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A new way of living with nature? Zones of friction and traction in Nangarin Vineyard Estate, a rural residential estate in Sydney's South-West

Charles Gillon

University of Wollongong

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<https://ro.uow.edu.au/thsci/62>

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Abstract

This thesis asks whether the rural residential estate is a human settlement space in which society can live 'better' with nature. Answering this question hinges on the identification of *zones of friction* and *zones of traction* (Head et al, in prep.) in the rural residential estate – ruptures and resiliences created by this unique experiment in urban design, and expressed through the everyday rhythms of residents. The thesis evaluates the rural residential estate using the study site of Nangarin Vineyard Estate, located near Picton, NSW. The materiality of this setting incorporates residential landuse and remnant bushland, facilitating an enmeshing of humans and non-humans in space. The study is conceptually framed around non-representational theory, a relational ontology used to re-frame the complexity of interactions between human and non-human actors. Reflecting this, semi-structured walking interviews were conducted with Nangarin residents to both enrol the non-human in research design, and to explore how residents have constructed their use the estate. This method was combined with frequent self-tours of the estate, to elicit place-based engagement for the researcher. Results presented over four chapters explore the complexity of interactions that take place between humans and nature in Nangarin estate. The first contextualises the urban design and regulatory framework of the rural residential estate, and how this material framework shapes the potential for its use. The second and third chapters explore the interactions expressed between humans and nature with respect to mobility and how they *dwelt* – how the rural residential estate informs their everyday rhythms, and subsequent construction of their home space. This thesis concludes that despite the material shell created by the rural residential estate, there is still a fixity expressed by humans towards how they enrol the non-human. This involved the creation of borders and territories that serve to exclude the non-human. The final chapter brings the threads of the thesis together, exploring zones of friction and zones of traction in the rural residential estate. Such frictions and tractions present opportunities and threats for pursuing future developments of this nature.

Degree Type

Thesis

Degree Name

Bachelor of Science (Honours)

Department

School of Earth & Environmental Science

Advisor(s)

Chris Gibson

Keywords

non-representational theory, master-planned estates, walking interviews, dwelling, gardens, border making

A new way of living with nature? Zones of friction and traction in Nangarin Vineyard Estate, a rural residential estate in Sydney's South-West

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Supervisor: Chris Gibson



October 2012



A thesis submitted in part fulfilment of the requirements of the Honours degree of Bachelor of Science in the School of Earth and Environmental Sciences, University of Wollongong 2012. The information in this thesis is entirely the result of investigations conducted by the author, unless otherwise acknowledged, and has not been submitted in part, or otherwise, for any other degree or qualification.

Signed: CW Gillon

Dated: 10/10/2012

Abstract

This thesis asks whether the rural residential estate is a human settlement space in which society can live 'better' with nature. Answering this question hinges on the identification of *zones of friction* and *zones of traction* (Head et al, in prep.) in the rural residential estate – ruptures and resiliences created by this unique experiment in urban design, and expressed through the everyday rhythms of residents. The thesis evaluates the rural residential estate using the study site of Nangarin Vineyard Estate, located near Picton, NSW. The materiality of this setting incorporates residential landuse and remnant bushland, facilitating an enmeshing of humans and non-humans in space. The study is conceptually framed around non-representational theory, a relational ontology used to re-frame the complexity of interactions between human and non-human actors. Reflecting this, semi-structured walking interviews were conducted with Nangarin residents to both enrol the non-human in research design, and to explore how residents have constructed their use the estate. This method was combined with frequent self-tours of the estate, to elicit place-based engagement for the researcher. Results presented over four chapters explore the complexity of interactions that take place between humans and nature in Nangarin estate. The first contextualises the urban design and regulatory framework of the rural residential estate, and how this material framework shapes the potential for its use. The second and third chapters explore the interactions expressed between humans and nature with respect to mobility and how they *dwell* – how the rural residential estate informs their everyday rhythms, and subsequent construction of their home space. This thesis concludes that despite the material shell created by the rural residential estate, there is still a fixity expressed by humans towards how they enrol the non-human. This involved the creation of borders and territories that serve to exclude the non-human. The final chapter brings the threads of the thesis together, exploring zones of friction and zones of traction in the rural residential estate. Such frictions and tractions present opportunities and threats for pursuing future developments of this nature.

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Acknowledgements

The success of this thesis is attributed to a number of people – my supervisor, the School of Earth & Environmental Sciences, the Nangarin community, my family and friends. Their interest in my work and effort towards making it a reality will not be forgotten.

First and foremost, I must thank my supervisor Chris Gibson. His assistance, guidance and patience throughout the development of this thesis were invaluable. I have enjoyed the opportunity to learn from Chris, and feel that his input has *greatly* furthered my ability as a researcher, and as a writer. His enthusiasm for geography has piqued my interest, and led me towards postgraduate studies.

I must also thank other staff members from the School of Earth & Environmental Sciences at the University Of Wollongong who were more than willing to allocate time for me and answer my questions over the course of this year: Lesley Head, Leah Gibbs, Christine Eriksen and Nick Gill. I must also thank Ross Bradstock from Biological Sciences for his help with biophysical elements of this thesis. I also thank Emma Power from UWS for her technical advice on consent considerations when working within master planned estates.

Thanks must next go to the residents of Nangarin estate. Their acceptance of my presence in their tight-knit community over the last nine months has been paramount to the eventuation of this thesis. I am grateful particularly to those residents who participated - they gave me something to write about! Without their participation I would not have such a rich pool of knowledge from which to construct my thesis. With respect to these residents, I feel must single out the Molloy family and the Wright family. Both of these families expressed an inordinate amount of interest in my thesis. I am so grateful for their above-and-beyond effort helping out with recruitment.

I reserve special thanks to my parents, Meredith & Satch Gillon, who have overseen my progress the course of this thesis – as well as my Undergraduate studies – and have been a source of unwavering support through hardship and success. The support of my friends has also been tantamount to my sanity over the last 9 months. I particularly thank Steph, Pete, Nick and Alex for their support, and for facilitating my escape from studying.

1

Introduction

1.1 Research impetus

*“The most destructive aspect of cities is the profound schism created
between humans and nature.”*

-David Suzuki, *The Sacred Balance*, page 44

The fabric of Sydney’s greater metropolitan area is changing. The need for housing has culminated in the proposed development of extensive residential projects on the rural-urban fringe. Such ‘greenfield’ areas are in a period of flux. According to the 2005 Metropolitan Strategy, they are expected to support an additional 155,000 new dwellings by 2031 as a part of the South-West Subregion (NSW Department Of Planning 2007). The proposed extent of residential development in these areas has raised concerns about the environmental implications of the methods by which to accommodate for housing needs without compromising the integrity of the rural landscape and associated remnant bushland (Abrams et al 2012, see also Esparza & McPherson 2009).

Motivated by flashpoints of environmentally-based public debate – namely ecological sustainability and climate change –are there better ways of living with and amongst nature, living as stewards rather than utilitarians? This thesis responds to these concerns, by evaluating one estate where an attempt has been made to structure suburbia differently – the Nangarin Vineyard Estate. In this thesis I assess everyday interactions of humans and nature, in light of the pinpointed aims of the estate to live more meaningfully with nature.

Nangarin Vineyard Estate is located near Picton, NSW on the fringe of this South-West Growth Centre of Sydney. It is a unique ‘experiment’ of urban design with a clear sympathy expressed towards the needs of the surrounding environment. Through large block sizes and the integration of a vineyard and remnant bushland into the estate landscape, Nangarin estate facilitates a rural lifestyle for its residents, where nature is a constant visible element of daily life. Through engagement with the estate and its residents (both human and non-human), this thesis will explore the potential offered by this estate framework as a different

way to live amongst nature in a climate of sustained environmental upheaval. I evaluate the viability of rural-residential settlements, and whether or not they can facilitate a different way of living with and amongst nature.

1.2 Aims

I analyse the rural residential estate using the conceptual framework of non-representational theory. Non-representational theory views the world as made up of encounters, as a complex product of interactions and lived practices (Thrift 1999). This relational ontology acknowledges the agency of both *humans* and *non-humans* in both time and space. Using non-representational theory as the framework for research seemed particularly useful when undertaking an analysis of Nangarin Vineyard Estate, as the marketing and materiality of the estate is rested on the promise of a different kind of engagement with non-human others. This point of difference begs critical investigation through on-the-ground empirical research.

With the above in mind, this thesis has three overall aims:

1. To explore the rural residential estate as an urban design experiment, and as a response to a wider contemporary search for a 'better way' to live with nature. More specifically,

1a) Through engagement with relevant publications and with residents, analyse the urban design, regulatory framework and governance structure of the estate.

2. Detail and evaluate the complexity of interactions that take place between humans and nature within this setting, drawing largely upon the conceptual framework of non-representational theory. More specifically,

2b) Evaluate the mobility of residents in Nangarin estate, and the territories created.

2a) Detail interactions between humans and nature expressed in everyday practice, with a focus on garden spaces.

3. Highlight the subsequent 'frictions' and 'tractions' (Head et al. in prep.) that the rural residential estate creates for its human and non-human occupants.

The first aim – analysing urban design, regulation and governance - is important for two reasons. First, this provides an account of the overarching structures in place that facilitate the ‘uniqueness’ of Nangarin as a setting. Second, an analysis of themes of governance, community and security effectively grounds this study within previous literature on master-planned estates.

