and a place for antisocial activity (see Palmer 2005; Morton 2006; McAullay 2009; Sykes 2006; Stone 2009; Taylor 2011; Ockwell 2012). The construction of a new marina precinct promised renewed economic activity, employment opportunities, and improved boating facilities. Whilst some viewed the development as a new wave of investment for Rockingham, others viewed it as the opening of the flood gates for the development of green spaces in the Point Peron area and the erosion of a cherished lifestyle.

Following the early alliance of local, state and federal governments to provide initial funding, a feasibility and impact study was ordered by the state government. The first step in the study was a public forum held over two nights in May, which sought to develop

a vision for the Point Peron Tourist Precinct and hear the differing perspectives of the community (*Weekend Courier*, May 27, 2005; June 1, 2005). Whilst the focus would be on providing additional, safer moorings for local boat owners, and for improving the tourism potential of the region, other benefits of the proposed marina touted included improved access to Cape Peron; rehabilitating degraded parcels of adjacent bushland; and improving the quality of the marine environment (*Weekend Courier*, May 13, 2005; May 27, 2005; August 12, 2005). The precinct was envisaged to transform what had become, in many eyes, a run down and under-utilised section of prime coastland. Further, marinas were, and still are, romanticised as iconic landmark destinations capable of revitalising declining local economies and rebadging battered identities as, for example, Fremantle or Hillarys – two existing and relatively successful marinas in the Perth region. The development of a marina in the Point Peron region was framed as an economic opportunity for otherwise under-utilised, and economically under-performing, space. Accordingly, the pro-development network's problematisation was two-pronged: providing a safe mooring space for local boat owners; and revitalising the Point Peron region to bring new economic opportunities for the Rockingham region.

However, opposition grew quickly. Many locals were concerned any development in the Cape Peron area, whether within Mangles Bay or inland on Point Peron, would have a detrimental impact on the existing environment. Concerns focused on the loss of seagrass within the bay and the associated effects on fish stocks; the loss of remnant coastal bushland located within the Rockingham Lakes Regional Park; and the risk of salt-water intrusion into Lake Richmond – a freshwater lake providing habitat for flora, fauna and the endangered Thrombolites. Others argued that, rather than improving accessibility to the area, the proposed marina would be elitist, providing moorings for the wealthy whilst being unaffordable for local boat owners, and reducing beach access to the general community.

The surge in distrust and dismay by sections of the community led to the creation of the counter network 'Preserve Point Peron for the People', often abbreviated to simply 'Preserve Point Peron' (PPP). The group sought to establish a community campaign to defend the local environment, hold the proponents to account and counteract the proclaimed benefits of the proposed marina. Many of the founding members held links to the local Naragebup Environmental Centre or volunteered with the local citizen science seagrass monitoring group, bringing with them a perspective formed through sustained immersion in the local marine and terrestrial natures. As a group, they sought to actively promote their perspective, with the preservation of the natural environment their key priority.

Upon completion of the first phase of community consultation, a stakeholder reference group (SRG) was formed to assist in developing a range of concept plans. The group consisted of a range of local actors including nearby leaseholders, members of PPP and other humans with perceived stakes, and met on four occasions to process concerns, opportunities and community feedback into a comprehensive proposal (Strategen 2006). Led by a third party facilitator, the pro-marina network argued the process was effective, with various concepts being supported by participants, and each plan specifically addressing concerns in relation to bushland and seagrass meadow loss (Strategen 2006). However, participants opposed to the project felt the process disregarded or overly simplified their concerns, and used the *Weekend Courier* to foster a sense of distrust in the process:

> "The SRG workshops are a technique to manipulate the public to provide the outcomes planned by the proponents. The abbreviated conclusion that the majority support the plan(s) is just part of the spin to discourage potential objectors" (Hodgkinson 2005, 11).

At the conclusion of the community consultation phase, the pro-marina network had developed five concept plans that achieved various levels of compromise between concerns and opportunities. The plans all included an inland marina, which was considered less detrimental to existing seagrass meadows than a floating marina (Strategen 2006). Figure 5.4 presents the final three plans. Two of the plans were discarded as they were deemed generally incompatible with the project's environmental objectives – which broadly sought to positively contribute to the marine and terrestrial environments (Strategen 2006). Option 2.2 was deemed the most compatible by the SRG and the steering committee, but was later redesigned by the committee in an effort to reduce the overall footprint of development and the level of bushland impacted, in line with community concerns (Strategen 2006). Two final versions prevailed, which reduced the clearing of bushland by 7.6 and 13 hectares respectively, and featured accommodation for tourism, commercial, residential and public open space areas in addition to a 500 pen marina (Strategen 2006). The two plans – considered actors that black-boxed in-depth discussions, ideas, concerns and thoughts - would be used to navigate the development proposal into the next stage, a strategic environmental review.

Again, the PPP pro-conservation network argued the community review process through the SRG was flawed and lacked integrity:

> "I defy them (CPTPP steering committee) to give me a list of people (in the SRG) who agreed to that concept plan… There was stunned silence when that plan was put on the board" (Goodale cited in Nugent 2005, 3).

Figure 5.4: Options 2.2 - 2.4 of the proposed Cape Peron Marina (Strategen 2006)

Regarding the two final versions, Goodale argued the PPP would remain opposed to any proposed marina at the site given the implications on the seagrass meadows, the potential impact to Lake Richmond's hydrology and the risk of disturbing nearby acid sulphate soils (Thompson, November 11, 2005). The pro-conservation network's concerns were validated by the Urban Bushland Council (UBC) and the Conservation Council of WA (CCWA), who publicly supported the PPP's opposition and urged the government to reconsider their plans (Thompson, November 4, 2005). Chris Tallentire, then director of the Conservation Council, reiterated Goodale's concerns regarding the risk to Lake Richmond and the Thrombolites, calling the plans "fatally flawed with numerous unresolved environmental hazards" (Thompson, November 4, 2005, 3).

The enrolled support of the UBC and the CCWA increased the political strength of the pro-conservation network, legitimised their environmental concerns, and extended the reach of the network to the broader Perth population. The marriage of Tallentire's authority with the local knowledge of Goodale and his associates strengthened the network's ability to trigger dissidence in key decision-makers, by deploying counter translations of the potential ecological impacts of the proposal and contesting the accuracy of the pro-marina network's translation. Continued contestation around the legitimacy and accuracy of the pro-marina network's ecological translations also served to plant further seeds of doubt into the local community regarding the project's environmental acceptability.

With the finalisation of concept plans, the strategic environmental review process commenced. Under section 16(e) of the *Environmental Protection Act 1986 (WA)* the state environment authority may assess a proposal, from a strategic point of view, to provide guidance to the state's Minister for the Environment and advice to proponents on the likely environmental implications of a proposal or phenomenon. The advice does not constitute an approval but assists the Minister and/or proponents in determining whether to proceed with a full environmental assessment. In this sense, the process could be considered an early obligatory passage point for the pro-marina network. Failure to convince the environment authority, at this early stage, of the environmental acceptability of the proposed development would hinder the network's ability to enrol and mobilise the Minister for the Environment and the securing of state environmental approval.

To facilitate the strategic review, the pro-marina network enrolled and tasked Strategen, an environmental consultant, to prepare a substantial document translating the outcomes of the community consultation process; an analysis of various potential sites; details pertaining to the two preferred black-boxed concept plans and the evolution of these; the translated social, economic and environmental opportunities and implications; and a review of community feedback (Strategen 2006; Strategen 2006a). The packaged document – a black-boxed actor in itself – can be seen to be strategically prepared and deployed by the pro-marina network with the specific intention of enrolling the early support of the state environment authority by translating the outcomes of the SRG.

Strategen claimed the proposed development would not have a negative impact upon the local nonhuman inhabitants and ecosystems, directly conflicting with the pro-conservation network's claims. Although acknowledging development may risk salt water intrusion, general dewatering, exposure to acid sulphate soils and a reduced vegetation buffer to Lake Richmond (Strategen 2006, 108), the report concluded the impacts of the proposed development, overall, were not "unacceptable" (Strategen 2006, 112 and 122). The excision and loss of 39 – 51 hectares of *Bush Forever* bushland from Rockingham Lakes Regional Park was framed as, on balance, beneficial as it would facilitate the construction of public amenities (Strategen 2006, xii).

In relation to seagrass, Strategen noted all marina options would result in a loss of seagrass. However, they claimed these "minor" losses were considered potentially acceptable by the Marine Parks and Reserves Authority if the marina also provided a considerable public benefit (Strategen 2006, xiv). Demonstrating this benefit would become an important challenge for the network in order to successfully navigate through the environmental approvals process. As a result, a $1 million offset package was

proposed to rehabilitate nearby seagrass meadows until ecological functionality was suitably restored within 5-10 years, despite acknowledging long-term seagrass rehabilitation had previously proven unsuccessful within the nearby Cockburn Sound (Strategen 2006, xv, 122). The deployment of the package by the proponents would serve to alleviate environmental concerns within the community, but also to negotiate a positive outcome through the state environment authority's obligatory passage point.

In August of 2006 the environment authority released their section 16(e) advice to the acting state Minister for Environment[2] regarding their perceived environmental viability of the proposed Cape Peron Tourist Precinct Project. Despite the pro-marina network's attempts to seduce the environment authority with their package of positively framed translations and offsets, the authority found that the proposed development would trigger an array of significant environmental impacts, the severity of which required further investigation (EPA 2006). On this, authority chairman Dr Wally Cox noted the loss of seagrass and unproven rehabilitation methods, potential known and unknown impacts on Lake Richmond and considerable vegetation loss signify the need for further investigations, justification and design amendments (EPA 2006a). Such investigations would need to "convincingly demonstrate" that development would not negatively detract from the environmental significance of Lake Richmond, devalue the Rockingham Lakes Regional Park and provide surety regarding seagrass rehabilitation (EPA 2006, 24-25). The authority also questioned the level of public benefit, and noted finding a balance between improving the social aspects of the development without further environmental degradation would prove problematic (EPA 2006). The advice would serve to assist the acting state Minister for Environment, and the state government, to form a position on whether the development's viability (environmentally, economically and politically) was sufficient to pursue and fund the required environmental impact assessment.

In this instance the environment authority chose to remain cautious and resisted supporting the pro-marina network's claim that the environmental impacts of the proposal were generally acceptable (Strategen 2006). Rather, a range of additional studies was requested to scientifically prove the network's claim and to secure approval, and thus passage through the authority's obligatory passage point. Sammels interpreted the authority's position, which did not rule out a potential marina, with optimism stating:

[2] Local MP and Minister for the Environment, Mark McGowan, was deemed to have a conflict of interest in dealing with the proposed marina at Mangles Bay. McGowan was a founding member of the Naragebup Rockingham Environment Centre and a member of the Rockingham-Kwinana Taskforce/Rockingham Development Office which lobbied for the resurrection of the marina proposal at Point Peron (The West Australian, April 12, 2006). Accordingly, McGowan stood aside from his Ministerial duties in relation to the proposed marina.

> "…the city and the committee welcomed the EPA's advice that development of a tourist-based marina in Mangles Bay had the potential to be carried out in an environmentally friendly way" (Sammels cited in Thompson, October 27, 2006).

However, unlike in the Underwood Avenue Bushland case study, the community surrounding Mangles Bay appeared divided in their support for or against the proposal. Whereas the proposed residential development at Underwood Avenue would primarily serve the interests of the University of Western Australia, the proposed marina would be a community facility developed for the 'public good'. It had been pitched as a solution to protect existing boats from storm damage, to cater for the region's growing rate of boat ownership, to provide economic benefits and create a 'world-class' place of recreation. Accordingly, the pro-conservation network were tasked with convincing not only the key decision-makers of the potential environmental implications, but the local Rockingham community too:

> "The natural beauty and tranquil ambience of the region will be destroyed forever by short-sighted developers who are only interested in the profits to be made. There are powerful and compelling arguments that the development will bring tourism, jobs and money to the area. However, lifestyle is more than money – it is about people enjoying, nurturing and preserving a fragile environment so that it will be available for future generations to enjoy" (Steel 2006a, 15).

The PPP group were actively fending off arguments from pro-marina locals that Point Peron had been neglected and was in a state of disrepair. The group held nature walks and clean up sessions as a method of engaging with local users, promoting their cause and providing opportunities for people to reconnect with the area (Mumme 2006). Additionally, the local Naragebup Rockingham Environment Centre sought to enrol the local Little Penguin colony, who utilise the Mangles Bay area as a feeding sanctuary and who were already facing pressures from increased development surrounding nearby Cockburn Sound, as an actor that could bring conservation supporters into association with the pro-conservation network (*Weekend Courier*, August 11, 2006). Despite these attempts to push their environmental agenda and discourage local support for the marina, a phone poll commissioned by the Rockingham Development Office indicated 51% of Rockingham residents supported, or strongly supported, the proposed development (Rockingham Development Office 2006, 35). Only 20% were against the proposal, and 29% undecided.

In their report, the state environment authority acknowledged many of the 453 submitters were not opposed to a marina in Rockingham per se, but were clearly against any significant development occurring at Cape Peron for environmental reasons (EPA 2006). Nearby, Wanliss Street was touted as a potential alternative site by locals, offering numerous environmental advantages over the Cape Peron region, including deeper

water and less, if any, seagrass or bushland at risk. A growing sense of frustration was becoming evident from locals who supported the development:

> "…to construct the marina we are only going to clean up an area that, in many incidences, is only being used as an extension of the Rockingham tip, and mainly consists of beach sand. Let's get on with it, Rockingham. The only thing that's constant in life is change and we certainly need change here to create tourists and commercial activities to meet our children's needs" (Stanners 2006, 13).

Within the pro-marina network local state politician Mark McGowan, and his counterparts in government, remained silent following the release of the environment authority's report. Sammels remained hopeful the government would be decisive in their deliberations and provide the funding required to progress the proposed development in the new year (Parker 2006).

In state parliament the Upper House Standing Committee on Environment and Public Affairs had been investigating numerous points of contention regarding the proposed development. Instigated by the pro-conservation network's 2,145 signature petition to Greens politician Giz Watson – a mediator deployed to agitate the state government - the committee was tasked with investigating the general economic, social and environmental sustainability of the project (Western Australian Legislative Council 2006). The result of the study, as tabled in parliament in September 2007, were 13 recommendations to the government of the day. Many simply reiterated concerns raised via the environment authority pertaining to the health of Lake Richmond, rehabilitation of seagrass meadows, bushland retention, and the like. However, the committee raised one particularly contentious point regarding the legality of the government pursuing development at Point Peron.

In their investigation, the committee identified a 1964 letter between the State of Western Australia and the Commonwealth setting the terms of agreement regarding the transfer of the Point Peron land to the state for the restricted purposes of public recreation (Western Australian Legislative Council 2006). The letter states:

> "I have to advise that the Hon. The Premier of Western Australia has received a communication from the Right Honourable the Prime Minister advising him that the Minister for the Interior has approved of the Point Peron property being transferred to the State of Western Australia, subject to the existing leases and subject also to the future use of the area being restricted to a reserve for Recreation and/or Park Lands, in consideration of a cash payment of £30,460 by the State. The State is in agreement with the provision that the land shall be created a reserve for 'Recreation and Park Lands'…" (Western Australian Legislative Council 2006, 61).

The transfer of land was finalised and confirmed in a further letter from the Hon. Minister for Lands, who stated:

> "The transfer from the Commonwealth to the State has now been completed by the payment of the full purchase price of £30,460, subject to the State recognising existing leases, and also that the future use of the area is restricted to "a reserve for recreation and/or park lands" (Western Australian Legislative Council 2006, 56).

Seeking to clarify whether the State had been relieved of their obligation to maintain Point Peron as a place of public recreation, and thus clarify the agency of the intermediary, the committee contacted the state land agency who forwarded the matter to the state planning agency, who provided the following advice:

> "In 1968 the Commonwealth of Australia released the State from its obligations under the 1964 agreement. We do not have copies of the correspondence on our files to confirm this, but the attached media extract of 15 October 1968… is indicative, and it is thought that relevant letters would be on files of the Department for Premier and Cabinet" (Western Australian Legislative Council 2006, 18-19).

The media extract referred to is a newspaper article from *The West Australian* detailing discussions between then Premier Brand and then Prime Minister Gorton about the future use of the site as a port facility with road and rail access. Regarding the State's land-use restrictions for the Cape, the article quoted Prime Minister Gorton who claimed:

> "the Commonwealth would not act to enforce the original terms of an agreement between it and the State government, providing for the land to be used only as recreational or park land" (*The West Australian,* October 15, 1968, n.p. cited in Western Australian Legislative Council 2006, 63).

Accordingly the committee called on the government to confirm, with appropriate documentation, they had been formally excused of their obligation to maintain Point Peron as a place for public recreation (Western Australian Legislative Council 2006). Whilst the state government was required to provide a response to all of the committee's recommendations and queries within four months, no further discussion regarding the 1964 agreement was had in parliament for several years. Further, despite the agreement being a potentially powerful intermediary reflecting an alliance of actors mobilised for the preservation of the land, the PPP remained silent within the public sphere.

Indeed by this stage, public opposition to the proposed marina also slowly withered as the state government prolonged their deliberation on whether to proceed with the project. Leading into the 2008 state election, the then centre-left government had failed, for reasons unknown, to provide the funding necessary to progress the project into the

environmental impact assessment phase. The government would go on to lose the election to the conservative Liberal Party. During that election, former president of the Rockingham Marina Action Group and local Rockingham Councillor, Phil Edman, had been elected as a Liberal Member of the Legislative Council (Upper House). Edman has been critical of the former government's lack of leadership and drive on the issue, and had indicated he would lobby the incoming government to take control of the project (Thompson, July 18, 2008). Perhaps sensing an incoming conservative and pro-development government would change the pace of the project, the future stalwart of the pro-conservation campaign, Dawn Jecks, made her presence known:

> "Freda Dixon makes some very good points in her letter (Keep boats at the yacht club, Courier, November 28). I especially agree with her statement that the "sea and the beaches are for everyone, not just the privileged few". I also believe that our regional parks are for everyone too. This is one of reasons why I am so strongly opposed to the proposed Cape Peron Tourist Precinct proposal - because it involves selling a large section of Rockingham Lakes Regional Park along with most of the children's holiday camps to make way for hotels and luxury, canal-side houses.
>
> Apart from the social justice aspects relating to the sale of community assets/parks, there are some substantial environmental issues to be considered as well. Of concern is the soil disturbance at Point Peron, which would expose the acid sulphate soils and erode the limestone landscape, posing a serious threat to the nearby Australian heritage-listed thrombolite community at Lake Richmond. The destruction of large areas of seagrass during the dredging for a channel leading out to sea is also of concern. After initial construction this channel will require continuous dredging to stop it from silting up." (Jecks, December 5, 2008).

In summary, the pro-marina network had remained strong through these early years with support from the primary actors generally unwavering. Upon receiving initial funding from the three tiers of government, the network had advanced its agenda, enrolling and tasking Strategen, the environmental consultant, to assist in undertaking initial site investigations, community consultation and the delivery of the strategic environmental review to be assessed by the state environment authority. Whilst this initial foray with the authority was far from positive, the challenges presented were not insurmountable. Local political actors Sammels and Edman had continued to promote the project and its perceived benefits for the local area while the centre-left state government's support for the project appeared uncertain as they headed towards an election in which they would be defeated.

The revival of the Cape Peron marina proposal had been met with mixed reactions from the community in 2005, and remained controversial through this first period to 2008. Whilst those opposed recognised the need for additional boating facilities in the

Rockingham region, the environmental impacts on local seagrass meadows, the adjacent Lake Richmond and the Thrombolites living within, and the general marine and terrestrial ecosystems, were considered too great. On the back of these concerns, the locally formed PPP attempted to use local knowledge coupled with endorsements from more authoritative conservation groups as a method of enrolling both community and political support into their pro-conservation network, with which they had relative success. The period ended with the project facing an uncertain future as the outgoing state government stalled in providing the required funds to progress the project through the environment authority's process and the incoming conservative government remained unclear in their intentions. The alliance of actors achieved by the pro-development and pro-conservation networks by the end of 2008 is illustrated in Figure 5.5.

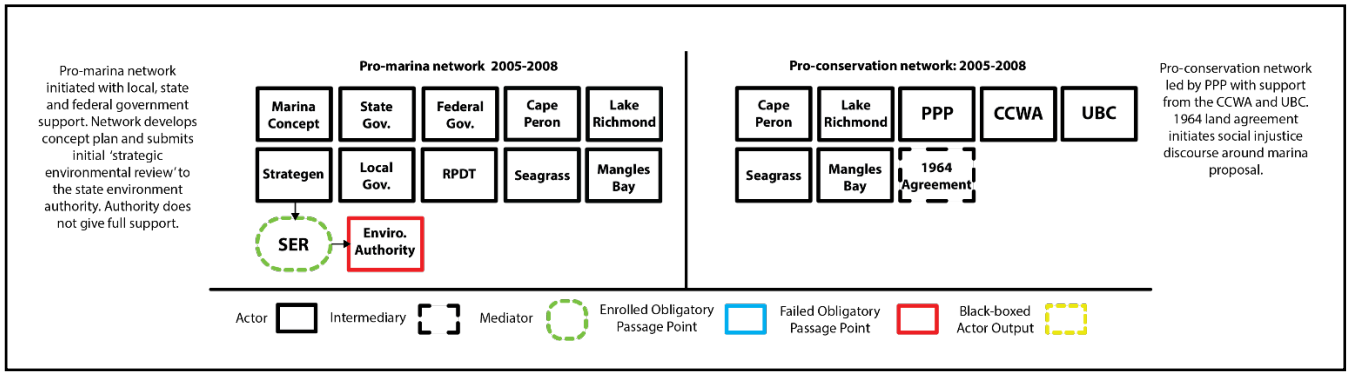


Figure 5.5: Alliance of key Mangles Bay Marina actors at the end of 2008.

5.4 2009-2011: Network Reshaping Amidst Growing Opposition

Following several turbulent years surrounding the progression of the proposed Mangles Bay Marina came a period of uneasy silence for opponents. The former centre-left state government had, for reasons unknown, opted not to fund the project through the environmental approval process. Whilst resolute opponents had maintained a presence in the community and local media, the surge in opposition had mostly, if only momentarily, subsided. However, with the election of Colin Barnett's conservative government the project was set for resurrection resulting in both networks undergoing periods of internal reshaping, with individual actors shifting in their roles, power and authority.

The catalyst for this resurrection, it appeared, was Phil Edman – a long-term advocate for a Rockingham marina and local Rockingham Councillor turned state parliamentarian. Following his election to the Legislative Council, Edman was quickly propelled into the

position of Chairman for the Rockingham-Kwinana Development Office (Day 2009). In this position, Edman could now dictate the development priorities for the Rockingham region and personally lobby for the progression of the Cape Peron project from within the government. With support enrolled from Boating WA (*Weekend Courier*, January 9, 2009), the Rockingham Chamber of Commerce and the City of Rockingham Council (Huizenga 2009), in April of 2009 Edman announced that the government was reviewing the project in preparation for a full environmental impact assessment (*Weekend Courier*, April 10, 2009). The announcement was met with little resistance from opponents in the local media, but would later be subjected to scrutiny as the pro-conservation network sought to highlight a number of scientific uncertainties relating to individual species of nonhumans residing within the subject site.

In September of 2009, Colin Barnett confirmed the government would be proceeding with the project to improve the "awful" facilities in the area (Barnett cited in *Weekend Courier*, October 2, 2009, 5). Detailed social and environmental investigations were promised to further the existing concept plans through the necessary environmental planning obligatory passage points (Government of Western Australia 2009). The government's development body, Landcorp, had been brought into the network and tasked with enrolling a private developer to assist with the planning and development of the project in a public-private partnership (Government of Western Australia 2009). The government, under the leadership of a supportive Premier Barnett, coupled with an empowered Phil Edman had reinvigorated the pro-marina network.

Following the submission of a new 359-signatory petition to the City of Rockingham by PPP, the pro-conservation network would also enter a period of restructuring. Until this point the network was led primarily by the PPP group with strong links to the Naragebup Environment Centre. The emphasis of the network had remained primarily on representing the potential ecological impacts of the proposal based on their own translations of the local ecology. Whilst the network had been relatively successful in driving community concern and raising the profile of the potential impacts, Dawn Jecks and Mark Winter felt there was a need to broaden the focus and emphasise the "social aspects and planning issues" in addition to the ecological concerns (*Weekend Courier*, December 4, 2009, 7). Collectively Jecks and Winter formed the group Hands Off Point Peron (HOPP) who would, alongside PPP, seek to enrol the support required from the community and decision-makers in order to achieve the conservation goals of the pro-conservation network. Utilising Facebook – a broadcasting intermediary extending the network's reach – the group sought to raise awareness of the potential environmental, social and economic impacts of the proposed development, including the ongoing cost

to local ratepayers for maintaining the site in perpetuity (*Weekend Courier*, December 4, 2009). According to a local HOPP member:

> *"It became more angst about - 'they are stealing our park! It's got public access, they will privatise it! It'll be houses and a marina and hotels and you won't be able to go there!'"*
>
> (Interview with HOPP1, August 22, 2016)

The newly formed HOPP would initiate more frequent public displays of opposition including rallies, protests and utilising public question time at Rockingham Council meetings to pressure local politicians and build momentum for the pro-conservation campaign. The approach appeared successful at engaging with the community, and by 2010 HOPP had extended its reach amassing a Facebook following of 4,700 people from across the Perth metropolitan region, providing the network with an improved political power. Jecks noted:

> "It is not suprising that we have had so many people join our group. With only one percent of the original Perth coastal bushland remaining, this project would see the removal of over 75 hectares of publicly owned land at Point Peron out of the 260-hectare area that makes up the Cape. Members of HOPP simply don't want to see our valuable and publicly owned natural assets being sold off, bulldozed and replaced with concrete, bitumen and canal housing" (Jecks cited in *Weekend Courier*, April 9, 2010, 5).

Figure 5.6: HOPP protest against the proposed marina (*Weekend Courier*, April 16, 2010).

The PPP group quickly took a back seat to the increasingly prominent HOPP campaign, led by Jecks who dominated local media. The shift in strategy to highlight the injustice of the proposed project, framed by Jecks as the government privatising *publicly owned* land, triggered a resurgence in opposition the pro-conservation network required to maintain pressure on the government. In April of 2010 the group held their first rally, with 150 supporters attending to demonstrate their opposition to the proposed project (see Figure 5.6; *Weekend Courier*, April 16, 2010).

Later that month the state Minister for Lands, Brendon Grylls, and the state Minister for Planning, John Day, announced that Cedar Woods had been enrolled as the private partner assisting Landcorp (Government of Western Australia 2010). In particular, Cedar Woods would take on the responsibility of progressing the proposal through the statutory approvals process, including an environmental impact assessment. The enrolment of Cedar Woods provided the pro-marina network with the expertise required to prepare the network for passage through the environmental planning obligatory passage points. In response to the growing community opposition, the government reinforced their messaging that the proposal would positively benefit the Rockingham region, and would provide the safe boating facilities required to service the area into the future, thus staying firm to the network's initial problematisation (Government of Western Australia 2010).

In response, Jecks called on Barnett to honour the 1964 agreement between the State and the Commonwealth and formally gazette the Point Peron land as an A-Class reserve (Hidding 2010). Whilst open to negotiating potential low-level, low-impact development, Jecks maintained development of the site as planned would be socially unjust and environmentally destructive (Jecks, March 5, 2010). Jecks was later preselected as the

Greens party candidate for the local Brand electorate at the 2010 federal election, extending the network's reach and providing a greater platform to promote the campaign and raise awareness.

Capitalising on the momentum of local opposition, the Greens alongside Jecks ran with the controversial development as a key local campaign issue. In July, national leader of the Greens, Senator Bob Brown, accompanied Western Australian Greens Senator Rachel Siewert and Jecks on a tour of the site. Brown reiterated Jecks' earlier argument regarding the legalities of the project given the 1964 land agreement, and suggested the development was now a national issue, stating, "If it's not illegal, it's a massive breach of faith" (Brown cited in Hidding 2010a, 1). With the Greens and HOPP, Jecks had widened the scope of protest from simply a matter of environmental concern, to one of social justice and increased the reach and impact of the network into the federal political arena and the digital community of Facebook. Soon after a second public rally was held and attended by approximately 200 people (*Weekend Courier*, July 16, 2010). Edman responded by claiming opponents had continued to "jump the gun" on the project, which had yet to be finalised in design or be submitted for environmental assessment (Edman cited in *Weekend Courier*, July 16, 2010, 21). On the back of campaigning, Jecks would achieve 14.7% of the vote in the federal election – a 5.9% increase in support for the Greens, in addition to the pro-conservation network expanding its support base and political power (ABC 2010).

Soon after the pro-marina network formally submitted the proposal to the state environment authority and the federal environment authority for their respective environmental approvals. The state environment authority classified the level of assessment as a 'Public Environment Review' (PER) – the highest level assessment of the environmental impacts. The network would be required to defend its translations of the perceived impacts on the nonhumans and nature assemblages of Mangles Bay and Point Peron, and navigate a path through the two obligatory passage points. In particular, the network would seek to address the issues raised previously by the state environment authority in relation to seagrass loss and salt-water intrusion into Lake Richmond where the endangered Thrombolite community resided. The support of both authorities would be required in order to obtain approval from the state and federal Ministers for Environment and progress to the land-use planning phase of the project. However, the network would need to withstand the scrutiny of the opposition, with conservation activists provided an opportunity, through public submissions, to discredit the validity of the environmental assessments and promote dissidence within the two environment agencies. With a growing surge of community opposition, the HOPP-led pro-

conservation network would seek to capitalise on any flaws identified within the environmental assessments released for public comment.

The first test for the pro-marina network came shortly after their entry into the environmental approvals process, with the admission that the endangered Graceful Sun Moth had been discovered within the vicinity of the project area. A consultant engaged by Strategen, ENV Australia, identified three living individuals of the endangered nonhuman species in a 2010 site visit, but argued the site's separation from other known habitats limited the proposal's impact on the overall sustainability of the species' total population (Strategen 2012, 167). With the species known for dramatically halting urban developments in the past, the *Weekend Courier* claimed the find would unleash a "tsunami of environmental ramifications" for Cedar Woods (Tomlinson, October 8, 2010, 1). Living for two to three weeks as an adult and typically only traversing a few hundred metres in their lifetime, the moths were (at the time) only known to exist in 10 sets of population groups based on a single variety of plant – the *Lomandra hermaphrodita* – that formed part of the vegetation proposed for clearing (DEC 2011; DEE 2016). The moth had been thought to be extinct in the local area, and claimed by Cedar Woods to be unaffected by the proposed development (DEWHA 2010). However, the discovery at Cape Peron would go on to assist the state conservation agency in identifying that the distribution and population of the species was more extensive than initially thought. Subsequently the species' endangered status was re-evaluated, and subsequently removed in 2013 (DSEWPC 2013). Despite this, the discovery served to highlight the potential unknown environmental impacts of the proposed development – particularly to the endangered Thrombolites whose resilience to change was untested. The acknowledgement provided ammunition to the pro-conservation campaign, with Jecks arguing the unexpected find demonstrated the need for decision-makers to use caution where unknowns exist:

> "There are many cases in the past where a species has initially appeared to be quite ordinary and insignificant; however, proper studies of the species' individual characteristics has gone on to reveal valuable scientific information that has had important applications for medicine, engineering and the like. This is the wrong location for a marina and further demonstrates the need for our Bush Forever sites to remain exactly that; bush forever" (Jecks cited in Tomlinson 2010, 5).

The perceived impacts on the seagrass meadows of Mangles Bay, and their ability to recover from construction related dredging, posed a second and more challenging test for the pro-marina network. Whilst the state environment authority were assessing the PER, "Seagrass warning" headlined the front page of the local *Weekend Courier* (Nugent 2011, 1). A group of 20 researchers had declared the specific species found on the Western Australian coastline, including in Mangles Bay – *Posidonia sinuosa* – was

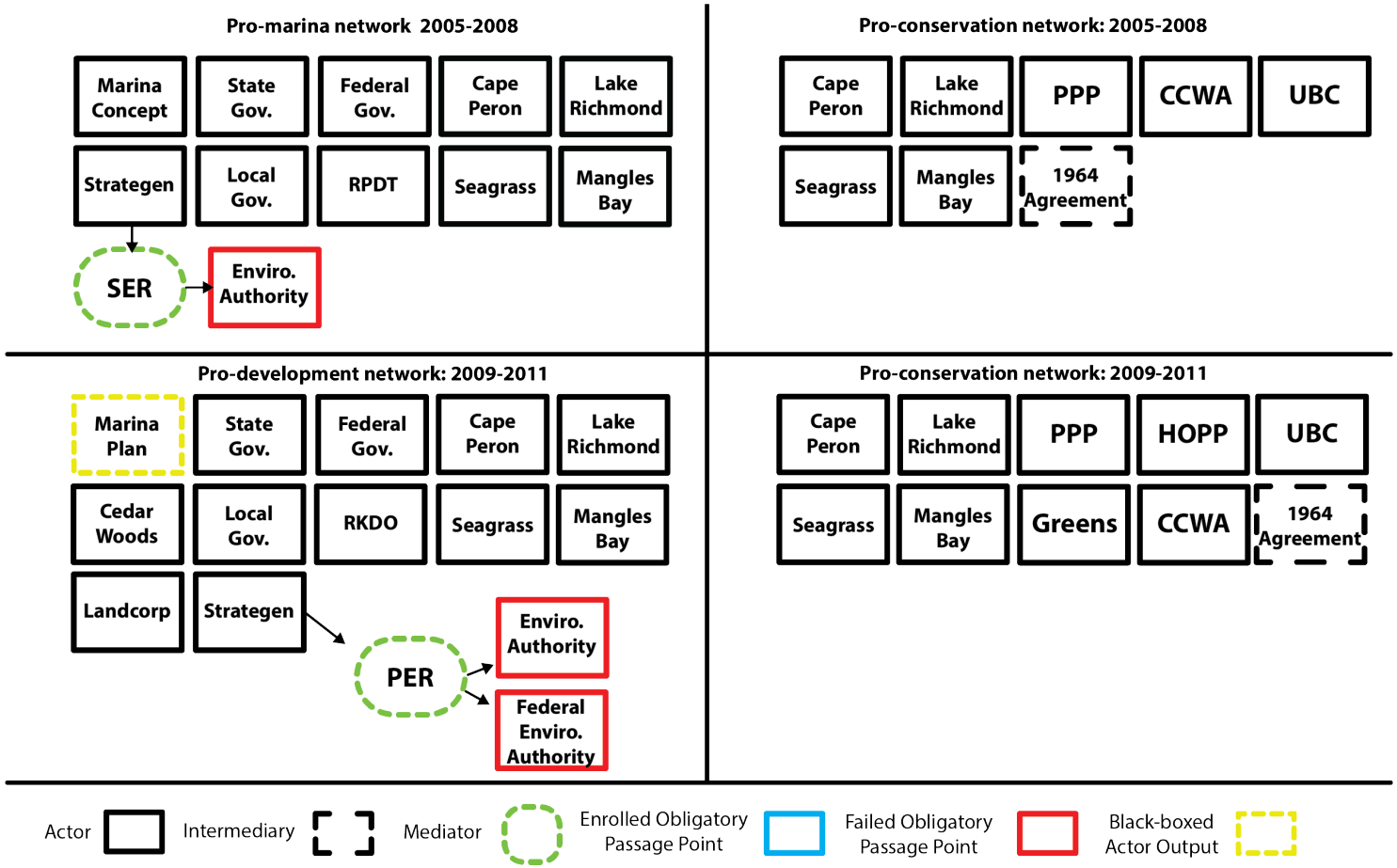
declining at a rate of 1.2% per year and were classified as ‘vulnerable’ under the International Union for Conservation of Nature criteria (Short et al. 2011). HOPP and PPP activists felt “vindicated” by the findings, which corroborated with their concerns regarding the future health of the marine eco-assemblage post-development of the marina (Nugent 2011, 1).

Cedar Woods responded by highlighting the findings of recent investigations into seagrass replanting trials by Murdoch University. The refusal of seagrass saplings to cooperate in transplantation trials had previously contributed to earlier marina proposals within Mangles Bay failing to enrol the support of the state environment authority. Given the research findings released by Short et al. (2011), the pressure appeared to lay even heavier upon the pro-conservation network to enrol the support of seagrass saplings and develop a successful method of offsetting the seagrass proposed to be removed, in order to convince the environment authority to support the development in a ‘no net loss’ scenario. Stuart Duplock of Cedar Woods claimed trials of replanting *Posidonia australis*, a related species to *Posidonia sinuosa,* in existing mooring scars were “encouraging” (Nugent 2011a, 9). The research, led by Murdoch University’s Professor Eric Paling, had demonstrated the *Posidonia australis* species was more obliging to transplantation and had successfully survived a trial in the South West of Western Australia (Paling et al. 2009).

For many opposed, the uncertainty surrounding the ability of Cedar Woods to replace lost seagrass, a crucial element in the function of the marine ecosystem, remained “…just one of the many reasons why the canal and inland marina development at Point Peron should not go ahead” (Jecks 2011, 14). Whilst HOPP could not present any counter scientific findings, their persistent presence in the media and activism across the state continued to agitate by fostering distrust amongst decision-makers and the community.

By the end of 2011 both networks had undergone significant change. The re-arrangement of the pro-marina network from an apathetic centre-left government to a pro-development conservative government, coupled with the promotion of Phil Edman, resulted in the project picking up pace. Colin Barnett’s aspiration to see the project into fruition, and the PPP-led network’s softer approach to opposition was the catalyst to the creation of HOPP. Under the leadership of Jecks, the HOPP-led campaign would match the pace of progression of the pro-marina network, outstripping PPP in community support and media attention with a broader focus on social and environmental issues and a direct action approach. However, neither the proponents nor opponents managed to enrol sufficient support to see their agendas significantly progressed (see Figure 5.7).

Pro-marina network initiated with local, state and federal government support. Network develops concept plan and submits initial 'strategic environmental review' to the state environment authority. Authority does not give full support.



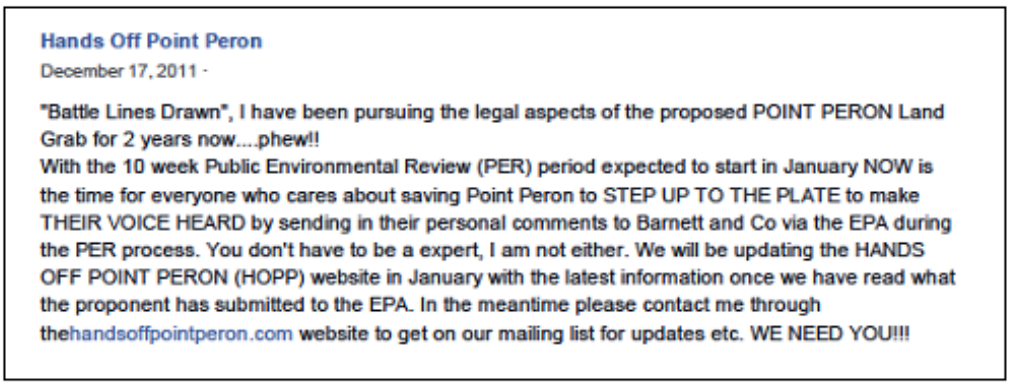
Pro-conservation network led by PPP with support from the CCWA and UBC. 1964 land agreement initiates social injustice discourse around marina proposal.

Pro-marina network enrols Cedar Woods and Landcorp to lead the project through approvals processes. Marina plan finalised. Strategen prepares and submits the Public Environmental Review to the state and federal environment authority. By the end of 2011 neither had given support.

Pro-marina network expands to include HOPP, led by Dawn Jecks. The network take the campaign to the federal election with support of the Greens.

Figure 5.7: Alliance of key Mangles Bay Marina actors at the end of 2011.

Utilising the agency of the Graceful Sun Moth, the seagrass meadows and the 1964 land agreement, the HOPP-led pro-conservation network would be required to find and pull together an alliance of actors with the capacity to corroborate the local activists' representations of the affected nonhumans and convince the state and federal environmental authorities to support a conservation future for the Mangles Bay area. Should the environmental authorities support the HOPP campaign's position, and recommend the Ministers for Environment refuse the development, the local activists' translations and perceived impacts on the nonhumans would be black-boxed into an immutable mobile that would disrupt the pro-marina network's progression through the planning process. Conversely, failure to enrol the support of the environmental authorities would diminish the political strength of the conservation network and the perceived validity of their translations, giving agency to the pro-marina network to progress. The outcomes of the environmental planning processes over the coming years would be critical to the progression of either network. The pressure laid firmly on the conservationists to agitate both the state and federal governments and dismantle the pro-marina network's representations of the nonhumans affected. Cognisant of the challenges ahead, HOPP utilised Facebook to mobilise both local and distant supporters and call them to action, as show in Figure 5.8.


Hands Off Point Peron

December 17, 2011 ·

"Battle Lines Drawn", I have been pursuing the legal aspects of the proposed POINT PERON Land Grab for 2 years now....phew!!
With the 10 week Public Environmental Review (PER) period expected to start in January NOW is the time for everyone who cares about saving Point Peron to STEP UP TO THE PLATE to make THEIR VOICE HEARD by sending in their personal comments to Barnett and Co via the EPA during the PER process. You don't have to be a expert, I am not either. We will be updating the HANDS OFF POINT PERON (HOPP) website in January with the latest information once we have read what the proponent has submitted to the EPA. In the meantime please contact me through thehandsoffpointperon.com website to get on our mailing list for updates etc. WE NEED YOU!!!

Figure 5.8: HOPP post on Facebook mobilising supporters in preparation for the PER public submission period (HOPP 2011).

5.5 2012-2014: Competing Representations Through Environmental Obligatory Passage Points

The following two years would be dominated by the pro-marina network's attempts to pass through the two environmental obligatory passage points, and the pro-conservation campaign's attempts inspire dissidence in decision-makers and enrol further community support. Critical to the conservation campaign during this period was the ability to promote alternative representations of the nonhumans affected by the proposed development, utilising local knowledge and alternative scientific translations. Additionally, the pro-conservation campaign via HOPP initiated an attempt to provide the community with an alternative future for the Point Peron region through the development of their own ecologically considered land-use plan of the area.

The first opportunity for conservation campaigners to view the PER came in February of 2012 when the state environment authority released the documents, as prepared by Cedar Wood's consultant Strategen, for a ten week public comment period. The extensive near 500 page document wrapped up all of the prior investigations into the site and design options, together with the environmental studies and assessments undertaken, to provide a comprehensive overview of the proposal and its translated impacts on the local ecology (Strategen 2012). The document's significance for the pro-marina network could not be overestimated. As a *mediator*, the PER's failure to convince key decision-makers of the environmental acceptability of the project would jeopardise the future of the network. Its failure to withstand the critique of opposition and alternative representations of the nonhumans and perceived impacts, would similarly jeopardise the future of the network. Accordingly, the PER and its passage through the obligatory passage points would be remembered as a critical moment for the future direction of both networks.

The largest proportion of the PER was dedicated to environmental investigations and impact assessments on the nonhumans and nature assemblages perceived to be affected. Regarding Lake Richmond, analysis of potential stormwater intrusion as a result of the project were argued to unlikely impact the Lake's water quality and as a result were unlikely to negatively impact the function or ecology, including the Thrombolites (Strategen 2012). Strategen argued, vegetation clearing would not result in any vegetation complex being reduced to less than 10% of their original pre-European settlement extent, but would result in a reduced connectivity through to Lake Richmond (Strategen 2012). The loss of vegetation was noted as likely to have an impact on local populations of Quenda and reptiles including the Carpet Python (Strategen 2012).

However, the Graceful Sun Moth, Carnaby's and Forest Red-tailed Black Cockatoos and other migratory species were considered unlikely to be affected (Strategen 2012).

The loss of seagrass was noted as likely to reduce local fish stocks until rehabilitated and transplanted grass meadows were established (Strategen 2012). Belinda Cannell, a local Little Penguin researcher, noted that a reduced food source via the loss of seagrass coupled with an increase in vessels and boat strikes were likely to disturb local penguin colonies (Strategen 2012). In response Strategen argued the risks could be mitigated with signage educating boat users, and by timing the dredging works to commence in non-breeding seasons. The report also acknowledged the bay historically had water quality issues as a result of the Garden Island causeway and the Cape sheltering the area causing issues with flushing, which in turn impact ecological processes such as seagrass growth and nutrient dilution (Strategen 2012). The PER also outlined an array of environmental management reports, review systems and reporting lines the proponent would follow, in addition to any conditions imposed by the state environment authority should the proposal proceed, in an effort to demonstrate the pro-marina network's commitment towards minimising environmental degradation of the area (Strategen 2012).

Speaking to the *Weekend Courier*, Stuart Duplock from Cedar Woods argued the PER demonstrated that the project's environmental impacts were "manageable and not significant" (Nugent 2012, 1). However, others were not convinced and a barrage of criticism was directed towards the pro-marina network from conservation supporters who sought to systematically unpick the validity of the PER's claims. Nic Dunlop from the Conservation Council of Western Australia (CCWA) called on the federal government to refuse the development, given the lack of information known about the ancient Thrombolites:

> "The aquatic environment of Lake Richmond is unique and contains the only example of these specific biological communities. If that environment is altered by hydrological changes caused by the construction or operation of the proposed marina then the consequences will be irreversible" (Dunlop cited in Wilkie, February 14, 2012).

The CCWA and WA Fishing Industry Council collectively raised concerns regarding the impact of the development on the local fishing industry, with the CCWA arguing the marina had the potential to "wipe out the single most significant nursery for commercial and recreational fish species in the Cockburn Sound" (McCarten cited in King 2012). The Urban Bushland Council (UBC) criticised the PER for failing to acknowledge the significance of the geomorphology of the Cape, which was integral to the conservation significance of the area under the *Bush Forever* policy. The UBC and the Wildflower

Society also criticised the government for directly contravening the intent of the *Bush Forever* policy by proposing to clear a *Bush Forever* site intended to be preserved in perpetuity to protect the threatened ecological communities within.

HOPP and PPP used the period to rally community support and increase pressure on the pro-marina network and decision-makers. Local residents continued to use the *Weekend Courier* as an intermediary to deliver messages of discontent regarding the environmental risks of the project and its likely financial impact on local ratepayers:

> "Who pays? Well let's face it, you do. You have spent (well Colin Barnett has done it for you), more than $3.5 million to prepare a 400-page report to convince you that this is what you wanted" (Pritchard 2012, 13).

> "A four-metre deep trench, 55 metres wide cut into the sea floor, 550 metres long all the way to the beach. Then four metres deep, around 30 metres wide, up through the beach, off into the bush. Meeting up with an inland canal system, which will need to swap 12ha of bush and soils, for 12ha of tidal saltwater? That's 12ha of salt water moved closer to a fragile freshwater wetland eco system, Lake Richmond" (Woodcock 2012, 14).

However, the *Weekend Courier* also stoked the fire by publishing a series of articles regarding the survival of the local population of Little Penguins. Utilising the assessment included within the PER by Dr Belinda Cannell, the newspaper distorted the framing to produce a story *fearful* for the local colonies survival (Nugent 2012a). In her assessment Cannell had noted that the removal of seagrass would likely hamper breeding, and increased boating activity would result in more deaths. The pro-marina network had attempted to quash these concerns in the PER by proposing to install signage to educate visitors and to restrict construction works until outside of breeding periods. The series of articles fanned the flames of opposition from local residents already concerned about the environmental impacts of the project, and served to assist the pro-conservation network's discourse that the project was environmentally treacherous for the region.

Assisting further, HOPP and PPP self-funded an independent scientific review of the PER to corroborate their concerns with an authoritative scientific perspective. The review, undertaken by Murdoch University's Dr Mike van Keulen who had 25 years experience in seagrass ecology, argued the PER contained a number of flaws, omissions, and underestimations of impacts relating to marine and terrestrial life (van Keulen 2012). In particular, van Keulen criticised the PER's reliance on seagrass transplantation and argued replanting within Mangles Bay was likely to be unsuccessful, resulting in a reduced ecological functionality of the ecosystem. The review served to strengthen and legitimise conservation activists' concerns and destabilise the pro-marina network's passage through the state environmental authority's obligatory passage point.

Following this, HOPP launched their alternative vision for the site, the Cape Peron Coastal Park (CPCP) featuring the Little Penguin as the logo. The concept plan sought to demonstrate the economic viability of utilising Mangles Bay, Cape Peron and Lake Richmond for their environmental richness and uniqueness as a place for recreation, tourism and conservation (CPCP 2012). The plan recognised the environmental value of the area was based upon the tapestry of interconnected and diverse flora and fauna within and encouraged land-uses that facilitated humans connecting with the local nonhumans and nature assemblages. The vision document would be used strategically by the network to demonstrate to local residents how the area could be utilised in a manner that worked with nature, rather than against it. The document would serve as a vital enrolling mechanism for the network, and as a tool for demonstrating to key decision-makers the viability of alternative land-use plans for the region.

Following the conclusion of the public comment period, internal assessments and deliberations, the state environment authority released its recommendations in April of 2013. Despite the efforts of the pro-conservation network to dismantle the legitimacy of the PER's representation of the nonhumans affected, the authority found that, on balance, the project coupled with conditions mitigating or offsetting impacts would environmentally acceptable and compliant with the authority's policies.

Regarding seagrass the authority supported the proponent's assertion that the impact would be limited to the 5.24 hectare meadow to be removed as part of the dredging process, with adjacent meadows unlikely to be affected by increased sediment, reduced water quality or an increase in traffic movement (EPA 2013). Further, the authority supported the proponent's commitment for 10.48 hectares of seagrass planting over five years as an offset, claiming similar replanting was undertaken by Cockburn Cement successfully despite research being dominated by a plethora of unsuccessful trials (EPA 2013).

The authority recognised that the proposed timing of the dredging works, scheduled throughout the winter, would coincide with the peak Little Penguin breeding season (EPA 2013). However, it was of the opinion with dredging timed to commence prior to chick rearing and with specific management techniques undertaken (including ongoing observation) the impacts upon the local colony would be minimised (EPA 2013). Notwithstanding this, it was acknowledged that with disruption to the habitat and feeding grounds there may be a short-term reduction in reproduction rates and survivorship of chicks (EPA 2013, 36). When considering the potential impacts to all marine species it was found, on balance, the project with the proposed management techniques would

result in the least amount of impacts to the marine environment more generally and to the seagrass meadows, which were given priority (EPA 2013).

A significant point of contention for local opponents was the potential impact an inland marina and canal development would have on the adjacent freshwater Lake Richmond and its inhabitants. The authority found, as a result of the project, groundwater drawdown would occur resulting in a permanent 3.8cm reduction in lake level but with "little potential for saline intrusion" (EPA 2013, viii). The impact of the reduction was considered unlikely to negatively impact upon the two Threatened Ecological Communities onsite, including the Thrombolites, which are listed as *critically endangered* and *endangered* at the state and federal level.

The state environment authority decision was a setback for the pro-conservation network. The announcement was met with dismay from local activists, frustrated that their local connections, experience and knowledge about the dynamics of the local ecology appeared to be ignored:

> *"They (government) don't even see the area as fragile. They think that the penguins are over the other side. But you know, we've sailed out there and the penguins feed in that bay, you know? So we see them. But, yeah... and even with Lake Richmond a lot of people just think, 'Ugh'... even people from the... not the Department of Planning, but one of the departments up in Perth like the Water Corporation was talking to one of our members and was like, 'It's just a drain'. Yeah. The water just drains into it. And then this fellow from our group rang me up and said, 'Are you sure Lake Richmond is freshwater?' And I said, 'Absolutely! It's freshwater!' They're all trying to play it down, but it is a freshwater lake and it provides...like, for the chicks out on the Shoalwater Islands. The pelicans fly in to drink the freshwater and then take it back to their chicks because... it's one of the deepest freshwater lakes close to the ocean in Australia. Or I've heard it's the deepest. And you know, I've seen ospreys there, I've seen long neck turtles. It's a beautiful area. People just don't think that. They don't even really know about the ancient Thrombolites."*
>
> (Interview with HOPP3, October 10, 2016)

The major points of contention raised by opponents were systematically and rationally dismantled throughout the authority's assessment. The failed enrolment of the authority into the pro-conservation network provided the HOPP-led conservation campaign with a surge of energy and a deeper, stronger resolve to quash the proposal. Led by Jecks, in May the group protested outside of Cedar Woods' head office in West Perth before marching to state parliament where an 8,000 signature petition was handed over to Lynn MacLaren, a local Greens politician, to present to the Legislative Council (Nugent 2013a). Throughout the following months the local newspaper the *Weekend Courier* continued to publish an array of opinions, mostly oppositional, towards the proposed

marina. Dawn Jecks campaigned on the issue throughout yet another election, whilst appeals against the state environment authority's recommendation were lodged and began the process of review.

Following the election of a conservative federal government, Greens Senator for Western Australia, Scott Ludlam, continued to campaign for the protection of the Point Peron region. In November 2013, responding to Senator Ludlam's questions, officers of the federal environment authority asserted that, after seeking legal advice in 2000, the 1964 land agreement between the state and the commonwealth was not a legally binding document requiring the state government to maintain the site as a reserve for public recreation and free from privatisation (Ludlam 2013). In particular it was noted that the transfer of land by letter at the time, did not create a contract of sale that contained caveats specifically preventing the use of the land for certain purposes or development. The statement delivered a blow to HOPP who had campaigned heavily around the injustice and legality of developing what was considered land for the people of Western Australia. The decision effectively dismantled the immutability of the 1964 land agreement, providing the state government with a clear path to proceed with the project. The agreement would still be utilised by the HOPP campaign to remind locals of the intent of the region, as a publically accessible place for recreation.

Shortly after in January 2014, the Appeals Convenor released her findings on the 17 appeals lodged against the state environment authority's report and recommendation. It was recommended that 5 of the 15 appeal grounds be upheld in part and that the state Minister for Environment approve the proposal subject to an amended version of the environment authority's recommended conditions (Office of the Appeals Convenor 2014). With little delay the Minister, Albert Jacobs, followed the advice of the Appeals Convenor and in June that year approval was issued subject to the recommended amended conditions (Office of the Appeals Convenor 2014a; EPA 2014). In October the federal environmental authority followed suit and issued conditional approval under delegated authority from the federal Minister (Department of the Environment 2014). The pro-marina network had successfully chartered a path through the two environmental planning obligatory passage points, and secured the enrolment of both state and federal Ministers for Environment. The environmental approvals black-boxed the various studies, assessments, discussions and debates around the environmental acceptability of the project and the perceived impact on nonhumans into immutable mobiles, allowing the pro-marina network to advance into the land-use planning phase of the project. The environment authorities, Ministers for Environment, and the translation of nonhumans affected were enrolled into the pro-marina network.

Supporters of the conservation campaign responded with an urgent open letter to the federal Minister for Environment calling for the decision to be reconsidered due to the potential impact on the nearby Little Penguin colony. Signed by 27 Australian and New Zealand scientists and advocates, the letter provided 12 distinct grounds for the Minister to reconsider the decision, arguing new information is available not previously considered. The leading signature on the letter was Dr Belinda Cannell, the local Murdoch University researcher who had previously contributed to Strategen's PER assessment. Whilst adding further strength to the concerns of the pro-conservation network and their alternate representation of the nonhumans, the federal Minister's position remained unchanged.

Whilst the period ended with significant growth in support for the HOPP campaign, there were few tangible outcomes that would see the region preserved. Despite assurances and proposed offsets, HOPP and locals alike remained concerned the project would detrimentally impact the integrity of the marine ecosystem, and lead to a saline Lake Richmond and the loss of the region's unique Thrombolites. Although these concerns were shared by authoritative actors such as conservation groups and scientists, the conservation network had failed to persuade environmental authorities. Further, the network's alternative vision for the site had also failed to lure both the local and state government from their support for a marina. With the environmental approvals process successfully navigated, nine years since Mark McGowan, Barry Sammels and Phil Edman initially floated the idea of a Mangles Bay marina, the pro-marina network led by Landcorp and Cedar Woods would now enter the structure planning phase as they sought to further progress the project. Figure 5.9 illustrates the position the pro-conservation and pro-development networks were in at the end of 2014.

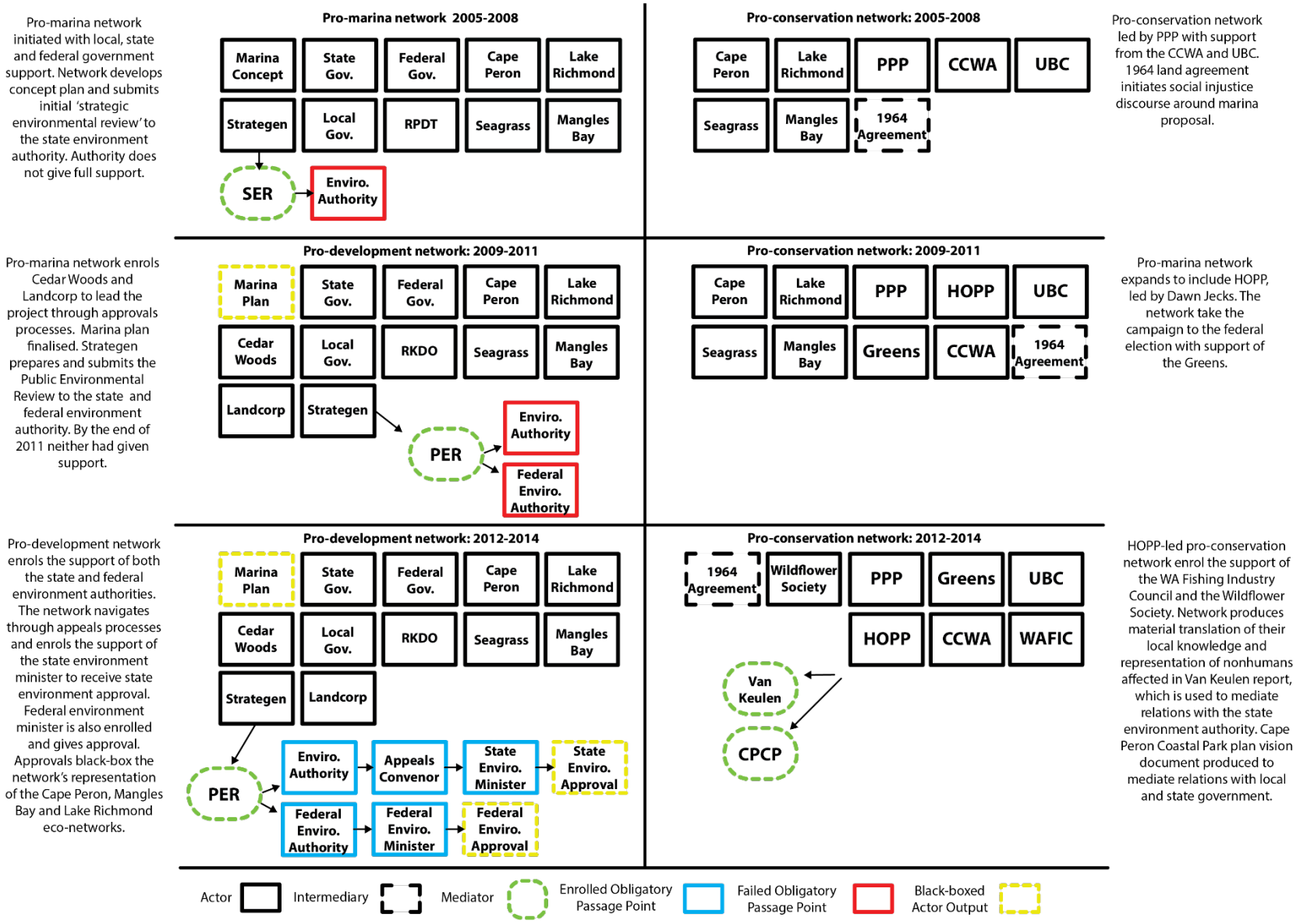


Figure 5.9: Alliance of key Mangles Bay Marina actors at the end of 2014.

5.6 2015 - 2018: Land-Use Planning and Pro-Marina Network Collapse

In the new year Colin Barnett, the Premier of Western Australia, named the Mangles Bay Marina a key project for the state government to further progress in 2015. The announcement ensured community debate on the project remained energetic in the local newspaper with, as was the trend, a greater sense of opposition present than support. The impact of seagrass loss and increased boating activity on the Little Penguin appeared to be a key concern from locals, and was equally promoted by the HOPP campaign in conjunction with a discourse of injustice, premised on the government's privatisation of what was perceived the *people's land* for recreation. The group also continued to promote their alternative vision for the site, the Cape Peron Coastal Park, and its economic and environmental credentials, whilst attempting to dismantle the economic and social benefits of the proposed marina promoted by Cedar Woods.

With the environmental acceptability of the project black-boxed into state and federal approvals, the pro-marina network progressed to land-use planning aspects. Prior to detailed structure planning, the network submitted an application to the state planning agency to rezone the site from parklands to urban, as demonstrated in Figure 5.10. The rezoning under the regional planning scheme sought to convert the Cape Peron parklands into 52.89 hectares of *urban*, developable land; 1.35 hectares of *urban deferred*; 3.53 hectares of *parks and recreation* reservation in the form of a coastal reserve; 4.41 hectares of *'other regional roads'* reservation; and the removal of 43.16 hectares of *Bush Forever* zoning (WAPC 2015). Failure to convince the state planning agency to support the amendment of the regional scheme – a statutory immutable mobile dictating particular human-nature relations through approved land uses – would block the project from proceeding. However, with the 1964 land agreement discredited as a contract restricting the privatisation of the site, and the recent issuing of state and federal environment approvals, the pro-marina network's passage through the state planning obligatory passage point appeared to be free of any significant hurdles.

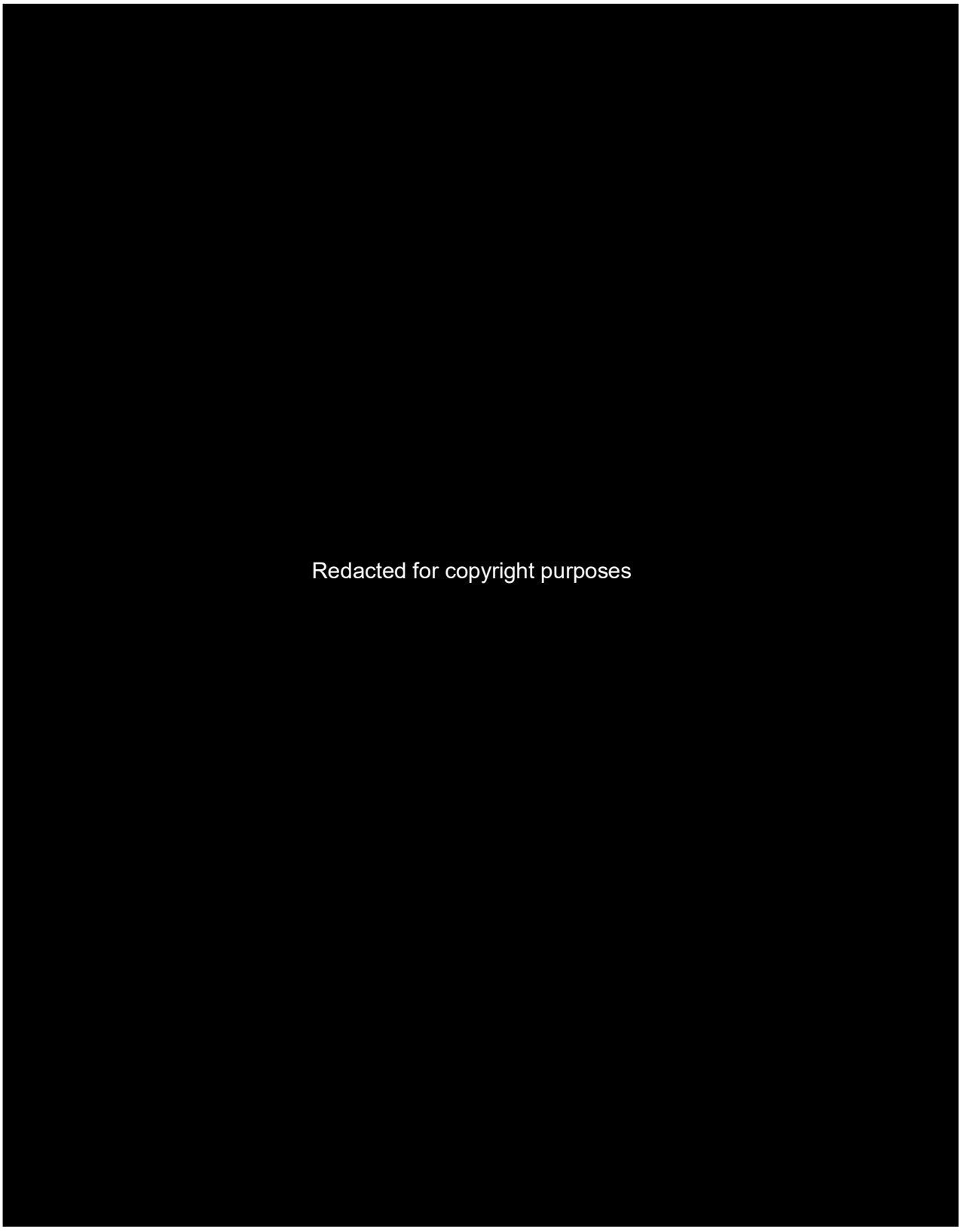


Figure 5.10: Proposed rezoning plan for the Mangles Bay Marina (WAPC 2015).

At this stage the pro-conservation network was required to shift strategies. Their failure to enrol the support of the environmental decision-making bodies had led to Strategen's representation of the nonhumans affected being accepted and enshrined into the environmental approvals. Moving into the land-use planning phase, HOPP shifted their campaigning focus onto the economic credentials of the project, the land-use planning merit of the zoning amendment, and promotion of the Cape Peron Coastal Park proposal as an ecologically considered alternative.

Regarding the zoning amendment, HOPP sought to promote distrust in the community around the true intentions of the pro-marina network. Concerns were raised regarding the blanket urban zoning across the site without any recognition or indication of future canal and marina waterbodies. This fuelled speculation from the community the marina was merely a masquerade by the government to privatise and profit from the development of prime coastal land. Opponents argued the cost of the dredging required for the proposed marina was prohibitive and warned the government had provided no guarantee the marina would ever be constructed. Further, it was argued upon approval of the urban zoning the government would likely discard the centre piece marina in favour of a standard, and far more profitable, canal residential development (HOPP 2015, 12).

> "All those who favour a marina at Point Peron might find that if the project gets planning approval it will prove to be [a] false victory. The way things are with the State's finance I am sure all the Government wants to do is sell the land and minimise the costs… Once the blocks have been sold, it is all outgoings for Cedar Woods and the Government. It is very likely that when it gets to the real site work it will be decided that the money is not available" (Hodgkinson 2015, 14).

The Jecks-led HOPP continued to pressure the state government and build support for their conservation agenda. Protesting outside a conservative party function, as shown in Figure 5.11, Jecks confronted Premier Barnett and urged him to consider the Cape Peron Coastal Park proposal. Encouraging those opposed to the development to make a submission to the state planning agency on the zoning amendment, Jecks argued the project made "no sense", stating:

> "We don't want 70 hectares of our Point Peron Regional Park bulldozed for Premier Barnett's proposed private canal housing estate. It makes no sense environmentally, socially or financially to destroy such an iconic and much loved treasure as Point Peron" (Jecks cited in *Weekend Courier*, September 11, 2015, 21).

Figure 5.11: Jecks speaks to Premier Barnett at a HOPP protest (*Weekend Courier*, September 11, 2015, 21).

In an effort to enrol the support of the planning agency, HOPP submitted a 600 page submission in opposition to the rezoning. The submission pulled together "a vast array of relevant information, analysis and expert opinion" demonstrating a strong case for the planning agency to recommend refusal (HOPP 2015, 4). HOPP argued approval of the zoning amendment would fundamentally be "at odds with sound planning principles" and "would bring Western Australia's planning regime into disrepute" (HOPP 2015, 4). They argued for the process to be restarted independent of the government who, as the proponent, had a notable conflict of interest, and for the Governor of Western Australia to investigate the state planning agency for mishandling the process and for biased decision-making (HOPP 2015, 4). The submission sought not only to highlight planning irregularities with the proposed zoning amendments, but to further discredit the character of the key pro-marina network actors and foster a sense of distrust in the community regarding the government's true intentions for the site.

Following a concerted campaign by the pro-conservation network, a total of 496 written submissions, of which 430 were in opposition, would be received by the planning agency, followed by 67 live depositions. The concerns raised by objectors ranged from the overall environmental impact of the development to the financial impact to ratepayers. This included a submission from pro-marina network actor the City of Rockingham, who expressed a number of concerns regarding the blanket urban zoning, addressing coastal setback requirements, and traffic modelling. The local government authority also expressed concerns regarding the ongoing management of the waterways and the

financial implications to the City for maintaining the marina post-development (WAPC 2018, 321). The concerns largely reflected the campaign messaging of the pro-conservation network, suggesting an effective attempt at instigating dissidence in supporters of the marina project.

In 2017, after a prolonged period of internal deliberation, and following the re-election of a centre-left state government headed, by local Rockingham politician Mark McGowan, the state planning agency recommended the Minister for Planning refuse the proposed scheme amendment (WAPC 2018). The agency provided six grounds for the refusal including what they perceived to be an inappropriate mix of land uses and scale of development in an area with significant natural and recreational value to the community. The agency further argued that the proposed amendment was in contravention with the *Bush Forever* policy, with the removal of 44 hectares considered to negatively impact upon the conservation objectives of the site (WAPC 2018). However, the recommendation of the agency would not be made public until the Minister made her decision, leaving the pro-conservation network waiting in the wings.

Aware the Minister was nearing a decision on the matter, in early 2018 the pro-conservation network began a campaign calling on its supporters to make contact with the Minister's office to "Save the Little Penguins of Point Peron" (see Figure 5.12; CCWA 2018). Led by the Conservation Council of Western Australia, the campaign strategically promoted the profile of the Little Penguin colony residing near the proposed marina site in an effort to mobilise conservation supporters and pressure the state government. The agency of the species and its ability to drive human action derived from its appearance and characteristics which triggered sympathy when coupled with the conservation campaign's narrative of a precarious future for the colony should the proposed marina proceed. Taking action to save the local penguin population, would similarly save the other flora and fauna impacted by the development that were less capable of connecting with and catalysing human action. Accordingly, the CCWA called on supporters to urge the Minister for Environment to direct the state environment authority to re-assess the proposal and its impact on the penguin colony. Giving authority to the motion was Dr Belinda Cannell, who had consistently argued the increase in boating activity, damaged seagrass meadows and a decline in fish stocks would likely result in the loss of the local penguin population (Carmody 2018). A surge in activity reverberated across Facebook, with images of the Little Penguin used as a mechanism to mobilise supporters into action, as shown in Figure 5.13.

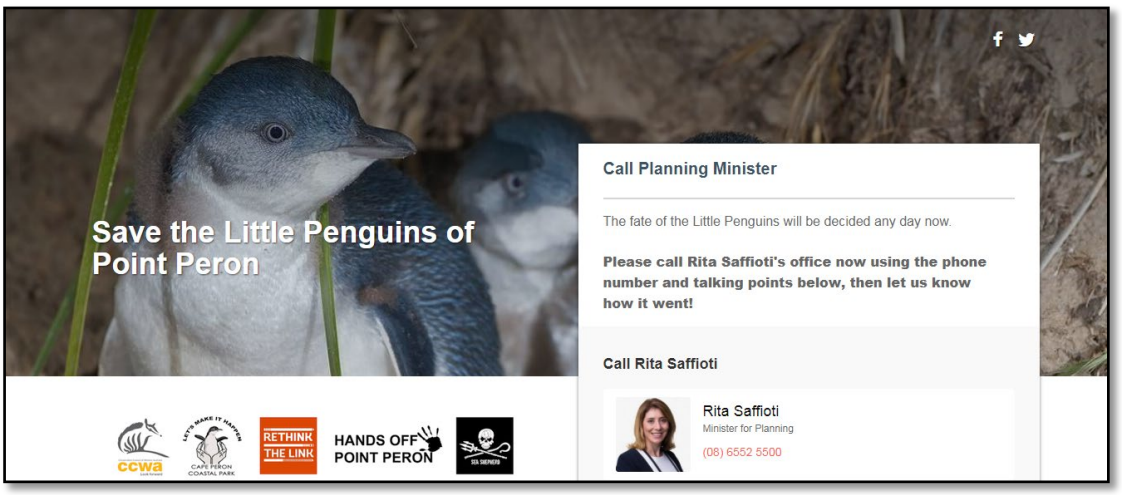


Figure 5.12: Pro-conservation network campaign, featuring the Little Penguin, calling on supporters to contact the Minister for Planning (CCWA 2018).

Figure 5.13: An image posted to the Hands Off Point Peron Facebook page, calling on supporters to save the Little Penguin (Hands Off Point Peron 2018).

In March 2018 the Minister announced she had received the advice from the state planning agency and had formed a conclusion on whether to allow the zoning amendment to proceed. Conscious of the scale of the development, and the concerns of the planning agency, the Minister accepted the recommendation not to proceed with the

zoning amendment (Government of Western Australia 2018). Cedar Woods and Landcorp had failed to navigate the pro-marina network through the planning agency's obligatory passage point following the barrage of criticism by pro-conservation supporters and the dissidence of the City of Rockingham, who had withdrawn support following concerns around the financial cost to maintain the marina post-development. Following the decision, pro-conservation supporters celebrated as the project was framed as "dead in the water" by the local *Weekend Courier* (Jeffery 2018, March 1).

The decision, which could not be appealed, ensured the pro-marina network could not achieve the alliance of actors required for the project to commence. Whilst the environmental approvals were still valid, the network had effectively collapsed with the failed enrolment of the WAPC and the dissidence of the City of Rockingham, as shown in Figure 5.14. The strategic framing of the project as an economic, social and environmental injustice to the local community of Rockingham had successfully mediated a positive outcome for the pro-conservation network. Speaking with local media, a jubilant Jecks commented:

> "It's been over 10 long years that the local community have been fighting this flawed proposal and it shows what ordinary citizens who band together can ultimately achieve by never giving up" (Jecks cited in McKnight 2018).

The network would continue to negotiate with the government to have the Cape Peron Coastal Park plan implemented, and the region classified an A-Class reserve, in order to prevent future development proposals and conserve the Cape Peron site and Mangles Bay in perpetuity.