The focal point of this thesis, however, is the ways in which humans and nature interact within this setting, and thus the second and third aims flow from this initial context-setting aim. Non-representational theory encourages the researcher to suspend the traditional human-nature duality, and acknowledge the political and ethical presence of non-human elements in the landscape (Hinchliffe 2007). This was put into practice through the use of semi-structured walking interviews with Nangarin residents, and a personal embodied engagement with the surrounding environment. A mobile methodology also allowed for an insight into the potential for mobility facilitated by the estate design. Subsequently, this reveals how the estate is negotiated in the everyday rhythms of its residents, and the borders and territories created.

The restricted structure and time allocation effectively restricted the manageable scope of analysis for this thesis. As a result, instead of evaluating how humans and nonhumans interact within the materiality of their entire ‘home’ space – inside and out – the outside, the garden, became the focal point of study. Gardens are complex sites of human-nonhuman relations. This thesis explores how Nangarin gardens are created, and how the agency of the non-human is negotiated in these spaces.

The third aim will tie the first two aims together, with a mind towards attempting to answer the overarching question: how does the rural residential estate respond to a wider contemporary search for a ‘better way’ to live with nature? Answering this question stems from identifying *zones of friction* and *zones of traction* (Head et al, in prep.) expressed in the everyday lifestyles of Nangarin residents. Identifying zones of friction and traction are used to explore how different elements of governance, materiality and practice interact (Gibson et al 2013: 23). Frictions and tractions highlight resistances and possibilities, respectively, for more sustainable pathways with nature. The frictions and tractions identified by this thesis

will subsequently offer promise and concern for reproducing this urban design framework elsewhere.

1.3 Location and context

Nangarin Vineyard Estate is located on Barkers Lodge Road, 5 kilometres from the township of Picton, New South Wales, and approximately 95 kilometres (80 minutes) from Sydney's Central Business District. Regionally, Picton is located in the Wollondilly Local Government Area (LGA), one of four LGAs earmarked as comprising the South West Subregion of Sydney – the others being Camden, Campbelltown and Liverpool (Figure 1.1). The South West Subregion is forecasted to accommodate for over 25 percent of new dwellings planned for Sydney in the next 25 years (NSW Department of Planning 2007:9).

Despite the housing expectations of Sydney's Metropolitan Strategy, most would consider this region is still inherently 'rural' by nature – notions of rurality tied to agriculture and the natural environment (Woods 2004). While the Wollondilly LGA is undergoing extensive landuse change, having experienced a population growth rate of 18.75 percent between 2006 and 2001 (Wollondilly Shire Council 2011:2), the area still has an active agricultural sector tied to the food security of Sydney and its surrounds. Agriculture represented 5.3 percent of Wollondilly's total employment in 2006 (Wollondilly Shire Council 2012). Indeed, livestock farms are still a visible element of the landscape (Figure 1.2).

As well as this, the Wollondilly LGA also plays host to 'the largest intact populations of threatened species and ecological communities in the Sydney Basin' (Wollondilly Shire Council 2011:2). For example, one of these endemic ecological communities is the Cumberland Plain Woodland system, protected under the NSW *Threatened Species Conservation Act* (1995) (Tozer 2003).

With the above in mind Wollondilly Shire Council have expressed concerns towards retaining this rural character of the area – citing its environmental, heritage and economic value, as well as its value in promoting tourism (Wollondilly Shire Council 2012:1).



Figure 1.1 Regional map of the LGAs of greater Sydney, highlighting the LGAs that comprise Sydney's South-West Subregion– as well as marking the town of Picton and its spatial relationship to Sydney.



Figure 1.2 Livestock farms are still a common landscape feature, Barkers Lodge Road, Picton (October 2012)

Nangarin Estate was proposed by Bradcorp in October 1997 as an ‘integrated rural development with community ownership of a commercially viable farm’ (Bradcorp 1997:2). Bradcorp are a housing development group with an active presence in the South-West Subregion, having developed six projects in the Macarthur region since their inception in 1996. Nangarin Vineyard Estate was their first project. The development philosophy of Bradcorp is ‘to create unique living environments that are of enduring value to the community’ (Bradcorp 2005).

Land sales in Nangarin Estate commenced in October 1999, and the first occupation of the estate started in 2001. Encompassing 116 hectares, the estate supports 115 dwellings, as well as integrating community amenities, remnant bushland and a fully functional vineyard. Previously utilised as a feedlot cattle farm, the estate site was comprised of pasture species and scattered open eucalypt forest belonging to the Cumberland Plain Woodland system. Spatially, the estate is effectively bordered by Stonequarry Creek, a tributary of the Nepean system, and adjacent to operational cattle farms and orchards (Figure 1.3).



Figure 1.3 A temporal comparison of land use change for the spatiality of Nangarin Vineyard Estate. The first image shows the Nangarin site in 2004. The second image shows Nangarin estate at present (2012). Source: a) © NSW Land and Property Management Authority 2004, b) Google Maps

Nangarin Estate was marketed as providing a boutique rural lifestyle for its residents, with a country lifestyle and the vineyard at the forefront. Figure 1.4, is a 2001 advertisement for land sales. The advertisement boasts 'a secure rural haven with a high proportion of retained bushland and unspoiled views of the surrounding countryside'. Recent advertisements for Nangarin land sales market the same rural lifestyle theme (Figure 1.5).

Imagine a country home overlooking a vineyard.

VIEWS FROM OUR RESIDENTS

"Tranquillity is just superb"

"The views won us over"

"Outstanding quality of life"

EXCLUSIVE RELEASE OF JUST 115 FULLY SERVICED ONE ACRE VINEYARD LOTS

HURRY 60% SOLD

Nangarin is a secure rural haven with a high proportion of retained bushland and unspoiled views of the surrounding countryside, all the way to the Illawarra Escarpment. All lots are fully serviced. You have the choice of briefing your own architect or choosing from one of our three core home designs. All the natural attractions of the Southern Highlands are right on your doorstep. And you get to share in the fruits of the vineyard.

There is only one Nangarin so you must be quick!

NANGARIN VINEYARD ESTATE
PICTON, NEW SOUTH WALES

For further information and a detailed brochure call
1300 367 171
or visit our website
www.nangarin.com.au

Bradman Building BL 81713C. *All blocks minimum 4000m². We reserve the right to make alterations without notice. Design and specifications are copyright Bradman Building. Call 13 24 25. That's Fairfax Community Classifieds. Camden Wollondilly Advertiser, Tuesday, April 10, 2001 - 18

Figure 1.4 'Imagine a country home overlooking a vineyard'.

Source: *Camden Advertiser*, April 10th 2001: 13

**FLAT USABILITY
ONE ACRE POSITION
FABULOUS VALUE**

**QUALITY BUILD
4 BEDS + STUDY
POOL & WORKSHOP**

PICTON \$829,000

3 THE VINES PICTON – FINE ONE ACRE AUSTRALIANA HOMESTEAD

A discerning ONE ACE homestead sited with great aspect the usability & entertaining attributes of this fine property are extremely appealing. Beautiful wraparound veranda adorns the aesthetics with free flowing access to enjoy all season activities. The floor plan designed to maximise family comfort with spacious living areas x 2, separate study with informal living as well off beautiful timber kitchen. All bedrooms are of sizeable proportions with master suite & French door access to rear veranda area overlooking landscaped area & gardens. For the enthusiast there is significant workshop capability, triple garage side & drive through access. A park like setting that will not dissappoint with a sparkling in ground pool.

- Fabulous & flat, totally usable & private
- Steel framed reassurance, termite proof
- Stylish décor, natural light in abundance
- Enjoy the seasons from every angle
- High ceilings, choice ceramics, open fireplace
- Beautiful streetscape & surroundings
- Quality at every turn, no expense spared
- Fully appointed gas & R/C air conditioning
- Triple garage, side & drive through access

**PRIME HOME
MANGARIN ACRE
COMFORT IS ASSURED**

**SUPERB VIEWS
EXECUTIVE CLASS
TOTALLY COMPLETE**

CONTACT AGENT

49 THE GRANGE PICTON – A MAJESTIC BACKDROP IT'S UPLIFTING

ACRE POSITION - MAGNIFICENT backdrop with aspect, privacy & executive panache. The location prominently known as The Grange in the significantly desirable NANGARIN VINEYARD ESTATE. An extraordinary package that caters for full enjoyment over a split level design featuring free flowing layout & spacious living areas. Internally the quality exudes class having been crafted with fastidious workmanship. A main suite features with balcony access overlooking the reserve to front & views across Picton valley. All other bedrooms are strategically located & generous in size. Externally the home has stunning mature gardens, no expense spared superior timber covered decking again taking in the best attributes.

- Ridge top location what a vista & view
- Quiet aspect beautiful native gardens
- Stylish, beautiful décor & natural light
- Tri level layout, copious & recreational
- Huge main suite with balcony enjoyment
- Enjoy the seasons from every angle
- Quality at every turn, no expense spared
- Fully appointed gas & R/C air conditioning
- Triple garage, side access, huge storage

Wanting to Sell a property - We are flexible, TALK to US. We go to work to work for you!

4677 3611

A big THANK YOU to everyone associated with our company.

David Goulding
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david@reside.com.au

RESIDE
real estate
www.reside.com.au

13 24 25 ... That's Fairfax Community Classifieds

Wollondilly Advertiser, Wednesday, September 26, 2012

Figure 1.5 A full-page spread by Reside Real Estate (a regional Real Estate business) in the Wollondilly Advertiser for land sales in Nangarin, marketing nature as a selling point.