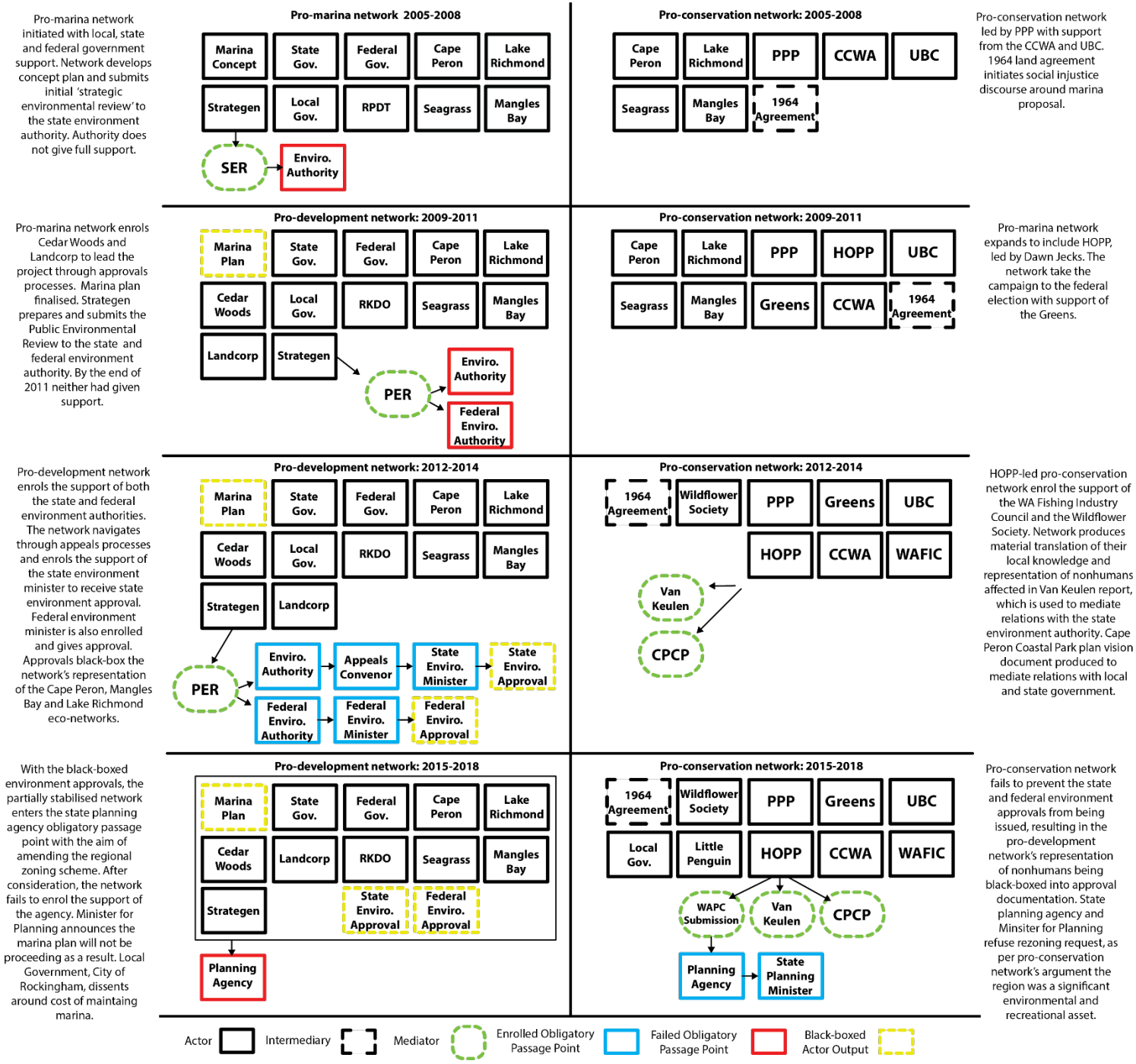


Figure 5.14: Alliance of key Mangles Bay Marina actors by 2018.

5.7 Summary

The chapter has presented the case of the Mangles Bay Marina and the representations of nonhuman flora, fauna and eco-assemblages deployed by the competing pro-marina and pro-conservation networks. As with the previous chapter, the case study has demonstrated the heterogeneity and complexity of each network, and how each manoeuvred through the planning system in a manner enabling the progression of their respective agenda and translations of the Mangles Bay, Cape Peron and Lake Richmond nature assemblages.

Whereas the Underwood Avenue bushland case study remains in a state of flux, the Mangles Bay Marina case has reached a potential position of finality, with the incoming centre-left state Minister for Planning refusing the zoning amendment. Despite the pro-marina network successfully navigating through the environmental obligatory passage points and securing the support of state and federal Ministers for Environment, the network's stability was undermined with the withdrawal of the state government's support in 2018. As a result, the pro-marina network reached a point where further progression is not impossible, but is unlikely. Notwithstanding this, the two environmental approvals issued remain valid and reflect black-boxed investigations, assessments and deliberations regarding the ability of the affected nonhumans to withstand the construction of the proposed marina. As an immutable mobile, the black-boxed translations of the Cape Peron, Mangles Bay and Lake Richmond assemblages packaged into the environmental approvals remain in situ until the dates of expiry or until a new application is received by the environmental agencies. Accordingly, despite the eventual success of the pro-conservation campaign, it is the pro-marina network's representation of the nonhumans affected that are cemented into the approval documentations. Should marina-supporters be able to re-convince the state government of the project's viability, a path for network re-stabilisation and further progression awaits.

Whilst the pro-conservation network's representation of the affected nonhumans may have been sidelined, the strategic deployment of a discourse of social injustice and the focus on the seagrass meadows and, later, the Little Penguin resulted in the proposed marina being refused and disendorsed by the sitting state government. The framing of the local natures as *a place for the people,* supported by the agency of the 1964 land agreement, developed a sense of injustice in the local community. The concept of publically accessible bushland and coastal areas being privatised, and the

ongoing cost to ratepayers for maintaining the canal network, fostered discontent in the local community providing the pro-conservation network with political strength in a period where a new government was finding its feet and seeking to avoid controversy. Securing the support of the state planning agency and the Minister for Planning ensured the regional zoning remained unchanged, preventing the conversion of recreation and conservation reserves to an urban zoning.

Further, the focus on the seagrass meadows, their ongoing decline, the impact of this decline on fish stocks, and unproven ability to be rehabilitated resulted in the enrolment of support from a wide range of individuals and organisations. The focus on the seagrass, a flagship species crucial to the ongoing function of Mangles Bay, placed significant pressure on the pro-marina network to justify their claims the impact would be manageable and rehabilitation successful. Similarly, the late emphasis on the Little Penguin colony – a species whose features and characteristics garner significant sympathy – placed the pro-marina network under pressure to defend their translation the proposal would not significantly impact the local population and the tourism industry reliant on it. The strategic focus on both species enabled the pro-conservation network to extend their reach to a wider audience, raise awareness of the proposed development, and highlight their translation of the potential impacts to the local environment. Whilst unsuccessful at enrolling the support of the environmental agencies, it can be argued the strength of the network as a result of ongoing campaigning peaked in 2018 when the state government withdrew support.

Moving forward, the pro-conservation network now seeks the state government's support for the establishment of the Cape Peron Coastal Park. Whilst the environmental approvals have black-boxed a particular interpretation of the nonhumans, the pro-conservation network would utilise their own translations to support the establishment of the conservation park, and the classification of the area as an A-Class Reserve. Accordingly, the network has successfully agitated the state government to an extent it revoked its support for the marina, and would now seek to test the durability of the state government's enrolment by initiating steps to reclassify the conservation class of the region.

Chapter 6 Discourses of Nature

6.1 Introduction

Chapter 2 discussed the complexity surrounding the discursive constructions of nature within planning practice. These representations are often highly personalised, developed through life experience, religion and culture (Black 2002). They are dynamic – shifting between generations, in response to new experiences or understandings, or through contestations between other actors (Cammack, Convery and Prince 2011). They are relational – developed through interactions with other human or nonhuman entities. In land use planning, dominant discourses can have significant on the ground consequences for particular natures by influencing policy, practice and subsequent development outcomes.

In an actor network theory context, discourses are the products of relations between entities utilised, often strategically, to mediate outcomes for networks. They are political agents deployed to enrol or agitate other actors. As translations of particular relationships, analysts must also be aware of their flaws and critically assess which voices, noises or other affordances have been purified, moulded, misinterpreted, exaggerated or privileged. Analysing text and talk in contested planning processes can illuminate the multispecies and multi-thing relationships behind human action, behind network evolutions and progressions through the planning system, and the manner in which particular nonhuman individuals or assemblages are represented through human translation.

This chapter discusses the findings of the discourse analysis undertaken against three sources of data: articles and 'letters to the editor' within local newspapers the *Subiaco Post* and the *Weekend Courier*; procedural documents including technical reports, public submissions and government reports; and interviews with local conservation actors. A total of twenty-two in-depth interviews with activists were conducted across both case studies. This included twelve interviews from the FUAB campaign, and ten from the HOPP campaign. The chapter is structured by the dominant framings presented across the data by the range of actors, to allow for an understanding of how the various human actors and networks discursively frame Nature, their local natures, and individual nonhuman species.

The findings highlight the range of discourses presented by actors in relation to local natures, the differences between activists, other actors and networks, and differences

across the two case studies. The analysis assists in understanding the underlying ethics of participants and the extent to which these align with the principles of deep ecology. Additionally, the findings provide insight into whether the discourses presented publically by actors shift throughout time, and the circumstances or influences surrounding such a shift, such as evolving relationships between network actors, local natures and decision-makers.

6.2 Nature as a *Thing* to Colonise, Trade, Negotiate and Offset

Across the interviews, media and documentary data the discourse most consistently deployed throughout both case studies framed nature as a resource with instrumental value for humans. Nature has typically been framed as a resource for human consumption throughout modern history and, more recently, a *thing* we can transform into an asset with an attributable economic value (Sullivan 2009, 2013). The colonisation and commodification of natures involve the transformation of nonhumans, discursively and materially, into a good that can be traded or sold with an attached value within market systems (Bakker 2005). Framings of the Mangles Bay, Point Peron and Underwood natures as an asset or commodity which could be transformed, traded, negotiated with, or offset were evident in the discourses deployed across the full spectrum of actors in both case studies. However, the representation of nature in this colonised and commodified form was particularly evident in the discourses presented by pro-development actors.

The University, for instance, was explicit in their representation of the Underwood Avenue site as an economic commodity, and the bushland as a constraint to realising that commodity's worth. Throughout the course of the case study and across various media, the University consistently framed the bushland as *land*; a commodity gifted to them for the specific purpose of being transformed to enable the generation of income through the property market. The use of the term 'land' discursively represented the nonhuman inhabitants irrelevant and the bush-site empty and awaiting improvement. In framing and reinforcing their network problematisation, the University and their network would also often refer to their "endowment obligation" (Robson 2010, 2) to "unlock the capital value of this (bushland) asset" (Robson cited in *Subiaco Post* 2006, 32) to "fund future educational requirements" of the community by developing the site (ATA 2007a, 4). Further, when attempting to secure support from external actors, the University would often utilise commodity and colonial discourses. For instance, framing the development of the bushland as a financial opportunity for the local government authority, who would benefit from "an additional

300 rateable dwellings" (UWA 2010, 5), thus discursively reinforcing the bushland as empty and requiring transformation.

In the case of the MBM, the proponents were less forceful but consistent in their framing of Point Peron as a natural commodity capable of reinvigorating the economy of Rockingham post-transformation. Cedar Woods often described how the proposed MBM would "*transform* a degraded and *underutilised* parcel of *land*" into a "five-star marine, tourist, retail, recreational and residential development" capable of generating significant economic and social returns for the local community (emphasis mine; Cedar Woods 2017, np). The development would create "an asset" with the capacity for long-term job creation and up to $1.3 billion in economic benefits for Rockingham (Cedar Woods 2017, np). Indeed, the colonial and commodity framing of the Point Peron nature-network as an under-utilised asset with the potential for significant economic and social benefits post-transformation dominated the discourses presented by Mayor Barry Sammels, Cedar Woods State Manager Stuart Duplock, local conservative politician Phil Edman and other influential pro-development actors. The translation of the region in this manner was also strategic, deployed across local media and through promotional materials to enrol local residents into the pro-marina network.

However, the framing of nature in this manner was not isolated to the proponents in each case study. Throughout the interviews, a number of FUAB conservation activists would slip in and out of a discourse translating the bushland as a "biodiversity resource" with potential "long-term financial benefits" (Interview with FUAB 4, May 11, 2016) in terms of tourism and research purposes. Similarly, HOPP participants framed the conservation of the Point Peron and Mangles Bay region as an economic opportunity that would "create long-term and ongoing and sustainable jobs" (Interview with HOPP 14, October 19, 2016).

The acknowledgement by pro-conservation actors that the preservation of their respective natures could be economically beneficial for proponents was used strategically to trigger dissent within the pro-development networks. This was formalised and packaged neatly by HOPP in their alternative vision, the Cape Peron Coastal Park (CPCP). Intended to highlight the environmental, social and economic value of retaining the region in its natural state and transforming the space into a recreation-based tourist destination, the CPCP reinforced Point Peron as an economic and recreational asset with significant *instrumental value* as a domestic tourism hotspot. Seeking to convince the City of Rockingham and the state

government to withdraw support for the MBM, the CPCP focussed on providing new passive recreation infrastructure to create a "nature-based recreational park for the people of Rockingham, Perth, and Western Australia in which to play and picnic with family, friends and peers" (CPCP n.d., 2). Within the plan, individual species and assemblages are framed as tourist drawcards, including the "Thrombolites that have survived for 600 million years", a "rare stand of Tuart trees" and the "ecologically unique Lake Richmond" (CPCP 2012, 3).

Whilst seeking to highlight the unique and conservation-significant nonhumans that reside within the scope of the CPCP area, the plan frames these nonhumans as economic assets that, following transformation, will bring tourists to the area in volumes greater than the proposed marina. Selling the perceived uniqueness of these nonhumans and the opportunity to be in and amongst nature recreationally, romanticised the region and reinforced its role as a commodity that could be utilised (anthropocentrically) for financial and social gain. The monetisation and marketisation of nature, in this manner, reflects an entanglement between conservation and capitalism which is utilised ever-more frequently by pro-conservation actors seeking to reframe the benefits of intact nature-networks in financial terms to, typically, conservative decision-makers (Sullivan 2013; Büscher et al. 2012). In what has been deemed by some scholars as "neoliberal conservation" (see Brockington and Duffy 2010; Büscher et al. 2012; Igoe and Brockington 2007), McAfee (1999, i) simply frames the strategic alignment as "selling nature to save it".

The FUAB and many of their enrolled supporters held a similar monetised view of the Underwood Avenue bushland. Throughout the media and interviews many pro-conservation actors spruiked a long-term financial benefit for the University in retaining the bushland for tourism or research purposes:

> *"There's a benefit for them, for long-term research purposes. They get… they can use the bushland as a biodiversity resource which promotes the tourism interests of the city and the state. There are financial, long-term financial benefits for them."*
>
> (Interview with FUAB 4, May 11, 2016)

> *"I've been at least for ten years been saying to the University that it is an ideal research park for you. People claim to be able to rehabilitate bushland. Nobody has done it. You have got this wonderful opportunity with this bushland… You are selling the family silver for nothing. Just to pay the electricity bills. You know? That's crazy."*

(Interview with FUAB SUPP 1, April 28, 2016)

The utilisation of a conservation discourse with capitalist undertones was also strategic, as pro-conservation actors across both case studies consistently fought off claims their campaigns were merely anti-development 'green' activism. Discussing nature in terms of its economic value as an asset assisted in providing legitimacy to their alternative proposals, which they argued would be both financially viable for the proponents and provide the maximum conservation of their respective nonhumans. Finding a way for proponents to financially benefit from the conservation of the nonhumans, which often involved some minor development, was considered by many activists to be a "middle ground" (Interview with HOPP 17, October 10, 2016) worth supporting. For the conservation networks, deploying a hybridised commodity-conservation discourse was considered a mediator more capable of swinging the support of the proponents or decision-makers in their favour. This has yet to be the case in reality for both networks, thus far.

Discourses around the privatisation and the claiming of particular natures by human actors similarly permeated across both case studies. The enclosure of local natures and their transformation into an asset that can be controlled and manipulated once transferred into the private realm is not a new phenomenon, but described as a key tenet in the neoliberalisation of nature (Mansfield 2007). Given the contextual differences between the two case studies, the discourse of a privatised nature varied from the protection of landowner rights at Underwood, to a social-justice framing around the public ownership of Point Peron.

Throughout the analysis it was apparent that the University felt the need to reinforce its ownership and perceived control of the bushland-site in response to the challenges put forward from environmental activists. Whilst the activists acknowledged the site was legally owned by the University, multiple propositions were put forward for the return of bushland into government ownership for conservation purposes. As a result, across multiple platforms the University-led network sought to reaffirm the bushland as "university owned *land*" (emphasis mine; *Subiaco Post*, October 9, 1999, 1) vested to them by the State for the specific purpose of generating income for future generations education – implying a social responsibility to develop *their land* (ATA 2004; ATA 2007; ATA 2007a). Further, the Vice Chancellor or other senior personnel would often appear in the *Subiaco Post* defending and reinforcing their claim of ownership and subsequent right to develop and, in many instances, the term *bushland* was avoided and *land* used in its place. This simplification purified the complexity of

multispecies within the bushland eco-system and reinforced the University's translation of the site as commodity they privately owned, ready to be transformed to maximise its economic value.

The black-boxing of the Underwood Avenue bushland as 'Urban' under the regional planning scheme, and a 'Development' zoning under the local planning scheme, strengthened the University's perceived right to develop the site (Coffey 2008). It reinforced an accepted translation of the bushland as a bounded commodity expected to be transformed and traded for private consumption, and the rights of the University as the *land*owner to pursue development options. With this understanding, the pro-development network would frame the setting aside of bushland for conservation purposes as a significant gesture by the University, who had expectations to capitalise on their right to develop. The University's environmental consultant stated:

> "… the landowner has always had an expectation of ultimate full development of the site. The offer to set aside 25% as non-urban land is, under these circumstances, a substantial compromise" (ATA 1999, 15).

However, as time progressed and as public pressure mounted, the University was required to re-assess the quantity and quality of bushland set aside for conservation purposes. A number of factors are likely to have influenced this shift including the introduction of the Bush Forever policy acknowledging and black-boxing the conservation significance of remnant bushland sites, and the growing public awareness around the endangered Carnaby's Cockatoo, and its reliance on the Underwood Avenue bushland. This was assisted by the FUAB and Marg Owen, not only through their public campaigning, but with direct communication and lobbying with internal officers within decision-making organisations and local politicians. What was initially framed as University, the landowner, offering bushland as goodwill shifted to a trade and negotiation process with environmental agencies, whereby the University was required to demonstrate that their package of offsets would sufficiently protect and reflect the existing biodiversity values onsite. The University's framing of the proposed development also shifted, emphasising its "environmentally sustainable" approach, a commitment to conservation and an offsets package estimated at over $100 million (UWA 2010, 4-7). In a presentation to the local government authority, this framing was accompanied with romantic sketches of the proposed development nestled amongst tree-lined streets and the adjacent bushland.

The contestation around Underwood Avenue bushland also ignited a broader debate in the *Subiaco Post* around landowner rights. Local Councillor Ben Hodson argued

that it was “ludicrous suggesting that we should trample on the rights of landowners” and that the bushland proposed to be set aside for conservation by the University should be considered “a gift worth at least $200 million” to Perth (Hodson, 2010, 54). Hodson’s comments reinforced a discursive translation of the bushland as a commodity awaiting transformation. In seeking a negotiated outcome, Marg Owen similarly argued the state government should purchase the bushland or undertake a land-swap with the University, reaffirming nature as a commodity to be traded; albeit in an effort to save it (Owen 2002, Owen 2016a).

Claims of ownership and the commodification of nature also dominated discourses in media and documents relating to the MBM. These discourses, however, were largely deployed and reinforced by HOPP activists who framed the proposed development of “publicly owned natural assets” as an injustice to the local community (*Weekend Courier* 2010, 5). Activists consistently claimed Point Peron was land for the people, purchased by the State from the Commonwealth Government in 1964 for the purpose of public recreation (Western Australia Legislative Council 2006). The area was consistently described as a place for the local community to enjoy local wildlife, marine activities and fishing; a place where generations of families had holidayed in shacks and camping sites. However, whilst arguing against the privatisation of publicly owned coastal land, the activists were reinforcing the notion the area was indeed a product-like, geographically bounded asset that *could be* owned and traded. This was further evident in the one-on-one interviews:

> *“The land must be kept in public ownership for future use by public. When there are 3.5M people it will be necessary for enjoyment.”*
>
> (Interview with HOPP 5, October 1, 2016)
>
> *“It's a land grab and it's taking land, which belongs to the people, away from them.”*
>
> (Interview with HOPP 17, October 10, 2016)

The concept that nature can be enclosed and alienated from public use through the mechanism of privatisation is considered a defining principle of a neoliberalised nature (Mansfield 2007). However, as demonstrated in the case of Point Peron, a lack of privatisation does not preclude the framing of nature as a commodity that can be owned more broadly by the community. The region’s high accessibility and picturesque landscape allowed the community to develop long-term, close relations

with both the Point Peron and Mangles Bay assemblages. This seemingly resulted in the framing of the site as a public commodity to be used for human-nature interactions, and a sense of injustice in the notion of the government stripping back and limiting the public's perceived right to enjoy the site and maintain relations. The framing of the site as a commodity, in this sense, is driven by the community's perceived right to interact and maintain a connection with their local natures.

Accordingly, pro-development and pro-conservation actors across both case studies consistently represented nature as a *thing* that can be colonised, traded, negotiated, owned or offset. Often this discounted the intrinsic value of individual beings and the interdependent relationships of those beings with others within these living systems. As their campaigns developed, local activists often reinforced this representation strategically with their alternative plans, support for compensation or request for land swaps. To this extent, the framing of nature as a commodity increased throughout the course of the two case studies as pro-conservation networks strategically sought to sell their natures, in order to save them (McAfee 1999).

6.3 Romantic Nature: A Double Edged Sword

Romantic notions of Nature within the discourses surrounding planning practice is common. Nature is often framed as a refuge away from the city or something that ought to be protected from urbanisation or other human-related interferences. Whilst romantic representations have historically resulted in a greater human appreciation of natural systems within Australia (Frawley 1992), in these cases it became clear this particular discourse was a double-edged sword deployed by both pro-development and pro-conservation actors with divergent motives.

Rational, science based representations by pro-development network environmental scientists often reinforced a romanticised view of Nature as pristine and without human interference. In the case of the Underwood Avenue bushland, the University's pro-development network consistently highlighted the sections of the bushland proposed for development as lesser quality to the areas proposed to be set aside for conservation. The University and their environmental consultants would highlight sections of bushland containing higher instances of non-native plant species, framing them as less significant or valuable, and thus suitable for development. Language such as "weed invasion" and "degraded" were commonly used, highlighting levels of disturbance and numbers of introduced species in an attempt to devalue particular sections of bushland and the individuals within (ATA 1999; ATA 2004; ATA 2007). In

some instances these were further framed as a threat to the areas considered more pristine, and thus more 'natural':

> "The introduction and spread of weeds in bushland areas presents a major threat to biodiversity including the loss of native floristic diversity, vegetation structure and native fauna habitat. In addition, the prevalence of weeds in bushland areas increases the threat of fire" (ATA 2007, 14).

Conversely, the bushland within the proposed conservation zones were framed as high quality, containing a number of locally native species in a relatively undisturbed state (ATA 1999; ATA 2007).

The dichotomisation of native versus non-native and pristine versus disturbed was tactically implemented by the University-led network to justify development – a strategy shifting very little throughout the course of the case study. The romantic discourse reflected society's tendency to favour and admire the parts of Nature appearing to be untouched by humans or human-related change – highlighting our weakness for nostalgia and yearning for the undisturbed, seemingly preserved and wild natural settings. Utilising a science-based conservation discourse that highlighted the weedy state of certain parts of the bushland, the University were seeking to counteract the activists' representation the Underwood Avenue bushland was valuable in its entirety. The weedy state of the site was used to frame the bushland as a place that had lost its value (both ecologically and aesthetically) and thus was not worthy of conservation as a whole. Accordingly, in order to advance their development agenda the University combined a rational conservation framing with a romantic discourse to argue the development would be scientifically and socially acceptable.

Similarly, pro-development actors within the MBM study consistently sought to frame the Point Peron region as a "mess" requiring development (Palmer 2005, 11). Whilst the developer's messaging was diplomatically focused on *enhancing* the existing features of Point Peron, pro-development locals were more pointed in their letters to the *Weekend Courier*, particularly during heightened moments of controversy. Actors referred to the region as "devoid of its once beautiful fauna" (Morton 2006, 9), "weed infested" (McAullay 2009, 13) and a "haunt for young drivers doing burnouts, and graffiti artists" (Sykes 2006, 13). The existing holiday units were described as "dilapidated" (Stone 2009, 13), the seagrass beds as "degraded" (Taylor 2011, 13) and the scrubland as "neglected" and "abused" (Ockwell 2012, 13). Sulc (2006, 13) summarised the above with:

> "… it is far from a pristine piece of wilderness as many green activists claim. The area of Point Peron is seen by myself and the public as being under-used and degraded with the establishment of fibro holiday shacks for the use of a privileged few. …Open your eyes and look at what is actually there on Point Peron."

On the other hand, pro-conservation actors tended to highlight the beauty, spirituality and wonder of both Point Peron and the Underwood bushland. This was particularly evident in the Underwood case, assisted by the regular narratives and commentaries provided by Marg Owen. However, setting Marg aside, romantic framings of the bushland were deployed regularly by a range of local actors throughout the early years of the campaign. In what appeared to be a strategic effort to enrol and mobilise supporters to protect and cherish their local bushland, Underwood was described as a "beautiful" (Fielding 2000, 8), "pristine" (Boase-Jelinek 2002, 10) space filled with "treasures" (Segal 2007b, 22), a peaceful sanctuary for animals (Stedman 2000; Boase-Jelinek cited in *Subiaco Post* 2000; Boase-Jelinek 2001), and a space capable of improving residents' quality of life and well-being (Payne 1999; Gates cited in *Subiaco Post* 2000; Gates 2007).

However, following the arrival of the endangered Carnaby's Cockatoo as a key player and resident within the bushland around 2007, there was a notable shift in the discourses deployed by local activists. By the end of 2008 the romantic framings, Marg aside, were superseded by impassioned pleas to consider the habitat as vital for the survival of the local Carnaby's flock. This shift to a conservation focussed discourse was relatively swift, aided by a heightened sense of urgency from the FUAB-led network following an approval recommendation being published by the state environment authority. The focus and impact of this conservation discourse is discussed further later in the chapter.

Similarly, local Rockingham newspaper the *Weekend Courier* was also a medium for conservation activists to express their appreciation for both the marine and terrestrial environments in the vicinity of the proposed marina. The site was framed as a "wild, natural beauty" (Higgins 2005, 11) and as a place where you can connect with and enjoy a "unique", "unspoilt" and "beautiful" natural area (Edwards and Edwards 2006, 14; Sykes 2006, 13; Unknown 2009, 9). For many it appeared these feelings and framings were tied to personal experiences and connections with the site, whether it be diving, fishing or camping nearby. There was a sense of urgency to convey the site's value, with many referring to future generation's access to one of the last

remaining coastal bushland settings in the Perth region (Jecks 2006; Edwards and Edwards 2006; Lowe 2010).

However, from a campaign perspective there was a notable shift in discourses deployed publically when the Jecks-led HOPP team branched off from Preserve Point Peron (PPP). Prior to the establishment of HOPP, the PPP team had focused their messaging more tightly on the potential negative environmental impacts. This shifted to a social justice framing in the years following the formation of HOPP. As one member noted:

> *"When Dawn came along, the focus sort of broadened. It became more angst about 'They are stealing our park. It's got public access, they will privatise it. It'll be houses and a marina and hotels and you won't be able to go there!'"*
>
> (Interview with HOPP1, August 22, 2016).

Whilst remaining in touch with the environmental issues, Jecks focused the group's anti-development messaging primarily on the privatisation of what was considered public land, the potential loss of public access, the likely unaffordable nature of the proposed moorings for local boat owners, and the cost to taxpayers and local rate-payers to construct and maintain the canal development. The campaign, however, still utilised romantic framings of Point Peron to garner support, particularly within the Cape Peron Coastal Park plan, which both discursively and photographically romanticised the region.

Overwhelmingly Marg Owen remained the greatest romanticist when discussing the various plants, insects and animals of Underwood in her many letters to the *Subiaco Post*. Her unique narrative approach not only highlighted the species that occupy the site, many unknown to the local community, but provided a sense of wonder and awe for the readers that romanticised the bushland as a place of discovery and fascination.

Many of her letters depict moments in time where her presence intersects with another being, or she curiously observes interactions between other species:

> "It was then that a movement caught my eye. Squatting down I saw that it was a bee that had been captured by an ant. Being a keen photographer, I raised my lens and was just about to achieve perfect focus when, faster then the eye could see, the pair of wrestlers disappeared. A trapdoor had opened and the pair vanished into the hole.
>
> … Upon reflection, I think that as the drama of the initial bout of bee versus ant was happening, the pair came to the edge of a trapdoor spider's home.

> The spider, feeling the vibrations, must have opened the door, grabbed the bee's leg and pulled the pair in" (Owen 2002a, 2).

Many of her depictions, particularly with the Goshawks, provided the bushland with a sense of danger, developing a perception the bushland was a patch of untamed wilderness in and amongst suburbia:

> "On a morning expedition into Underwood, I heard red tails in the bush and headed that way. A goshawk decided to chase the red tails and I had a glimpse of the chase through the leaves. By then I was in the middle of the bush and heard that familiar goshawk sound of 'yip, yip, yip, yip, yip'. Coming towards me at head height and from 50m away was a goshawk, but she veered off-line to perch on a jarrah branch. She was a youngster, as indicated by the strong barring of dits and dots on her front plumage. …The chick and I studied each other for some time and then I said goodbye and left" (Owen 2016, 12).

Marg's letters framed the bushland, and Nature more broadly, as a place of curiosity, joy and beauty. Whether discussing the sharing nature of Orb-weaver Spider couples (Owen 2011b); the gorgeous pheromone-producing, wasp-attracting Carousel Spider Orchids (Owen 2007e); the "lurid, sulphurous" blob-like Dog Vomit Slime Moulds (Owen 2014, 12); or the "rich tapestry of life and loves" for the black cockatoos that reside in and around Underwood (Owen 2014a, 32), Marg's descriptive narratives romanticised the nonhumans of Underwood in a way that not only anthropomorphised them, but anthropocentrically framed them as a source of entertainment. Marg advised that her intention was to "keep the readers/the community informed about the wonderful things to be seen in the bushland" knowing that "if the bulldozers threatened, there'd be many, many people who would rush to the bushland to occupy it" (Owen 2016, pers. comm.). This suggests a very strategic deployment of the romantic discourse to captivate, enrol and mobilise supporters, bringing them into association with the bushland's network of species.

In order to understand strategy further, it was useful to analyse the discourses utilised by activists within the public realm against those displayed throughout the individual interviews. There were clear correlations between the two, with activists across both case studies typically describing and framing Nature in the same positive terms as found within the media. For instance, when asked to describe what Nature meant to them, many described a sense of wonder, awe or inspiration when referring to their personal experiences or interpretations:

"You get into nature and there's not that geometric shape. There's diversity of shape, and colour, and shade and light and, you know, life and things around."

(Interview with HOPP 14, October 19, 2016)

For some, it was considered a place of refuge, vital for emotional well-being and capable of creating very personal, deep, spiritual-like connections. It seemed for some, being amongst what was perceived to be a natural environment allowed them to reconnect with the environment.

"… but as soon as I step into this bush area and see the reeds and the birds... like, it just... it's quite a release. And it's sort of takes me back to nature, I guess. So ... it's quite emotionally uplifting to think that a place like that still exists so close to my home. It's really important that it's valued."

(Interview with HOPP 3, October 10, 2016)

"Just… it's almost like a spiritually uplifting experience to be in an environment like that. And that's what I think of is nature. Just magic really. Absolute magic."

(Interview with FUAB 6, April 4, 2016)

However, there was also a sense that Nature was a place clean of humans – somewhere free of human-related noise, air, visual or physical land and water pollution. The beauty of a space that was perceived to be unspoilt, or unaffected by human touch. Yet also free from weeds or non-native flora and fauna. In a sense perfect, as if found in a preserved state prior to human interference.

"Wildlife. Umm… natural vegetation. Endemic species. Beauty. Wonder. Uniqueness…"

(Interview with FUAB 3, April 4, 2016)

"And I don't know, probably the last big walk I did was at Cradle Mountain, just for the day. And it's just gorgeous, this amazing scenery. You look out and see this great view, it's just this pristine landscape. No buildings, just water, mountains, trees. And then there's always things flowering close by, which is just beautiful. And no weeds."

(Interview with FUAB 7, April 4, 2016)

The framing of Nature in this romantic manner suggests that, to them, humans and what is perceived by them to be natural are somewhat incompatible. For Nature to

exist it is required to be free of human interference and change, yet open as a space of refuge and exploration – a place humans can enter periodically, but not impose themselves upon. There is a recognition humans can, at will, step in and out of Nature or connect and reconnect on a spiritual or emotional level. To them, the flora and fauna found in and amongst human-centric urban environments on a daily basis does not provide the same benefits or level of connection – these urban natures are not the Nature they are seeking. In this sense it illustrates a weakly anthropocentric mentality where they want and perceive Nature to be a pristine, healthy system of flora and fauna that allows species to thrive and be wondrous, whilst also being a resource to tap into for human benefit.

The notion that human-centric urban environments do not form part of nature was further evident when participants were asked to describe an unnatural environment. Almost all participants described human-made products within city environments, or the effects of such environments, as the antithesis of natural.

> *"Noise, is the first thing for me… It just doesn't look harmonious. There's no harmony in it, really. Yeah. I find hard surfaces give you so much noise."*
>
> (Interview with HOPP 7B, October 4, 2016)
>
> *"Umm… well, cities. And most built up environments, where this no… well it is unnatural. Anything built by humans is unnatural. I guess, because it is a construct. It's not something that forms naturally."*
>
> (Interview with FUAB SUPP 6, April 27, 2016)

Human-made products may be considered unnatural in that they often constitute the marriage or collection of elements not typically found without human involvement. Indeed, Soper (1995, 15) contends the most common understanding of Nature is "everything which is not human and distinguished from the work of humanity". The romantic notion of a natural environment being restricted to where nature can be found in its purest, most pristine form with human cities constituting the extreme opposite reinforces the notion of a human-nonhuman dichotomy.

This dichotomy corresponds with the discourse presented by the pro-development actors of the two case studies in their efforts to devalue the nonhumans and justify development. Accordingly, there is an apparent tension between how the local activists discursively frame natural environments, more broadly, as pristine, human-free spaces and the local natures they are seeking to protect, which are notably

disturbed and human-affected. Despite this conundrum, activists have clearly chosen to deploy positive romantic framings throughout the local media in order to enrol and mobilise supporters to secure a conservation outcome and to counteract the counter-romanticism put forward by the pro-development networks.

6.4 Scientific & Conservation

The quantification of natures within scientific analyses has historically justified the conservation of particular environments and landscapes into reserves, national parks and open spaces (Frawley 1992). However, the same discourses have also been utilised to justify and legitimise the development or use of other natures for human purposes (Frawley 1992). Politically, the scientific discourse of nature is powerful. The legitimacy associated with scientific analyses, and the technical experts capable of performing analyses, has laid the foundations for the discourse to be dominant throughout environmental impact assessments in land-use planning processes (Hillier 1998; Cadieux 2011). As Bear (2006, 186) reminds us, knowledge in the Latourian sense, “is fundamentally a relational concept in its production and acceptance”. Knowledge produced by pro-development and pro-conservation actors through relational experiences with the nonhumans from each case study were consistently translated into discourse mediators or technical intermediaries to assist in achieving their network goals.

Throughout the two case studies nature was consistently translated and quantified by technical experts enrolled into the pro-development networks. Typically, nonhuman individuals from each case study were observed during site visits by environmental scientists engaged by proponents. These were staged at times considered most effective at maximising, in terms of quantity, species identification, or identifying seasonal changes in species diversity. Data obtained from on the ground interactions with nonhumans were often combined with existing knowledge of what were perceived to be similar nature assemblages nearby, utilising artefacts such as published reports, aerial photographs and GIS mapping systems. Using the information gathered, the scientists would develop an all-encompassing representation, in the form of a report, of the nonhuman flora and fauna known and expected to be present at each site and of the expected impact from the proposed developments.

The findings reported were typically framed in accordance with black-boxed policy that established normative approaches to quantifying species. Nonhumans were

ordered into classification systems, complexes, subsets and communities to assist in understanding, from a scientific perspective, quantities of nonhumans present geographically, in relationship to which others, the extent of their distribution and rarity both locally and generally. For instance, the nature-assemblage of Point Peron was represented in the manner below, listing the species and complexes present on-site:

> "Floristic community types (FCT) mapped at the site (Point Peron) include FCT 30a *Callitris preissii* (or *Melaleuca lanceolata*) forest and woodlands which is listed by the Department of Environment and Conservation as a Threatened Ecological Community (TEC); and FCT 29b *Acacia* shrublands on taller dunes and FCT 30b Quindalup *Eucalyptus gomphocephala* and/or *Agonis flexuosa* woodlands which are both listed by the DEC as Priority 3 Ecological Communities" (EPA 2013, vi).

The quantification and classification of nonhumans in this manner flattens the richness of species diversity and inter-relations into often simplistic categories translatable into two-dimensional reports, maps and graphs. These artefacts serve as intermediaries delivering the translation through time and space, supporting network agendas and informing decision-makers. As Latour (1987, 227) explains, the process transforms the on-the-ground complexity of the eco-systems and inter-relating nonhumans present within these systems into "a flat surface of paper that can be archived, pinned on a wall and combined with others". From a discourse perspective, the reports produced by environmental scientists translate the on-the-ground phenomenon of interspecies mingling, occurring within these nature assemblages, into a language that rationally lists, categorises, orders and ranks the existence of species present.

The translation of the local natures in this manner also reflects the relationship between the various pro-development and pro-conservation humans and the bushland itself. The University's environmental consultant was enrolled into the pro-development network to investigate the bushland from a scientific perspective. Their translation of that bushland as weed infested and littered with non-native species reflects this objective, rational scientific approach. Conversely, the translations by conservation activists, and in particular from Marg Owen, reflect a longer, more personal immersion into the bushland and an understanding of how the individual parts come together to create the whole, both on the ground and in reality. Whilst acknowledging weeds, the FUAB and their conservation supporters' romanticised framing of the bushland as a beautiful sanctuary is a translation of their relationships with the dynamic, lived reality of the site as a habitat for various interacting species, and not necessarily its quality as measured against a standardised benchmark.

Identified species or specific nature-networks deemed more valuable or in need of special consideration by black-boxed policy tended to dominate scientific representations. The absence of such privileged nonhumans were reported on with emphasis, as pro-development actors sought to convince decision-makers of the environmental acceptability of their respective development proposals.

> "No Endangered species pursuant to the Environmental Protection and Biodiversity Conservation Act 1999, Declared Rare Flora pursuant to the Wildlife Conservation Act 1950 or Priority Flora species listed by the Department of Environment and Conservation were located" (2011 ENV Australia, iii).

If such nonhumans were present, they were typically framed as capable of withstanding the impacts of the proposed development, or suitably represented in nearby sites. As Hillier (1998) noted, such scientific representations are often strategically deployed to ensure they correlate with advancing development goals – they are political agents used to mediate network outcomes. The political nature of scientific interpretations was particularly evident in the Underwood Avenue bushland case, where the pro-development actors sought to diminish the significance of the increasingly present Carnaby's Cockatoo by dissenting against the rationale underpinning their endangered status in the immutable mobile federal legislation.