Source: Wollondilly Advertiser, September 26th 2012:29

Nangarin Vineyard Estate is an example of a master-planned estate (MPE) – the study of which is now a popular focus in of urban geography. Due to the sheer diversity of how MPEs can be composed, an exact definition is a source of debate (McGuirk & Dowling 2007).

Nevertheless, master-planned estates share several characteristics: a comprehensive master plan, a single developer responsible for delivering the plan, distinct physical boundaries, uniform design features and an appeal to a community ethic (Cheshire et al 2010). At its simplest, a *master plan* is a set of planning controls exacted over a landscape for the purpose of achieving a particular vision (Gwyther 2005).

Master-planned estates are instead categorised based on a typology – a function of design features and the type of residents (Blakely & Snyder 1997, Grant & Mittelstadt 2004). With respect to this typology, Nangarin Vineyard Estate has been identified as a rural residential estate (McGuirk & Dowling 2007). Two definitions of the rural residential estate are offered below:

Rural residential estates are exurban estates located at the edge of the rural-urban fringe of major centres within a rural residential subdivision. Lots are often a minimum of one acre in size, a code covers design of the housing stock and garden areas to ensure a 'rural idyll' is maintained, and large areas of the estate are retained as pastoral landscape (Burke 2001:143).

Rural residential estates are the master-planned development of sizeable residential lots around communal agricultural land and rural amenities held under community title by residents who are attracted by the lifestyle aesthetic but not its workload (Dowling & McGuirk 2005:10).

This newly identified type of estate design is unique from conventional suburban estates in the fact that it is designed in favour of retaining a *rural* lifestyle. This rural aesthetic is achieved by three major design features.

The first is to do with the home plots themselves. The lot sizes are notably larger than suburban estates. Nangarin is comprised of just 115 homes with a minimum lot size of one acre (4000 square metres). This allows residents to use their lots for agricultural use. Also, to protect and present a rural atmosphere, possibilities for home design are regulated through an architectural scheme. House design, fences and gardens must complement the natural landscape: preserve the undulating topography of the landscape, and facilitate the

movement of animals in residential space. At present, Nangarin estate is almost full – there are 94 active dwellings in Nangarin estate (at June 2012).

The remaining design features used to achieve this rural lifestyle aesthetic are associated with the broader landscape. Almost half of the development is comprised of either the vineyard or community land. Extensive open space – parklands, woodlands and waterfront – have been retained by developers and integrated into the space. These areas are managed under Community Title, and their correct usage detailed under the regulatory framework of a Community Management Statement (for example, walking, bicycling, horse riding). This Community Management Statement also details the nature of plants and animals allowed within the estate, offering a list of eligible natives, and restricting animal ownership (Parish Patience 2000).

Another different feature of design about Nangarin as an estate is, as the name suggests, that the development is situated around a functioning 18 hectare vineyard (Figure 1.6). The vineyard is under the management of Bradcorp, and externally overseen by a viticulturalist. As a result, the aesthetic of the vineyard is achieved without any exertion from the residents themselves. This estate is therefore both commodifying productive rurality, and retaining it within the functioning of the space. The vineyard is not functional at the moment, because of low grape prices and regional control of the phylloxera virus.



Figure 1.6. The vineyard, captured from a vacant lot on The Grange, showing the first signs of Spring growth (October 2012)

The unique design of Nangarin estate was lauded by the Housing Industry of New South Wales, with Bradcorp receiving the HIA Housing Development of the Year award in 2001 (Blok 2004: 26). Regionally, the close-knit relationship with nature offered by the framework of Nangarin is still unique, and this begs critical investigation. This thesis subsequently investigates through empirical research whether Nangarin does facilitate new and different ways to live with (rural) nature.

1.4 Chapters Overview

Chapter 2 places the study of the rural residential estate within urban theory, and outlines the conceptual framework used to conduct analysis. Chapter 3 details the methodology chosen to address the thesis aims, attending to ethical concerns and the challenges of creating a method grounded in non-representational theory. Chapters 4-7 then present results, addressing the aims in sequence. Chapter 4 discusses the urban design and regulatory framework of Nangarin estate, and how this shapes the potential for its use. The

ways in which residents interact with nature in their mobility and the construction of their garden spaces is addressed in Chapters 5 and 6 respectively. Chapter 7 brings the thesis back to the overarching question: how does the rural residential estate respond to a wider contemporary search for a 'better way' to live with nature? This involves identifying zones of friction and zones of traction expressed by the everyday practices of Nangarin residents. Chapter 7 also offers recommendations for the future sustainability of similar residential developments.

2

Master Planned Estates, Sydney's Rural Fringe & Conceptual Considerations

2.1 Introduction

The purpose of this chapter is to contextualise the study of Nangarin Vineyard Estate within relevant frameworks of urban, rural and cultural geography. In so doing, this chapter clarifies where this thesis will contribute to the field, and explains the contemporary significance of studying a rural residential estate. To achieve this, the chapter has been structured around three sections. The first deals with the intricacies of the rural-urban fringe. The fringe is a complex flashpoint for landuse, involving the negotiation of a rural past and a residential present. This flows into the second section, a discussion of master-planned estates in urban geography, sourcing studies from the United States and the United Kingdom, as well as Australia. Master-planned estate research is concerned largely with evaluating the creation of community, fashioned by urban design, regulation and lifestyles.

The final section of this chapter discusses non-representational theory, as the conceptual framework chosen to progress this study. Non-representational theory challenges the preconceptions of how the spheres of culture and nature interact and can be understood. Regarding the human in relational thought, this section flows into a conceptualisation of the importance of dwelling and practice theory. This section also highlights studies in urban geography that are utilising non-representational thought – and in so doing, challenge our political and ethical relationships with nature.

2.2 Master-Planned Estates

Master planned estate research has emerged internationally, sourced mainly from the United States (Blakely & Snyder 1997, Grant & Mittelstadt 2004, LeGoix 2004, Low 2003), as well as the United Kingdom and others (Atkinson & Flint 2004, Atkinson et al 2005 – for a study of Turkey see Akgun & Baycan 2012). The focus of previous research has often been on the privatisation of space – so-called ‘fortresses’. Blakely & Snyder (1997) refer to ‘Fortress America’, Atkinson & Flint (2004) to ‘Fortress UK’, Kenna (2010) to ‘Fortress Australia’. MPE’s are recognisable internationally as ‘gated communities’, defined by Atkinson & Flint (2004) as walled and gated developments that restrict public access. Such gated communities are sites of exclusion, and have far-reaching area effects on their social and natural surroundings. Concerns centred upon themes of privatism, privatisation and social distinction shape the majority of research undertaken within this kind of master-planned estate literature (Dowling, Atkinson & McGuirk 2010).

To better understand the diversity of MPEs, Blakely & Snyder (1997) developed a widely applied typology of gated communities based upon four features: functions of enclosure, security features and barriers, amenities and facilities included and type of residents. They recognise three major types of gated communities in the United States which differ in how they address the development of a sense of community:

- a) *prestige* communities for the elite,
- b) *lifestyle* communities where leisure and exclusive access to amenities is a key concern, and
- c) *security zone* communities, where safety from the outside community is the prime motivator.

Australian research on master planned estates has also emerged (Bajracharya & Khan 2010, Costley 2006, Gwyther 2005, Johnson 2010, Kenna 2010, Kenna & Stevenson 2010, McGuirk & Dowling 2007, Rosenblatt 2005, Rosenblatt et al 2009). In response to the decline of the first home-owner market, MPE living is now the newest and most extensive form of residential development in suburban Australia (Gleeson 2003, Cheshire et al 2010, Johnson 2010). The historical development of master-planned developments in Australia is tied to the revival of the *city beautiful* concept – a focus on green open spaces, community building and place making (Freestone 2007).

It is important to note that a major distinction with overseas MPE typologies is that physically walled and gated communities are few and far between in the Australian urban landscape. One rare example of 'fortress Australia' is that of Macquarie Links in Campbelltown (Kenna 2010, Kenna & Stevenson 2010). Instead, in Australia the focus of research has tended to be on master-planned *communities* (MPCs), which are estates located on the urban fringe, large in scale (populations of 20-30,000) and as such are challenging sites for development, planning and governance (McGuirk & Dowling 2007).

The exploration of community and community building is a popular theme in research on master-planned estates in Australia. An idealised, imagined sense of community is commodified by developers of MPEs to tailor for certain needs, life-stages and lifestyles (Rosenblatt 2005). 'Community' as a concept is largely achieved through the aesthetics of the estate landscape and the provision of amenities and facilities exclusively for residents.

Community is also achieved through regulation. Termed the 'community compact', restrictions on design and behaviour are used to proliferate order and social interaction (Gwyther 2005). In effect, these features combine to create a distinct sense of place within the estate, transforming the space from a simple *estate* to that of a *community*.

While such research has built knowledge related to MPEs in Australia, McGuirk & Dowling (2007) suggest that a focus on master-planned communities undermines the diversity of MPEs. Following on from the framework supplied by Blakely & Snyder (1997) and further development by Grant & Mittelstadt (2004), they applied a similar typology to MPE development in greater Sydney. Lifestyle and prestige communities are most prevalent, with sub-types based upon the life-cycle and status of residents. Extending this, McGuirk & Dowling identified examples in Sydney that have no place within conventional frameworks, and which suffer from a lack of research: *brownfield new town developments* and *greenfield rural residential estates*. Nangarin estate is an example of the latter.