In response to the federal environment authority, the University's environmental consultant sought to debunk claims regarding the degree of population decline. They stated:

> "We believe there is evidence to suggest that the population of Carnaby's Cockatoo has declined significantly in recent decades… However, we could find no data to support the claim that it has halved over the last three generations. Similarly, we could find no data to support the estimate of 60,000 breeding Carnaby's Cockatoos as suggested by DEH. …it is at best an educated guess. It is our view that if there are currently 60,000 breeding birds in WA as indicated by DEH, then the conservation status of Carnaby's Cockatoo should be reassessed" (ATA 2007, 28).

Further, the consultant sought to reassure the federal environment authority that additional food sources outside of the Underwood Avenue bushland were readily available for the birds. They noted:

> "The Underwood Avenue site represents less than 3% of the available habitat assessed as having feed plants available in good condition. Based on this data it is difficult to conclude that the clearing of the Underwood Avenue site

> would have a significant detrimental effect on Carnaby's Cockatoo in the Perth metropolitan area" (ATA 2007, 28).

The consultant listed several hundred potential foraging sites within the vicinity of the development site that may be utilised by the Carnaby's Cockatoo as an alternative food source (ATA 2007). Utilising their own data, and seeking to dismantle competing translations regarding population, breeding and foraging reliance, the consultant sought to represent the Carnaby's Cockatoo as an adaptable species that could continue to thrive post development of the bushland. However, following counter-translations by the FUAB-led network including long-term counts and observations by Marg Owen, the federal environment authority failed to be enrolled and recommended refusal on the basis that:

> "There is a limited number of foraging habitat patches remaining in the Perth metropolitan area. The proposed clearing has the potential to contribute to the cumulative effect of development in metropolitan Perth, which is resulting in a reduction in the number of 'islands' of foraging vegetation to support connectivity between these metropolitan islands, and the feeding and breeding areas further east in the wheatbelt.
>
> It is likely that the proposed action will displace or limit the Camaby's Black Cockatoos that currently utilise the area and therefore is likely to have an *unacceptable impact* on the persistence of a robust population of Carnaby's Black Cockatoo in the southern Perth metropolitan area" (DEH 2008, 11).

Indeed, counter-translations were consistently put forward by local activists across both case studies, in an attempt to de-legitimise the scientific representations deployed by pro-development actors. Both the FUAB and HOPP enrolled the support of expert scientists to assist in delivering counter-translations, highlighting perceived inconsistencies in the pro-development network's translations. In some instances these were inscribed into technical reports submitted to decision-makers to mediate a conservation outcome. However, for the most part these were utilised in formal submissions throughout various approval processes, and in direct communications with decision-makers in an attempt to persuade enrolment, or instigate dissidence, for instance, the letter from prominent Australian scientists to the federal Minister for Environment to re-consider the impact of the Mangles Bay marina on the local penguin population (Carmody 2018). These were combined with less-traditional scientific representations by individual activists, which were typically based on long-term relational interactions with, and observations of, individual and collections of nonhumans within each site.

Marg Owen's photographic journalism and evening counts of the Carnaby's within Underwood is a prime example. By submitting photographs to the local newspaper of the birds utilising the bushland site, Marg and the FUAB were able to engage the local community in the narrative of the declining species. Discursive framings of the bushland began shifting from romanticism to a conservation focus, with local residents' understanding of the site shifting as a result of their newfound relationship with the Carnaby's. Further, Marg's observations and counts of birds as they came in to roost for the evening was used strategically by the FUAB-led pro-conservation network to mediate relations with decision-makers and counter the assertions presented by the pro-development network the site was not significant for the species. Where the Little Eagle had been less successful in generating momentum in the community as a campaign focus, the Carnaby's, boosted by their endangered status, demonstrated significant agency, resulting in shifting discourses, increased mobilisation of conservation actors, and the destabilisation of the pro-development network. At times HOPP similarly sought to deploy a conservation discourse around the seagrass meadows, the Thrombolites, and, particularly towards the end of the campaign with the Little Penguin.

However, other conservation actors took a more eco-socialist approach. Utilising existing knowledge, and the argument there is knowledge yet to be learnt, they sought to advocate protection for an entire range of nonhumans. This was a notable difference to the pro-development scientific representations that interpreted "common" nonhuman individuals as insufficiently rare to warrant their specific protection, thus equating such species with little value (Coffey 2008, 14). Conversely, activists tended to frame entire nature-networks as a scientific depository, which if not fully understood ought to be conserved as a precaution. In their submission to the federal environment authority, the FUAB stated:

> "…for the sake of biological diversity and ecological integrity, and to comply with the precautionary principle, the whole of the Bushland needs to be preserved" (FUAB 2007, 1).

Indeed the "precautionary principle" was quoted by a number of local activists and other actors across both case studies in submissions to decision-makers to promote conservation where scientific data was perceived to be lacking (Office of the Appeals Convenor 2008; Strategen 2006; Strategen 2012a; Office of the Appeals Convenor 2014). This was particularly evident regarding the risk of saltwater intrusion into Lake Richmond and the proposed seagrass transplantation for the marina project

(Strategen 2012a). Regarding the latter, the proponent's commitment to replant seagrass meadows within Mangles Bay as an offset and to counteract long-term impacts on local fish stocks used a methodology utilised in previous replanting trials in Western Australia that had limited success. This was a significant point of contention for local actors, and used to support an argument the proposed development would have an unknown impact on the nearby Little Penguin colony whose foraging grounds extended into the development zone. An unnamed appellant commented:

> "The indirect impact on potential food sources for Little Penguins through impacts on the Mangles Bay shallow flats which is a fish nursery and the general lack of sufficient data to fully determine the importance to penguins of the shallow flats of Mangles Bay suggests that more studies are required and that the full direct or indirect impacts cannot be assessed at this time. It will be difficult to determine an offset given the immediate impact cannot be mitigated by offsets that may take several years to achieve the functionality of an established seagrass meadow" (Strategen 2012a, 118).

Similarly, it was argued by many actors that there was insufficient knowledge surrounding the potential saltwater intrusion into Lake Richmond or changes in water level, and the impact these may have on the endangered freshwater Thrombolite community (Strategen 2012a, 56; 58; 61; 67; 94; 97; 102 etc.). In this instance, the framing of nature as scientifically unpredictable gave cause for actors to suggest decision-makers take a precautionary, conservation-focused approach when assessing development potential.

In summary, throughout both case studies actors across both networks consistently sought to fight science with science. Utilising local relational knowledge in combination with expert translations, the local activists sought to disrupt their respective pro-development network's advancement through obligatory passage points by instilling dissidence in decision-makers. Whilst this was done with great skill in the case of HOPP, it had little impact in delaying the enrolment of the state and federal environment authorities into the proponent's network and the issuing of environmental approvals. Conversely, the efforts of Marg Owen and the FUAB in deploying alternative scientific translations resulted in significant delays in the enrolment of the state environment authority to University's network and the eventual recommendation for refusal by the federal environment authority.

6.5 Stewardship of Nature: An Ecological Gift

The notion of human stewardship over local natures permeated throughout the discourses of activists, decision-makers and proponents in both case studies. Whilst not the dominant discursive representation, the language used in the local newspaper and interviews indicated some humans felt a moral responsibility to nurture nonhumans, be the "carers of the earth" (Peters 2010, 34) and act in a responsible way permitting other species to thrive into the future. Whilst the discourse tended to reinforce a sense of hierarchy, language was framed around an ethic of caring, rather than as an act of dominance:

> *"…we really should be stewards and protecting nature. But not just humans but all life. So I think we need to take on… we have to look after it. We are in this together. We are a part of it"*
>
> (Interview with FUAB 3, April 4, 2016).

Proponents spoke of the need to "intensive(ly) manage" ecosystems and bushlands to ensure that they continued to function post-development as they did pre-development, and maintain their ecological, and instrumental, value long term (EPA 2003, ii). Further, they spoke of their commitment to protect individual species by applying "fauna friendly clearing protocols" involving, for instance, inspecting hollows, nests and debris for any affected fauna within the Underwood Avenue bushland prior to clearing (ATA 2007a, 4) or timing the commencement of dredging to avoid the peak Little Penguin breeding and foraging season in Mangles Bay (EPA 2013). Whilst these commitments arguably were required by proponents to enrol the support of state and federal environmental authorities during obligatory passage points, they were framed with a sense of responsibility to care for or nurture vulnerable nonhumans – particularly those deemed to be endangered or threatened as per black-boxed legislation.

The discourse tended to reinforce the dichotomy between humans and nonhumans and the notion that humans are superior. The anthropocentricity of the discourse was strengthened further by actors framing the protection or conservation of the two sites for the sake of future *human* generations who were yet to enjoy or experience them. This was particularly prevalent in the case of Point Peron, where numerous letters to the *Weekend Courier* called for the consideration of future generations' access to the coastal and marine environment current and former generations had so enjoyed (Jecks 2006; Edwards and Edwards 2006; Steel 2006b; Hardie 2010; Lowe 2010;

Chapman 2011; Kelly 2015). Both Point Peron and Underwood were presented as ecological gifts to mankind, implying a moral responsibility to pass it on as we so received it:

> "Margaret and her bushland group have proved beyond all reasonable doubt that the Underwood land is a real treasure trove given to all freely by Mother Nature" (Hine 2008, 2).

6.6 An Interconnected Nature

Representations that reflected the complexity and interconnectedness of the natural systems at Underwood and Point Peron were also present in both media and documentary sources. The discourse recognises the contribution individual nonhuman actors have in creating functioning systems, and the importance of maintaining and enhancing linkages and corridors between systems to encourage cross-pollination and avoid the island effect. In comparison to the eco-socialist approach or stewardship framings, which appeared to be centred on a sense of caring and preservation, discourses around the interconnectedness of the local natures highlighted linkages and connections.

Across both case studies, much of this discourse was presented by local conservation actors, often imbued with a sense of frustration and desperation regarding the incompatibility between the proposed developments and maintaining eco-system functionality.

> "If this development goes ahead we can say goodbye to the white-tailed black cockatoos and all the other birds that feed and nest in this area. We can say goodbye to the small reptiles, insects and the orchids and banksia and other species that live in harmony with each other" (Graham 2008a, 28).

Throughout media outlets conservationists would often reinforce the interconnectedness of nature, and the far-reaching consequences of degrading or disrupting the existing entanglements and interdependency between nonhuman species. The discourse was often loaded with terms such as destroy, threaten or devastating:

> "To destroy a Bush Forever site to cater for a few cashed-up boaties, threatening the survival of the ancient Thrombolites, the coastal ecosystem and nursery for those fish that recreational fishers are so keen on is insanity" (Naia 2013, 9).

These framings demonstrate an acknowledgement by some actors the actions proposed would impact not only the functionality of the existing ecosystems, but the ability for the individual nonhumans within to flourish. Thus, the discourse illustrates examples of less anthropocentric representations put forward into the public sphere. Notwithstanding this, some activists framed the demise or disturbance of these systems as potentially detrimental to human quality of life given our reliance on their ability to produce clean air, water and food:

> "With climate change and the threat of rising sea levels it is up to all of us, especially those who have the power to make decisions that can have long-reaching implications, to seriously conserve and account for the environment because without it and its services (clean air, biodiversity, water and so forth) none of us will survive" (Byrne 2009, 13).

Whilst acknowledging the interconnectedness and value of the ecosystems, the ecological services they provide were again framed in an anthropocentric manner as a human good.

The discourse was also deployed by activists seeking to produce counter-arguments to proponents throughout the environmental planning approval process. Actors sought to convince decision-makers protecting entire systems of nature served a greater purpose and held greater value than focusing on the protection of individuals, such as endangered species, or specific parcels. In some instances this was framed in an anthropocentric manner, for example highlighting the potential loss of scientific value for humans:

> "What has [previously] been lost is most of a diverse, large ecosystem and its constituent flora, fauna and vegetation that once covered the entire Swan Coastal Plain and which consisted of a large number of sub systems of great variety. … To not conceive the destruction of this [Underwood] ecosystem as a loss, is itself a tragedy of a lack of understanding and knowledge" (Trudgen 2001, v).

For others, the discourse focused on securing a positive outcome for the nonhumans they were representing. Many of these highlighted the importance of conserving the "unique diversity of inter-related species" (Segal 2010, 2), recognising the fragility of these systems such as the seagrass meadows in Mangles Bay (Jecks cited in Nugent 2013b; Chapman 2013), maintaining functional linkages between adjacent local systems (UBC 2013; 2015), and intact vegetated corridors assisting to create larger regional connections required for species to thrive:

> "Regional connectivity of Underwood Avenue to other areas such as Kings Park and Bold Park is critically important to the long-term capacity of Underwood to support regionally significant bird species, and is crucial for protecting these species against local extinction" (WREN 2008 cited in Coffey 2008, 41).

The discourse was also deployed frequently by the state environment authority, who repeatedly noted the interconnected nature of the nonhumans present at each site. In relation to the Underwood bushland, the authority noted its value as one biodiverse-rich part of a regional ecological corridor through Perth's western suburbs:

> "The Underwood Avenue Bushland is also part of a significant potential bushland/wetland linkage that is likely to facilitate the movement of birds, some reptiles, frogs and insects between other conservation reserves including Kings Park, Shenton Bushland and Bold Park" (EPA 2001, 8).

Despite this acknowledgement, and noting that should the proposed Mangles Bay Marina proceed there was potential for "deleterious environmental impacts" (EPA 2006, 26), the state environment authority flagged the use of offsets or conservation zones as possible solutions to deeming both proposals as environmentally acceptable (EPA 2006, 26; EPA 2001, 13). Upon further negotiation with proponents, the state environment authority subsequently supported the approval of both proposals subject to conditions that enforced the provision of offsets at Point Peron and the securement of a sufficiently sized and representative conservation area within the Underwood bushland (EPA 2007; EPA 2013).

Whatmore and Boucher (1993) contend the ecological discourse has traditionally reinforced a regulatory planning system seeking to protect ecologically valuable natures from development. However, given the dominance associated with the political economy of development and the commodification of natures within western societies, Whatmore and Boucher (1993, 170) accepted the ecological discourse had often been marginalised in planning policy. This is evident in the state environment authority's position for both case studies, in which despite consistently acknowledging the ecological value of the sites in their reporting, the negotiation of offsets eventually prevailed over an outright refusal.

6.7 Deep Ecology & Marg Owen

The analysis of interview, media and documentary sources highlighted discursive framings of both Nature and the local natures in each case study, which aligned partially with the principles of deep ecology. In particular, discourses highlighted the

intrinsic value of the local natures or individual species and the role of the Self in relation to these. This was most evident throughout the interview transcripts, and in particular in the responses received from members of the FUAB. Conversely, the media and documentary sources presented fewer instances of deep ecological discourses, suggesting pro-conservation networks strategically published discursive representations more likely to enrol and mobilise local support.

The differences between the two cases was most evident in the one-on-one interviews, where the intrinsic value of the nonhuman actors within the Underwood bushland, and Nature more broadly, were frequently recognised:

> *"So you might just say it's another piece of bushland, but it's not. They're all different bits of bushland. And I am particularly interested in the fungi and the fungi that you get in those bits of bushland are irreplaceable."*
>
> (Interview with FUAB SUPP 1, April 28, 2016)

When discussing value FUAB participants did not tend to favour particular species, naming an array of individual and collections of nonhumans from trees to bushland, fungi to animals more broadly. However, overall there was a sense of frustration, and for some the discussion was particularly emotional. Many have been involved in multiple environmental campaigns, and have been witness to the loss of natural environments when campaigns fail. When asked about the current relationship between humans and nature, many responded that there was a lack of understanding across society of the intrinsic value nonhumans and natures possess:

> *"They don't see that it's got value of its own and that a whole lot of things live there. It's (the bushland) already home to a lot of other animals, so we don't need to put people there, it's already being used."*
>
> (Interview with FUAB 7, April 4, 2016)

> *"But when you look at different species, they are… they have amazing attributes that humans can't even fathom sometimes. And then those sub species, they're more capable then us in many ways and because of the history of our thinking of animals we think we can just treat them like a carrot or something."*
>
> (Interview with FUAB 5, May 4, 2016)

There was one notable exception across both case studies – Marg Owen – who consistently highlighted publically in published letters not only the existence but the

worth of individual species and specific *individuals*, particularly those that are less known or, as she acknowledges, too common to be surveyed in environmental planning processes:

> "An expert on ants told me recently there was a large diversity of ants in Shenton Bushland and that Underwood Avenue Bushland would have a similar diversity. The little things that matter – such as the diversity near the base of the food chain that are not considered important enough to be surveyed when development proposals are made" (Owen 2008, 30).

Using her storytelling approach, Marg was consistently able to highlight the function or role of particular species, their relationship with other species in the bushland, and thus their instrumental value to the ecological functionality of the site. Importantly, her stories also provided moments of pause to observe and learn about the species that quietly inhabit such bushland settings, and that go about their business with purpose driven by their intrinsic telos (Taylor 1986). The passage below, for instance, provides an insight into the breeding behaviour of plant hoppers as experienced by a one-time encounter between Marg and an individual insect:

> "These white waxy patches are common on leaves in the bushland but I never knew what emerged from them. Recently, however, I saw some new little nymphs who had just emerged and I could see they were plant hoppers. The nymphs are intriguing as at their back end are two filaments which they can manipulate. When the filaments are sticking up at right angles they look like antennae. Which end is the front you might wonder? To add to the deception, the nymphs have a habit of walking backwards; most confusing. Last week I was lucky enough to see a beautiful adult plant hopper laying her eggs. As she laid them she was manipulating the white waxy material to cover them. She worked her way up to near the top of the leaf and her job was done. I thought she might rest – but no, in the twinkling of an eye, she was off" (Owen 2011c, 24).

Marg doesn't attempt to politicise the plant hopper, or justify its existence from a human perspective. Rather, she does little more than detail a one-time observation of a particular moment in an individual insect's life; an insect living its life within a much larger system. Marg provided similar accounts of various nonhumans, some on multiple occasions – for instance the resident Goshawk:

> "Swisssh… as the goshawk swooped from behind and passed just over my hatted head, I got quite a shock and dived under the fronds of a grass tree. My nose was only 40cm from the ground when swisssh again: a goshawk wing sailed past my cheek. Oh goodness, now I would have to endure again the only too well remembered diving and ducking of last year. From each tree trunk, you have to plan the dash to the next tree trunk and take courage in hand to make the break.

> The goshawk perched, yip, yip, yipping, reading for the next opportunity and unresponsive to my very earnest assurances of "It's alright, I'm going", and my pleas: "Why don't you go and chase a bird?" and "I'm leaving as fast as I can…"
>
> Cowering behind a jarrah trunk, I formed a theory that maybe the goshawk would continue to swoop just over my head. So I rushed almost blindly to the next tree trunk. The goshawk swooped, with legs extended, and whacked me on the back of the shoulder, its talons tearing my shirt and piercing my skin.
>
> So that theory was disproved.
>
> Finally, I got to the southern edge of the Underwood Avenue bush and the goshawk stopped swooping. From past experience, I believe that this female goshawk will be defending her nest site for almost a month until the young hatch. The male goshawk partner has been seen on numerous occasions recently and he always flies away.
>
> Those carrying out research in the bush have been warned. We are privileged that such birds of prey can breed in the city" (Owen 2015, 50).

Marg's accounts read with a sense of equality. She does little more than observe other species and acknowledge her relationship with the species in that moment. Whilst at times she may use romantic language or anthropomorphise her subjects, there appeared a general sense of respect. She accepts that a breeding Goshawk will seek to defend her nest mercilessly, and in that situation human dominance over nature is a far-flung concept. Further, her stories sought to highlight the lives of the nonhumans that had failed to be represented in technical scientific documents or black-boxed policy.

Similar discourses suggesting an equality between humans and nonhumans were generally scarce throughout the media and documentary data sources. These were penned exclusively by activists, and typically highlighted the precarious reliance humans have on a functioning natural world (Monks 2007; WREN 2008 cited in Coffey 2008; Byrne 2009; Stubbs 2010), or as noted by Marg Owen:

> "It is so important that we maintain connected corridors and the small amount of bushland we have left, so that birds, animals, plants and fungi *(and we)* can survive…" (Owen 2007f, 16).

However, throughout the interviews in both case studies there was a clear recognition by activists of an interconnectedness between humans and the nonhuman natural

world. Many acknowledged that humans form part of nature, and despite a perception of dominance, are still reliant upon it, live within it and are influenced by it:

> *"Symbiotic. Can't live without nature. We should be able to live together and share this planet, and do a lot better than we are doing. We need nature to survive. End of story."*
>
> (Interview with FUAB 3, April 4, 2016)

> *"Well we are part of nature. It's not a relationship with nature. We are part of nature. We are just another animal. Except that we are a very destructive animal."*
>
> (Interview with FUAB 7, April 4, 2016)

> *"I also think of necessity. You know we depend on all the natural systems and ecosystems. And I also think that humanity is part of nature, I don't think we separate from nature. And I think that is where Western society has gone wrong, because we have separated ourselves from nature as if we are not part of it, as if we are not natural."*
>
> (Interview with FUAB SUPP 6, April 27, 2016)

Again, these moments were imbued with feelings of frustration that many in society hold a conflicting perspective. For some, this was based on concepts of carrying capacity and recognising that humans are falling out of sync with nature and its capacity to handle human growth demands:

> *"… like so many people say to me, we have to accommodate so many million people. We don't need those people. They don't need that space. And it's a really skewed argument. It's just a stupid way of looking at things really. We should just say, 'Ok. This ecosystem can't support any more people. So we are going to have zero growth. If people want to move here, that's too bad. We won't be able to accommodate them. We can't give them water. We can't give them space. And there's plenty of other places they can live, or not'."*
>
> (Interview with FUAB 7, April 4, 2016)

For others this was expressed as an acknowledgement that actions taken by humans against nature were counterproductive or irresponsible – affecting the natural assets humanity requires to thrive:

> *"I mean we're a part of nature too, it's just that so many of our actions are counterproductive and harmful."*

(Interview with HOPP 1, August 22, 2016)

"I mean we are part of nature one would expect. We've always made ourselves... tried to make ourselves kings... in charge. And maybe we have to see ourselves as part of a relationship rather than always in charge because we're obviously… If nothing else will beat us bacteria and the climate will. If we don't sort of accept that we've got a mutual responsibility at a whole range of levels."

(Interview with HOPP 10, October 14, 2016)

For some, there was a sense of egalitarianism in the way they described nature and the role of humans within it. It was about harmony and equality:

"But yeah, nature. It's... well I just saw a rat running through the vine there. We don't lay rat baits or anything. Rats are part of us."

(Interview with HOPP 18, October 11, 2016)

Naess' (1973, 95) deep ecological notion of "biospherical egalitarianism" was evident throughout many of the conversations. Despite slipping in and out of various anthropocentric discourses, many seemed to come back to equality and connect humans back to nature as simply one other ingredient in the web of life:

"And we're really just another aspect of the Earth, the universe, life…"

(Interview with FUAB 6, April 4, 2016)

Participants were also asked directly whether they believed nonhumans were entitled to 'rights' – the scope and definition being left to their own interpretation. Whilst all agreed, for some the question required thought and appeared to be a conclusion they had reached after reflecting on human-nonhuman relations:

"*Well I've talked before about respecting nature and respecting the organisms and the connections and so on and that has to be based on some sense of the rightness of respecting other organisms, so yes I'd say so."*

(Interview with HOPP 1, August 22, 2016)

"Oh definitely. I mean I think that… I guess that's what partly we do is that we provide that voice for parts of nature that don't get a voice. I mean there is intrinsic value in everything, and all those things should have rights. Plants and animals should have rights to a place on the Earth and exist."

(Interview with FUAB 7, April 4, 2016)

Despite interview participants supporting the notion of greater rights for nonhumans, particularly within development processes, the discourses deployed throughout the media and documentary sources were less explicit. Whilst the language used by some early FUAB actors framed the eviction of nonhumans from their bushland 'homes' as a form of injustice (Stedman 2000; Boase-Jelinek 2000), Marg Owen was explicit in her view that the rights of nonhumans were being impinged upon:

> "I know that turtle frogs have rights; one being the right to live in their habitat without a bulldozer exterminating them" (Owen 2006, 22).

> "The bushland is already housing many species of reptiles, raptors, parrots, cockatoos, small birds, insects, spiders, frogs, fungi, banksias, tall jarrahs, tuarts and marri trees and flowering plants, including orchids. The bushland is alive and occupied" (Owen 2009, 26).

> "Sparrowhawks, and all the other raptors which visit the bushland, have a moral right to exist, if not a legal right in the eyes of our government" (Owen 2010b, 34).

Throughout both case studies, the interview participants discursively demonstrated a leaning towards the principles of deep ecology. This was less evident throughout the media and documentary sources, particularly in the case of HOPP where the value of individual and collective nonhuman species tended to be framed instrumentally rather than intrinsically. Across both cases, interview participants noted the negative connotations associated with being an environmental activist. Many noted, in order to be taken more seriously by proponents and decision-makers they were required to dress and speak more conservatively when meeting, in order to "neutralise the effect of activism" (Interview with FUAB6, April 4, 2016). This may assist in explaining the differences between the public and private framings of nature.

Marg Owen's approach was different. Marg's consistent use of narrative and photography in the *Subiaco Post* allowed readers to understand and appreciate the inhabitants of the Underwood Avenue bushland and their intrinsic value. Whilst these accounts may have been successful in building and maintaining momentum for a campaign against the proposed development, it appears their influence in shifting discourses into a deep ecological space was limited. Similarly, despite many HOPP activists aligning with deep ecology throughout their interviews, the discourse presented publically focused on the social injustice of the proposed marina thus limiting the ability to shift the overall representation of affected nonhumans into a less

anthropocentric space. This suggests that whilst activists may be motivated by an underlying environmental ethic, deploying a similar discourse publically is strategically disadvantageous.

6.8 Complex, Strategic and Relational Discourses: A Summary

Utilising the media, interview and documentary data the discourse analysis has highlighted the dominant discursive representations of the affected natures within the two case studies. These included romantic representations of wondrous natures; the commodification and representation of natures as a resource; and scientific, ecological and deeper ecological perspectives. Further, the analysis demonstrated the way nature is represented in planning processes is complex, strategic and relational. While some discourses remain relatively fixed throughout both case studies, others shift as a result of network activities and relational interactions, and some intersect to create hybridised, often contradictory representations.

Arguably the dominant representation across both case studies were the discourses framing nature as an economic resource. These included the colonisation, commodification, marketisation and privatisation of nature under a concept some scholars deem the neoliberalisation of nature (Castree 2008a, 2008b; McCarthy and Prudham 2004). Proponents tended to lead the charge in the economic framing of nature, with both pro-development networks seeking to unlock the perceived financial capital of their respective natures. For the University, this was framed as their right as a private landowner to transform the bushland site into a marketable asset to assist in funding university activities. For the state-led marina project, the transformation and privatisation of the Point Peron and Mangles Bay areas were presented as an economic and social opportunity to capitalise on the region's natural (and marketable) assets and improve the local economy as a result. However, the representation of these local natures as economic opportunities was not limited to the proponents.

Whilst motivated to protect the natures within the scope of the marina's development area, the HOPP messaging relied on the concept of "selling nature to save it" with the development of the CPCP (McAfee 1999). The plan sought to rationalise the economic value of preserving Point Peron and Mangles Bay as conservation areas, capable of driving a surge in domestic tourism. The marketisation and economic translation of the region was strategically deployed by the HOPP-led network to enrol community members who were interested in either conservation or the economic revitalisation of the area. By doing so, they sought to build strength and political power

in their movement, with which they could position to increasingly agitate the pro-development City of Rockingham Council and local Rockingham politician Mark McGowan. This economic discourse was coupled with a sense of injustice at the potential privatisation of the region, which had been framed as land for the people as an accessible recreational area.

Similarly, within the FUAB campaign there appeared a sense that if conservation outcomes were to be achieved, they needed to be framed in market terms. Whilst the FUAB-led network never managed to develop an alternative proposal such as the CPCP, there appeared a seemingly desperate need to convey the financial benefits of retaining the bushland for research or tourism purposes. This was evident through individual 'letters to the editor' in the *Subiaco Post*, and particularly apparent in the one-on-one interviews. Despite individual activists demonstrating a deep ecological ethic towards nature, conservation aims were being translated into economic gains in an effort to justify and provide weight to their conservation end-goal in a politically conservative environment. The strategic neoliberalisation of nature, fuelled by an underlying pro-conservation environmental ethic, demonstrates the complexity and often contradictory manner in which nature is represented in these contentious circumstances.

Romantic representations of Nature and local natures also featured strongly across both case studies. Local activists and pro-conservation actors tended to talk about the beauty of their local natures: the wonder, fascination, peacefulness and a sense of harmony. This appeared to be the most comfortable way for pro-conservation actors to convey their feelings about their respective natures, to convey its importance and to garner local support for its protection. This correlated with the one-on-one interviews, where Nature was described overwhelmingly in romantic terms as a pristine place, a sanctuary for endemic species and free from weeds and signs of human interference. However, this often contrasted with the very natures they were seeking to protect, which were human affected and often not in a 'pristine' state. Further, activists would frame both Nature and local natures anthropocentrically as a refuge, a tool for improving mental health and well-being and a place of recreation. Thus, natures were framed as something to be used by humans, yet expected to be free of them in order to be pristine. This tension, again, demonstrates the complexity surrounding the framing of nature and the multiple layers within an individual human's interpretation of, and relationship with, local nonhuman natures particularly within an urban context.

In the case of the Underwood bushland there was a notable shift away from romantic framings following the arrival of the Carnaby's Cockatoo onsite. Assisted by Marg's photographic and narrative representations, the discourse from the FUAB-led pro-conservation network shifted noticeably to a conservation focus. The bushland had become a refuge for a significantly large flock of the birds, whose population decline across Western Australia had been translated and black-boxed by environmental scientists into an 'endangered' status under state and federal legislation. This discursive translation of the Carnaby's as an 'endangered' species, provided the bird with political influence throughout the planning process. The subsequent enrolment of the bird as a flagship species by the FUAB provided the pro-conservation network momentum to enrol and mobilise local supporters. The Carnaby's became the rallying point for the conservation campaign and, as a result, the discourses presented publically by the network shifted towards the value and importance of the bushland site for the survival of the Carnaby's.

Similarly, the arrival of the Carnaby's disrupted the momentum of the University-led pro-development network and caused a defensive shift in their deployed discourses. By questioning the science behind the bird's endangered listing, the network attempted a scientific dismantling of the bird's agency in an effort to salvage relations with decision-makers who were showing signs of cold feet during approval process obligatory passage points. Where the FUAB-endorsed Little Eagle had failed previously as a flagship species, the Carnaby's demonstrated significant influence in their ability to alter network dynamics and shift discourses presented by both pro-conservation and pro-development actors. Such a shift, as a result of human-nonhuman relations, was less evident in the HOPP campaign, which strategically shifted its public messaging to a social justice framing to gain more traction in the local community.

The less anthropocentric ecological and deep ecological discourses deployed throughout both campaigns were relatively static, failing to generate traction amongst other actors. Both FUAB and HOPP networks consistently highlighted the ecological value and interconnectedness of Underwood and Point Peron throughout media and public submissions. This was generally reciprocated by the state and federal environment authorities in their reporting, however ultimately failed to prevent environmental approvals from being issued. The discourse deployed by the pro-conservation actors thus failed to disrupt the proponent's advancement through the necessary obligatory passage points.

Despite many local activists across both case studies demonstrating an alignment with the principles of deep ecology throughout the interviews, this was less evident in the representations of nature put forward publically. For HOPP this was likely related to their adopted strategy to focus primarily on the social injustice of the issue. In the case of FUAB, throughout the interviews there was a sense from many the term 'environmental activist' had negative connotations attached. In order to overcome the negativity and perceived lack of authority, it was recognised they were required to dress and speak more formally than usual when meeting with proponents and decision-makers. They knew the game that had to be played, how to appear in public, and speak with more conservative actors in order to achieve their conservation end-goal. Often this required speaking more anthropocentrically about the nonhumans they were representing by, for instance, promoting the economic value and research potential of retaining the bushland. Accordingly, the lack of a public deep ecological discourse coupled with an increased neoliberal framing of nature can be seen as a strategic network activity – a Trojan horse deployed to advance the pro-conservation network's agenda.

Marg Owen, however, was the exception. Through her photographic and narrative representations, Marg instilled the principles of deep ecology into the public sphere sensitively. Her representations touched on the themes of intrinsic value, human-nonhuman egalitarianism and nonhuman rights carefully, in a less frantic, demanding tone then that often attached with community activism. In this way, Marg was able to avoid the negative connotations associated with 'green' activism, and with the assistance of the *Subiaco Post* who consistently published her letters, successfully grew the pro-conservation network and raised the profile of many nonhumans.

Accordingly, the discourse analysis has demonstrated the complex, strategic and relational discursive translations of Nature and local natures deployed by both pro-development and pro-conservation actors in their efforts to progress their agendas. The discourses presented by pro-conservation actors were at times contradictory, reflecting the complexity around cultural understandings of a wild, human-free Nature and the local human-affected natures they have developed long-term relations with. Various discourses were deployed strategically across networks in both case studies, often to mediate specific relations with key actors but also to destabilise the opposition. Further, the analysis has also demonstrated how discourses come to fruition as a result of specific human-nonhuman relations – from the deep and long-term, to the scientific and objective. In summary, the chapter has highlighted how

discursive translations of the local natures in both case studies are actors in their own right capable of shifting network dynamics. Developing an understanding of how the discourses are constructed and utilised in network activities assists in further understanding how particular representations of the Mangles Bay, Point Peron and Underwood natures become accepted in the planning obligatory passage points and black-boxed into decision-making documents.

Chapter 7 Exploring the Dynamics & Influence of Activists' Representations of Nonhumans

7.1 Introduction

This research investigated the role of local environmental activists and their representation of local nonhuman species and assemblages in divisive land use planning proposals. I was curious about deep ecology, and whether the intrusion of environmental activism into the planning sphere could shift the ethics framing processes and outcomes towards nonanthropocentric philosophies such as the deep ecology platform where the human-nature divide is dismantled and the intrinsic value of flora and fauna acknowledged. This chapter draws together the findings from the two case studies – the FUAB and HOPP – and discusses them in relation to the objectives of the dissertation, which were to:

1. Analyse the dynamics of the Friends of Underwood Avenue Bushland (FUAB) and Hands Off Point Peron (HOPP) pro-conservation networks to understand the more-than-human relations between the environmental activists and nonhumans;

2. Explore the motivations behind, and the epistemology underpinning, the FUAB and HOPP activists' representations of the local nonhuman species and nature assemblages; and

3. Analyse the influence of the FUAB and HOPP pro-conservation networks in the respective land use planning processes and whether their alternative representations of nonhuman nature assisted in producing less anthropocentric decision-making.

7.2 Dynamic Entanglements: Tracing the Associations

The ANT analysis of the two case studies has provided an opportunity to explore the role and influence of both human and nonhuman actors within land-use planning based empirical studies. Utilising an ANT lens I was able to open up the complex and dynamic political processes within these cases, to gain an understanding of how humans and nonhumans have collaboratively co-shaped planning outcomes to date. The analysis provides an opportunity to break down prior assumptions regarding power relations amongst human stakeholders, and illuminates the agency of particular nonhumans such as the Carnaby's Cockatoo and the meadows of seagrass

within Mangles Bay. Focusing on the environmental activists themselves, ANT provides the tools to examine their specific relationship with the nonhumans they seek to represent. Further, I was able to examine the mechanics of the pro-conservation networks and how these more-than-human assemblages collectively navigate the planning process to achieve their end-goals. To this end, the following discussion focusses on the first objective of the research; to explore and analyse the dynamics of pro-conservation networks to gain an understanding of the relationship between environmental activists and nonhumans within the context of the Underwood and Mangles Bay case studies.

7.2.1 Pro-Conservation Networks: Unpacking the Assemblages

Whilst geography and the environmental humanities have begun exploring the multispecies and more-than-human realities of cities and spaces, van Dooren and Rose (2012) argue our understanding is yet to be fully realised. Planning theory in particular is yet to fully embrace the theoretical potentialities of cities as complex heterogeneous assemblages and dislodge itself from the hegemonic humanism it finds itself anchored to (Houston et al. 2018; Houston and Ruming 2014; Beauregard 2012; Wolch 2002, 1996). However, slowly over the course of the past two decades there has been a trickle of ANT-based planning studies allowing the discipline to dip its toes into the post-humanism realm. These empirically based studies have begun stripping back the human-centric perspective of planning to uncover its relational aspect, whereby development processes and outcomes can be seen as a product of enmeshed human-nonhuman associations (Rydin and Tate 2016).

The two case studies presented in this thesis demonstrated the complex and messy process of relation building between human and nonhuman actors within controversial environmental planning processes. Further, these cases revealed how *human* stakeholders are themselves products of heterogeneous actors engaging in dynamic relations – they are a mask, concealing the complex human and nonhuman entanglements that have occurred and affected them. The research has sought to explore the assemblages collectively constructing local non-government, not-for-profit pro-conservation groups and how they mobilise to influence planning processes in support of local nonhuman natures. Unpacking the assemblages of the FUAB and HOPP has allowed me to further understand the dynamic heterogeneous relations within such groups and how actors are enrolled and mobilised to advance their pro-conservation agendas in an attempt to co-shape the urban spaces around them.

On the surface and under the asymmetrical narrow focus of a human-centric ontology, the FUAB appear to be the single local entity with the aim of protecting the Underwood Avenue Bushland. In practice Marg Owen has, for the most part, been the most recognisable stakeholder from the FUAB throughout the planning approvals process. As a result she has participated, often with other activists, in the community consultation processes as a FUAB representative and developed relationships with specific departments, officers and Ministers. Through her letters to the *Subiaco Post* and her photography of the flora and fauna, Marg has developed a well-known profile in the local community. Many of the local activists interviewed claimed to first hear about the proposed development of the bushland as a result of Marg's activism. If we take a symmetrical view under the lens of ANT we can unpack the multi-actor assemblage underpinning the pro-conservation network we understand as the FUAB.

Tracing the associations back through time we know the initial start-up of FUAB was led by local humans known as the Friends of Shenton Bushland (FSB). Assisting in the maintenance of the Shenton Bushland adjacent to Underwood, these humans had developed an intimate relationship with this local eco-system assemblage, which over time had been separated into individual parcels as a result of development. When the University announced plans to develop the Underwood bushland section of the eco-assemblage, Daniel Boase-Jelinek raised concerns in the *Subiaco Post* that the proposed 8.5 hectare conservation zone would be insufficient at preserving the integrity of the bushland's biodiversity. The pro-conservation letters to the *Subiaco Post* that followed all spoke to the importance of saving the bushland, and shortly after the FUAB were formed. Despite the bushland being privately owned and fenced, restricting more direct and intimate relations to be formed, there was an evident bond between local residents and the site. This bond coupled with the FSB's direct and intimate relationship with the ecologically similar Shenton Bushland was the catalyst for the creation of the pro-conservation FUAB-led network. Thus the bushland as an actor can be seen to have a direct influence over local environmental activists, and enrolling them into the initial pro-conservation network.

Following the formation of the FUAB a number of nonhuman actors were integral to the pro-conservation agenda. Utilising the reach of the local newspaper the *Subiaco Post*, local activists took advantage of the 'letter to the editor' function to spread awareness of their campaign and the nonhumans they were seeking to represent. The lives of the Little Eagle breeding pair and later the resident flock of Carnaby's Cockatoo, both interressed as flagship species, were inscripted into narratives and

photography within the newspaper, which, as an intermediary, could be moved through space and time as a method of engaging local residents and bringing them into association with the pro-conservation network. The Bush Forever document, as a black-boxed policy of government deeming the Underwood Bushland as significant for conservation purposes, provided the FUAB with the political impetus to push the government for a pro-conservation outcome. Similarly, the SWWTP, its affiliated odour, and controversial buffer zone were also politically powerful as an assemblage of other-than-humans. Together they were capable of inscribing dissidence into decision-makers regarding the safety and environmental health implications of a residential development within proximity of the treatment plant. Marg Owen's photographs as visual inscriptions – translations into the material form (Callon 1990) – of individual nonhumans present within the bushland were powerful interventions that engaged with local residents and decision-makers and allowed them to develop curiosities, intrigue and sympathies with critters and other nonhuman things they would otherwise never have known. The romanticised framings of the bushland, and the conservation discourses around the Carnaby's also assisted in mediating relations between the FUAB and local supporters and decision-makers. These nonhuman actors, amongst others, each played a part in shaping the pro-conservation network's strategy and ability to mobilise as a unit with political influence towards their conservation end-goal.

Similar to the FUAB, on the surface HOPP appears to be the primary *human* entity leading the charge for the preservation and protection of the Point Peron and Mangles Bay region. Dawn Jecks is the leading and most visible activist associated with the local group. However, the formation of both HOPP and its predecessor PPP can be traced back to local residents and their connection with the Mangles Bay and Point Peron eco-assemblages. These residents engaged regularly with both the terrestrial and marine natures and have developed significant local knowledge about the ecosystems and their processes, in addition to deep relational bonds. Utilising the ANT account of the case study, we can take a symmetrical view of the network of actors underpinning HOPP and PPP and begin to unpack the various nonhuman actors influencing its formation and direction.

Despite the proposed Mangles Bay Marina having direct impacts on both the terrestrial and marine eco-systems of Point Peron and Mangles Bay, it was the marine eco-assemblage that appeared to trigger the formation of PPP. For several decades the local activists had utilised the Mangles Bay area for recreational fishing, sailing,

swimming, kayaking, and the like. Whilst this appears to be typical of human instrumentalism of Nature, it allowed local humans to form insightful bonds with their local natures. Local activists were armed with knowledge about the function of the marine environment including seasonal flows of water, directions and timings of winds, areas of erosion and accretion, the relationship between the seagrass as a habitat for fish, and the fish as a food source for the penguins. These bonds were intensified through interactions with individual nonhuman animals such as seals and penguins, and long-term observations of other species' seasonal behaviours and use of the site. A few months after the initial announcement of the proposed development, PPP was formed. Whilst the terrestrial ecosystem of Point Peron and the freshwater assemblage of species within Lake Richmond were contributory factors, it appears the marine environment was key to enrolling the initial collective of local activists.

Throughout the course of the PPP and HOPP campaigns a series of nonhumans played significant roles in the pro-conservation network's activity. As was the case in the Underwood case study, the local newspaper the *Weekend Courier* was critical for the PPP and HOPP campaigns communications and enrolment strategy. 'Letters to the editor' were used in a similar fashion to the FUAB campaign, and were integral for providing an alternative representation in the public sphere, which could bring the conservation network into association with local supporters. The relationship between local activists and the seagrass meadows of Mangles Bay were also integral in counteracting claims by proponents and agitating decision-makers regarding the viability of replanting and success of prior trials. Further, as the primary habitat for local fish stocks and the functionality of the Mangles Bay eco-assemblage, the seagrass meadows demonstrated their ability to influence debate and enrol the support of the Western Australian Fishing Industry Council and the Conservation Council of Western Australia; two seemingly unalike allies. The Thrombolites of Lake Richmond were also a prominent contributor, as the agency enhanced by their endangered status helped enrol support for the pro-conservation campaigns on behalf of their affiliated eco-system. Furthermore, integral to the HOPP campaign was the 1964 land agreement – a contract black-boxing an agreement between state and federal governments of the time for the purchase of the Point Peron land for the purposes of public recreation. The agreement was utilised strategically by the pro-conservation network to dismantle the state government's right to develop the site, and was influential in constructing a discourse of injustice around the proposal. These actors collectively with the local activists were integral in moulding the pro-

conservation network, its agenda and strategic direction throughout the course of the campaign.

The first objective of the research was to explore the dynamics of the two pro-conservation networks and the relationships between the environmental activists and nonhumans. Replacing the sociology of the *social* with a sociology of *associations*, ANT has provided the framework necessary to explore the two case study phenomena symmetrically (Boerboom and Ferretti 2014). This has provided an opportunity to break down, unpack, and expose the more-than-human relations and plural ontologies that were shaped, moulded and merged when creating the two pro-conservation networks (Bueger 2013). From this position we can begin to understand the output of environmental activism and attempted influence of planning processes by the FUAB and HOPP as *products* of relation-building between various entities, rather than a group of humans acting within a void, free of other-than-human agency. Unpacking the assemblages has also provided an opportunity to scrutinise the dynamic relationships between the activists and other-than-human entities, highlighting how each reciprocally influence and affect each other and work collaboratively in co-constructing a particular pro-conservation reality (Boerboom and Ferretti 2014). This relational understanding between humans and nonhumans corresponds with the turn in cultural geography that began viewing cities as knitted landscapes of interconnected and entangled linkages (Karvonen and Yocom 2011).

From tracing the assemblage of actors co-shaping the FUAB and HOPP networks, it has been demonstrated how these local conservation campaigns can be viewed as the sort of interspecies mingling Hovorka (2008) argues is fundamental to city life. The Carnaby's Cockatoos and seagrass meadows are not passive actors submissive to human action (Lake 2017). Rather, they are active and at times powerful participants with an ability to influence network output and human action. If cities can be viewed as complex foldings of humans, natures and technical entities, then the planning of those cities can similarly be viewed as a dynamic process of engagement and network building between various heterogeneous actors (Braun 2005). The Carnaby's and seagrass meadows, whilst unable to verbally participate in the human-centred planning negotiations, were active mediators affecting and co-shaping the outcomes of deliberations, and thus the ongoing evolution of the spaces around them. As a result the research supports attempts by more-than-human geographers and urban theorists to quash the paradigm that planning and the process of development represents the transformation of "empty" spaces (Wolch 1996, 22). Space is never

empty, nor is it wholly human (Houston and Ruming 2014). It reflects a patchwork of actors who individually are capable of shifting, shaping and affecting the "more-than-human; more-than-animal; more-than-plant" and *multi-thing* world in which humans co-reside (Hinchliffe and Whatmore 2006, 126; Wolch 1996, 2002; Swyngedouw 2006, 1996; Hovorka 2008; Karvonen and Yocom 2011; Beauregard 2015, 2012).

7.2.2 Flagship Species: The Asymmetry of Nonhuman Agency

Using ANT as a framework to explore and trace the associations of local pro-conservation networks, I was able to explore the agency of specific nonhumans in network development and infiltration. Typically agency has been associated with human rationality and intentionality (Pearson 2015; Pickering 1993). However, ANT extends agency beyond human intentionality and into the nonhuman domain, to "*any thing* that does modify a state of affairs by making a difference" (Latour 2005b, 71). In this sense agency is "dehumanised" (Sayes 2014, 141), and the association of agency with intentionality re-evaluated (Pearson 2015). Following the ANT line of thinking, agency is viewed as an output of relations between various heterogeneous entities (Callon and Law 1995; Latour 2005b). The capacity for humans to act cannot be seen to be produced in a void free of any external influence – it is constituted through relations, entanglements, collaborations, hybrid collectives and partnerships with, and in response to, other actors (Pearson 2015; Fatimah and Arora 2016; Jansen 2017; Dwiartama and Rosin 2014; Murdoch 1997). As Latour (2005b, 72) explains:

> "ANT is not the empty claim that objects do things 'instead' of human actors: it simply says that no science of the social can ever begin if the question of who and what participates in the action is not first of all thoroughly explored, even though it might mean letting elements in which, for lack of a better term, we would call *nonhumans."*

Thus ANT has provided an opportunity to thoroughly explore the relationships between local activists and nonhumans in the two case studies, and in particular nonhuman flora, fungi, fauna, and ecosystems. Utilising ANT's concept of agency, and through tracing network associations, the research has demonstrated how entanglements between nonhumans and other actors within the pro-conservation network produce visible effects influencing the network's operation and navigation (Latour 2005b; Murdoch 1997; Law 1994). As such, the research has been able to explore how such nonhumans actively participate in not only the formation and infiltration of the pro-conservation networks, but within the development assessment process more broadly.

In the case of the Underwood Avenue Bushland, the most influential nonhuman actor undoubtedly was the Carnaby's Cockatoo. Whilst it was the bushland and the Little Eagle that initially appeared to drive the formation of the FUAB group, it was the arrival of the Carnaby's that propelled the conservation campaign forward. Parikka (2010) argues insects such as ants communicate modes of organisation and internal structure; similarly the arrival of the Carnaby's communicated a message of habitat loss and decline in their traditional lands. This loss resulted in the birds taking roost deeper into suburbia in the search for new habitat, and eventually in the vicinity of the Underwood bushland. Here they foraged in backyard trees, filled the sky with large flocks and called out with their unique echoing voice – what Lorimer (2007, 914) describes as "nonhuman affordances" which assist in developing relations with, and influence over, humans. The cockatoos became entangled within the eco-assemblage of the bushland itself, utilising the remnant banksia and jarrah as a new foraging patch. The message of decline was further reinforced by black-boxed legislation at both the state and federal level proclaiming its endangered status, defining an explicit set of relations between the species and humans within development processes in order to mitigate further population decline (Latour 1987). Thus their agency can be linked to their ability to individually form relations with and influence local humans, and, as a species, mould planning outcomes via black-boxed intermediaries that promote their endangered status and call for specific human intervention.

With the assistance of Marg Owen's narrative and photographic inscriptions in the *Subiaco Post,* the Carnaby's became an influential political actor capable of shifting network dynamics. The analysis of discursive representations at Underwood demonstrated a shift in FUAB deployed discourses from romantic notions to a dominant conservation framing following some of Marg's initial Carnaby's translations. This had a known impact on network enrolment, with many active members of FUAB citing the Carnaby's and Marg's inscriptions in the *Subiaco Post* as a key factor in becoming more involved in the campaign. Thus the Carnaby's can be seen to be shaping the intentionality of, initially, Marg Owen and then local residents indirectly through Marg's translations (Dwiartama and Rosin 2014). The presence of the Carnaby's added weight to the pro-conservation network's argument, by shifting the attitudes of local residents and decision-makers. What had been initially a campaign to save remnant urban bushland shifted to a campaign to save remnant urban bushland *that was habitat for an endangered species*, provoking a sympathetic reaction from the community that triggered some into supporting the pro-conservation

campaign. Thus the agency of the Carnaby's can be seen as multiple visible affects forged through a relationship between the legislation declaring the species endangered status, the local flock and the bushland, individual Carnaby's, Marg Owen, the *Subiaco Post* and the local human community, demonstrating how intentionality is shaped by the extension of causal relationships between entities (Law 1994; Dwiartama and Rosin 2014).

Further, the entanglement between the pro-conservation network and the Carnaby's can be seen to have a direct impact on the way the activists proceeded in the land-use planning deliberations. In particular, their influence was strategically utilised by the pro-conservation network to instil dissidence in decision-makers and block the University's attempt through key approval obligatory passage points. Utilising locally produced knowledge of the species at Underwood, coupled with expert (more authoritative) translations, the FUAB-led network lobbied politicians, provided submissions to agencies and submitted appeals against the state environment authority's recommendations for approval. These were effective in delaying the Minister for Environment from issuing state approval for some time and successful in enrolling the federal environment authority into the pro-conservation network, with the authority claiming the proposed development would have an unacceptable impact on the local flock of Carnaby's (DEH 2008). Accordingly, it can be seen how the agency of the Carnaby's is developed through a set of relations, encouraging and rendering possible a course of action by network actors (Latour 2005b).

The arrival of the Carnaby's at Underwood Avenue also significantly impacted the dynamics of the University's network. The degree of this impact was particularly evident in the University's explicit attempt to dismantle the black-boxed science underpinning their endangered status. The University's multi-million dollar offsets package could also be seen as an attempt to *seduce* (Callon 1986) decision-makers to the idea that the proposed development would have little impact on the Carnaby's – again, signalling a need to negate the influence of the species. The arrival of the Carnaby's created new obstacles for the University's network, requiring longer than expected obligatory passage point negotiations that resulted in a plan of development with a lower lot yield, larger conservation zones, additional financial offsets and, yet, still no federal approval. Had the Carnaby's taken roost elsewhere, the outcome of the proposed development would undoubtedly be different. Accordingly, the University network's intentionality was moulded as a direct result of its imbroglio with

the Carnaby's Cockatoos; agency seen as a visible effect of, and shaped by, an unwanted network entanglement (Jansen 2017; Dwiartama and Rosin 2014).

In the case of HOPP, the seagrass meadows can be seen as the most influential nonhuman *natural* actor throughout the planning process. Despite the proposed marina having direct impacts on both the terrestrial and marine eco-systems of Point Peron and Mangles Bay, it was the marine eco-assemblage that appeared to mobilise local conservation activists and, in particular, the seagrass meadows.

The seagrass was the dark figure beneath the surface of the water, lurking as locals swam above often unaware of the intricacies of life existing in the meadows beneath them. For the humans who visited Mangles Bay often, the seagrass formed part of the place they had developed deep attachments with. It provided sensory familiarity in terms of sight, touch and smell. It also formed a critical element in the marine eco-system, providing shelter and nutrients to fish and crabs, and a feeding ground for seals, penguins and dolphins. Local conservationists were acutely aware of the presence and function of the meadows, and had formed a seagrass monitoring group in the years prior to monitor patches of decline from anchors dredging the seafloor. Whilst not charismatic like the local Little Penguins, the meadows were dynamic in their movement and interaction with other species, including humans who would fossick amongst the meadows whilst diving to catch crabs. Accordingly, the meadows were active contributors in the stabilised identity of the Mangles Bay that local pro-conservation activists had developed an intimate bond with and were seeking to protect from the development of the MBM.

Pro-conservation activists were aware of the repercussions of losing the seagrass meadows on the dynamics of the Mangles Bay eco-assemblage. Without healthy seagrass, there remained a lack of habitat for local fish stocks and crabs, affecting the Little Penguins who feed in the area during breeding season, and the humans who recreationally fish and dive. The function of the Mangles Bay eco-assemblage would fundamentally shift, altering the relationships between the local humans and the space. It would no longer be the ecosystem many of the activists had formed long-term relations with, triggering an emotional and defensive reaction to protect the remaining patches of seagrass. Further, prior research seeking to replant seagrass meadows had proven challenging, suggesting the meadows in Mangles Bay were irreplaceable and any damage received irrevocable. It was these reasons that had led to the refusal of prior marina proposals at Point Peron and for local residents to establish seagrass monitoring groups to document the meadow's decline. This

uncertainty increased the anxiety of local activists, further fuelling the pro-conservation network's activism against the proposal.

However, the seagrass' ability to drive community support was limited and "selling" seagrass to the community and decision-makers proved a difficult task for pro-conservation activists. In an attempt to overcome the seagrass meadows' lack of charisma and mobility, local activists promoted the importance of healthy seagrass meadows to the ecological integrity and liveliness of Mangles Bay. Linking the seagrass meadows to the highly charismatic Little Penguin, whose livelihood in the bay relied upon the survival of the meadows, the pro-conservation activists sought to 'prop-up' or inflate the profile of the seagrass in order to enrol and mobilise the support of local residents and decision-makers. The agency of the seagrass meadows was also boosted further by research findings that demonstrated the specific variety found at Mangles Bay was classified by the International Union for Conservation of Nature as 'vulnerable'. As such, its agency can be seen as a product of its relations within the marine eco-assemblage, the local activists, and refusal to be regrown artificially reinforcing its rarity and 'vulnerable' status.

For Latour (2005b, 52-53), agents must be proven to be "*doing* something" and "transforming some As into Bs through trials with Cs". Tracing the associations of the HOPP network, the seagrass meadows can be seen as a significant contributor to enrolling the initial support of local residents and in co-shaping strategies and arguments against the proposed marina thereafter. While the seagrass does not demonstrate charisma like the Carnaby's, its ongoing decline, vulnerability status and role in maintaining a healthy Mangles Bay that many local residents hold deep-seated connections with (including the survival of the Little Penguins), enabled the meadows to become an influential actor and a flagship species for the conservation campaign.

As was the case with the Carnaby's, the proponents of the MBM sought to deflate the agency of the seagrass meadows and its ability to enrol pro-conservation supporters and spook decision-makers. The initial strategic environmental review of the proposed marina highlighted significant environmental concerns relating to seagrass loss. As the pro-marina network navigated its way through obligatory passage points, they were required to demonstrate how six hectares of seagrass could be replaced on-site to create a no net loss scenario and to ease the EPA's and local residents concerns. Despite earlier research by Short et al. (2011) demonstrating the difficulty of seagrass transplantations, trials undertaken by Paling et al. (2009) of a similar variety to that found in Mangles Bay, *Posidonia australis,* had been successful. Armed with this

knowledge the pro-marina network negotiated a five year 10.48 hectare replanting program of *Posidonia australis* that was considered by the EPA to suitably address their concerns (EPA 2013). Accordingly, whilst the seagrass meadows had forced the hand of the proponents to invest in a significant replanting program, its agency had been deflated by the enrolment of its sister species that had proven more willing to co-operate, and equally capable of maintaining the ecological functionality of the Bay. Thus, through the obligatory passage point the seagrass meadows had been forcibly enrolled and interressed into the pro-marina's network by the EPA, and its status as a flagship species diminished.

In addition to the Carnaby's and the seagrass meadows, a number of nonhumans within each case study displayed their ability to affect networks to varying degrees. In the case of HOPP the Thrombolites of Lake Richmond and the Little Penguins demonstrated their ability to influence local residents into "*doing* something" for the pro-conservation campaign (Latour 2005, 52). The uniqueness and rarity of the Thrombolites, being the only known living specimens, thrusted the Lake Richmond aquatic-assemblage into the spotlight of local environmentalists. The resulting activism forced the pro-marina network to demonstrate through obligatory passage points how the development of the MBM would not result in a salt-water intrusion of the lake. Similarly, the Little Penguin, which features in the City of Rockingham's logo, and its reliance on the seagrass meadows as habitat during breeding season invoked despair from local residents who were concerned about the potential decline of species in the area. The 1964 land agreement also demonstrated significant agency, resulting in the HOPP campaign deploying a discourse of injustice and the pro-marina network actively seeking to deconstruct its ongoing legality and thus suppress its influence.

At Underwood, it was the bushland itself that first influenced the Friends of Shenton Bushland conservationists to act in response to the University's announced development proposal. The bushland similarly enticed the Carnaby's to roost within its assemblage of suitable foraging species. The Little Eagle and other nonhumans including, for instance, the Subiaco Waste Water Treatment Plant and the Bush Forever policy also demonstrated their ability to influence network configurations and activities, co-shaping the outcomes of the planning deliberations. The varying degrees of agency displayed by nonhuman actors within the two case studies, and how these shifted over time, demonstrates the dynamic nature of such actor networks and the

ability of nonhumans to participate and influence the planning of the world around them (Metzger 2014b).

In tracing the associations of the two case studies, the Carnaby's Cockatoos and the seagrass meadows have demonstrated their power to influence exceed that of other nonhumans within their networks. As members of the Underwood eco-system of actors and the marine eco-assemblage of Mangles Bay, the two actors became "flagship species", albeit in different ways (Lorimer 2007, 923). The Carnaby's were highly charismatic, endangered, and able to move throughout the adjacent suburbs, building relations with local humans on a daily basis through one-on-one interactions. As a fundamental element in the Mangles Bay assemblage, the threat of the seagrass meadows being irrevocably damaged caused anxiety in local residents who had developed long-term bonds with the area through recreational swimming, diving and fishing. The ability of these species to build relationships and connect with local humans enabled the enrolment of local activists as "ventriloquist" representatives, acting on behalf of the nonhumans during planning deliberations and processes (Castree 2013, 111). This ability to connect with the local activists and the activists' ability to interpret these nonhumans, reflects a process of being enmeshed together in particular ways and in a particular context that facilitates a capacity for humans (in this instance, activists) to be "response-able" (Haraway 2008, 71) – that is, to be able to respond to and affected by nonhuman agency (Brown and Dilley 2012). The process of the activists being affected and subsequently enrolled and mobilised as representatives, resulted in what Metzger (2014a) described as the various nonhuman *noises* being translated into a human *voice.*

Whilst this demonstrates how the agency of nonhumans can create "assemblages of communication" (Metzger 2014a, 10) in practice, it raises questions around the ability for humans to be symmetrical when being enrolled by nonhumans in environmental controversies. If the process of being enrolled and mobilised as the representative for nonhumans relies on emotional subjectivities, the legislative status of a species, or the noticeable affordances of species to communicate with humans, there remain issues of power unresolved. The ability of certain nonhuman species to affect humans emotionally, such as the anxiety around the seagrass, or to be heard through prominent visual or verbal cues, such as the Carnaby's charisma, compared to species that render no human response or are offered little legislative protection, suggests humans retain an asymmetrical prejudice in favour of nonhumans with "charisma" or those able to affect us in some way (Lorimer 2007, 915). Accordingly,

some species are easily represented by humans in planning matters while others effectively remain mute and unrepresented, if not leveraging off more prominent and well-represented species or the agency imbued through intermediaries such as legislation. This point highlights the importance of Marg Owen's attempts to bring non-threatened, less-charismatic species into connection with local humans through photographic and narrative-based translations in the *Subiaco Post*.

Whilst Metzger (2014a), Lorimer (2007) and Houston et al. (2018) argue that humans need to develop the ability to listen and learn to be affected by nonhumans, there remains simply far too much *noise* to comprehend it all. As emotional animals we are drawn to the nonhumans that trigger an emotional response within, acting as a catalyst in the development of an ethic of care (Wolch 1996). To this end, whilst ANT allows for an investigator to be symmetrical in tracing associations, the two case studies have demonstrated that humans are likely to be drawn to particular species in an asymmetrical fashion. This brings into question whether humans, including environmental activists, will ever be able to achieve a deep ecological perspective and may assist in understanding why the agency of the Carnaby's appeared far superior to that of any of the other nonhumans across both case studies. Even if planners were to develop a more-than-human sensibility as Metzger (2016) posits, individual biases and value systems will influence which nonhumans are prioritised – whether intentionally or unintentionally – affecting the extent to which certain species are included or excluded in spatial planning practices (Hovorka 2008).

Accordingly, the research has demonstrated that nonhuman species are significantly more influential when their affordances, legislative status, or material semiotics connect with, or trigger opportunities to build relations with, humans. These relationships allow humans to become more effective listeners and to develop translations enabling representation in planning deliberations. The focus on these charismatic and influential species in planning deliberations, however, is likely to result in distorted conservation outcomes. Whilst they may assist in promoting broader conservation outcomes, we must be cognisant of the species that remain excluded, under-represented and mute as a result of more prominently represented, or "noisier", species. The role for environmental activists, or other response-able humans (Haraway 2008), here is understanding which nonhumans are likely to be more influential in affecting the various human stakeholders participating in a planning deliberation. Strategic representation of a flagship species may result in whole eco-assemblages being protected.

7.3 The Epistemology of Nature's Local Representatives

As local activists, the members of the FUAB and HOPP sought to represent the plight of the nonhumans within each case study in light of their inability to do so. However, the act of representing nonhuman nature is considered, by some scholars, problematic. The difficulty of inter-species communication between the human and nonhuman worlds, in a manner accessible for human understanding, increases the risk of misinterpreting the other-than-humans affected. It is simply not possible for any human, regardless of their culture, spirituality or connection with the other-than-human world, to "*know* nonhuman nature" wholly "and thus be able to incorporate it successfully into our discourses" without risk of misinterpretation (Whitworth 2000, 148). Whilst relational experiences and deep observations may assist in the development of human-nonhuman communication, there remains, argues Neimanis (2015), an excess to nature humans cannot understand. An "other worldliness" and a "wildness" that Sandilands (1999, 180) claims is generally unspeakable by the human tongue. Despite this, failing to represent the perceived voice of nonhumans, particularly within land-use planning, does little to assist in securing ecologically-just outcomes and the prevention of further colonisation. Thus, we are stuck between "a representationalist rock and a hard place of complicit silence" (Neimanis 2015, 136). As such, there is a recognised ethical and political need for discursive representations of nonhumans, acknowledging representations are only partial (Neimanis 2015; Alaimo 2010; Whitworth 2000; Sandilands 1999).

In light of the above, it is important to gain an understanding of why the FUAB and HOPP activists feel they have a claim to *know* the nonhumans of the Underwood bushland and Mangles Bay and therefore be best placed to represent their interests in land use planning matters. Accordingly, the second objective of the dissertation was to critically evaluate the motivations behind, and the epistemology underpinning, the FUAB's and HOPP's representations of the nonhumans affected. Exploring the individual relationships between the activists and the nonhumans, the discursive framing of the nonhumans, and the epistemology underpinning the activists' representations, assisted in evaluating motivations and ethical positions.

The discourse analysis provided insight into the underlying ethics and relational experiences with nature driving individual FUAB and HOPP activists' representations. In particular, the analysis of one-on-one interviews was helpful in gaining a more personal insight into the motivational forces driving the local activists. In both cases, many of the FUAB and HOPP participants expressed an understanding of nature akin

to the principles of deep ecology. There was a recognition of an interconnectedness between humans and nonhumans, and humanity's humbling reliance upon functioning and healthy natural systems. This was framed with a sense of equality – *we are part of nature.* Individual nonhumans were described as intrinsically valuable by participants – a value many thought worthy of greater legal protection, and status in decision-making processes. The alignment of their values with a less-anthropocentric environmental ethic, akin to deep ecology, assists in providing their eco-activism with a sense of credibility.

Additionally, the interviews were also useful for identifying the deep, individual relations the activists had with local natures. Many participants linked their framing of nature to personal experiences of, or explorations into, the 'wilderness' and the sense of wonder, peacefulness and spiritual rejuvenation such journeys provided. Some participants appeared weighed down by personal responsibilities to care for, and advocate on behalf of, the natures they had formed relations with. There was a sense of dismay at what they perceived to be the lack of understanding or connection with nature from broader society.

This was particularly evident in the case of HOPP, where the majority of participants had developed deep-seated attachments with the nature at Point Peron and in Mangles Bay. For some this attachment was formed through regular recreational based immersion into the Mangles Bay assemblage, and one-on-one interactions with individual nonhumans. For others, this attachment was based around memories of childhood or family experiences camping nearby, fishing or as active community boating members. The utilisation of the Point Peron nature as a recreational resource was a common theme across participants in developing an appreciation and, for some, what appeared a spiritual bond with the environment. If we think of knowledge in the Latourian sense as a product of relations, then the activists' long-term connections and experiences with the Point Peron nature-network provides weight to their local knowledge, and a sense of legitimacy to their epistemic claim to *know* the Point Peron natures and be able to represent them.

Indeed, the impact of this bond with Point Peron is significant. However, it adds complexity to the motivations fuelling local activists. Whilst there was a clear sense that the activists felt a responsibility to protect and care for the various natures likely to be impacted, this was imbued with a fear of losing the natures they have formed deep bonds with. There was a fear of change and a potential loss of access. There was a fear of irreparable damage to key nonhumans, or processes supporting certain

nonhumans, such as the seagrass meadows, the Thrombolites and the Little Penguins. There was a fear of losing the status quo. This was intensified by a deep sense of injustice upon discovering the 1964 land agreement intermediary, whereby the state government was, by condition of sale, not permitted to privatise the area. Accordingly, whilst many of the HOPP activists demonstrated an alignment to an underlying environmental ethic, for some their motivations appeared to be driven by a self-interested fear of losing their sense of place, their lifestyle, *their* Point Peron and Mangles Bay.

Conversely, the enclosure of the Underwood Avenue site with cyclone-mesh fencing by the University constrained FUAB members from developing personal connections with the bushland. Rather, participants explained how the bushland had been the consistent feature in an ever changing, urbanising landscape. It was local – participants acknowledged that the birds who visit their backyards, also rely on the bushland. It reflected a similarity to Shenton Bushland, of which many early FUAB members had cared for and managed. They also felt a moral obligation to protect it – for the sake of future human generations, and future ecosystem functionality. They recognised the value of the bushland, as a remnant patch of untouched nature that was a stepping stone for birdlife moving between Kings Park and Bold Park. In particular, the Carnaby's and their reliance on the site for foraging was a significant factor driving locals to act. Whilst these factors assist in determining the motivational factors fuelling local activism at Underwood, the epistemic claims underpinning their representations are less clear. Whilst their motivations may be valid, without *knowing* the bushland more deeply, their basis for representing its perceived needs may be argued to be less founded, or founded on a broader-than-Underwood scientific-based conservation perspective.

Marg Owen was the exception. During an interview she explained how as a child she would often retreat to the local bushland in her spare time. Later in life, she would spend many hours observing and photographing nature within the Underwood bushland. Marg would dedicate many evenings to counting the Carnaby's as they came in to roost across the road from the bushland, and later the Forest Red-tails as they, too, took up residence. She would often observe the birds as they took flight into the bushland and surrounding suburbs at dawn; observing flight paths, interactions between individual birds and with other species. Much of these observations were translated into the narratives submitted to the *Subiaco Post*, visually represented through photography, and scientifically used to counter-act the University's

representations. As such, these observations provided her with a sense of credibility when seeking to represent and protect the Underwood Avenue bushland and its inhabitants. Whilst Whitworth (2000) might argue Marg could never fully *know* the Carnaby's, her long-term, methodical observations combined with her intimate relationship with the species provided her with authority to proclaim to be *one* human that *knows best* for their long-term survival. This knowledge elevated her status in the community and her political ability to persuade, or at least agitate, decision-makers. Furthermore, her translations acted as a catalyst for inspiring other locals to enrol in the FUAB pro-conservation network. Indeed many FUAB members interviewed cited Marg as their inspiration for becoming move involved. Accordingly, the epistemic claim for the FUAB to be local representatives for the inhabitants of Underwood appears largely vested in Marg Owen's personal relationship with the site.

The second objective of this research also demanded exploration of the basis for the FUAB and HOPP activists' claims to represent the local nonhumans in terms of underlying their motivations and ethics. Whilst individual motivations are too complex and individualised to be analysed in great depth here, there was a clear sense that both FUAB and HOPP participants were motivated by an underlying environmental ethic and a perceived duty of care. Discourses deployed publically that were often anthropocentrically leaning, and at times contradictory, may in part be explained by network strategy – "selling nature to save it" (McAfee 1999, 133). These might also be explained as an empirical illustration of the failure of human language to adequately or fully represent the spiritual connections with, and relational entanglement between, individual humans and their local natures. Activists sought to discursively represent some*thing* that is fundamentally unspeakable – the *excess,* the *other worldliness,* the *wildness* (Neimanis 2015, 7; Sandilands 1999, 185). The often partial and overtly human-focused discourses presented publically by some activists should not discredit their credibility or perceived motivation in seeking to represent their local natures. Rather, this serves to remind us of an ontological gap between the human and nonhuman – a divide that will often result in the interpretation and representation of nonhumans remaining skewed to the anthropocentric. Accordingly, despite subscribing to a deep ecological, or otherwise less anthropocentric, environmental ethic, it's unclear whether humans will ever be capable of fully dislodging themselves from their human-centred point of view and delivering a truly nonanthropocentric representation of nature.

7.4 The Influence of the Environmental Activists on Planning Processes

The third objective of the research was to critically analyse the influence of the pro-conservation networks, and whether the activists' representation of the respective nonhumans and natures were able to shift the associated planning processes and decision-making into a more environmentally ethical space. The objective sought to explore the impact of the conservation campaigns within the planning processes, and whether local activists' representations of nonhumans could foster more ecologically just development outcomes.

At the point of writing this dissertation, the two pro-conservation networks had successfully contributed to the shaping and moulding of more ecologically considered development outcomes in their respective case studies. However, neither of the pro-conservation networks had been able to mobilise the actors required to crystallise the secured conservation reality they were seeking, despite assisting in the delayed issue of approvals or securing the support of individual decision-makers. The HOPP team are continuing to negotiate with the state government for the classification of Point Peron as an A-Class reserve to prevent future development proposals, and the FUAB continue to investigate options to protect the Underwood Avenue bushland. Nonetheless, their activism and representation of the various flora, fauna and eco-systems have not been fruitless. Rather, the ANT and discourse analyses have demonstrated how, throughout the two campaigns and up until the present time, there have been numerous small, and some relatively significant, victories influencing the planning processes to various degrees.

For instance, the representation put forward by the environmental activists resulted in a greater recognition of both individual species and whole systems within the planning approvals process and within the local community more broadly. With a focus on the Underwood bushland ecosystem holistically, and the endangered Carnaby's more specifically, the FUAB were able to increase the decision-makers' awareness of the bushland's ecological significance through direct lobbying and submission writing. Many of the individual species highlighted through Marg Owen's photographic journalism in the *Subiaco Post* were often considered too common to be represented in the pro-development network's environmental reporting, thus remaining blind to public eye. Similarly, the seagrass meadows and ancient Thrombolites of Lake Richmond were fairly obscure and not the traditional focus of local communities. Through the activism presented by the PPP, and later HOPP, these individuals and

the nature-assemblages they reside within were firmly placed on the community's agenda for consideration.

Whilst traditional scientific analyses presented in environmental impact assessment processes would provide comment on some of these species, the additional representation by FUAB and HOPP provided new opportunities for species recognition, consideration, and for proponents and decision-makers to be held to account. In the case of the Underwood bushland this resulted in a drawn out process for the University, resulting in a number of conservation concessions being provided, and yet still no federal environmental approval. Despite the proposed Mangles Bay Marina ultimately being refused planning approval, the pro-marina network had received its two environmental approvals relatively swiftly. The process of obtaining these approvals, however was amplified with a full public environmental review resulting in design modifications and conditions imposed regarding seagrass replanting and saltwater monitoring in Lake Richmond. Accordingly, the additional representation by FUAB and HOPP can be seen to have a positive contribution in shifting processes into a more environmentally *considered* space. Whilst it cannot be said to have shifted into a space of biocentric equality, as called for under the deep ecology platform (Devall and Sessions 2005), the processes have shown aspects of nonanthropocentrism, in that the consideration of some affected nonhumans were not skewed by their perceived instrumental use to humans (McShane 2007). Typically, this occurred with species that were provided with a legislative classification of rare, threatened or endangered. This was particularly evident with the endangered Thrombolites, which have little 'use' for local humans and whose representation was focused primarily on its inherent and scientific worth as an irreplaceable ancient specimen. Refusal of the federal approval at Underwood was also based directly on what were perceived to be unacceptable impacts on the local flock of endangered Carnaby's and their ability to flourish post-development, despite the University offering a number of offsets. This demonstrated a less-anthropocentric line of thinking on behalf of the decision-makers, placing their focus on the interests of the individual flock of affected Carnaby's rather than the interests of the University, or any other human subject. The same kind of treatment was less evident for species without legislative protection.

The local knowledge derived and developed through the process of representation also demonstrated an ability to assist the shifting of planning process into a more environmentally considered space. The knowledge developed by local activists

regarding, for instance, the long-term health of the seagrass meadows, or the movements of the Carnaby's in and out of the bushland, assisted decision-makers in developing a more balanced understanding of the ecological circumstances of each site. The FUAB in particular used their local knowledge of the Carnaby's to lobby directly individual decision-makers at all tiers of government, including state and federal Ministers, assisting in developing a one-on-one relationship with agencies and fostering a sense of ecological urgency. Further, local knowledge was utilised strategically to counter-act competing discourses deployed by pro-development networks, and to enrol and mobilise further support within the conservation campaigns. This support was then used to increase pressure on both proponents and decision-makers, politicising the proposals and associated processes further. In both cases, this pressure resulted in what appeared to be greater oversight by decision-makers, perhaps instilled through the increased politicisation of each development proposal. This increased oversight subsequently acted as a catalyst for proponents designing more ecologically sensitive designs – for Underwood this included larger conservation zones, and decreased areas of impact on seagrass meadows for Mangles Bay. However, the shift into a more environmentally ethical space was again limited and certainly far from achieving the principles set out by Naess (1973) and Devall and Sessions (2005) in the deep ecology platform.

Whilst the efforts of the FUAB and HOPP campaigns have had an impact on the outcomes of the associated planning processes, these have been inconsistent. The analysis has demonstrated some encouraging signs of decision-makers considering the intrinsic value of, for instance, the Thrombolites and the rights of the Carnaby's to sufficient habitat to sustain their existence. However, these examples appear to be limited to species already statutorily classified as endangered or threatened. Whilst the activists' representations have resulted in processes being more thorough, and proponents and decision-makers being more accountable, for the most part it appears the planning processes have stood firm in their relatively anthropocentric approach in handling affected nonhumans. Although this can in part be explained by statutory limitations imposed on decision-making authorities by existing legislation, it must be questioned whether a shift to a fully nonanthropocentric approach, such as deep ecology, is realistically achievable, or, indeed, fully desirable. Reflecting on the earlier discussions of this chapter, even the environmental activists themselves appeared to straddle the boundaries of anthropocentrism and nonanthropocentrism in their discursive and material representations of nature. These findings bring into question

the ability of such nonanthropocentric environmental ethics to be implemented broadly across planning systems, which are inherently human-centric.