These newly identified MPE sub-types align clearly with the North-West (brownfield) and South-West (greenfield) land releases as proposed in the 2005 Metropolitan Plan For Sydney (NSW Department Of Planning 2005). As such, opportunities have now opened up for new, topical areas of research into Australian MPEs. The greenfield rural residential estate phenomenon is one of these. Although the rural residential estate has been recently acknowledged by other urban geographers (Burke 2001, Sinclair & Bunker 2012), this thesis responds by examining, for the first time, a greenfield rural residential estate.

2.3 The Rural-Urban Fringe

To effectively analyse the rural residential estate, it is important to contextualise the composition of the contemporary rural landscape. Nangarin Vineyard Estate, an identified rural residential estate, is located in the Wollondilly LGA on in the outer exurban zone of Sydney's rural-urban fringe (McKenzie 1996). The rural-urban fringe is defined by Pryor (1968) as a zone of transition between the continuously built-up areas of the central city and rural hinterland.

Bunker & Houston (2003) provide a brief history of Sydney's rural-urban fringe. The design approach initially proposed for Sydney's fringe was as a 'green belt' – a site for low-level residential development, preserving agricultural land and the rural idyll. However, the

contemporary demand for residential space has inevitably integrated this green belt as part of Sydney's sprawl – sprawl being the unplanned extension of relatively low density urban landuses into rural areas, usually alongside main roads (Johnston 2000).

Australia's fringe areas are now a major location for national population growth (Bunker & Houston 2003). Fuelled by global economic restructuring, rural areas have undergone extensive change. The rise of the tertiary economy undermines the economic viability of a land-intensive, utilitarian use for rural landscapes in the developed world (Woods 2004). Travel and communication technologies have transformed the meaning of distance, and the retreat of a rural lifestyle is being taken up by privileged urbanites in the developed world (Cadieux & Hurley 2009). Woods (2004) now lists the appeal of investment in the rural hinterland as tied to lower land prices, an aesthetically higher quality environment and the availability of greenfield sites for development – giving rise to counter-urbanisation. Larsen et al (2011) mark this as the exurban transition – the subdivision of agricultural landuse for residential and recreational purposes. The residential use of land in rural areas is termed rural residential development – people live on rural lots, but used the land for primarily residential purposes (Sinclair & Bunker 2012).

Although in some cases residential use of rural land is a necessity for extensive greenfield development (as expressed by Sydney's Metropolitan Plan) the appeal of a rural *lifestyle* is a motivator for amenity migration. Amenity migration is defined broadly as the movement of largely affluent urban or suburban populations to rural areas for specific lifestyle amenities, such as natural scenery, proximity to outdoor recreation, cultural richness or a sense of rurality (Argent et al 2007).

The environmental implications of amenity migration are a site of contemporary interest and concern for planners and natural resource managers (Abrams et al 2012, Bock & Bock 2009, Dale et al 2005). Exurban development is largely attributed as negative: increasing human-animal conflicts, creating networks for invasive species, and complicating fire protection efforts (Knight et al 1995, Dale et al 2005, Eriksen & Gill 2010). However residential development in rural areas can be positive, providing better habitats and supporting higher species diversity than surrounding homogenised agricultural landscapes (Bock & Bock 2009).

Abrams et al (2012:273) suggest that further studies of amenity migration need to explore the complex social productions of nature, and how exurban dwellers conceive of and manage nature within their properties. This thesis is one such study.

2.4 Conceptual Framework

While this thesis is deals with the analysis of a unique experiment of urban design, the distinction must be made that this is not an evaluation of 'green' design and sustainable cities (for a reader on this subject, see Wheeler & Beatley 2004). This is because of a limitation of the technical approach. The motivation behind this thesis goes beyond design. Instead, this thesis explores the complex everyday interactions between humans and non-humans, and whether the rural residential estate can respond to a wider concern of how we as humans can live differently with and amongst 'nature' (Head & Gibson 2012).

2.4.1 Non-Representational Theory

Reflecting this, the conceptual framework chosen for this thesis is non-representational theory. Lorimer (2005:83) describes non-representational theory as 'an umbrella term for diverse work that seeks better to cope with our self-evidently more-than-human, more-than-textual, multi-sensual worlds'. Pioneered by Bruno Latour (1993, 2005), and further developed by notable academics such as Nigel Thrift (1998, 1999), John Law (2004) and Donna Haraway (1991), the basis of non-representational theory is built on post-structuralism: the world cannot be understood through determining perfect 'truths' (representations). Indeed, Lorimer (2005) prefers to think of the concept as a 'more-than-representational' geography. The world is instead understood via a complex outcome of relations between human and non-human actors.

Stemming from the increasingly accepted notion in geographical thought that the spheres of culture and nature are not ontologically separate, landscapes are now considered to be nature-culture hybrids (Whatmore 2002). Hybridity allows for a relational geography of change in all actors as they relate to one another (Hinchliffe 2007). Following this line of thought, the world should be understood as a space in which a series of interactions and networks between actors take place; interactions which are in a constant state of flux within space and time (Thrift 1999). Such actors are both human and non-human (plants, animals, things), where elements of nature are understood to have agency as well as humans –

decoupling the culture/nature dualism from a subject/object relationship (Power 2005). Stepping away from anthropocentric thought, non-representational theory involves an understanding of the relationship between the collaborative human-nonhuman 'cyborg' (Haraway 1991); for Latour (1993) it involves convening a 'parliament of things' to re-position the political and ethical agency of the non-human. We should now understand our ethical-political commitments as 'more-than-human', to make visible the many ways that non-human actors are both enrolled in and help shape our lives (Braun 2005:635).

One urban geographical site where non-representational theory has been widely applied is gardens. Gardens exist as liminal spaces between the spheres of humans and nature (Head & Muir 2007, see also Hitchings 2003, Robbins 2007). Using an actor-network approach provides a framework to acknowledge the complexity of human/nature relationships in this space where nature is no longer a passive object (Power 2005). Lawns, for example, have their own agencies. Their appearance and continual growth governs the maintenance actions of humans – the use of chemicals, mowing and removing weeds (Robbins 2007).

More-than-human accounts are increasing in prominence in human geography. A relational framework has also been applied to the hybrid materiality of roadkill (Lulka 2008, Coffin 2007), companion animals (Haraway 2003, Power 2008), orchards (Clope & Jones 2001), and wheat production (Head, Atchison & Gates 2012).

Non-representational theory has also influenced recent urban geography (Farias & Bender 2010). Once seen as the antithesis to nature, urban spaces are now also considered to be more-than-human (Braun 2005). Discussions of hybrid spaces such as 'urban natures' are now growing within the field of human geography (Castree & Braun 2001, Gandy 2003, Kaika 2005, Hinchliffe 2007). A more-than-human home space, for example, challenges the normative construction of the Western home space as a safe, autonomous, human space, separate from the 'outside' – wildness, nature and dirt (Power 2009:29). The creation of this 'human' space involves the creation and enforcing of border zones and boundaries against what Kaika (2005) defines as 'bad nature' – unruly non-humans, dirt and waste. This interplay becomes inherently relational, inherently more-than-human. Non-humans exhibit agency through resisting this boundary, and transgressing these human placements (Philo & Wilbert 2000).

Johnston (2008) questions how humans can accurately represent the ‘beastly natures’ of non-humans within our own discourses. He goes on to say that taking the non-human seriously must be more than recognising the ways in which animals affect the lives of human beings, but by hearing the very cry of the non-human (Philo & Wilbert 2000). The complexity involved in undertaking a non-human account of space in this thesis will be elaborated upon in Chapter 3.

Despite this awakening of the culture-nature hybrid, a fixity between these two spheres is still performed by humans – but manifest themselves in different ways. Thought is the motivation behind practice in conservation policy – one example the ‘wilderness’ discourse (Cronon 1995). A distinction created between human spaces and ‘pure’ nature is still upheld in contemporary management practice (Hinchliffe 2007). Kaika (2005) puts forward the difference between ‘good’ and ‘bad’ nature within the confines of the domestic home. Indeed, new spheres of difference are created that reflect the tolerance of accepted non-humans – for example, the divide between native and non-native (Head 2012).

2.4.2 Relational Humans: The Dwelling Perspective & Practice Theory

One way to frame humans in a more-than-representational framework is to use what is known as the *dwelling* perspective. Following Martin Heidegger (1971), the dwelling perspective was developed predominately by Tim Ingold (2000, 2011). Dwelling is a way of conceptualising human existence as ‘being-in-the-world’ – the immersion of human actors in their environment. Challenging conceptualisations of material culture, Ingold’s dwelling perspective opposes what he calls the *building* perspective – the transitive relation between subject and object that creates objects and things (Ingold 2011:9). Instead, dwelling shifts the focus to an appreciation of the ‘manifold constituents of the world’, and how materiality and ideas are enrolled into a regular pattern of life activity (Ingold 2000:153). Dwelling can then be defined as the product of ‘the specific relational contexts of [people’s] practical engagement with their surroundings’ (Ingold 2000:186). Wylie (2007) extends this further: there has been a conceptual shift from ‘the horizon to the earth’, and landscapes are now understood as the multi-sensual performance of lived experience. The engine of landscape’s being is practice: everyday agents calling the landscape into being as they make it relevant

for their own lives, strategies and projects (Rose 2002; see also Degen, DeSilvey & Rose 2008).

In other words, the lifeworlds of humans are informed by an inseparable relationship between actors and their surrounding environment, revealed in turn by practice and everyday rhythms. The task for this thesis is then to understand how residents of a rural residential estate *dwell*, and how this in turn informs the subsequent binding together of nature and culture in place (Cloe & Jones 2001).

Elizabeth Shove (2009), amongst notable others (Schatzki 2002, Warde 2005), has extended similar thinking in what is now increasingly being described as *practice theory*. Practice exists as the embodied production and consumption of time, the 'temporal texture of daily life' (Shove 2009:18). Practice is a performance (Schatzki 2002), and the reproduction of practice informs the creation of everyday routines and rhythms. Ehn & Lofgren (2009:110) suggest that routines are 'fruitful arenas for looking at the interplay between material, natural, social and emotional forces in everyday actions'. Such routines have permanence – carrying inherent consequences for how humans construct their lives in the present, and the future. Shove (2009) particularly focusses on the rigidity of temporal rhythms with respect to domestic comfort, and how this affects the relationship of humans with the natural world, framing a discussion around practice and the associated environmental footprint.

Practice theory explores the interplay between consumers, producers and the materiality of things (Shove & Pantzar 2005). Master-planned estates can also be imagined in this way: they are essentially a product consumed by homebuyers. This thesis extends that premise by positioning Nangarin residents as the *consumers* of a rural lifestyle. Degen, DeSilvey & Rose (2008) note that few discussions of urban design appear interested in how people experience and engage with such designed environments, or how these environments are experienced in the routines of everyday life. Analysing the point of difference offered by the unique materiality of Nangarin estate provides the potential for unveiling disruptions in everyday habits and routines, what Trentmann (2009:68) states as the 'elasticity of everyday life'.

Reflecting this elasticity, Warde (2005) suggests that due to consumer culture there is a multiplicity of practices available to humans. Indeed practices 'contain the seeds of constant

change' (Warde 2005:141), offering the potential for the adoption of new practices and the formation of new routines. This thesis examines how dwelling humans use Nangarin estate, and how their routines either express fixities or fluidities towards a new way of living with nature. Following Head et al. (in prep.), these fixities and fluidities will be expressed as *zones of friction* and *zones of traction* (see Box A).

Box A The Importance Of Practice: Zones Of Friction, Zones Of Traction

The materiality of design in Nangarin could be seen, though a relational ontology, as an opportunity to promote a more successful or holistic co-existence between human and non-human actors. This analysis will be structured around zones of friction and zones of traction, derived from Head et al. (2012, in prep.). Head et al. used the framework of frictions and tractions to analyse the contribution of Australian households to the goals of sustainability policy. Zones of friction were defined as 'pathways of resistance' (p. 9), and zones of traction the result of 'the deroutinisation of previous practices' (p. 9). After exploring specific aspects of everyday life in Nangarin in Chapters 4, 5 and 6 (?), this thesis will conclude by identifying zones of friction and zones of traction, and how the rural residential estate offers opportunities and threats when responding to the everyday interplay of humans and nature.

2.5 Conclusion

This chapter has worked towards placing this thesis within relevant existing research. There are three ways in which this thesis contributes to existing literatures. First, the rural residential estate is a unique setting for examination, having not yet been a study site for research on master planned estates. Second, the composition of the rural residential estate is one landuse challenge for the rural-urban fringe. The thesis is therefore also positioned to contribute a growing area of research on the environmental harms and benefits of the dynamic rural-urban interface – including the related field of amenity migration studies. Third, the thesis explores a more-than-human approach to understanding residential space. Non-representational theory has been chosen as the conceptual framework because it acknowledges agency as belonging to both humans and non-humans, exhibited in space through a series of relations. This relational ontology involves an exploration of the routines and dwelling of humans to understand how non-humans are enrolled within everyday

rhythms. Later results chapters (4-7) explore such themes. Before we encounter Nangarin, however, the thesis turns to confront the more difficult methodological challenges such ontologies create.

3

Methodology

3.1 Introduction

Non-representational theory explores relations between actors – both human and non-human – within space and time. Reflecting the slippery nature of defining non-representational theory, developing a non-representational methodology is far from prescriptive (Hitchings 2003). It becomes an iterative, messy process, involving a rethink of the way that research frames and interferes with the world (Law 2004). This chapter will explore the practical hurdles that are met when developing a methodology grounded in relational theory, and how these were negotiated when addressing the aims of this thesis.

This chapter serves several purposes. First, it involves a discussion of positionality within the confines of the research focus. This leads into the acknowledgement of ethical considerations made before the onset of fieldwork. Recruitment, and the sampling strategies utilised for this purpose, are also explored. The chapter then focuses upon the creation of a non-representational methodology using a semi-structured interview schedule, and how the integration of mobility in the interview schedule worked to incorporate the interaction of actors and the environment. The chapter concludes by explaining how this methodology attempted to incorporate the elusive agency of the non-human, theorising ways to remove the troublesome human gaze and exploring the ‘beastly spaces’ – those governed by the agency of the non-human (Philo & Wilbert 2000) .

3.2 Ethics & Positionality

As a requirement before the onset of fieldwork, this thesis underwent a formal ethics approval through the Human Research Ethics Committee (HREC) via the University of Wollongong. The application was submitted on May 18th 2012, and given conditional approval on May 24th 2012, pending the adjustment of the Participant Information Sheet. The conditional approval notice (quote number HE12/202) has been included as Appendix A.

This section details three important ethical requirements for this thesis: achieving initial transparency of research, upholding informed consent, and addressing confidentiality concerns.

3.2.1 Research Transparency

By their nature, master-planned estates are generally exclusionary spaces for non-residents (Blakely & Snyder 1997). While Nangarin estate is not physically gated by any means, it was

anticipated that there would be resistance towards entering a small community estate and asking residents questions about how they interact with nature. As such, it was important to achieve a sense of research transparency before the onset of fieldwork so residents would become accepting of my presence inside the estate.

I made my presence public from the outset through regular self-tours of Nangarin estate. The visual presence of the researcher walking around on a weekly basis (albeit at different times, and on different days) established an early sense of familiarity with Nangarin residents, many of whom were encountered and greeted informally on such walking visits. Familiarity was enhanced by the choice to wear the same clothes during each visit, noted by Kearns (2000) as a key marker to use in the field.

Following advice sought from Emma Power, given her prior experience conducting similar research within master planned estates (2005, 2009), consent from the regulatory organisations in estates was not deemed necessary. Nonetheless, first contact was made through the Nangarin estate website (www.nangarin.com.au) with the Strata manager and the Executive Committee as a courtesy to the community before fieldwork. Following this, the researcher received consent from Committee members via phone conversations and emails preceding the walking interviews. This was a worthwhile move: establishing transparency and an early rapport with community representatives created subsequent opportunities for collaboration and support in the field. Indeed, eight of the nine Executive Committee members were willing to be interview participants, and also became essential in the recruitment process through snowballing.

3.2.2 Informed Consent

Informed consent was a formalised process, obtained through the combination of a Participant Information Sheet (PIS) and a Consent Form. These were given to each participant preceding the interview. The PIS detailed the nature of research, the participant's roles as part of the thesis, and how their responses would be used (see Appendix B). I was present when this was read by participants, in order to address any questions or concerns. Only once the participant understood the terms of their involvement were they given the Consent Form to sign (see Appendix C).

Obtaining consent in writing was the chosen method because it formalises the consent process. When the consent form was signed, there was a clear understanding between the researcher and the subject that consent was achieved. Each participant signed a consent form, and these were retained as a written record. Participants were also free to withdraw their consent at any time, without any adverse consequences.

Additionally, the Consent Form gave the participant the ability to opt in or out of proposed fieldwork activities with tick boxes. As an ethical consideration, participants were given the option of whether or not to partake in the walking element of the interview – so as not to exclude those who didn't (for further discussion of challenges that arose during walking interviews, see Chapter 5).

3.2.3 Confidentiality

Qualitative research presents the researcher with particular unwritten ethical responsibilities. Interviewing accesses the personal stories and experiences of participants. This can subsequently expose the personal context and attitudes of the participant, making them identifiable.

Allowing each participant the opportunity for confidentiality was especially pertinent in the methodology design for this thesis. Nangarin estate is a small community of 115 lots with distinct boundaries. Included on the Consent Form was a tick-box that asked each participant whether or not they wished to be anonymous in published material. While anonymity cannot be guaranteed by a pseudonym – especially between neighbours, in such a small space – this was something that was strongly suggested to participants, so as to avoid any possible ramifications with neighbours or governing bodies of the estate. Each participant that opted to be confidential in published material was provided with a pseudonym in the following results chapters.

Confidentiality in the analysis and presentation of data must also be considered. Analysis was undertaken in a controlled environment, and the researcher was the only person who listened and viewed any field data recorded. Audio recordings and photos were stored safely in the password-protected personal computer of the researcher, kept at their home. This is also where the majority of data analysis took place. With respect to data presentation, interview responses are labelled only with the first name and the first initial of their last

name, to ensure a level of confidentiality. Additionally, exact street addresses of participants are not divulged in the subject matter.