Indeed the plausibility of implementing wide-scale nonanthropocentrism has been a point of contention for environmental ethicists for some time. For Devall and Sessions (2005) and Naess (1973), shifting from a human-centric perspective towards nonanthropocentrism is a critical element in the implementation of the deep ecology platform. Yet many critics have questioned whether it is possible for humans to think outside the realms of being human (Drenthen 2011; Hayward 1997; Burms and Vergauwen 1991), and whether it is in actuality required to achieve ecologically sensitive outcomes (Schmidtz 2011; Grey 1993; Norton 2008, 1984). Being human (animals), we are bound to think like humans and see the world from the perspective of humans. Thus, developing a full nonanthropocentric perspective is theoretically implausible, argues Drenthen (2011). As seen with the environmental activists within the two case studies, it is difficult to fully dislodge the human from their representation – whether it be anthropomorphising nonhumans, favouring flagship species that evoke an emotional response, or discursively framing Nature as a space separate from humans. This, however, does not limit our capacity to morally consider the impacts of our actions on other-than-human species and eco-assemblages in what Norton (1984, 328) prescribes as “weak anthropocentrism”. It does, however, raise questions about whether such a dramatic shift into the realms of deep ecology is required, or even possible, to achieve more balanced ecological planning outcomes.

If we consider van Dooren and Rose’s (2012) perception of the city as a more-than-human entanglement of life and death, a concept explored recently within various disciplines including geography, we can understand the human realm as deeply integrated within the nonhuman world. Cities and other human-centric spaces that planners seek to plan are in reality situated firmly within nature – interconnected, knitted and enmeshed together. Humans, arguably as the dominant species within these multispecies natures in terms of power and control, have altered the landscape and species compositions significantly in the quest to flourish. Our destructive behaviour, whilst unhelpful, is inherently natural (Watson 2005). Notwithstanding this, we are fundamentally another species reliant upon a healthy, functioning biosphere. This has become ever clearer in recent decades as we begin to feel the effects of human-induced climate change and resource depletion in a period now known as the Anthropocene (Crutzen and Stoermer 2000; Steffen, Crutzen and McNeill 2007). Maintaining the systems of natures, of which we are a part, is critical for our own

survival. Accordingly, establishing a weak anthropocentric ethic within the systems of planning – that is, considering ecologically sensitive development for the interests of humans as members within, and reliant upon, the biotic community – may result in similar, if not the same, outcomes as if we were to establish a nonanthropocentric ethic (Norton 2008, 1984; Grey 1993).

In light of this line of thinking and the findings of this research dissertation, it appears that seeking to shift planning processes into the territory of deep ecology is neither realistic nor helpful. Further, as Callon, Latour and Law have espoused consistently in the field of ANT, the social is a constructed milieu of heterogeneity. We are encouraged to break down existing dichotomies. Similarly, Norton (2008) reminds us that anthropocentrism is a spectrum itself and not black and white. Accordingly, it would be unhelpful and overly simplistic to assume planning systems, which are a product of a multitude of human and nonhuman actors, could consistently reflect a static position along the environmental ethics spectrum. These processes are dynamic and outcomes are influenced significantly by the human actors that choose, are able, or are privileged to participate in them. As demonstrated by this research, the inclusion of more environmentally conscious humans can positively contribute towards less human-centric outcomes. This opens up questions about how to proceed in encouraging a planning system that supports diversity in ethical stances and positions towards the nonhuman world, in order to achieve ecologically sensitive development outcomes.

7.5 Encouraging Planners as Multispecies Facilitators

This research sought to explore the representation of nonhumans by environmental activists in land use planning systems, and whether and to what extent such representations could produce more ecologically considered and environmentally ethical planning outcomes. Utilising two pro-conservation campaigns – the FUAB and HOPP – as case studies, the research has investigated the process in which nonhumans become represented by environmental activists in controversial planning proposals. The results signify the challenges for individual humans, planning systems and planners, more broadly, of adopting nonanthropocentric environmental ethics, such as the deep ecology platform, as a normative approach to achieving ecologically sensitive development outcomes and questions whether such an approach is necessary. Additionally, the analysis of the two pro-conservation campaigns has demonstrated empirically that whilst land use planning is a human-led endeavour, its outcomes are co-shaped significantly by other-than-human actors. Whilst flora, fauna

and other species are not physically present during deliberations, nor able to verbally communicate in the human sense, they are active participants with the ability to influence the politics and discourses surrounding planning processes.

The Carnaby's, the seagrass, penguins and Thrombolites – in addition to other living and non-living nonhumans – were often active participants in the planning of the Underwood Avenue Bushland or Point Peron region. These nonhumans actively mediated relations amongst human stakeholders, assisted in the mobilisation of community activists, influenced and co-shaped outcomes of deliberations, and thus actively played a role in the moulding of the urban spaces around them. Whilst some nonhumans demonstrated only small impacts and changes to the planning of the two development proposals, the Carnaby's and seagrass meadows demonstrated significant political power with an ability to catalyse community activism, shift the discursive framings of nature presented by human stakeholders, and mediate new relations amongst human and nonhuman stakeholders. Their presence within the FUAB and HOPP case studies resulted in design modifications to the proposed developments, specific offset negotiations, and intensified negotiations between pro-conservation activists, pro-development actors and decision-makers. The political agency of the Carnaby's and seagrass meadows, as demonstrated through the actor network theory analysis, significantly contributed towards the planning of the urban spaces in which they reside.

Accordingly, this research has demonstrated that, whilst unable to participate in language-based deliberations, many of the nonhuman species, assemblages and things associated with the two case studies and their planning processes were active, visible and at times influential. This assists in disrupting and unsettling the inherent anthropocentrism within planning theory and demonstrates planning as a relational, more-than-human practice. Behind the human planner, human stakeholders, and human communities we find various heterogeneous actors ordering, provoking, moulding, bending, and influencing the manner in which planning matters are deliberated and negotiated. Under these layers we find messy more-than-human imbroglios that bring us into a realm of complex political and power relations worthy of consideration within the discipline of planning.

Further, the research illustrated that the species with an ability to evoke an emotional response or form deep relations with local humans, were those that had the capacity to develop into powerful agents. This was particularly the case when species were supported by a legislated 'endangered' or 'threatened' status. The Carnaby's as a

highly charismatic and statutorily registered 'endangered' species assisted in mobilising community support for the pro-conservation campaign, shifting the activists' discourse into a conservation framing, and bringing the activists into connection with key decision-makers. In addition, the Carnaby's mobility throughout the surrounding suburbs enabled the species to develop more intimate relations with the local community, which served as a catalyst to local pro-conservation activism and enabled the species to develop into the 'flagship species' of the local conservation campaign with the political power to disrupt the planned development of the bushland.

Whilst the seagrass meadows of Mangles Bay formed part of the emotional connection local residents held with the site, the lack of mobility of the seagrass and demonstrated ability to be replaced by a sister species, diffused the political agency of the meadows. Notwithstanding this, the seagrass served as a politically powerful actor within the case study, which drove support for the pro-conservation campaign and triggered the pro-development network to negotiate harder and produce less ecologically impactful designs. To this end, the research has demonstrated potential combinations of characteristics nonhuman species may possess for them to build the relations required with humans to be not only represented in local planning processes, but influential political agents capable of shifting, disrupting, and reconfiguring planning outcomes. However, planning deliberations remain an innately human task undertaken using language-based modes of communication. Nonhumans therefore still rely on human translations and representations throughout planning negotiations for their interests to be defended.

The research has demonstrated how these translations of nonhuman species can be viewed as a product of relations between the affected nonhumans and their human interpreters. However, these representations are often skewed by the individual biases of representatives, their culture, previous experiences or spirituality. They are also limited in their scope by our inherent humanness – as Neimanis (2015) argues, we simply cannot wholly understand the perspectives of species other-than-human. We are human, and whilst we can learn to listen and be affected by other species – become response-able (Haraway 2008) – humans will necessarily retain a human bias. Accordingly, the representation of nonhumans by humans in land-use planning is an imperfect process, influenced by multiple complexities. Planners must be cognisant of the risks of misrepresentation, mistranslations and the issues associated with the legitimacy of representative's epistemology.

As demonstrated in the FUAB and HOPP case studies, despite local environmental activists often being motivated by an underlying environmental ethic, a perceived duty of care and awareness of Self-within-ecology, discursive framings of nonhuman species and natures were at times anthropocentrically leaning. Whilst on the surface this appears contradictory, it may in part be explained by campaign strategies to "sell nature to save it", or be seen as an empirical illustration of the failure of the human tongue to adequately or fully represent human translations of nonhumans. Further, the research clearly demonstrated that species with particular characteristics are more likely to be represented by humans, rendering many species voiceless and under-represented. Humans will likely privilege species that are more capable of emotionally connecting, are more visible or mobile, and institutionally recognised as threatened or endangered. Nonetheless, the research has demonstrated that increased representation that utilises local knowledge by, for instance, environmental activists can result in more environmentally considered outcomes – regardless of whether this representation stems from a weak anthropocentric or nonanthropocentric ethical position.

This observation allows for reflection. Rather than the planning profession developing a normative nonanthropocentric ethical stance, a general ethic of responsibility and caring should be promoted. Scholars such as Wolch in her seminal piece *Zoöpolis* (1996), and more recently Hinchliffe and Whatmore (2006), van Dooren and Rose (2012), Metzger (2014b) and Houston et al. (2018) have called for similar responses towards the more-than-human world. Planners and the system of planning, particularly in the context of the Anthropocene, should continue to evolve into a praxis that endorses multispecies inclusivity and acknowledges ontological plurality. Accepting that cities and other proclaimed 'human' spaces are indeed a product of entwined multispecies relations, planners should foster an ethic of caring by facilitating the inclusion of alternative other-than-scientific human representations of nonhuman nature, in order to develop more nuanced deliberations. As illustrated through the perspectives provided by the FUAB and HOPP case studies, understandings of nonhumans can be based on long-term and deep-seated relations; through the ability to listen and be affected by particular species or assemblages; and through long-term observations, cultural or spiritual knowledge. These perspectives are valuable alongside traditional scientific approaches, and assist planners in developing a well-rounded ecological sensibility.

Whilst it may be implausible to fully dislodge the human within and employ a deep nonanthropocentric ontology, we are capable of learning to listen and being affected by nonhuman species and assemblages (Metzger 2014a). In doing so, we are able to reduce our chauvinistic approach to the world and develop a greater Self-awareness and Self-within-ecology awareness. Planning needs to foster practices enabling other-than-scientific translations of so-called mute actors' *noise* to *voice* to be considered, and encourage local humans to respond to local nonhuman "outbreaks, objections, testimonies, and propositions" in relation to planning matters (Bennett 2009, 108). As the role of the planner continues to shift into a space of facilitation under the communicative paradigm (McGuirk 2001), it is argued that a further shift is required whereby planners facilitate the inclusion of multiple representations of more-than-human perspectives into deliberative planning practice. As Metzger (2014b) proclaims, caring for the multispecies *city* that we – humans – share with other-than-humans, will allow for the development of a sensitivity towards the material-semiotics of nonhumans, assisting in the creation of a more ecologically considered built environment.

To this end, it is argued that planners need to be open to the diverse range of ethical and political stances present and develop frameworks facilitating consensus amongst the multitude of human and nonhuman interests. This involves being open to diverse knowledge practices and technologies that facilitate a greater understanding of the more-than-human environment and implications of development across a multitude of spatial and temporal scales and across species. Planners need to consider the built environment as a dynamic multispecies reality, inherently linked to the health and well-being of human communities. The 'city' must no longer be considered void of other-than-human species, but rather a complex system of actors. Participatory planning practices should acknowledge the varying capacities and abilities of affected actors to participate in human-led language-based deliberations. Environmental activists and other local 'other-than-scientific' representatives of nonhumans should be acknowledged for the ecological wisdom they may offer and encouraged to participate in formal planning deliberations alongside authoritative experts. Encouraging a diversity of representations will assist in delivering positive planning outcomes for the nonhuman flora, fauna and ecosystems affected by development proposals and unable to participate in planning deliberations in their own right.

References

Abbott, Barbara. 2008. “Why is UWA building here?” *Subiaco Post*, February 2.

ABC. 2010. “2010 Federal Election Results: Brand”. http://www.abc.net.au/elections/federal/2010/guide/bran.htm

Alaimo, Stacy. 2010. "The Naked Word: The Trans-Corporeal Ethics of the Protesting Body." *Women & Performance: A Journal of Feminist Theory* 20 (1): 15-36. doi: 10.1080/07407701003589253.

Albrechts, Louis. 2003. "Planning and Power: Towards an Emancipatory Planning Approach." *Environment and Planning C: Government and Policy* 21 (6): 905-924. doi: 10.1068/c29m.

Anderson, Helen. 2008. “Time running out to lodge a protest”. *Subiaco Post,* February 9.

Anderson, James. 2010. “Bush backflip is shameful”. *Subiaco Post,* May 8.

Anderson, Kay. 2003. "White Natures: Sydney's Royal Agricultural Show in Post-Humanist Perspective." *Transactions of the Institute of British Geographers* 28 (4): 422-441.

Alan Tingay & Associates (ATA). 1999. “Environmental Assessment Lot 2103 Underwood Ave Shenton Park”. Accessed 27 July, 2016. https://library.dpaw.wa.gov.au/static/TEB/TEB-BF-042-01-1.pdf

Alan Tingay & Associates (ATA). 2004. “Environment Protection and Biodiversity Conservation Act 1999. Referral Form (EPBC 2004/1479)”. Accessed August 10, 2016. http://epbcnotices.environment.gov.au/referralslist/

Alan Tingay & Associates (ATA). 2007. “Lot 4 Underwood Avenue, Shenton Park. 2007 Development and Conservation Proposal. Environmental Review Report. EPA Assessment No. 1403”. Accessed 27 July, 2016. https://library.dpaw.wa.gov.au/static/TEB/TEB-BF-042-01-1.pdf

Alan Tingay & Associates (ATA). 2007a. “Referral of Proposed Action: Pt Lot 4 Underwood Avenue, Shenton Park, Western Australia (EPBC 2007/3386)”. Accessed August 10, 2016. http://epbcnotices.environment.gov.au/referralslist/

Appeals Convenor. 2014. “Report to the Minister for Environment: Appeals in Objection to Contents of and Recommendations in Report of the Environmental Protection Authority: Mangles Bay Marina-Based Tourist Precinct”.

Attfield, Robin. 2003. *Environmental Ethics : An Overview for the Twenty-First Century* Cambridge, UK: Polity Press.

Bakker, Karen. 2005. "Neoliberalizing Nature? Market Environmentalism in Water Supply in England and Wales." *Annals of the Association of American Geographers* 95 (3): 542-565. doi: 10.1111/j.1467-8306.2005.00474.x.

Baldwin, Andrew, and Anna Stanley. 2013. "Risky Natures, Natures of Risk." *Geoforum* 45: 2-4. doi: http://dx.doi.org/10.1016/j.geoforum.2012.12.016.

Baxter, Jamie. 2010. "Case Studies in Qualitative Research." In *Qualitative Research Methods in Human Geography*, ed. Iain Hay, 81-98. Ontario, Canada: Oxford University Press.

Bear, Christopher. 2006. "Salmon by Numbers: Quantification and Understandings of Nature." *The Scottish Geographical Magazine* 122 (3): 185-203.

Beatley, Timothy. 1989. "Environmental Ethics and Planning Theory." *Journal of Planning Literature* 4 (1): 1-32. http://jpl.sagepub.com/content/4/1/1.abstractN2.

———. 1991. "A Set of Ethical Principles to Guide Land Use Policy." *Land Use Policy* 8 (1): 3-8. doi: http://dx.doi.org/10.1016/0264-8377(91)90048-N.

———. 1994a. "Environmental Ethics and the Field of Planning." In *Values and Planning*, ed. Huw Thomas, 12-37. Brookfield, Vermont, USA: Ashgate Publishing Company.

———. 1994b. *Ethical Land Use: Principles of Policy and Planning*. Baltimore: Johns Hopkins University Press.

———. 2000. "Preserving Biodiversity." *Journal of the American Planning Association* 66 (1): 5-20. doi: 10.1080/01944360008976080.

———. 2011. *Biophilic Cities: Integrating Nature into Urban Design and Planning.* Island Press.

Beatley, Timothy, and Marc Bekoff. 2013. "City Planning and Animals: Expanding Our Urban Compassion Footprint." In *Ethics, Design and Planning of the Built Environment*, 185-195. Springer.

Beatley, Timothy, and Peter Newman. 2013. "Biophilic Cities Are Sustainable, Resilient Cities." *Sustainability* 5 (8): 3328-3345.

Beauregard, Robert A. 2012. "Planning with Things." *Journal of Planning Education and Research* 32 (2): 182-190.

———. 2015. *Planning Matter: Acting with Things*: University of Chicago Press.

Bennett, Jane. 2009. *Vibrant Matter: A Political Ecology of Things*: Duke University Press.

Beresford, Quentin. 2001. "Developmentalism and Its Environmental Legacy: The Western Australia Wheatbelt, 1900 – 1990s." *Australian Journal of Politics & History* 47 (3): 403-415. doi: 10.1111/1467-8497.00236.

Berglund, Eeva K. 1998. *Knowing Nature, Knowing Science: An Ethnography of Environmental Activism*: White Horse Press.

Black, Brian. 2002. "Organic Planning: The Intersection of Nature and Economic Planning in the Early Tennessee Valley Authority." *Journal of Environmental Policy & Planning* 4 (2): 157-168. doi: 10.1002/jepp.105.

Boase-Jelinek, Daniel. 1999a. “Threatened”. *Subiaco Post*, November 20.

Boase-Jelinek, Daniel. 1999b. “Development Will Put Eagles at Risk”. *Subiaco Post,* December 4.

Boase-Jelinek, Daniel. 2000. “Help Save the Little Eagle”. *Subiaco Post,* January 22.

Boase-Jelinek, Daniel. 2001. “Cross with UWA? Then Make Crosses.” *Subiaco Post,* June 30.

Boase-Jelinek, Daniel. 2002. “Bush fire was my worst nightmare”. *Subiaco Post,* January 19.

Boase-Jelinek, Daniel. 2003. “Bush Friends Call for Support in Campaign”. *Subiaco Post,* April 19.

Boelens, Luuk. 2010. "Theorizing Practice and Practising Theory: Outlines for an Actor-Relational-Approach in Planning." *Planning Theory* 9 (1): 28-62. doi: 10.1177/1473095209346499.

Boerboom, Luc, and Valentina Ferretti. 2014. "Actor Network-Theory Perspective on a Forestry Decision Support System Design." *Scandinavian Journal of Forest Research* 29 (sup1): 84-95. doi: 10.1080/02827581.2014.946960.

Bookchin, Murray. 2005. "Social Ecology Versus Deep Ecology." In *Environmental Ethics: Readings in Theory and Application*, ed. Louis P. Pojman, 212-222. Canada: Thomson Wadsworth.

Booth, Kate. 2008. "Holism with a Hole? Exploring Deep Ecology within the Built Environment." *Trumpeter* 24 (1).

Boström, Magnus, and Ylva Uggla. 2016. "A Sociology of Environmental Representation." *Environmental Sociology* 2 (4): 355-364.

Bowler, Ian R. 1999. "Recycling Urban Waste on Farmland: An Actor network Interpretation." *Applied Geography* 19 (1): 29-43. doi: http://dx.doi.org/10.1016/S0143-6228(98)00033-2.

Braun, Bruce. 2005. "Environmental Issues: Writing a More-Than-Human Urban Geography." *Progress in Human Geography* 29 (5): 635-650. doi: 10.1191/0309132505ph574pr.

Brockington, Dan, and Rosaleen Duffy. 2010. "Capitalism and Conservation: The Production and Reproduction of Biodiversity Conservation." *Antipode* 42 (3): 469-484.

Brown, Katrina, and Rachel Dilley. 2012. "Ways of Knowing for 'Response-Ability'in More-Than-Human Encounters: The Role of Anticipatory Knowledges in Outdoor Access with Dogs." *Area* 44 (1): 37-45.

Brown, Mark B. 2017. "Speaking for Nature: Hobbes, Latour, and the Democratic Representation of Nonhumans." *Science & Technology Studies* Forthcoming.

Bueger, Christian. 2013. "Actor network Theory, Methodology, and International Organization." *International Political Sociology* 7 (3): 338-342. doi: 10.1111/ips.12026_3.

Burgess, Jacquelin, Judy Clark, and Carolyn M. Harrison. 2000. "Knowledges in Action: An Actor Network Analysis of a Wetland Agri-Environment Scheme." *Ecological Economics* 35 (1): 119-132. doi: http://dx.doi.org/10.1016/S0921-8009(00)00172-5.

Burms, A., and R. Vergauwen. 1991. "Natural Kinds and Moral Distinctions." *Philosophia* 21 (1-2): 101-105. doi: 10.1007/BF02381972.

Burr, Vivien. 2003. *Social Constructionism*. 2nd ed.. ed. London: Routledge.

Büscher, Bram, Sian Sullivan, Katja Neves, Jim Igoe, and Dan Brockington. 2012. "Towards a Synthesized Critique of Neoliberal Biodiversity Conservation." *Capitalism Nature Socialism* 23 (2): 4-30.

Byrne, Jason. 2010. "The Human Relationship with Nature: Rights of Animals and Plants in the Urban Context." In *The Routledge Handbook of Urban Ecology*, eds Ian Douglas, David Goode and Mike Houck, 63-73. Taylor and Francis.

Byrne, Julie. 2009. "Assertions queried". *Weekend Courier*, May 15.

Byrne, M. G. Barrett, M. Blythman, H. Finn and M. Williams. 2015. The 2015 Great Cocky Count: a community-based survey for Carnaby's Black-Cockatoo (Calyptorhynchus latirostris) and Forest Red-tailed Black-Cockatoo (Calyptorhynchus banksii naso). BirdLife Australia, Floreat, Western Australia.

Cadieux, Kirsten Valentine. 2011. "Competing Discourses of Nature in Exurbia." *GeoJournal* 76 (4): 341-363. doi: 10.2307/41308579.

Callaghan, Linda. 2004. "Bush decision stuns UWA". *Subiaco Post,* June 19.

Callaghan, Linda. 2008. "Uni offers farmland for bush housing deal". *Subiaco Post,* June 21.

Callaghan, Linda. 2010. “Uni had secret talks at SAT”. *Subiaco Post,* May 29.

Callaghan, Linda. 2010a. “Attempt to turn off water rumours”. *Subiaco Post,* May 29.

Callaghan, Linda. 2011. “Our cockies are doomed”. *Subiaco Post,* May 29.

Callon, Michel. 1986. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay." *Power, action, and belief: A new sociology of knowledge* 32: 196-223.

———. 1990. "Techno-Economic Networks and Irreversibility." *The Sociological Review* 38 (S1): 132-161.

Callon, Michel, and John Law. 1995. "Agency and the Hybrid «Collectif»." *The South Atlantic Quarterly* 94 (2): 481-507.

Cameron, W.S.K. 2012. "Can Cities Be Both Natural and Successful? ." In *The Natural City: Re-Envisioning the Built Environment*, eds Ingrid Leman-Stefanovic and Stephen B Scharper, 36-49. Toronto: University of Toronto Press.

Cammack, Paul J, Ian Convery, and Heather Prince. 2011. "Gardens and Birdwatching: Recreation, Environmental Management and Human–Nature Interaction in an Everyday Location." *Area* 43 (3): 314-319.

Campbell, Heather. 2012. "'Planning Ethics' and Rediscovering the Idea of Planning." *Planning Theory* 11 (4): 379-399. http://plt.sagepub.com/content/11/4/379.abstract.

Cape Peron Coastal Park. 2012. “Cape Peron Coastal Park”. http://cape-peron-coastal-park.com/

Carmody, James. 2018. “Proposed marina sparks fears for future of Penguin Island’s colony of Little Penguins”. *ABC,* February 23, http://mobile.abc.net.au/news/2018-02-23/fears-for-penguin-island-over-development/9478770?pfmredir=sm

Carew-Hopkins, D. 2002. *Appeals Inquiry Report. Residential Subdivision Pt Lot 4 Underwood Avenue, Shenton Park. EPA Bulletin 1034.* Perth, Western Australia: Appeals Convenor for the Environmental Protection Act (1986).

Carson, Rachel. 2002. *Silent Spring*: Houghton Mifflin Harcourt.

Castree, Noel. 2003. "Commodifying What Nature?" *Progress in Human Geography* 27 (3): 273-297.

———. 2008a. "Neoliberalising Nature: Processes, Effects, and Evaluations." *Environment and Planning A* 40 (1): 153-173.

———. 2008b. "Neoliberalising Nature: The Logics of Deregulation and Reregulation." *Environment and Planning A* 40 (1): 131-152.

———. 2013. *Making Sense of Nature*: Routledge.

Cedar Woods. 2017. “Mangles Bay Marina”. Accessed 23 May 2017. www.manglesbaymarina.com.au.

Chapman, Ron. 2011. “Awake to dangers”. *Weekend Courier*, January 28.

Chapman, Ron. 2013. “Sensible option”. *Weekend Courier*, February 1.

Chappell Lambert and Everett. 2007. “Investigation into Planning Matters Related to Public Submissions on the Environmental Review Report for Lot 4 Underwood Avenue.” http://www.epa.wa.gov.au/epadoclib/B1272/AnnexureG.PDF

Christian, Brett. 2012. “It’s a cockatoo crisis – conservationists”. *Subiaco Post,* February 4.

City of Nedlands. 1985. “Town Planning Scheme No. 2”. Accessed 27 July, 2016. http://www.nedlands.wa.gov.au/town-planning-scheme-no-2

City of Nedlands. 2008. “Minutes. Council Meeting: 9 September 2008”. Provided by request by the City of Nedlands.

City of Nedlands. 2009. “Attachment to Item 2, Council Meeting 15 December 2009: Addresses by Members of the Public – Ms. M Owen – Letter from Colin J Barnett MLA, Member for Cottesloe to Hon David Templeman MLA, Minister for the Environment, dated 28 May 2008, regarding the Underwood Avenue Bushland in Floreat”. Provided by request by the City of Nedlands.

City of Nedlands 2009a. “Minutes. Council Meeting: 15 December 2009”. Provided by request by the City of Nedlands.

City of Nedlands. 2010. “Minutes. Council Meeting: 27 April 2010”. Provided by request by the City of Nedlands.

Cockburn Sound Management Council. 2003. “Sound News #20”. http://portal.appealsconvenor.wa.gov.au/pls/portal/docs/PAGE/ADMIN_CSMC/CSMC_SOUND_NEWS/TAB963897/ISSUE20.PDF

Coffey. 2008. “Response to public submissions on the 2007 Development and Conservation proposal for Lot 4 Underwood Ave, Shenton Park (EPBC 2007/3386)” http://www.aph.gov.au/DocumentStore.ashx?id=dd259374-c12e-4132-ac05-b206eea83fc0&subId=253010. Accessed 31 March 2017.

Collinson, Gary and Nicolie Collinson. 1999. “UWA Should Save Bush”. *Subiaco Post,* December 11.

Comber, Alexis, Peter Fisher, and Richard Wadsworth. 2003. "Actor–Network Theory: A Suitable Framework to Understand How Land Cover Mapping Projects Develop?" *Land Use Policy* 20 (4): 299-309. doi: http://dx.doi.org/10.1016/S0264-8377(03)00048-6.

Conservation Council of Western Australia. 2018. “Save the Little Penguins of Point Peron”. Accessed March 12, https://ccwa.good.do/littlepenguins/call_minister/

Council, National Health and Medical Research. 2007. "Australian Code for the Responsible Conduct of Research." edited by Australian Research Council, Canberra, ACT: Australian Government.

Crutzen, PJ, and EF Stoermer. 2000. "The Anthropocene " *IGBP Newsletter* 41.

Davison, Aidan. 2008. "The Trouble with Nature: Ambivalence in the Lives of Urban Australian Environmentalists." *Geoforum* 39 (3): 1284-1295.

Davoudi, Simin. 2012. "Climate Risk and Security: New Meanings of “the Environment” in the English Planning System." *European Planning Studies* 20 (1): 49-69. doi: 10.1080/09654313.2011.638491.

———. 2014. "Climate Change, Securitisation of Nature, and Resilient Urbanism." *Environment and Planning C: Government and Policy* 32 (2): 360-375. doi: 10.1068/c12269.

Day, John. 2009. “Response to Media Inquiry. Re: Rockingham Kwinana Planning and Development Taskforce”. https://www.mediastatements.wa.gov.au/Archived-Statements/Pages/Ministers/Barnett-John-Day.aspx

DeLapp, Kevin, ed. 2011. *The View from Somewhere: Anthropocentrism in Metaethics Human-Animal Studies, Volume 12 : Anthropocentrism : Humans, Animals, Environments*. Leiden, NLD: Brill Academic Publishers.

Department of Environment and Conservation. 2011. “Conservation Advice for Synemon gratiosa (graceful sun-moth) – January 2011”. http://www.jindee.com.au/wp-content/uploads/2016/05/Appendix_8.pdf

Department of Environment and Energy. 2016. “Species Profile and Threats Database: Synemon gratiosa — Graceful Sun Moth”. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=66757

Department of Environment and Heritage. 2004. “Decision on Controlled Action, Controlling Provisions and Designation of Proponent”. http://epbcnotices.environment.gov.au/

Department of Environment, Water, Heritage and the Arts. 2008. “Decision to Refuse Action; Lot 4 Underwood Avenue, Shenton Park, WA (EPBC 2007/3386)”. Accessed 10 August, 2016. http://epbcnotices.environment.gov.au/referralslist/

Department of Environment, Water, Heritage and the Arts. 2010. “Referral of Proposed Action: Mangles Bay Marina Based Tourist Precinct”. http://epbcnotices.environment.gov.au/_entity/annotation/c8310921-8869-e511-b93f-005056ba00a7/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1521195628911

Department of Environment Protection. 2001. “Draft Preliminary Comment on Bush Plan Site 119 in relation to Environmental Assessment (ATA Environmental November 2000 Report No. 2000/133)”. Accessed August 10, https://library.dpaw.wa.gov.au/static/TEB/TEB-BF-042-01-1.pdf

Department of the Environment. 2014. “Mangles Bay Marina Based Tourist Precinct, WA (EPBC 2010/5659)”. http://epbcnotices.environment.gov.au/_entity/annotation/add3a24d-3568-e511-9099-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1521195599370

Department of Parks and Wildlife. 2016. “Lake Richmond”. Accessed December 13, https://parks.dpaw.wa.gov.au/site/lake-richmond.

Department of Planning and Infrastructure. 2008. “The Perth Recreational Boating Facilities Study 2008”. http://www.transport.wa.gov.au/mediaFiles/marine/MAC_R_PerthRegion.pdf

Department of Premier and Cabinet. 2015. “Perth and Peel Green Growth Plan for 3.5 Million”. Accessed August 8, 2016. https://www.dpc.wa.gov.au/Consultation/StrategicAssessment/Pages/Default.aspx

Department of Sustainability, Environment, Water, Population and Communities. 2013. “Advice to the Minister for Sustainability, Environment, Water, Population and Communities from the Threatened Species Scientific Committee (the Committee) on amendment to the list of Threatened Species under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)”. http://www.environment.gov.au/biodiversity/threatened/species/pubs/66757-listing-advice.pdf

Denzin, Norman K., and Yvonna S. Lincoln. 2011. *The Sage Handbook of Qualitative Research*. 4th ed.. ed. Thousand Oaks, Calif.: SAGE.

Devall, Bill. 1988a. "Deep Ecology and Its Critics." *Trumpeter* 5 (2).

———. 1988b. *Simple in Means, Rich in Ends: Practicing Deep Ecology*: Peregrine Smith Books Salt Lake City.

Devall, Bill, and George Sessions. 2005. "Deep Ecology." In *Environmental Ethics: Readings in Theory and Application*, ed. Louis P. Pojman, 200-205. Canada: Wadsworth.

Dilley, John M. 2005. “Group appeals for funding”. *Weekend Courier,* July 22.

Government of Western Australia. 2004. “State Government committed to Rockingham’s revitalisation”. https://www.mediastatements.wa.gov.au/Pages/Gallop/2004/06/State-Government-committed-to-Rockingham's-revitalisation.aspx

Dittmer, Jason. 2010. "Textual and Discourse Analysis." In *The Sage Handbook of Qualitative Geography*, eds Dydia DeLyser, Steve Herbert, Stuart Aitken, Mike Crang and Linda McDowell, 274-286. London: SAGE Publications Ltd.

Drenthen, Martin. 2011. "Ecocentrism as Anthropocentrism." *Ethics, Policy & Environment* 14 (2): 151-154. doi: 10.1080/21550085.2011.578365.

Duminy, James. 2015. "Using the Case Study Approach to Inform Planning Practice and Research in Africa." In *The Routledge Handbook of Planning Research Methods*, eds Elisabete A. Silva, Patsy Healey, Neil Harris and Pieter Van den Broeck, 440-449. New York, New York: Taylor and Francis.

Dunn, Kevin. 2010. "Interviewing." In *Qualitative Research Methods in Human Geography*, ed. Iain Hay, 101-138. Ontario, Canada: Oxford University Press.

Dwiartama, Angga, and Christopher Rosin. 2014. "Exploring Agency Beyond Humans: The Compatibility of Actor network Theory (Ant) and Resilience Thinking." *Ecology and Society* 19 (3): 28.

Edwards, Margaret and Robert Edwards. 2006. “Keep nature for future”. *Weekend Courier*, October 13.

Eastwood, Ken. 2010. “Nedlands’ bush about-face for review”. *Subiaco Post,* May 22.

Environmental Protection Authority. 2001. “Residential Subdivision – Pt Lot 104 Underwood Avenue/Selby Street, Shenton Park (Bulletin 1034)”. Accessed 3 January, 2016. http://edit.epa.wa.gov.au/EPADocLib/1034%20feb.pdf

Environmental Protection Authority. 2003. “Superlot Subdivision Lots 4 and 105 Underwood Avenue, Shenton Park (Bulletin 1099)”. Accessed 27 July, 2016. http://epa.wa.gov.au/EPADocLib/1635_B1099.pdf

Environmental Protection Authority. 2006. “Cape Peron Tourist Precinct Project: Advice of the Environmental Protection Authority to the Minister for the Environment, under Section 16e of the *Environmental Protection Act 1986.*

Bulletin 1237". http://www.epa.wa.gov.au/proposals/mangles-bay-marine-based-tourist-precinct

Environmental Protection Authority. 2006a. "EPA Bulletin 1237 Section 16 Advice – Cape Peron Tourist Precinct Project".

Environmental Protection Authority. 2007. "Lot 4 Underwood Avenue, Shenton Park 2007 Development and Conservation Proposal (Bulletin 1272)". Accessed 27 July, 2016. http://www.epa.wa.gov.au/epadoclib/B1272/Bull1272Underwood291007.pdf

Environmental Protection Authority. 2009. "EPA Report 1339 - Port Rockingham Marina". Accessed September 6, http://www.epa.wa.gov.au/NEWS/MEDIASTMNTS/Pages/3037_EPAReport1339-PortRockinghamMarina.aspx

Environmental Protection Authority. 2010. "Ministerial Statement No. 835. Statement that a Proposal May Be Implemented: Development and Conservation Proposal Lot 4 Underwood Avenue, Shenton Park". Accessed 25 July, http://epa.wa.gov.au/EPADocLib/000835.pdf

Environmental Protection Authority. 2013. "Report and recommendations of the Environmental Protection Authority: Mangles Bay Marina – Based Tourism Precinct. Report 1471". http://www.epa.wa.gov.au/proposals/mangles-bay-marine-based-tourist-precinct

Faragher, Donna. 2009. "Ministers Appeal Determination. Appeal Against Environmental Protection Authority Report and Recommendations – Lot 4 Underwood Avenue, Shenton Park 2007 Development and Conservation Proposal (Bulletin 1272)".

Faragher, Donna. 2010. "Final Approval for Shenton Park Development". Accessed 26 July, 2016. https://www.mediastatements.wa.gov.au/Pages/Barnett/2010/07/Final-approval-for-Shenton-Park-development.aspx.

Farren, P. R. 2002. "Blaze was double devastation". *Subiaco Post,* January 19.

Fatimah, Yuti Ariani, and Saurabh Arora. 2016. "Nonhumans in the Practice of Development: Material Agency and Friction in a Small-Scale Energy Program in Indonesia." *Geoforum* 70: 25-34.

Fielding, Suzanne. 2000. "Uni should hang on to rare bush". *Subiaco Post*, March 25.

Flick, Uwe. 2014a. *An Introduction to Qualitative Research*. London: Sage.

———, ed. 2014b. *The Sage Handbook of Qualitative Data Analysis*. London: SAGE Publications Ltd.

Flyvbjerg, Bent. 2004. "Phronetic Planning Research: Theoretical and Methodological Reflections." *Planning Theory & Practice* 5 (3): 283-306. doi: 10.1080/1464935042000250195.

———. 2006. "Five Misunderstandings About Case-Study Research." *Qualitative inquiry* 12 (2): 219-245.

———. 2011. "Case Study." In *The Sage Handbook of Qualitative Research (4th Edition)*, eds Norman K. Denzin and Yvonna S. Lincoln. Thousand Oaks, Calif.: SAGE.

Forester, John. 1989. *Planning in the Face of Power*: Univ of California Press.

Fox, Stephen. 2000a. "Communities of Practice, Foucault and Actor network Therory." *Journal of Management Studies* 37 (6): 853-868. doi: 10.1111/1467-6486.00207.

Fox, Warwick. 1984. "Deep Ecology: A New Philosophy of Our Time?" *The Ecologist* 14 (5/6): 194-200.

———, ed. 2000b. *Ethics and the Built Environment*. London: Routledge.

Franklin, Adrian. 1999. *Animals and Modern Cultures: A Sociology of Human-Animal Relations in Modernity*: Sage.

Frawley, Kevin. 1992. "A 'Green' Vision: The Evolution of Australian Environmentalism." In *Inventing Places : Studies in Cultural Geography*, eds Kay Anderson and Fay Gale. Melbourne: Longman Cheshire.

Freeman, Carrie Packwood. 2010. "Embracing Humanimality: Deconstructing the Human/Animal Dichotomy."

Freestone, Robert. 2014. "Australian Environmental Planning Origins and Theories." In *Australian Environmental Planning: Challenges and Future Prospects*, eds Jason Byrne, Jago Dodson and Neil Sipe, 21-36. Oxford: Routledge.

Friends of Underwood Avenue Bushland Inc. 2007. Friends of Underwood Avenue Bushland Inc to Garry Middle, Appeals Convenor.

Gallanter, Eden. 2012. "Ciudad Jardín Lomas Del Palomar: Deriving Ecocity Design Lessons from a Garden City." *Planning Perspectives* 27 (2): 297-307. doi: 10.1080/02665433.2012.654973.

Gates, Kim. 2000. “Land swap should be part of bigger picture”. *Subiaco Post,* December 28.

Gates, Kim. 2003. “Not Everyone’s Happy, Dr Cox”. *Subiaco Post*, June 7.

Gates, Kim. 2007. “Watchdog’s process is flawed”. *Subiaco Post*, November 3.

Gaynor, Andrea. 1999. "Regulation, Resistance and the Residential Area: The Keeping of Productive Animals in Twentieth-Century Perth, Western

Australia." *Urban Policy and Research* 17 (1): 7-16. doi: 10.1080/08111149908727786.

Gee, James Paul. 2014. *How to Do Discourse Analysis : A Toolkit*. 2nd ed. Hoboken: Taylor and Francis. http://CURTIN.eblib.com.au/patron/FullRecord.aspx?p=1600495.

Gergen, Kenneth J., and Mary M. Gergen. 2007. "Social Construction and Research Methodology." In *The Sage Handbook of Social Science Methodology*, eds William Outhwaite and Stephen P. Turner, 461-478. SAGE Publications Ltd.

Gleeson, Brendan, and Nicholas Low. 2000. *Australian Urban Planning : New Challenges, New Agendas*. St Leonards, N.S.W.: Allen & Unwin.

Goulden, Shula. 2016. "Constructing 'Green Building': Heterogeneous Networks and the Translation of Sustainability into Planning Is Israel." In *Actor Networks of Planning: Exploring the Influence of Actor Network Theory*, eds Yvonne Rydin and Laura Ellen Tate, 41-57. Abingdon, Oxfordshire: Routledge.

Government of Western Australia. 2002. *Extract from Hansard. Underwood Avenue Bushland: Motion*. Perth, Western Australia: Legislative Assembly.

Government of Western Australia. 2004. “Minister rejects UWA proposal for development on Underwood Avenue bushland”. https://www.mediastatements.wa.gov.au/Pages/Gallop/2004/06/Minister-rejects-UWA-proposal-for-development-on-Underwood-Avenue-bushland.aspx

Government of Western Australia. 2007. “Study identifies Perth's future boating facilities”. https://www.mediastatements.wa.gov.au/Pages/Carpenter/2007/05/Study-identifies-Perth's-future-boating-facilities.aspx

Government of Western Australia. 2009. “Cape Peron marina one step closer”. https://www.mediastatements.wa.gov.au/Pages/Barnett/2009/09/Cape-Peron-marina-one-step-closer.aspx

Government of Western Australia. 2010. “Cape Peron development partner announced”. https://www.mediastatements.wa.gov.au/Pages/Barnett/2010/04/Cape-Peron-development-partner-announced.aspx

Government of Western Australia. 2018. “Mangles Bay Marina proposal withdrawn”. https://www.mediastatements.wa.gov.au/Pages/McGowan/2018/03/Mangles-Bay-Marina-proposal-withdrawn.aspx

Graham, J. 2008. “Bird visitors are declining”. *Subiaco Post,* February 9.

Graham, Janet. 2008. “Flora and fauna deserve a win”. *Subiaco Post,* July 28.

Grey, William. 1993. "Anthropocentrism and Deep Ecology." *Australasian Journal of Philosophy* 71 (4): 463-475. doi: 10.1080/00048409312345442.

Gunder, Michael. 2010. "Planning as the Ideology of (Neoliberal) Space." *Planning Theory* 9 (4): 298-314.

Gunn, Alastair S. 1998. "Rethinking Communities: Environmental Ethics in an Urbanized World." *Environmental Ethics* 20 (4): 341-360.

Hajer, Maarten A. 1993. "Discourse Coalitions and the Institutionalization of Practice: The Case of Acid Rain in Great Britain." In *The Argumentative Turn in Policy Analysis and Planning*, eds Frank Fischer and John Forester, 43-76. London: UCL.

Hajer, Maarten, and Wytske Versteeg. 2005. "A Decade of Discourse Analysis of Environmental Politics: Achievements, Challenges, Perspectives." *Journal of Environmental Policy & Planning* 7 (3): 175-184. doi: 10.1080/15239080500339646.

Hall, Peter. 2002. *Cities of Tomorrow : An Intellectual History of Urban Planning and Design in the Twentieth Century* 3rd ed.. ed. Oxford, UK: Blackwell Publishers.

Hands Off Point Peron’s Facebook Page, dated December 17, 2011. www.facebook.com/HandsOffPointPeron

Hands Off Point Peron. 2015. “Proposed Metropolitan Region Scheme Amendment 1240/81 Regarding Land at Point Peron. Hands Off Point Peron Inc. (HOPP) Submission”. http://handsoffpointperon.com/current-status-of-campaign/

Hands Off Point Peron. 2016. “Get the Facts”. Accessed September 6, http://handsoffpointperon.com/get-the-facts/

Haraway, Donna. 1987. "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s." *Australian Feminist Studies* 2 (4): 1-42.

———. 1992. "The Promises of Monsters: A Regenerative Politics for Inappropriate/D Others." In *Cultural Studies*, eds L. Grossberg, C. Nelson and P. Treichler, 295-337. London: Routledge.

Haraway, Donna Jeanne. 2008. *When Species Meet*. Vol. 224: U of Minnesota Press.

Hardie, Denise. 2010. “Canals idea dated”. *Weekend Courier*, April 16.

Hardisty, Heidi. 2008. “Misinformation, not facts, from UWA on Underwood”. *Subiaco Post,* October 11.

Hartley, Michael. 2007. “Unis about more than making money”. *Subiaco Post,* November 10.

Hayward, T. I. M. 1997. "Anthropocentrism: A Misunderstood Problem." *Environmental Values* 6 (1): 49-63. http://www.jstor.org/stable/30301484.

Healey, Patsy. 1992. "Planning through Debate: The Communicative Turn in Planning Theory." *Town Planning Review* 63 (2): 143. http://liverpool.metapress.com/content/422X602303814821.

———. 1997. *Collaborative Planning: Shaping Places in Fragmented Societies*: UBc Press.

Healey, Patsy, and Tim Shaw. 1994. "Changing Meanings of 'Environment' in the British Planning System." *Transactions of the Institute of British Geographers* 19 (4): 425-438. doi: 10.2307/622833.

Hennink, Monique, Inge Hutter, and Ajay Bailey. 2010. *Qualitative Research Methods*. London, United Kingdom: SAGE Publications.

Heynen, Nik, and Paul Robbins. 2005. "The Neoliberalization of Nature: Governance, Privatization, Enclosure and Valuation." *Capitalism Nature Socialism* 16 (1): 5-8.

Hidding, Roslyn. 2010. “Marina draws more fire”. *Weekend Courier,* April 23.

Hidding, Roslyn. 2010. “Marina mauled”. *Weekend Courier,* July 2.

Hillier, Jean. 1998. "Paradise Proclaimed? Towards a Theoretical Understanding of Representations of Nature in Land Use Planning Decision-Making." *Philosophy & Geography* 1 (1): 77-91. doi: 10.1080/13668799808573633.

———. 1999. "Habitat's Habitus: Nature as Sense of Place in Land Use Planning Decision-Making." *Urban Policy and Research* 17 (3): 191-204. doi: 10.1080/08111149908727805.

———. 2000. "Going Round the Back? Complex Networks and Informal Action in Local Planning Processes." *Environment and Planning A* 32 (1): 33-54.

———. 2015. "If Schrödinger’s Cat Miaows in the Suburbs, Will Anyone Hear?" *Planning Theory* 14 (4): 425-443. doi: 10.1177/1473095215576159.

Hinchliffe, Steve, and Sarah Whatmore. 2006. "Living Cities: Towards a Politics of Conviviality." *Science as Culture* 15 (2): 123-138.

Hine, Audrey. 2008. “Stand firm to save bushland”. *Subiaco Post*, May 24.

Higgins, E. 2005. “Save Point Peron”. *Weekend Courier*, August 12.

Hodgkinson, Norm. 2005. “Marina: read the fine print”. *Weekend Courier*, August 19.

Hodgkinson, Norm. 2015. “Costly ‘victory’”. *Weekend Courier,* July 17.

Hodson, Ben. 2010. “We can’t ignore owners’ rights”. *Subiaco Post,* 20 November.

Holmes, Penny. 2008. “Who will offer compo for uni?” *Subiaco Post,* November 22.

Horowitz, Leah S. 2012. "Translation Alignment: Actor network Theory, Resistance, and the Power Dynamics of Alliance in New Caledonia." *Antipode* 44 (3): 806-827. doi: 10.1111/j.1467-8330.2011.00926.x.

Houston, Donna, Jean Hillier, Diana MacCallum, Wendy Steele, and Jason Byrne. 2018. "Make Kin, Not Cities! Multispecies Entanglements and 'Becoming-World'in Planning Theory." *Planning Theory*: 1473095216688042.

Houston, Donna, and Kristian Ruming. 2014. "Political Ecologies of Australian Cities." *Geographical Research* 52 (4): 351-354. doi: 10.1111/1745-5871.12076.

Hovorka, Alice. 2008. "Transspecies Urban Theory: Chickens in an African City." *Cultural Geographies* 15 (1): 95-117.

Huber, Patrick R., Fraser Shilling, James H. Thorne, and Steven E. Greco. 2012. "Municipal and Regional Habitat Connectivity Planning." *Landscape and Urban Planning* 105 (1–2): 15-26. doi: http://dx.doi.org/10.1016/j.landurbplan.2011.11.019.

Huizenga, Roslyn. 2009. "Proposed marina divides council". *Weekend Courier,* April 10.

Hurley, Patrick T, and Peter A Walker. 2004. "Whose Vision? Conspiracy Theory and Land-Use Planning in Nevada County, California." *Environment and Planning A* 36 (9): 1529.

Igoe, Jim, and Dan Brockington. 2007. "Neoliberal Conservation: A Brief Introduction." *Conservation and society* 5 (4): 432.

Innes, Judith E, and David E Booher. 2014. "A Turning Point for Planning Theory? Overcoming Dividing Discourses." *Planning Theory*. doi: 10.1177/1473095213519356.

Jacobs, Harvey M. 1995. "Contemporary Environmental Philosophy and Its Challenge to Planning Theory." In *Planning Ethics: A Reader in Planning Theory, Practice and Education*, ed. Sue Hendler, 83-104. New Jersey: Rutgers, the State University of New Jersey.

Jacobs, Keith. 1999. "Key Themes and Future Prospects: Conclusion to the Special Issue." *Urban Studies* 36 (1): 203-213.

Jansen, Till. 2017. "Beyond Ant: Towards an 'Infra-Language' of Reflexivity " *European Journal of Social Theory* 20 (2): 199-215. doi: doi:10.1177/1368431016646506.

Jansujwicz, JessicaSpelke, and AramJ K. Calhoun. 2010. "Protecting Natural Resources on Private Lands: The Role of Collaboration in Land-Use

Planning." In *Landscape-Scale Conservation Planning*, eds Stephen C. Trombulak and Robert F. Baldwin, 205-233. Springer Netherlands.

Jecks, Dawn. 2006. “Price of marina too high”. *Weekend Courier*, January 27.

Jecks, Dawn. 2008. “Regional parks for everyone too”. *Weekend Courier,* December 5.

Jecks, Dawn. 2010. “Location sensible”. *Weekend Courier,* March 5.

Jecks, Dawn. 2011a. “Go a smarter way”. *Weekend Courier,* June 10.

Jeffery, Gabrielle. 2018. “Mangles Bay Marina development dead in the water”. *Weekend Courier,* March 1, https://www.communitynews.com.au/weekend-courier/news/mangles-bay-marina-development-dead-in-the-water/

Jennings, Lyn. 2010. “Can Suzuki help save Underwood?”. *Subiaco Post,* 9 October.

Jóhannesson, G. T., and J. O. Bærenholdt. 2009. "Actor network Theory/Network Geographies." In *International Encyclopedia of Human Geography*, ed. Rob KitchinNigel Thrift, 15-19. Oxford: Elsevier.

Jones, Alex. 2007. “Bricks and mortar UWA’s priority”. *Subiaco Post,* 13 January.

Jones, Owain, and Paul Cloke. 2008. "Non-Human Agencies: Trees in Place and Time." In *Material Agency*, 79-96. Springer.

Jørgensen, Marianne W, and Louise J Phillips. 2002. *Discourse Analysis as Theory and Method*: Sage.

Kalamaras, Leon. 1999. “Our Bush is Our Future”. *Subiaco Post,* 20 November.

Karvonen, Andrew, and Ken Yocom. 2011. "The Civics of Urban Nature: Enacting Hybrid Landscapes." *Environment and Planning A* 43 (6): 1305-1322.

Katz, Eric, Andrew Light, and David Rothenberg. 2000. *Beneath the Surface: Critical Essays in the Philosophy of Deep Ecology*: Mit Press.

Kelly, Debbie. 2015. “Advert claims challenged”. *Weekend Courier*, April 24.

King, Roger. 1997. "Critical Reflections on Biocentric Environmental Ethics: Is It an Alternative to Anthropocentrism?" In *Space, Place and Environmental Ethics*, eds Andrew Light and Jonathan M. Smith, 209-229. Lanham, Maryland: Rowman and Littlefield Publishers Inc.

King, Roger JH. 2000. "Environmental Ethics and the Built Environment." *Environmental Ethics* 22 (2): 115-131.

King, Rhianna. 2012. “Point Peron marina development angers locals”. *WA Today,* April 10, http://www.watoday.com.au/wa-news/point-peron-marina-development-angers-locals-20120405-1wekq.html?deviceType=text

Kong, Fanhua, Haiwei Yin, Nobukazu Nakagoshi, and Yueguang Zong. 2010. "Urban Green Space Network Development for Biodiversity Conservation:

Identification Based on Graph Theory and Gravity Modeling." *Landscape and Urban Planning* 95 (1–2): 16-27. doi: http://dx.doi.org/10.1016/j.landurbplan.2009.11.001.

Kopnina, Helen. 2012. "The Lorax Complex: Deep Ecology, Ecocentrism and Exclusion." *Journal of Integrative Environmental Sciences* 9 (4): 235-254. doi: 10.1080/1943815X.2012.742914.

Laine, Matias. 2010. "The Nature of Nature as a Stakeholder." *Journal of Business Ethics* 96: 73-78. doi: 10.1007/s10551-011-0936-4.

Lake, Robert W. 2017. "A Humanist Perspective on Knowledge for Planning: Implications for Theory, Research, and Practice." *Planning Theory & Practice* 18 (2): 291-319.

Landgate. 2018. “Glossary of Terms”. Accessed August 11, https://www0.landgate.wa.gov.au/for-individuals/property-ownership/survey-services/glossary-of-terms

Lang, Cathy. 2005. “Thank, you, Margaret”. *Subiaco Post, 26* November.

Latour, Bruno. 1987. *Science in Action : How to Follow Scientists and Engineers through Society / Bruno Latour*. Milton Keynes: Milton Keynes : Open University Press.

———. 1996. "On Actor network Theory: A Few Clarifications." *Soziale Welt* 47 (4): 369-381. doi: 10.2307/40878163.

———. 2004a. "How to Talk About the Body? The Normative Dimension of Science Studies." *Body & society* 10 (2-3): 205-229.

———. 2004b. *Politics of Nature*: Harvard University Press.

———. 2005a. *Reassembling the Social-an Introduction to Actor network-Theory*. Oxford, UK: Oxford University Press.

———. 2005b. *Reassembling the Social : An Introduction to Actor network-Theory*. Oxford, GBR: Oxford University Press, UK.

Law, John. 1994. *Organizing Modernity*: Blackwell Oxford.

———. 1999. "After Ant: Complexity, Naming and Topology." *The Sociological Review* 47 (1): 1-14.

———. 2009. "Actor Network Theory and Material Semiotics." *The New Blackwell Companion to Social Theory*: 141-158.

Law, John, and Annemarie Mol. 1995. "Notes on Materiality and Sociality." *The Sociological Review* 43 (2): 274-294.

Lee-Lampshire, Wendy. 1996. "Anthropomorphism without Anthropocentrism: A Wittgensteinian Ecofeminist Alternative to Deep Ecology." *Ethics and the Environment*: 91-102.

Leino, Helena, Ilari Karppi, and Ari Jokinen. 2017. "It's All About the Birds! Non-Human Actors' Situational Power in Creating Conditions for Human Engagement." *Planning Theory* 16 (2): 133-149. doi: doi:10.1177/1473095215617985.

Leman-Stefanovic, Ingrid. 2012. "In Search of the Natural City." In *The Natural City: Re-Envisioning the Built Environment*, eds Ingrid Leman-Stefanovic and Stephen B Scharper, 11-35. Toronto: University of Toronto Press.

Leopold, Aldo. 1987. *A Sand County Almanac, and Sketches Here and There*. New York: New York : Oxford University Press. Original edition, 1949.

Lichtman, Marilyn. 2013. *Qualitative Research for the Social Sciences*: Sage Publications.

Light, Andrew. 2001. "The Urban Blind Spot in Environmental Ethics." *Environmental politics* 10 (1): 7-35.

Light, Andrew, and Holmes Rolston III. 2003. "Introduction: Ethics and Environmental Ethics." In *Environmental Ethics: An Anthology*, eds Andrew Light and Holmes Rolston III, 1-13. Cornwall, Great Britain: Blackwell Publishing.

Lockie, Stewart. 2004. "Collective Agency, Non-Human Causality and Environmental Social Movements a Case Study of the Australian 'Landcare Movement'." *Journal of Sociology* 40 (1): 41-57.

Lorimer, Jamie. 2007. "Nonhuman Charisma." *Environment and Planning D: Society and Space* 25 (5): 911-932.

Lowe, Les. 2010. "Open to ridicule". *Weekend Courier*, November 5.

Ludlam, Scott. 2013. "Senate Estimates: Point Peron and the 1964 Commonwealth-WA government agreement". https://scott-ludlam.greensmps.org.au/articles/senate-estimates-point-peron-and-1964-commonwealth-wa-government-agreement

MacCallum, Diana. 2009. *Discourse Dynamics in Participatory Planning: Opening the Bureaucracy to Stangers* Farnham, England: Ashgate.

Magnani, Natalia. 2012. "Nonhuman Actors, Hybrid Networks, and Conflicts over Municipal Waste Incinerators." *Organization & Environment* 25 (2): 131-145. doi: 10.1177/1086026612449337.

Mansfield, Becky. 2007. "Privatization: Property and the Remaking of Nature–Society Relations. Introduction to the Special Issue. ." *Antipode* 39 (3): 393-405.

McAfee, Kathleen. 1999. "Selling Nature to Save It? Biodiversity and Green Developmentalism." *Environment and planning D: society and space* 17 (2): 133-154.

McAullay, Frank. 2009. “Plan is exciting”. *Weekend Courier*, October 9.

McCarthy, James, and Scott Prudham. 2004. "Neoliberal Nature and the Nature of Neoliberalism." *Geoforum* 35 (3): 275-283.

McGuirk, P M. 2001. "Situating Communicative Planning Theory: Context, Power, and Knowledge." *Environment and Planning A* 33 (2): 195-217. doi: 10.1068/a3355.

McKnight, Gareth. 2018. “Marina plan gets the axe”. *Sound-Southern Telegraph*, March 6, https://thewest.com.au/news/sound-southern-telegraph/marina-plan-gets-the-axe-ng-b88762532z

McShane, Katie. 2007. "Anthropocentrism Vs. Nonanthropocentrism: Why Should We Care?" *Environmental Values* 16 (2): 169-185. http://www.jstor.org/stable/30302252.

———. 2009. "Environmental Ethics: An Overview." *Philosophy Compass* 4 (3): 407-420.

Merriam, Sharan B, and Elizabeth J Tisdell. 2015. *Qualitative Research: A Guide to Design and Implementation*: John Wiley & Sons.

Metzger, Jonathan. 2013. "Placing the Stakes: The Enactment of Territorial Stakeholders in Planning Processes." *Environment and planning A* 45 (4): 781-796.

———. 2014a. "The Moose Are Protesting: The More-Than-Human Politics of Transport Infrastructure Development." In *Planning against the Political: Democratic Deficits in European Territorial Governance*, eds Jonathan Metzger, Philip Allmendinger and Stijn Oosterlynck, 191-214. New York, New York: Routledge.

———. 2014b. "Spatial Planning and/as Caring for More-Than-Human Place." *Environment and Planning A* 46 (5): 1001-1011. doi: 10.1068/a140086c.

———. 2015. "The City Is Not a Menschenpark: Conceptualising the Urban Commons across the Human/Nonhuman Divide." In *Urban Commons: Rethinking the City*, eds Christian Borch and Martin Kornberger, 22-46. Abingdon: Routledge.

———. 2016. "Cultivating Torment: The Cosmopolitics of More-Than-Human Urban Planning." *City* 20 (4): 581-601. doi: 10.1080/13604813.2016.1193997.

Middle, Garry. 2008. *Report to the Minister for the Environment. Appeals Against EPA Report and Recommendations: Lot 4 Underwood Avenue, Shenton*

Park 2007 Development and Conservation Proposal (Bulletin 1272). Perth, Western Australia: Office of the Appeals Convenor.

Millington, P. 2004. *Appeals Committee Report. Superlot Subdivision Lots 4 and 105 Underwood Avenue, Shenton Park. EPA Bulletin 1099, May 2003. Appeals Against EPA Bulletin 1099.* Perth, Western Australia: Appeals Committee.

Miller, Jody, and Barry Glassner. 2016. "The 'inside' and the 'Outside': Finding Realities in Interviews." In *Qualitative Research*, ed. David Silverman, 51-63. London, UK: SAGE Publications.

Milton, Kay. 2002. *Loving Nature: Towards an Ecology of Emotion*: Psychology Press.

Ministry for Planning. 2000. “Bush Forever”. Perth, Western Australia: Government of Western Australia. https://www.planning.wa.gov.au/publications/5911.aspx

Monks, Wayne. 2007b. “Cockatoos are losing their habitat”. *Subiaco Post,* 14 April.

Monks, Wayne. 2007a. “Happy now?” *Subiaco Post,* December 1.

Monks, Wayne. 2008. “Bushland swap deal is flawed”. *Subiaco Post,* July 28.

Morton, Richard. 2006. “Resort to another option”. *Weekend Courier*, January 4.

Moser, Ingunn, and John Law. 2003. "Making Voices”: New Media Technologies, Disabilities, and Articulation." *Digital media revisited: Theoretical and conceptual innovation in digital domains*: 491-520.

Muir, Jenny. 2008. "'Are You Taking Notes on Us?’ Reflections on Case Study Research in Urban Environments." In *Qualitative Urban Analysis: An International Perspective*, eds Paul J. Maginn, Susan M. Thompson and Matthew Tonts, 105-132.

Mumme, James. 2006. “Put words into action”. *Weekend Courier,* June 16.

Murdoch, Jonathan. 1997. "Inhuman/Nonhuman/Human: Actor network Theory and the Prospects for a Nondualistic and Symmetrical Perspective on Nature and Society." *Environment and Planning D* 15: 731-756.

Myerson, George, and Yvonne Rydin. 1996. *The Language of Environment : A New Rhetoric* London: UCL Press.

Naess, Arne. 1973. "The Shallow and the Deep, Long-Range Ecology Movement. A Summary." *Inquiry* 16 (1-4): 95-100. doi: 10.1080/00201747308601682.

———. 1986. "The Deep Ecological Movement: Some Philosophical Aspects." *Philosophical Inquiry* 8 (1/2): 10-31.

———. 2005. "Ecosophy T: Deep Versus Shallow Ecology." In *Environmental Ethics: Readings in Theory and Application*, ed. Louis P. Pojman, 192-200.

Naia. 2013. “From the Web…”. *Weekend Courier*, April 12.

Neimanis, Astrida. 2015. "No Representation without Colonisation? (or, Nature Represents Itself)." *Somatechnics* 5 (2). https://doi.org/10.3366/soma.2015.0158.

Newby, Howard, Graham King, George McDonic, Timothy O'Riordan, and Christopher Wood. 1990. "Ecology, Amenity and Society: Social Science and Environmental Change." *The Town Planning Review* 61 (1): 3-20. doi: 10.2307/27798185.

Nimmo, Richie. 2011. "Actor network Theory and Methodology: Social Research in a More-Than-Human World." *Methodological Innovations Online* 6 (3): 108-119.

Norton, Bryan. 1984. "Environmental Ethics and Weak Anthropocentrism." *Environmental Ethics* 6 (2).

———. 2008. "Convergence, Noninstrumental Value and the Semantics of 'Love': Comment on Mcshane." *Environmental Values* 17 (1): 5-14. http://www.jstor.org/stable/30302620.

Nugent, Michelle. 2005. “Marina misgivings”. *Weekend Courier,* August 12.

Nugent, Michelle. 2011. “Seagrass warning”. *Weekend Courier,* June 3.

Nugent, Michelle. 2011a. “Seagrass planting ‘encouraging’ so far”. *Weekend Courier,* June 10.

Nugent, Michelle. 2012. “Marina making waves”. *Weekend Courier,* February 17.

Nugent, Michelle. 2012a. “Fears raised over penguin colonies”. *Weekend Courier,* February 24.

Nugent, Michelle. 2013a. “Marina project a ‘crackpot idea’”. *Weekend Courier*, April 12.

Nugent, Michelle. 2013b. “Marina protesters won’t roll over”. *Weekend Courier,* May 10.

Office of the Appeals Convenor. 2004. “Appeals Committee Report. Superlot Subdivision Lots 4 and 105 Underwood Avenue, Shenton Park. EPA Bulletin 1099, May 2003. Appeals Against EPA Bulletin 1099”. http://portal.appealsconvenor.wa.gov.au/pls/portal/docs/PAGE/OAC/ADMIN_CONTENT/DECISION_SUMMARIES/2004/UNDERWOOD_AVE.PDF

Office of the Appeals Convenor. 2008. “Report to the Minister for Environment. Appeals Against EPA Report and Recommendations Lot 4 Underwood Avenue, Shenton Park 2007 Development and Conservation Proposal (Bulletin 1272)”. http://search.appealsconvenor.wa.gov.au/appeals/documents/110-145-07_AC_Report_Erratum_28Oct09.pdf

Ockwell, Frank. 2012. “So much is lost”. *Weekend Courier*, March 16.

Office of the Appeals Convenor. 2010. “Ministerial Statement No. 835: Statement That a Development Proposal May Be Implemented: Development and Conservation Proposal. Lot 4 Underwood Avenue, Shenton Park”. http://epa.wa.gov.au/EPADocLib/000835.pdf

Office of the Appeals Convenor. 2014. “Report to the Minister for Environment. Appeals in Objection to Contents of and Recommendations in Report of the Environmental Protection Authority. Mangles Bay Marina – Based Tourism Precinct”. http://search.appealsconvenor.wa.gov.au/appeals/documents/002-020-13_AC_Report%20January%20141.pdf

Office of the Appeals Convenor. 2014a. “Minister’s Appeal Determination. Appeals Against Report and Recommendations – Mangles Bay Marina – Based Tourist Precinct, City of Rockingham”. http://portal.appealsconvenor.wa.gov.au/pls/portal/docs/PAGE/OAC/ADMIN_CONTENT/DECISION_SUMMARIES/2014/MANGLES_MINISTER'S%20APPEALS%20DECISION_13FEB14.PDF

Office of the Environmental Protection Authority. 2015. “S38 Referrals, S16 and/or S46 Advice”. http://edit.epa.wa.gov.au/EPADocLib/CD%20June%2022%202015.pdf

O'Neill, John. 2001. "Representing People, Representing Nature, Representing the World." *Environment and Planning C* 19 (4): 483-500.

———. 2006. "Who Speaks for Nature?" *How nature speaks: The dynamics of the human ecological condition*: 261-278.

Ogden, Laura A, Billy Hall, and Kimiko Tanita. 2013. "Animals, Plants, People, and Things: A Review of Multispecies Ethnography." *Environment and Society: Advances in Research* 4 (1): 5-24.

Owen, Margaret. 2002. “Compensate UWA and save bushland”. *Subiaco Post,* January 26.

Owen, Margaret. 2002a. “Moments of drama in the bush”. *Subiaco Post*, April 27.

Owen, Margaret. 2003a. “Bully boys of the bush”. *Subiaco Post,* August 16.

Owen, Margaret. 2003b. “Underwood bush full of colour”. *Subiaco Post,* September 6.

Owen, Margaret. 2003c. “Buddie, you’re beautiful”. *Subiaco Post,* October 25.

Owen, Margaret. 2004a. “More than stings in their tails”. *Subiaco Post,* February 7.

Owen, Margaret. 2004b. “Seeing frog a privilege”. *Subiaco Post,* June 19.

Owen, Margaret. 2005a. “Red fingers, brown legs”. *Subiaco Post,* July 9.

Owen, Margaret. 2005b. “Nymphs saved by their bottoms”. *Subiaco Post,* August 27.

Owen, Margaret. 2005c. “Huntsmen in fight to the death”. *Subiaco Post,* October 1.

Owen, Margaret. 2005d. “Mystery insect a rare find”. *Subiaco Post,* November 19.

Owen, Margaret. 2006. “Turtle frogs have rights, too”. *Subiaco Post*, July 29.

Owen, Margaret. 2007a. “Cones have an ancient history”. *Subiaco Post,* August 11.

Owen, Margaret. 2007b. “Painted ladies all aflutter”. *Subiaco Post,* November 10.

Owen, Margaret. 2007c. “This bug’s a fast mover!”. *Subiaco Post,* September 29.

Owen, Margaret. 2007d. “What will be left for lefties?” *Subiaco Post,* July 14.

Owen, Margaret. 2007e. “Wasps really fancy this spider”. *Subiaco Post*, September 8.

Owen, Margaret. 2007f. “A precious place for bee-eaters”. *Subiaco Post*, January 13.

Owen, Margaret. 2008. “Baby spiders brave the big bad world out there”. *Subiaco Post*, May 3.

Owen, Margaret. 2009. “Housing is already there in the bush”. *Subiaco Post,* January 3.

Owen, Margaret. 2010a. “If we lose the trees, we’ll lose the cockies forever”. *Subiaco Post,* June 5.

Owen, Margaret. 2010b. “Bushland is sparrowhawks’ home”. *Subiaco Post*, September 18.

Owen, Margaret. 2011a. “Cockatoos struggling to survive”. *Subiaco Post,* March 26.

Owen, Margaret. 2011b. “They’re into sharing and caring”. Subicao Post, February 26.

Owen, Margaret. 2011c. “Hopper does the white thing”. *Subiaco Post*, January 8.

Owen, Margaret. 2012. “We are watching three cockatoo species die out”. *Subiaco Post,* March 17.

Owen, Margaret. 2014. “Slimy stuff is cause for excitement”. *Subiaco Post*, August 16.

Owen, Margaret. 2014a. “Cockies dance beak to beak”. *Subiaco Post*, May 17.

Owen, Margaret. 2015. “Under attack in the bush”. *Subiaco Post*, December 5.

Owen, Margaret. 2016. “Goshawks’ new family”. *Subiaco Post*, January 23.

Owen, Margaret. 2016a. “Swap land to protect Underwood bush from development”. *Subiaco Post*, June 25.

Paling, Eric L. , Mark Fonseca, Marieke M. van Katwijk, and Mike van Keulen. 2009. "Seagrass Restoration." In *Coastal Wetlands: An Integrated Ecosystem*

Approach, eds Gerardo M.E. Perillo, Eric Wolanski, Donald R. Cahoon and Mark M. Brinson. Elsevier.

Palmer, Clare. 2003a. "Colonization, Urbanization, and Animals." *Philosophy & Geography* 6 (1): 47-58.

———. 2003b. "An Overview of Environmental Ethics." In *Environmental Ethics: An Anthology*, ed. Andrew Light and Holmes Rolston III, 15-37. Cornwall, Great Britain: Blackwell Publishing.

Palmer, Rick. 2005. “Informed opinions only, please”. *Weekend Courier*, August 19.

Parikka, Jussi. 2010. *Insect Media: An Archaeology of Animals and Technology*. Vol. 11: U of Minnesota Press.

Parker, Gareth. 2006. “Marina a risk to the Sound: EPA”. *The West Australian,* November 2.

Parry, D.R. 2009. *Reasons for Decision of the Tribunal: [2009] WASAT 121*. Perth, Western Australia: State Administrative Tribunal.

Payne, G. 1999. “Bush Enhances Our Well-being”. *Subiaco Post,* December 18.

Pearson, Chris. 2015. "Beyond ‘Resistance’: Rethinking Nonhuman Agency for a ‘More-Than-Human’ World." *European Review of History: Revue européenne d'histoire* 22 (5): 709-725. doi: 10.1080/13507486.2015.1070122.

Peters, Bernice. 2010. “We must keep the bushland”. *Subiaco Post*, August 14.

Peters, Bernice. 2010. “We must keep the bushland”. *Subiaco Post*, August 14.

Phillips, Nelson , and Cynthia Hardy. 2002. "Discourse Analysis." Thousand Oaks, California: SAGE Publications, Inc.

Philo, Chris. 1995. "Animals, Geography, and the City: Notes on Inclusions and Exclusions." *Environment and Planning D: Society and Space* 13 (6): 655-681.

Pickering, Andrew. 1993. "The Mangle of Practice: Agency and Emergence in the Sociology of Science." *American Journal of Sociology* 99 (3): 559-589.

Pløger, John. 2001. "Public Participation and the Art of Governance." *Environment and Planning B: Planning and Design* 28 (2): 219-241.

Plumwood, Val. 2002. *Feminism and the Mastery of Nature*: Routledge.

———. 2003. "Decolonising Relationships with Nature." In *Decolonising Nature: Strategies for Conservation in a Post-Colonial Era*, eds William Mark Adams and Martin Mulligan, 51-78. London: Earthscan.

Portugali, Juval, and Nurit Alfasi. 2008. "An Approach to Planning Discourse Analysis." *Urban Studies* 45 (2): 251-272. doi: 10.1177/0042098007085962.

Potter, Jonathan. 1996. "Discourse Analysis and Constructionist Approaches: Theoretical Background": British Psychological Society.

Pritchard, Doug. 2012. “Winners and losers”. *Weekend Courier,* February 24.

Rapley, Tim. 2007. *Doing Conversation, Discourse and Document Analysis*. Edited by Uwe Flick. London: Sage Publications.

Richardson, Tim. 1996. "Foucauldian Discourse: Power and Truth in Urban and Regional Policy Making." *European Planning Studies* 4 (3): 279-292. doi: 10.1080/09654319608720346.

Robson, Alan. 2002. “UWA ‘gives back’ money in kind”. *Subiaco Post,* March 23.

Robson, Alan. 2010. “Post spin on Underwood”. *Subiaco Post,* June 5.

Robson, Alan (Vice Chancellor UWA) to Sheryl Froese (City of Nedlands Mayor), letter, 30 March 2010 in “Memorandum to Mayor and Councillors”, City of Nedlands, File Ref: UN1/L4-07, M10/12347, 18 June 2010.

Rockingham Development Office. 2006. “Rockingham Development Office News Update”. *Weekend Courier,* October 6.

Rolston III, Holmes. 1985. "Is There an Ecological Ethic?" In *Ethics in Planning*, ed. Martin Wachs, 299-317. New Brunswick, New Jersey, United States: Centre for Urban Policy Research.

Routley, Richard. 1973. "Is There a Need for a New, an Environmental, Ethic?" *Proceedings of the XV World Congress of Philosophy*: 205-210.

Ruming, Kristian. 2008. "Non-Human Agency in Residential Development and Planning: Two Examples from Fringe Sydney."

Ruming, Kristian J, Kathleen Mee, and Pauline M McGuirk. 2016. "Planned Derailment for New Urban Futures? An Actant Network Analysis of the "Great [Light] Rail Debate" in Newcastle, Australia." In *Actor Networks of Planning: Exploring the Influence of Actor Network Theory*, eds Yvonne Rydin and Laura Ellen Tate, 58-76. Abingdon, Oxfordshire: Routledge.

Russell, Jim A. 1989. "The Genesis of Historic Landscape Conservation in Australia." *Landscape and Urban Planning* 17 (4): 305-312. doi: http://dx.doi.org/10.1016/0169-2046(89)90084-4.

Rydin, Yvonne. 2013. "Using Actor–Network Theory to Understand Planning Practice: Exploring Relationships between Actants in Regulating Low-Carbon Commercial Development." *Planning Theory* 12 (1): 23-45. doi: 10.1177/1473095212455494.

———. 2014. "The Challenges of the “Material Turn” for Planning Studies." *Planning Theory & Practice* 15 (4): 590-595.

Rydin, Yvonne, and Laura Ellen Tate, eds. 2016. *Actor Networks of Planning : Exploring the Influence of Actor Network Theory* Edited by Yvonne Rydin and Laura Ellen Tate. London: Routledge.

Sandercock, Leonie. 1990. *Property, Politics, and Urban Planning : A History of Australian City Planning, 1890-1990* 2nd ed.. ed. New Brunswick (U.S.A.): Transaction Publishers.

Sandford, Ros. 2008. “Freehold land under threat”. *Subiaco Post,* November 22.

Sandilands, Catriona. 1999. *The Good-Natured Feminist: Ecofeminism and the Quest for Democracy*: University of Minnesota Press.

Save Underwood Bush’s Facebook page, accessed January 25, 2018, https://www.facebook.com/Save-Underwood-Bush-579034515476836/

Sayes, Edwin. 2014. "Actor–Network Theory and Methodology: Just What Does It Mean to Say That Nonhumans Have Agency?" *Social Studies of Science* 44 (1): 134-149. doi: 10.1177/0306312713511867.