3.3 Recruitment

3.3.1 Initial Recruitment Strategy

The criterion for selecting participants was solely place-based – they simply had to be residents of Nangarin estate. The entire Nangarin population was targeted. Recruitment was conducted with no desired groupings based on age, gender or cultural or religious affiliations – nor was the presence of minors necessary (those under the age of 18). A sample size of twenty household interviews was deemed sufficient to address the project aims, and also to be achievable in terms of the allotted timeframe. This equated to 17 percent of the active dwellings in Nangarin estate (at June 2012).

The recruitment process for Nangarin residents took the shape of two letterbox drops, spaced two weeks apart throughout the months of June and July 2012. Both of these documents have been included as Appendix D. The first letterbox drop acted as an ‘icebreaker’ flyer and introduced residents to the research, calling for early expressions of interest. To assist with research transparency, the first flyer also incorporated a picture of the researcher. The second flyer was more formal, asking directly for resident involvement in the interview process.

Initial contact between the researcher and potential participants was facilitated via email. An email address was provided as a point of contact on both flyers. The personal phone number of the researcher was withheld from potential participants until they agreed to participate, to accommodate for personal safety.

A series of letterbox drops was chosen as a viable recruitment method due to the fact that Nangarin estate is a small study area, comprising of 115 residential lots, and 94 active dwellings (at June 2012). This made a mass letterbox drop, which can ordinarily be quite a labour-intensive recruitment strategy, a manageable task in terms of time and targeting the entire population. The idea behind multiple letterbox drops was another way to increase research transparency, and effectively keep the research in the minds of Nangarin residents.

Being a small, spatially bounded community, it was expected that once one or two residents agreed to be interviewed word of mouth would create a snowballing effect – and subsequently pique the interest of more participants.

3.3.2 Snowballing

As predicted, the letterbox drops elicited a small response. Even with the incorporation of a third letterbox drop, only 20 percent of eventual interview participants were sourced from these drops. Nevertheless the flyers did raise awareness of my presence at Nangarin.

The majority of participants came instead from snowballing. Often if one resident agreed to take part, they would in turn recruit their adjacent neighbours. The Executive Committee was also essential to recruiting Nangarin residents – their established presence in the community garnered more support in recruiting participants could have ever been possible alone.

3.3.3 Incentives

To maximise the response rate of Nangarin residents, participation was coupled with a with a \$20 gift card for the local shopping complex, Macarthur Square. Reflecting on the tactic of rewarding participants, it probably had little effect on recruitment levels. Indeed some residents refused to accept the gift card, citing it as unnecessary.

3.4 Semi-structured Walking Interviews

3.4.1 Semi-Structured Interviewing

One ‘staple’, ‘backbone’ method of qualitative research is the semi-structured interview (Crang 2002, Davies & Dwyer 2007). Interviewing allows the researcher to tap into the ‘small stories’ – the place-based knowledges of the personal and the local (Lorimer 2003).

The semi-structured interview consists of ordered but flexible questioning (Dunn 2000). The interview schedule largely exists as a prompt in the interview setting. Addressing the aims of analysing how residents of a semi-rural estate use the space, and how they interact with nature in their everyday practices, the interview schedule used in this thesis consisted of three broad sections. These were as follows:

1. A brief personal biography, and contextualising living in Nangarin estate
2. Nature in the home, and gardening practices
3. Negotiating estate design through walking, and engagement with nature

The interview schedule used is included as Appendix E.

The setting for each interview was the home of the participant/s. Because the thesis aims to explore how Nangarin residents use and interact with their surrounding environment, this encouraged interview participant/s to engage with the setting of their homes, and prompted embodied knowledge and memories. Using each participant's home as the setting also worked towards making the participant comfortable within the interview process. Rapport was built through developing a feeling of informality with the participant/s – one useful way of achieving this was through a warm-up chat preceding the interview (Dunn 2000). As well as this, I was often offered a coffee or equivalent beforehand, and accepting this helped to relax both parties.

With respect to rigour, positionality was addressed in the interview process through the creation of a fieldwork diary. A new entry was created after each interview, detailing the nature of the interview, key themes addressed in their responses, as well as a reflection on the success or failure of the interview process. This constant evaluation of the interview schedule – mannerisms, and the wording and ordering of questions – became an iterative process towards maximising the success of each interview.

Responses were recorded using a portable voice recorder, and the run-time of the interview schedule was approximately 40 minutes. To enhance the surrounding environment as a prompt, where possible the interview setting was chosen by the researcher to incorporate the surrounds – adjacent to a window, or outside on a balcony or verandah.

As well as a focus on the interaction between humans and nature in Nangarin Estate, the interview schedule also asked residents questions based around a sense of community, regulatory structures and governance. The primary reason for this was to assess the impact of these structures upon the everyday rhythms of the estate. Subsequently, the Chairman of the Executive Committee was interviewed using a separate interview schedule (Appendix F), with the themes of community, governance and regulation in mind.

3.4.2 The Walking Interview

With regards to addressing how humans and non-humans interact, and how residents use the estate, a sedentary interview was deemed an incomplete methodology. Assessing engagement and embodied knowledge requires *immersion* in the surrounding environment by the interviewer and the participant (Wylie 2007). At the conclusion of the interview schedule, the interview was mobilised.

In this way the thesis connects to what has been described as the 'new mobilities paradigm', a mobilities turn, in contemporary human geography (Sheller & Urry 2006, see also Fincham, McGuinness & Murray 2010). There has been a conceptual shift from the horizon to the earth; from a visual understanding of landscape to a tactile, embodied one (Wylie 2007). Mobilities research focuses on the movement of people and things, and the relations between them (Cresswell 2011). A prominent method through which this mobilities turn has been expressed is the walking interview. The practice of 'talking whilst walking' involves the interviewer conducting a semi-structured interview while walking with the subject around the environment of study (Anderson 2004). Physical engagement enrolls the surrounding environment as a prompt, allowing the interviewer to gain a privileged insight into the memories, attitudes and knowledge that would be 'unseeable' in sedentary, sit-down interviews (Evans & Jones 2011, Ingold & Lee 2006, Duncan & Duncan 2010). This subsequently includes nature within the interview process, the success of which has been noted by Hitchings (2003) and Head & Muir (2006, 2007) in their analysis of gardens, and by Cloke & Jones (2001) in their analysis of orchards. As Nangarin estate itself has been designed with an identifiable inclusion of nature, using the walking interview was deemed highly relevant to this thesis' aims (Figure 3.1).



Figure 3.1 As can be seen here, the walking interview worked to inscribe the natural surrounds within the interviewing process, The Grange (May 2012)

As well as exploring how humans and nature interact within the setting of Nangarin estate, this thesis also considers how urban design shapes the potential for these interactions.

Ingold & Lee (2006) suggest that a distinctive relationship with place emerges from analysing the routes that people take through an environment. The environment presents the walker with a set of possibilities for routes, and they create routes based on everyday choices and actions. The 'walkability' of urban design and the urban street environment has been further explored by Ewing & Handy (2009) and Burke (2001).

To effectively assess how Nangarin residents move through and interact with the estate, the route for the walking element of the interview was not predetermined by the researcher, and left to the participant. Participant autonomy has been cited by Evans & Jones (2011) as necessary when the subject is more familiar with the location. Nangarin residents were briefed beforehand to lead the researcher **somewhere that you usually walk, or a place that you feel closest to nature.**

Each walk was recorded using a GPS tracker, to allow for comparison and an analysis of trends. The incorporation of a GPS element into the walking interview allows location to be tracked with a fair degree of accuracy, but can carry a 'Big Brother' stigma for research participants (Jones et al 2008). As such, using GPS had inherent ethical considerations – as discussed in Box B.

Box B – Ethical Challenges of the Walking Interview

The walking interview is an overt process – both the interviewer and the participant can be seen taking part by any observers. This is very different from interviewing a resident in the privacy (and secrecy) of their own homes. Ultimately, this posed no identifiable problems – and in some cases resulted the impromptu recruitment of a new interview participant.

It was also important to consider the ethical responsibilities of data presentation. The integration of a GPS element made visible the start and finish point of the walk – their homes. For the keen observer, this could easily identify participants. To combat this, street numbers have not been used in data presentation. Also, the scale of the map output chosen makes it virtually impossible to delineate individual households.

The walking interview, while inscribing the environment as a prompt for memories, also allows the interviewer to observe how the participant interacts with their surrounds. Degen & Rose (2012) note that the walking interview helps identify a relationship between the environment, sensory experiences and the way people walk.

In terms of structure, it was initially planned that the interview schedule would encompass both the sedentary and the mobile element of the interview – with the first two sections used in the home and garden, and the final section used while walking around the estate. Continuing the iterative nature of interviewing, after the first couple of interviews it became apparent that the enrolment of the surrounding environment questioned the need to rely on the interview schedule. To allow the surrounds to 'speak for themselves', the set questions were exhausted, and the walk proceeded with the schedule themes in mind. On average, the running time of the interview doubled when the walk was incorporated.

An analysis of urban design also involved engagement with relevant planning documents for Nangarin Vineyard Estate – notably the Development Application, Local Environment Plan and the Community Management Statement.

3.5 Regarding the non-human

3.5.1 Using the Human Lens

A non-representational methodology demands the inclusion of a more-than-human account. However, making room for non-humans is a tricky task for researchers (Instone 2004). This is because ‘articulating the liveliness and agency of non-humans is (inescapably?) through a non-human lens’ (Head & Muir 2006:510, brackets in original).

Nevertheless, this troublesome human gaze can be utilised to identify dominant non-human actors in the landscape. The key criteria for non-humans becoming actors is cited by Owens (2007) as emotional investment, and the threat of interrupting human goals. This premise was used by Kristian Ruming (2009) in a study of a master-planned community in the Wyong Shire. Ruming interviewed the elite human actors central to planning policy (council employees, state planners, developers) to identify which non-human actors expressed the most agency in the design of the estate – pinpointing an endangered glider species and the landscape topography. By tapping into the embodied knowledge of Nangarin humans, a narrative of how non-humans interact with humans, and subsequently shape space, can be developed.

3.5.2 The Self-Tour

It is also important for researchers themselves to ‘push further into the felt, touched and embodied constitution of knowledge’ (Crang 2003:501). Keeping this in mind, a separate supplementary method was devised: regular self-tours of the estate conducted on a weekly basis 11 times between April 3rd and the completion of field work on July 31st. Immersion in the study area helps to understand the everyday rhythms and routines of the community (Cook 2003). Ingold & Lee (2006) support this, suggesting that frequent repetition of the same route leads the walker to notice tiny changes in their surrounds, and construct an ongoing narrative of place.

The fieldwork conducted on these self-tours was also devised with a mind towards exploring the 'beastly spaces' of the non-human (Philo & Wilbert 2000). One means by which to decentre the human is the study of ecological traces, which are markers of the presence of non-human networks within urban settings (Hinchliffe et al 2005, Power 2009). Hinchliffe (2007) was concerned with 'making things present'. Learning to make things present – in Hinchliffe's case water voles – involved becoming skilled in reading the landscape for other traces beyond a visual sighting. As such, the walks were also skewed towards biophysical prompts, using a field guide of Australian animals (Triggs 2003) to identify 'scats, tracks and traces' in the landscape. Hinchliffe (2007) notes that the use of a field guide enables the researcher to look at the landscape differently, and recognise what is present. Lorimer (2010:72) also stresses the point of learning-by-witnessing, and recording the 'momentary intensities of relation' between humans and non-humans.

Drawing from participant observation, self-tours were structured around a template for recording observations – this template has been included as Appendix G. To uphold the fluidity of relations between humans and non-humans, the walks were conducted at different times of the day (encompassing the hours of 6am and 8pm), different days of the week, and in varying weather conditions.

3.6 Processing & Analysis

Audio recordings of interviews were transcribed using iTunes and Microsoft Word softwares. To maintain confidentiality and an ethical responsibility to participants, the recordings were heard solely by the researcher. Transcribing was conducted in a controlled environment – the personal home of the researcher. Transcripts were then analysed using latent content analysis. Latent content analysis involves searching interview data for apparent themes (Dunn 2000). These themes were not given an initial rigid structure, but instead allowed to form naturally as they revealed themselves in the narratives of interview participants.

The GPS tracks were processed using the accompanying software package for the device. This software creates vector tracks, which are overlain onto Google Maps. There was no additional processing of these tracks – they were left raw, and presented on one map together to allow for a comparison of walking trends (see Figure 5.3).

The following two sections detail how the methodology was realised in *practice* – offering a brief introduction to the participants, and reflecting on the viability of the walking interview.

3.7 Introduction to the Participants: Demographics & Distribution

3.7.1 Demographics

Twenty-two semi-structured interviews were conducted with residents of Nangarin Vineyard Estate, from a possible sample of 94 occupied blocks. This equated to 23 percent of current Nangarin homeowners (at June 2012).

Of these interviews, 13 individual residents and eight couples took part in the interview process, equating to 18 males and 12 females. A detailed expression of participant attributes has been included below as Table 3.1. With respect to demographics, the average age of participants was 62, with an age range between 29 and 68. This correlates with forecast population trends for the Wollondilly LGA – a significant increase in the population aged 65 years and over is expected, increasing from 8 percent of the total population in 2001 to 18 percent in 2031 (NSW Department of Planning 2005). With the majority of interviewed residents in the later stages of life, and subsequently their careers, it was no surprise that eight of the households studied were retired residents. Reflecting critically on the sample, an older set of interview participants could be attributed to the fact that retired residents would have had more time to get involved in a project of this nature.

With respect to participant attributes, the stylising of quoted material in this thesis expresses the age of the Nangarin resident, as well as their occupation (or lack thereof) and length of residency in the estate. For example:

Kevin M. (63 years old, Retired, Nangarin resident for 6 years)

Of those residents that were employed, there was a strong trend towards employment in tertiary academic and management roles (see Table 3.1). This skewing may be the result of sympathy towards the research obligations of an Honours student – with these residents having been involved in tertiary education themselves. It is also likely that this trend towards employment in academia and senior management roles speaks towards revealing

the exclusivity of master-planned estates such as Nangarin. This idea of exclusivity was elaborated upon by Greg W. (53 years old, Council manager, Nangarin resident for 2 years):

CG: So you would say that you feel part of a community here.

GW: Yeah, absolutely. Only having been here a bit over two years, we were made to feel really welcome straight away. It's going to sound snobbish, but there's a – when you're living in an estate where the basic price of a property is at a particular price point, you know, there are professional people in here, and they just sort of seem to be the sort of people we would move amongst anyway. I know that sounds snobbish, it's not meant to be.

Such exclusivity was noted by Gleeson (2003) – while the Australian master-planned estate is rarely walled, exclusion is assured by the expense of buying into such estates. It is also possible that the sample is so highly educated because individuals with tertiary education are likely to have more of a concern for the natural environment and express willingness towards getting involved in a project of this nature – a trend which has been noted in similar studies (see Head & Muir 2006).

The length of residence for each participant is also highlighted in subsequent analysis to enable comparison of residents that have spent longer living in Nangarin estate with those who have been there a short time. The supposition is that the temporal intricacies of everyday life – seasons, years, and the relative changes in the landscape that have occurred – require sustained immersion in a landscape to be fully appreciated. With respect to non-representational theory, a temporal understanding of space is essential (Lorimer 2005).

Table 3.1. Participant Attributes – the attributes of the Executive Chair have been omitted for confidentiality purposes.

NUMBER	NAME/S	AGE	STREET	LENGTH OF RESIDENCE	PROFESSION
1	Kevin M	63	The Ironbarks	6 years	retired
2	Bruce H	57	The Ironbarks	2 years	Biology professor
3	Adele H	62	The Ironbarks	4 years	Psychology professor
4	Pat F	60	The Vintage	8 years	retired
5	Matt F Laura F	60 61	The Grange	7 years	Audio/Visual manager Teacher
6	Peter B	32	The Grange	4 years	Engineer
7	John R	48	The Vintage	11 years	Construction manager
8	Karen H	29	The Vintage	1 year	Biology professor
9	Boyd W	32	The Grange	2 years	Pilot
10	Kerrie W	45	The Grange	10 years	Police Analyst
11	Paul W Denise W	56 56	The Vintage	2 years	National logistics manager Housewife
12	Executive Chair	51	-	-	-
13	Sam P	62	The Vines	5 years	Herbicide manufacturer
14	Mike S	54	The Vintage	11 years	Manufacturing manager
15	George K	68	The Vintage	8 years	retired
16	Annette P	52	The Vintage	2 years	retired
17	Greg W	53	The Grange	2 years	Local Council Manager
18	John D Anita D	67 67	The Ironbarks	11 years	retired
19	Brian S	45	The Grange	9 years	Self-employed project manager
20	Jeff S	68	The Briars	5 years	retired
21	Sue T Peter T	60 63	The Ironbarks	4 years	retired
22	Annette C	50	The Vintage	11 years	Auditor

3.7.2 Spatial Distribution

Spatially, the participants were reasonably spread throughout the estate (Figure 3.2). There was some clustering, but this was largely a result of the snowballing recruitment.

Participants were likely to recruit their direct neighbours. With respect to the estate as a whole, at least one response was recorded from each of the five streets in the estate: The Vintage, The Ironbarks, The Grange, The Vines and The Briars. As a result, from the sample it was possible to gain a more holistic understanding of how nature has been inscribed in the everyday practices of residents at Nangarin Vineyard Estate.

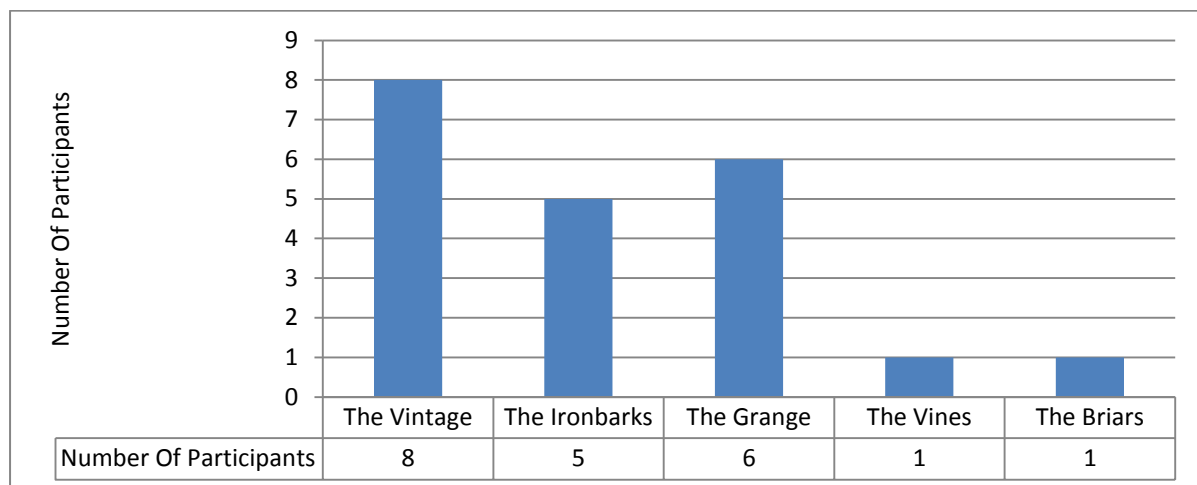


Figure 3.2 Number Of Participants, As A Function Of Street Of Residence.