Schmidtz, David. 2011. "Respect for Everything*." *Ethics, Policy & Environment* 14 (2): 127-138. doi: 10.1080/21550085.2011.578359.

Schultz, P Wesley, Lynnette Zelezny, and Nancy J Dalrymple. 2000. "A Multinational Perspective on the Relation between Judeo-Christian Religious Beliefs and Attitudes of Environmental Concern." *Environment and Behavior* 32 (4): 576-591.

Seares, Margaret. 2007. “UWA needs money for activities”. *Subiaco Post,* November 24.

Segal, Leah. 2007a. “UWA plan is reprehensible”. *Subiaco Post,* December 1.

Segal, Leah. 2007b. “Bushland should be heritage listed”. *Subiaco Post*, August 17.

Segal, Leah. 2008. “Bush is vital for relieving stress”. *Subiaco Post*, May 17.

Segal, Leah. 2008a. “Bush a thing of beauty”. *Subiaco Post*, August 9.

Segal, Leah. 2010. “Last hope for Underwood now gone?” *Subiaco Post,* May 8.

Sessions, George. 1988. "Ecocentrism and the Greens: Deep Ecology and the Enviromental Task." *Trumpeter* 5 (2).

———. 2006. "Wildness, Cyborgs, and Our Ecological Future: Reassessing the Deep Ecology Movement." *Trumpeter* 22 (2).

Sharp, Liz, and Tim Richardson. 2001. "Reflections on Foucauldian Discourse Analysis in Planning and Environmental Policy Research." *Journal of Environmental Policy & Planning* 3 (3): 193-209. doi: 10.1002/jepp.88.

Sheets-Johnstone, Maxine. 1996. "Human Versus Nonhuman: Binary Opposition as an Ordering Principle of Western Human Thought." *Between the Species* 12 (1): 13.

Sheppard, James W. 2006. "The Paradox of Urban Environmentalism: Problem and Possibility." *Ethics Place and Environment* 9 (3): 299-315.

Short, Frederick T., Beth Polidoro, Suzanne R. Livingstone, Kent E. Carpenter, Salomão Bandeira, Japar Sidik Bujang, Hilconida P. Calumpong et al. 2011. "Extinction Risk Assessment of the World's Seagrass Species." *Biological Conservation* 144 (7): 1961-1971. doi: http://dx.doi.org/10.1016/j.biocon.2011.04.010.

Silverman, Robert Mark. 2015. "Analysing Qualitative Data." In *The Routledge Handbook of Planning Research Methods*, eds Elisabete A. Silva, Patsy Healey, Neil Harris and Pieter Van den Broeck, 140-156. New York, New York: Taylor and Francis.

Singer, Peter. 1977. *Animal Liberation. Towards an End to Man's Inhumanity to Animals*: Granada Publishing Ltd.

———. 1985. "Prologue: Ethics and the New Animal Liberation Movement." In *In Defence of Animals*, ed. Peter Singer, 1-12. Oxford, UK: Blackwell Publishers.

———. 1989. "All Animals Are Equal." In *Animal Rights and Human Obligations*, eds Tom Regan and Peter Singer, 73-86. Englewood Cliffs, New Jersey, USA: Prentice-Hall

Solli, Jøran. 2010. "Where the Eagles Dare? Enacting Resistance to Wind Farms through Hybrid Collectives." *Environmental Politics* 19 (1): 45-60. doi: 10.1080/09644010903396077.

Soper, Kate. 1995. *What Is Nature? : Culture, Politics and the Non-Human* Oxford: Blackwell.

Spencer, Peter. 2010. "We're happy with UWA's plans". *Subiaco Post,* June 26.

Stanners, Tom. 2006. "Change is the only constant". *Weekend Courier,* November 3.

Starik, Mark. 1995. "Should Trees Have Managerial Standing? Toward Stakeholder Status for Non-Human Nature." *Journal of Business Ethics* 14 (3): 207-217. doi: 10.1007/BF00881435.

Stedman, Cheryl. 2000. "I thought universities were moral leaders…" *Subiaco Post*, January 22.

Steel, John. 2006a. "Call to purchase green power". *Weekend Courier,* November 3.

Steel, John. 2006b. "Complacency is unacceptable". *Weekend Courier*, November 3.

Steffen, Will, Paul J. Crutzen, and John R. McNeill. 2007. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" *Ambio* 36 (8): 614-621. doi: 10.2307/25547826.

Stone, Peter. 2009. “Motto is a joke”. *Weekend Courier*, June 12.

Strategen Environmental Consultants. 2006. “Strategic Environmental Review: Cape Peron Tourist Precinct Project”. http://handsoffpointperon.com/wp-content/uploads/2016/06/Point_Peron_Strategic_Environmental_Review_2006.pdf

Strategen Environmental Consultants. 2006a. “Stakeholder Reference Group Submissions and Responses”. http://www.epa.wa.gov.au/proposals/mangles-bay-marine-based-tourist-precinct

Strategen Environmental Consultants. 2011. “Mangles Bay Marina Based Tourist Precinct Scoping Document”. Accessed October 3, https://manglesbaymarina-com-au.s3-ap-southeast-2.amazonaws.com/pdf/ced10088.01_scoping_document_v15_updated_web.pdf

Strategen Environmental Consultants. 2012. “Mangles Bay Marina Based Tourist Precinct: Public Environmental Review”. https://manglesbaymarina-com-au.s3-ap-southeast-2.amazonaws.com/pdf/ced10088_mangles_bay_per_part_i.pdf

Strategen Environmental Consultants. 2012a. “Appendix 2: Detailed Response to Matters Raised in Submissions on the Mangles Bay PER”. http://www.epa.wa.gov.au/proposals/mangles-bay-marine-based-tourist-precinct

Stubbs, Leonie. 2010. “Bush must be protected”. *Weekend Courier*, September 24.

Subiaco Post. 1999. “UWA plans $50m estate near bush”. October 9.

Subiaco Post. 2000. “UWA land could be big money-spinner”. February 12.

Subiaco Post. 2000. “Swans add their two cents’ worth”. February 26.

Subiaco Post. 2000. “Crosses for wildlife”. August 12.

Subiaco Post. 2002. “Friends tell uni to build”. April 6.

Subiaco Post. 2002. “Bush picnic aims to save bushland”. May 25.

Subiaco Post. 2006. “UWA plans 160 houses for bushland”. December 27.

Sulc, George. 2006. “Marina will enhance area”. *Weekend Courier*, April 14.

Sullivan, Sian. 2009. "Green Capitalism, and the Cultural Poverty of Constructing Nature as Service-Provider." *Radical Anthropology* 3: 18-27.

———. 2013. "Banking Nature? The Spectacular Financialisation of Environmental Conservation." *Antipode* 45 (1): 198-217.

Swyngedouw, Erik. 1996. "The City as a Hybrid: On Nature, Society and Cyborg Urbanization." *Capitalism Nature Socialism* 7 (2): 65-80. doi: 10.1080/10455759609358679.

———. 2006. "Circulations and Metabolisms: (Hybrid) Natures and (Cyborg) Cities." *Science as Culture* 15 (2): 105-121. doi: 10.1080/09505430600707970.

———. 2009. "The Antinomies of the Postpolitical City: In Search of a Democratic Politics of Environmental Production." *International Journal of Urban and Regional Research* 33 (3): 601-620. doi: 10.1111/j.1468-2427.2009.00859.x.

Sykes, Trevor. 2006. “Marina could curb break-ins”. *Weekend Courier*, November 17.

Tait, Malcolm. 2002. "Room for Manoeuvre? An Actor network Study of Central-Local Relations in Development Plan Making." *Planning Theory & Practice* 3 (1): 69-85. doi: 10.1080/14649350220117816.

Tanasescu, Mihnea. 2014. "Rethinking Representation: The Challenge of Non-Humans." *Australian Journal of Political Science* 49 (1): 40-53. doi: 10.1080/10361146.2013.874404.

Taylor, Nik. 2011. *Theorizing Animals : Re-Thinking Humanimal Relations*. Edited by Tania Signal, *Human-Animal Studies, Volume 11*. Leiden: Leiden : BRILL.

Taylor, Paul W. 1986. *Respect for Nature: A Theory of Environmental Ethics*: Princeton University Press.

Taylor, Stephanie. 2013. *What Is Discourse Analysis?* London, UK: Bloomsbury Publishing.

Taylor, Trevor. 2011. “Facts are enough”. *Weekend Courier*, February 4.

Thomson, Melanie S. 2007. "Placing the Wild in the City: "Thinking with" Melbourne's Bats." *Society & Animals* 15 (1): 79-95.

Thompson, Yvonne. 2005. “Marina plan lauded”. *Weekend Courier,* November 4.

Thompson, Yvonne. 2005. “Test for Peron v3”. *Weekend Courier,* November 11.

Thompson, Yvonne. 2006. “Peron plans fragile”. *Weekend Courier,* October 27.

Thompson, Yvonne. 2008. “Marina in holding pattern”. *Weekend Courier,* July 18.

Thorning, Natalie. 2001. “Intra-Departmental Referral: Proposed residential subdivision – Underwood Avenue/Selby Street, Shenton Park”. Accessed August 10, https://library.dpaw.wa.gov.au/static/TEB/TEB-BF-042-01-1.pdf

Tironi, Manuel. 2015. "Modes of Technification: Expertise, Urban Controversies and the Radicalness of Radical Planning." *Planning Theory* 14 (1): 70-89. doi: doi:10.1177/1473095213513579.

Tomlinson, Laura. 2010. “Rare moth comes to light”. *Weekend Courier,* October 8.

Tuckwell, Erin. 2012. "Science in Dispute: Debating the Authority of Knowledge in an Environmental Contestation." *Oceania* 82 (3): 308-322. doi: 10.1002/j.1834-4461.2012.tb00136.x.

Trudgen, Malcolm. 2001. “Significance for flora and vegetation of Lot 4 Underwood Avenue, Shenton Park”.

University of Western Australia. 2010. “Lot 4 Underwood Avenue. Presentation to the City of Nedlands Council”. http://www.web.uwa.edu.au/__data/assets/pdf_file/0011/1059167/10_18208_Presentation_City_of_Nedlands_100316_-_PowerPoint_Presentation.pdf

University of Western Australia. 2016. “Development and conservation proposal: Underwood Avenue”. Accessed 20 July, http://www.cm.uwa.edu.au/projects-and-works/current-projects/underwood

Unknown. 2007. “Bushland a sacred site”. *Subiaco Post*, July 28.

Unknown. 2009. “No time for further procrastination”. *Weekend Courier*, January 2.

Urban Bushland Council (UBC). 2013. “Appeal – EPA Report 1471: Mangles Bay Marina-Based Tourist Precinct”.

Urban Bushland Council (UBC). 2015. “Metropolitan Region Scheme Amendment 1280/41: Mangles Bay Marina. Submission by Urban Bushland Council WA Inc.”

van Dooren, Thom, and Deborah Bird Rose. 2012. "Storied Places in a Multispecies City." *HUMaNIMALIA* 3 (2). http://www.depauw.edu/humanimalia/issue%2006/pdfs/van%20dooren%20rose.pdf.

Van Keulen, Mike. 2012. “Review of Mangles Bay Marina Based Tourism Precinct – Public Environmental Review”. http://handsoffpointperon.com/wp-content/uploads/2016/06/2012-4-23-PER-Submission-Van-Keulen-M.pdf

Verhagen, Frans C. 2008. "Worldwide Views and Metaphors in the Human-Nature Relationship, an Ecolinguistic Exploration through the Ages." *Language and Ecology* 2 (3).

Vining, Joanne, Melinda S Merrick, and Emily A Price. 2008. "The Distinction between Humans and Nature: Human Perceptions of Connectedness to Nature and Elements of the Natural and Unnatural." *Human Ecology Review* 15 (1): 1.

Waitt, Gordon. 2010. "Doing Foucauldian Discourse Analysis - Revealing Social Identities " In *Qualitative Research Methods in Human Geography*, ed. Iain Hay, 217-240. Ontario, Canada: Oxford University Press.

Wallace, Lisa J. 2012. "An Actor network Approach to Canadian Forest Research: The Case of a New Brunswick Policy Debate." *The Canadian Geographer / Le Géographe canadien* 56 (3): 362-380. doi: 10.1111/j.1541-0064.2012.00436.x.

Watson, Richard A. 2005. "A Critique of Anti-Anthropocentric Biocentrism." In *Environmental Ethics: Readings in Theory and Application*, ed. Louis P. Pojman, 205-211. Belmont, CA: Wadsworth.

Webb, David. 2016. "Towards an Extended Symmetry - Using Ant to Reflect on the Theory and Practice Gap." In *Actor Networks of Planning : Exploring the Influence of Actor Network Theory*, eds Yvonne Rydin and Laura Ellen Tate, 232-268. London: Routledge.

Weekend Courier. 2010. “Opponents rally”. April 9.

Weekend Courier. 2010. “Strong marina protest”. April 16.

Weekend Courier. 2011. “Marina protesters march on”. January 28.

Weekend Courier. 2015. “Point made about Peron”. September 11.

Western Australian Fishing Industry Council. 2015. “Mangles Bay Marina Development a Threat to Commercial Fishers”. http://www.wafic.org.au/news/mangles-bay-marina-development-a-threat-to-commercial-fishers/

Western Australian Legislative Council. 2006. “Report 7. Standing Committee on Environment and Public Affairs. A Petition into the Proposed Marina at Point Peron”. http://www.parliament.wa.gov.au/parliament/commit.nsf/(WebInquiries)/D8F3BF5C23AEB56648257831003E96D4?opendocument

Western Australian Planning Commission. 2014. “Statutory Planning Committee. Tuesday 14 October 2014. Item No: 9.2 Subdivision Lot 4 and Lot 105 Underwood Avenue”. http://www.planning.wa.gov.au/PAM/download.asp?filename=c3RhdHV0b3J5IHBsYW5uaW5nIGNvbW1pdHRlZS9hZ2VuZGFzL1tzXWEwNGUxODE0XDIwMTQxMDE0IFN0YXR1dG9yeSBQbGFubmluZyBDb21taXR0ZWUgQWdlbmRhIFJlcG9ydHMgYWxpYXMwMDAwNDEtMDAwMDYwLnBkZg

Western Australian Planning Commission. 2015. “Metropolitan Region Scheme Amendment 1280/41. Mangles Bay Marina, Amendment Report”. https://www.planning.wa.gov.au/publications/7917.aspx

Western Australian Planning Commission. 2018. “Metropolitan Region Scheme Amendment 1280/41. Mangles Bay Marina, Report on Submissions”. https://www.planning.wa.gov.au/publications/7917.aspx

Whatmore, Sarah. 1999. "Hybrid Geographies: Rethinking the ‘Human’ in Human Geography." In *Human Geography Today*, eds Doreen Massey, John Allen and Phillip Sarre, 22-39. Cambridge: Polity Press.

Whatmore, Sarah, and Susan Boucher. 1993. "Bargaining with Nature: The Discourse and Practice Of'environmental Planning Gain'." *Transactions of the Institute of British Geographers*: 166-178.

Whisson, Gary. 2001. “Underwood Avenue Bushland – Summary of Conservation Values and Outcomes”. Department of Environment Protection. Accessed 10 August, https://library.dpaw.wa.gov.au/static/TEB/TEB-BF-042-01-1.pdf

Whitworth, Andrew. 2000. "Communication with the Environment? Non-Human Nature in the Theories of Jürgen Habermas." *Politics* 20 (3): 145-151. doi: 10.1111/1467-9256.00124.

Wilkie, Dan. 2009. “New UWA Shenton Park hurdle”. *Business News,* July 22.

Wilkie, Dan. 2010. “Mangles Bay to become ‘new Mandurah’”. *Business News,* August 26. https://www.businessnews.com.au/article/Mangles-Bay-to-become-new-Mandurah

Wilkie, Dan. 2012. “Plans advance for new boating facilities”. *Business News,* February 14. https://www.businessnews.com.au/article/Plans-advance-for-new-boating-facilities?destination=node/321320

https://www.businessnews.com.au/article/NewUWAShentonParkhurdle

Wilkinson, Cathy. 2012. "Social-Ecological Resilience: Insights and Issues for Planning Theory." *Planning Theory* 11 (2): 148-169. http://plt.sagepub.com/content/11/2/148.abstract.

Willig, Carla. 2014. "Discourses and Discourse Analysis." In *The Sage Handbook of Qualitative Data Analysis.*, ed. Uwe Flick, 341-354. London: SAGE Publications Ltd.

Wolch, Jennifer. 1996. "Zoöpolis." *Capitalism Nature Socialism* 7 (2): 21-47. doi: 10.1080/10455759609358677.

———. 2002. "Anima Urbis." *Progress in Human Geography* 26 (6): 721-742. doi: 10.1191/0309132502ph400oa.

Woodcock, Adam. 2012. “Cause for concern”. *Weekend Courier,* March 2.

Woods, Michael. 1998. "Researching Rural Conflicts: Hunting, Local Politics and Actor networks." *Journal of Rural Studies* 14 (3): 321-340. doi: http://dx.doi.org/10.1016/S0743-0167(97)00038-7.

Wynne, Brian. 1992. "Misunderstood Misunderstanding: Social Identities and Public Uptake of Science." *Public Understanding of Science* 1 (3): 281-304. doi: 10.1088/0963-6625/1/3/004.

Yin, Robert K. 2014. *Case Study Research: Design and Methods*. Fifth edition.. ed. Thousand Oaks, California: Sage.

Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged.

Appendix 1: Curtin University Ethics Approval

MEMORANDUM

Curtin University

To:	Dr Diana MacCallum School of Built Environment
CC:	Mr Ryan Quinn
From:	Dr Catherine Gangell, Manager Research Integrity
Subject	Ethics approval Approval number: RDHU-246.15
Date:	03-Dec-15

Office of Research and Development
Human Research Ethics Office

TELEPHONE 9266 2784
FACSIMILE 9266 3793
EMAIL hrec@curtin.edu.au

Thank you for your application submitted to the Human Research Ethics Office for the project: 5517

Deep Ecology, Non-Humans & Activism: Using Actor-Networks to Challenge Anthropocentric Land Use Planning

Your application has been approved through the low risk ethics approvals process at Curtin University.

Please note the following conditions of approval:

1. Approval is granted for a period of four years from **03-Dec-15** to **03-Dec-19**
2. Research must be conducted as stated in the approved protocol.
3. Any amendments to the approved protocol must be approved by the Ethics Office.
4. An annual progress report must be submitted to the Ethics Office annually, on the anniversary of approval.
5. All adverse events must be reported to the Ethics Office.
6. A completion report must be submitted to the Ethics Office on completion of the project.
7. Data must be stored in accordance with WAUSDA and Curtin University policy.
8. The Ethics Office may conduct a randomly identified audit of a proportion of research projects approved by the HREC.

Should you have any queries about the consideration of your project please contact the Ethics Support Officer for your faculty, or the Ethics Office at hrec@curtin.edu.au or on 9266 2784. All human research ethics forms and guidelines are available on the ethics website.

Yours sincerely,

Dr Catherine Gangell
Manager, Research Integrity

Appendix 2: Participant Information Sheet

PARTICIPANT INFORMATION STATEMENT

HREC Project Number:	RDHU-246.15
Project Title:	Deep Ecology, Non-Humans & Activism: Using Actor networks to Challenge Anthropocentric Land Use Planning.
Principal Investigator:	Dr Diana MacCallum
Researcher:	Ryan Quinn
Version Number:	1.0
Version Date:	13 November 2015

Curtin University Human Research Ethics Committee (HREC) has approved this study (RDHU-246.15). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

What is the Project About?

The project seeks to investigate how non-humans become stakeholders in planning and development processes, the practices through which their interests are represented, and the ethical considerations surrounding these practices.

Who is doing the Research?

The research is being undertaken by Mr Ryan Quinn, PhD candidate, who may be contacted on 0435 472 598 or via email ryan.quinn@postgrad.curtin.edu.au. The researcher is currently supported by a Commonwealth funded scholarship.

Why am I being asked to take part and what will I have to do?

You are being asked to participate as it is believed that you have experience that may be valuable to the research project. As a participant you will be asked a range of interview questions at a mutually convenient location. Questions will focus on your knowledge of, or participation within, a group of environmental activists, your views on the meanings or definition of 'nature', your views on whether we should, and how we might, inclusively plan for non-humans and our level of responsibility to do so. The interview, with your permission, will be recorded and later transcribed into a full written copy. There will be no cost to you for taking part in this research and you will not be paid for taking part. The interview will be one-on-one, and is expected to run for 30-45 minutes.

Are there any benefits to being in the research project?

There may be no direct benefit to you from participating in this research. However, it is hoped the research will generate knowledge of use to planners and stakeholders engaged in developments where non-human nature are actual or potential stakeholders.

Are there any risks, side-effects, discomforts or inconveniences from being in the research project?

As a participant you are not expected to experience any risk, or inconvenience from taking part in this research project. Should you feel any discomfort please discuss this with the researcher, Mr Ryan Quinn. You may opt to withdraw from the research at any point.

Who will have access to my information?

The data obtained as a result of your participation will remain confidential and will be stored on the secured 'Research Drive' on the Curtin network. Physical copies of data (including video or audio tapes) will be stored in locked storage. After the research has ended the information collected in this study will be kept under secure conditions at Curtin University for 7 years and then it will be destroyed. The results of this research may be presented at conferences or published in professional journals. You will not be identified in any results that are published or presented.

Will you tell me the results of the research?

Once complete the research thesis will be available via a number of sources including the Curtin University Library Catalogue

Do I have to take part in the research project?

Taking part in this research is voluntary. You are not required to take part in this research and may opt out at any point. If you choose not to take part or to opt out, it will not affect your relationship with the University, staff or colleagues. If you choose to leave the study we will use any information collected unless you advise otherwise.

What happens next and who can I contact about the research?

If you decide to take part in this research we will ask you to sign the consent form. By signing it is telling us that you understand what you have read and what has been discussed. Signing the consent indicates that you agree to be in the research project and have your knowledge on the topic used as described. Please take your time and ask any questions you have before you decide what to do. You will be given a copy of this information and the consent form to keep.

The ethical aspects of this research project have been approved by the Curtin University HREC. This project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007). If you have any concerns and/or complaints about the project, the way it is being conducted or your rights as a research participant, and would like to speak to someone independent of the project, please contact: The Curtin University Ethics Committee by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.

CONTACT DETAILS

Mr Ryan Quinn	Dr Diana MacCallum	Dr Shaphan Cox
Researcher	Primary Research Supervisor	Secondary Research Supervisor
Phone: 0435 472 598	Phone: (08) 9266 7313	Phone: (08) 9266 2477
Ryan.quinn@postgrad.curtin.edu.au	Diana.maccallum@curtin.edu.au	S.cox@curtin.edu.au

Appendix 3: Participant Consent Form

CONSENT FORM

HREC Project Number:	RDHU-246.15
Project Title:	Deep Ecology, Non-Humans & Activism: Using Actor networks to Challenge Anthropocentric Land Use Planning.
Principal Investigator:	Dr Diana MacCallum
Student researcher:	Ryan Quinn
Version Number:	1.0
Version Date:	13 November 2015

- I have read the information statement version listed above and I understand its contents.
- I believe I understand the purpose, extent and possible risks of my involvement in this project.
- I voluntarily consent to take part in this research project.
- I have had an opportunity to ask questions and I am satisfied with the answers I have received.
- I understand that this project has been approved by Curtin University Human Research Ethics Committee and will be carried out in line with the National Statement on Ethical Conduct in Human Research (2007) – updated March 2014.
- I understand I will receive a copy of this Information Statement and Consent Form.

Participant Name	
Participant Signature	
Date	

Declaration by researcher: I have supplied an Information Letter and Consent Form to the participant who has signed above, and believe that they understand the purpose, extent and possible risks of their involvement in this project.

Researcher Name	
Researcher Signature	
Date	

Appendix 4: Interview Questions

Interview Schedule

What is the project about?

The project seeks to investigate how non-humans become stakeholders in planning and development processes, the practices through which their interests are represented, and the ethical considerations surrounding these practices. The research will be focusing on two case studies: the proposed residential development at Underwood Avenue bushland, Shenton Park; and the proposed marina at Point Peron.

Procedural Items

- The interview is seeking your thoughts on selected topics including your involvement in the case study, your views on activism and your views on nature. The interview is semi-structured, and thus is more conversational in approach.
- The interview should take approximately 30 minutes, but generally no longer than 45 minutes.
- The interview, with your permission, will be recorded for transcription purposes. An audio recording only is required.
- All participants will remain anonymous throughout the research process, and within any written findings or publications, unless specified or requested otherwise.
- The interview component of the research project has received ethics approval from Curtin University. However, should at any time you feel uncomfortable and wish to cease the interview, you may do so, please let me know. You may also request that the interview not be included within the research project.
- You have been provided with an information sheet regarding the research project. Would you like a paper copy? Do you have any questions regarding the project?
- If you have no further questions, and are happy to proceed, it would be appreciated if you could please sign the following consent form.

Interview Framework – Activists

Aim:

- To understand the activists motivations and intentions for getting involved in their particular campaign.
- To gain an understanding of their ethical position, and whether this has driven their actions.
- To understand how they interpret or define 'nature'.
- To understand their interpretation of their role as an activist in the planning process, and whether they are being successful.

Initial Interview – indicative questions:

Q: Can you describe your involvement with XXX organisation? How long have you been involved, what is your role etc.?

Q: Can you explain the circumstances behind how you became involved in XXX organisation, and what you were hoping to achieve?

Q: Can you explain, in your opinion, how effective your activism on this matter has been?

> Probe: Do you feel the decision-makers are listening to you, or paying attention to what XXX organisation has to say about the proposed development?

Q: In what ways do you feel the proposed development could better respond to your concerns regarding its impacts on the environment?

Q: Do you consider yourself an activist, and can you describe how you believe others (stakeholders, decision-makers, general public etc.) may see you?

Q: What does that term, activist, mean to you?

Q: What do you think the term activist means to the proponents and decision-makers? Does it affect your relationship or communication with them? Tell me about that.

Q: What words come to mind when you think of a natural environment?

> Probe: What comes to mind when you hear the term nature? What does it include?

Q: What words come to mind when you think of an un-natural environment?

Q: How do you see the relationship between humans and nature?

> Probe: Do you consider humans as part of or separate from nature?
>
> Can you describe your own relationship with nature, and do you think this is typical? Why/why not?
>
> How would you describe your connection with nature? How do you experience nature?

Q: Do you think non-human nature have rights?

> Probe: Do you think they have a right to be planned for? Explain.

Appendix 5: FOI Request to the Department of Environment

Australian Government
Department of the Environment

FOI APPLICATION FORM
Freedom of Information Act 1982 – Request for access to documents

Surname: QUINN

Given Name: RYAN

Address: 21 BRANDON STREET, SOUTH PERTH, WA Post Code: 6151

Postal Address (if different): AS ABOVE Post Code:

Email: ryan.quinn@postgrad.curtin.edu.au

Telephone Number: 0435 472 598

Fax Number:

DOCUMENT DETAILS: Please provide a description of the documents you are seeking access to in the space provided below. If you need more space please attach more page(s) as appropriate. There are some helpful tips on describing the documents at the bottom of this form.

I am seeking access to documents relating to EPBC 2007/3386 (regarding Lot 4 Underwood Avenue, Shenton Park) in particular the draft recommendation report, and any document that summarises and responds to the submissions received from the public (should this be a different document than the draft recommendation report). Also the technical reports submitted by the proponents environmental consultant ATA Environmental to support their application.

Do you consent to receiving communications regarding your FOI request by email? Yes/No

Signed: Date: 8/8/16

Tips for Requesting Documents

These tips may assist you in narrowing the scope of your request and as a result make it easier for the Department to identify the documents, speed up the processing of your request and reduce any associated costs with processing your request.

Timeframes: Are you seeking documents within a specific timeframe? For instance, you could state: "I am seeking access to documents dated between 1 May 2014 through to 1 August 2014".

Specific References: If you have a reference number for a particular matter, please provide this information. For instance, you could state: "I am seeking access to documents relating to EPBC referral EPBC2009/555".

Types of documents: In order to narrow the scope of your request, you may wish to think about whether you are interested in all documents relating to a particular matter or whether, for instance, you are only interested in correspondence, or briefs, or reports.

Source of documents: You may wish to think about specifically referring to a particular source of documents. For instance, only documents that originated within the Department, or correspondence between two particular parties.

Appendix 6: FOI Request to the Department of Planning

Government of Western Australia
Department of Planning

FREEDOM OF INFORMATION

Application for access to documents (under the *Freedom of Information Act 1992*)

Details of applicant:

Title: MR **Surname:** QUINN **Given names:** RYAN

Australian Postal Address:
21 BRANDON STREET, SOUTH PERTH **State:** WA **Postcode:**6151

Telephone numbers: **Mobile:** 0435 472 598 **Home:** **Work:**

If application is on behalf of an organisation:

Name of Organisation

Details of request:

Personal ☐ **Non-Personal** ☑

I wish to apply for access to the following documents:

1. Statutory Planning Committee (or equivalent) minutes from August 2002 (unsure of exact date) that contain the agenda item related to the refusal of subdivision application ref: 112907 at Lot 4 Underwood Avenue, Shenton Park.
2. Statutory Planning Committee (or equivalent) minutes from September 2010 (unsure of exact date) that contain the agenda item related to the approval of subdivision application ref: 112907 at Lot 4 Underwood Avenue, Shenton Park.

(Please describe documents specifically and provide a date range for the search. Attach an additional sheet if required.)

Form in which access is requested: ***(Please tick appropriate box)***

I require a copy of the document(s) ☑ ***I require access in another form*** ☐ ***Please specify:***

Fees and charges:

The standard Freedom of Information Application fee is $30.00

I wish to pay by:

Credit Card ☑ **Name on Card** RYAN QUINN

Signature of Cardholder

Cash ☐

Cheque ☐

(If making a credit card payment by phone, please call the Department of Planning reception on (08) 6551 9000. Please advise reception that you are making a credit card payment for a Freedom of Information application. You will be put through to a Receipting Officer who will ask for your credit card details.)

I understand that before I obtain access to documents I may be required to pay processing charges in respect of this application and that I will be supplied with a statement of charges, if appropriate.
(A reduction in processing fees may apply for the holder of a pension or concession card.)

I am requesting a reduction in processing charges? **Yes** ☐ **No** ☑

Applicant's signature: **Date:** 26/7/16

Lodgement of applications:

By post –	In person –	Via email -
Department of Planning Locked Bag 2506	Department of Planning Level 2, Gordon Stephenson House	foi@planning.wa.gov.au

Appendix 7: Copyright Authorisation from Margaret Owen

5 June 2018

Marg Owen
86 Daglish Street
WEMBLEY WA 6014

Dear Marg,

It is my understanding that you are the copyright holder for the following material:

- Orchids in Underwood Avenue bushland (photo)
- Turtle frog (photo)
- Rainbow bee-eaters (photo)
- Australian Painted Ladies butterfly (photo)
- Kleptoparasitic insect (photo)
- Macrozamia (photo)
- Male Carnaby's Cockatoo (photo)
- 'Save Underwood Bush' sign at the City to Surf run (photo)
- Swooping Goshawk (photo)

I would like to reproduce an extract of this work in a doctoral thesis which I am currently undertaking at Curtin University in Perth, Western Australia. The subject of my research is **Deep Ecology, Non-Humans & Activism: Using Actor-Networks to Challenge Anthropocentric Land Use Planning.** I am carrying out this research in my own right and have no association with any commercial organisation or sponsor.

The specific material that I would like to use for the purposes of the thesis are the photographs identified in the Appendix, taken within the Underwood Avenue bushland site.

Once completed, the thesis will be made available in online form via Curtin University's Institutional Repository espace (http://espace.curtin.edu.au). The material will be provided strictly for educational purposes and on a non-commercial basis.

I would be most grateful for your consent to the copying and communication of the work as proposed. If you are willing to grant this consent, please complete and sign the attached approval slip and return it to me at the address shown. Full acknowledgement of the ownership of the copyright and the source of the material will be provided with the material.

If you are not the copyright owner of the material in question, I would be grateful for any information you can provide as to who is likely to hold the copyright.

I look forward to hearing from you and thank you in advance for your consideration of my request.

Yours sincerely

Ryan Quinn

PERMISSION TO USE COPYRIGHT MATERIAL AS SPECIFIED BELOW AND SHOWN IN APPENDIX:

- Orchids in Underwood Avenue bushland (photo)
- Turtle frog (photo)
- Rainbow bee-eaters (photo)
- Australian Painted Ladies butterfly (photo)
- Klepto-parasitic insect (photo)
- Macrozamia (photo)
- Male Carnaby's Cockatoo (photo)
- 'Save Underwood Bush' sign at the City to Surf run (photo)
- Swooping Goshawk (photo)

I hereby give permission for **Ryan Quinn** to include the abovementioned material(s) in his/her higher degree thesis for Curtin University, and to communicate this material via the espace institutional repository. This permission is granted on a non-exclusive basis and for an indefinite period.

I confirm that I am the copyright owner of the specified material.

Signed: M Owen

Name: MARGARET OWEN

Position: CHAIR FRIENDS OF UNDERWOOD AVENUE BUSHLAND

Date: 5 MAY 2018

Please return signed form to **Ryan Quinn** – ryan.quinn@postgrad.curtin.edu.au

Appendix 8: Copyright Authorisation from the *Weekend Courier*

13 August 2018

Managing Editor
The Weekend Courier
34 Stirling Street
Perth
Western Australia 6000

Dear Sir/Madam,

It is my understanding that the *Weekend Courier* are the copyright holder for the following images as printed in the *Weekend Courier*:

- HOPP protest against the proposed marina (*Weekend Courier*, April 16, 2010)
- Jecks speaks to Premier Barnett at a HOPP protest (*Weekend Courier*, September 11, 2015, 21).

I would like to reproduce an extract of this work in a doctoral thesis which I am currently undertaking at Curtin University in Perth, Western Australia. The subject of my research is **Deep Ecology, Non-Humans & Activism: Using Actor-Networks to Challenge Anthropocentric Land Use Planning.** I am carrying out this research in my own right and have no association with any commercial organisation or sponsor.

The specific material that I would like to use for the purposes of the thesis are the photographs identified in the Appendix, taken with regards to the proposed Mangles Bay Marina.

Once completed, the thesis will be made available in online form via Curtin University's Institutional Repository espace (http://espace.curtin.edu.au). The material will be provided strictly for educational purposes and on a non-commercial basis.

I would be most grateful for your consent to the copying and communication of the work as proposed. If you are willing to grant this consent, please complete and sign the attached approval slip and return it to me at the address shown. Full acknowledgement of the ownership of the copyright and the source of the material will be provided with the material.

If you are not the copyright owner of the material in question, I would be grateful for any information you can provide as to who is likely to hold the copyright.

I look forward to hearing from you and thank you in advance for your consideration of my request.

Yours sincerely

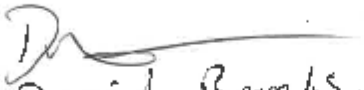
Ryan Quinn

PERMISSION TO USE COPYRIGHT MATERIAL AS SPECIFIED BELOW AND SHOWN IN APPENDIX:

- HOPP protest against the proposed marina (*Weekend Courier*, April 16, 2010)
- Jecks speaks to Premier Barnett at a HOPP protest (*Weekend Courier*, September 11, 2015, 21).

I hereby give permission for **Ryan Quinn** to include the abovementioned material(s) in his/her higher degree thesis for Curtin University, and to communicate this material via the espace institutional repository. This permission is granted on a non-exclusive basis and for an indefinite period.

I confirm that I am the copyright owner of the specified material.

Signed: 

Name: David Banks.

Position: Photographic Manager

Date: 17-08-18

Please return signed form to **Ryan Quinn** – ryan.quinn@postgrad.curtin.edu.au

Appendix

Rockingham protesters picket against the proposed development of Point Peron. Picture: Marcus Whitsitt

Strong protest to marina

MORE than 150 protesters against the State Government's proposed marina tourist precinct at Cape Peron rallied on Sunday, sending a clear message that they want the project scrapped.

The rally, held at the site of the proposed development, was the first of its kind for the Hands Off Point Peron group. Spokeswoman Dawn Jacks labelled it a huge success.

"We were really overwhelmed with the response considering it was organised at short notice," she said.

"There were a diverse number of people there and they all had a lot of energy, so we were really pleased. I could see that they were very passionate about the issue."

Ms Jacks said Point Peron was the wrong spot for a marina in Rockingham and a more suitable location at Wanliss Street had already been endorsed for the port Rockingham Jetty development.

"Unlike a Point Peron marina location, this alternate finger jetty style marina is being fully funded by its private developer with no requirement for the sale of publicly-owned land and no need for subsidies from the ratepayers of WA or City of Rockingham ratepayers," she said.

In September 2009 Premier Colin Barnett announced that the State Government would proceed with the next phase of the controversial Cape Peron Tourism Precinct Project by submitting it to a full public environmental assessment.

The project, which will provide boat pens and services, will only go ahead if it receives full environmental approval from the Environmental Protection Authority.

Figure 1. HOPP protest against the proposed marina (Weekend Courier, April 10, 2010)

Figure 2. Jerks speaks to Premier Barnett at a HOPP protest (Weekend Courier, September 11, 2015, 31).

Pic by Gabrielle Jeffery.

Appendix 9: Copyright Authorisation from the *Subiaco Post*

PERMISSION TO USE COPYRIGHT MATERIAL AS SPECIFIED BELOW AND SHOWN IN APPENDIX:

- Protestors from the FUAB placing white crosses outside of the bushland for the lives of the inhabitants likely impacted by the planned development (Subiaco Post, August 12, 2000, 12)
- University students protesting against the University's proposal, outside the bushland (Subiaco Post, May 25, 2002)

I hereby give permission for **Ryan Quinn** to include the abovementioned material(s) in his/her higher degree thesis for Curtin University, and to communicate this material via the espace institutional repository. This permission is granted on a non-exclusive basis and for an indefinite period.

I confirm that I am the copyright owner of the specified material.

Signed:

Name: Bret Christian

Position: Publisher Post Newspapers P/L

Date: 21/8/2018

Please return signed form to Ryan Quinn – ryan.quinn@postgrad.curtin.edu.au