3.8 Reflections on the Walking Interview

In terms of mobility, 13 of the 22 participants consented to the incorporation of a walking element in the interview schedule. As noted above, residents were prompted towards taking the researcher on a route that they usually walk, or a place where they feel close to nature. Seven of the interviews did not involve a walking element – the major reasoning behind this was a product of time constraints, the current weather conditions, a lack of mobility and topography. The incorporation of a walking element into the interview generally doubled the running time of the interview process, and due to availability for some participants allocating this much time was not possible.

Adverse weather conditions – in this case, rain – were cited as the reason for a lack of participation on two occasions. A study by Clark & Emmel (2008) showed a similar negative response towards weather conditions. However, on some occasions this was negotiated. As

a substitute, John R. instead drove me to where he walks, and used Google Maps to show me where he walked:

JR: No, I can show you on Google where I walk – that's the best thing to do I think.

Look, I'll take you for a drive over there to show you how to get in there. It's a bit too wet to walk... I won't go walking around in this! [laughs]

The other overriding limitation for mobility had to do with the topography itself. The design of the estate, where possible, has retained the natural slope of the land. This has resulted in quite a steep streetscape, as seen in Figure 3.3.



Figure 3.3 The undulating terrain of Nangarin, retained in the streetscape of The Grange (June 2012)

3.9 Conclusion

This chapter outlined the methodology chosen for this thesis. Ethical responsibilities have been observed where appropriate, most notably with respect to informed consent and confidentiality. All Nangarin residents were targeted as potential participants, and participants were recruited using a combination of letterbox drops and snowballing. The creation of a non-representational methodology is a challenging task, as it is largely non-prescriptive. Non-representational theory offers a 'loose, intellectual toolkit' for creating a methodology – and how this is manifested is at the discretion of the researcher (Law 2004:157). Enrolling the surrounding environment within fieldwork was a necessity when addressing how the hybrid space of Nangarin estate is used and shared by humans and non-humans. With the aims in mind, this thesis is utilising semi-structured walking interviews in conjunction with self-tours. The integration of mobility facilitates engagement with the surrounding environment, and effectively taps into the embodied knowledges of Nangarin residents. A mobile method also allows for an analysis of urban design and how the estate is used. The following chapter will begin the discussion of fieldwork results and analysis by evaluating urban design, regulation and governance.

4

The Rural Residential Estate: Urban Design, Regulation, Governance



4.1 Introduction

This chapter discusses design, regulation and governance in Nangarin estate. It is the first substantive results chapter, and sets the scene for subsequent detailed analysis of human-nonhuman interactions and zones of friction and traction. Drawing from Ingold (2011), this chapter is exploring how Nangarin estate is *built*. Building is a work of architecture, a transitive relation, the outcome of design (Ingold 2011:9). The chapter will sequentially analyse the urban design, regulatory framework and participatory governance of Nangarin Estate, and how these elements coalesce to create a material shell for how residents *dwell*. This dwelling will be explored in Chapters 5 and 6.

4.2 Urban Design

McGuirk & Dowling (2007) note that many master-planned developments in Sydney are aligned to lifestyle communities, with status and security less important drivers for residency. Nangarin Vineyard Estate markets a distinct rural lifestyle – designed with a view towards integrating elements of the natural landscape, providing community amenities in the form of a tennis court and barbecue area, and productive landuse in the form of an operational vineyard (Figure 4.1).



Figure 4.1. The community area as seen from The Vintage streetscape. This photo shows one of the dams, retained from the site's pastoralist history. Beyond the dam is the path of the central walking track, flanked by the main vineyard (March 2012)

In terms of urban design, Nangarin estate was established with a mind towards retaining the natural topography of the site. At the Development Application stage, building was divided into three zones – Zones A, B and C – based on the suitability for building. The schematic accompanying this zonation is presented in Figure 4.2.

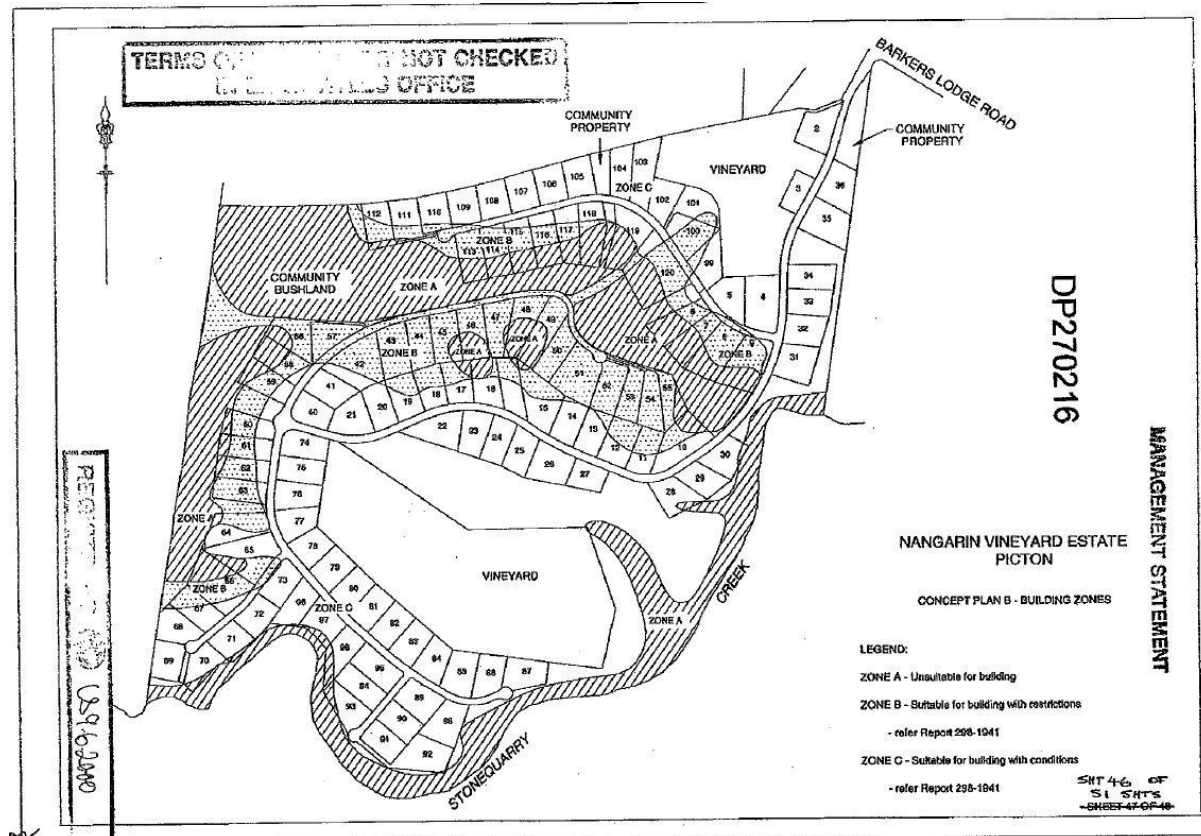


Figure 4.2. Nangarin Vineyard Estate Concept Plan B – Building Zones

Source: Parish Patience 2000:46

As can be seen in Figure 4.2, Zone A is community property, where building was deemed unsuitable and is restricted. The result is eight hectares of community land, incorporating 'bridleways along Stonequarry Creek and other rural and wildlife links' (Bradman Corporation 1997:5). Zones B and C are subdivided for residential use, and are suitable for building with conditions. It is a part of the DA that earthworks are kept to an absolute minimum, to maintain the integrity of the landscape. For example in Zone B, located on the ridge, house design is restricted in terms of cut and fill. Any building has to complement or enhance the 'natural' landscape – with respect to design guidelines, colour, building materials and fencing (Parish Patience 2000:8). What results is an undulating streetscape, one where the topographical and aspect conditions are markedly variable for each private block.

The impetus for following these building conditions was noted by Bruce H. (57, University professor, 2 years), who inherited a house on the sloped side of The Ironbarks that had been

built on a concrete slab. Due to the unsuitable design of his home, the management of Bruce's block became much more difficult with respect to stability and drainage:

Well if you look at [the] house next door, it's a house on stilts, and that's an appropriate design - whereas this house has been cut in. That's not right. It's a silly thing to do... I mean, this house is quite good and everything, it's very liveable and they have made good use of the view blah blah blah, but to cut the site and build a house on a concrete slab here is bloody stupid... But it was literally a waterfall coming over, coming down here it was like a river. No kidding. It was this deep [knee height] during thunderstorms. And it was just pouring over here. The big problem is you've got to disrupt the flow up there... So this is what I was saying, the house cutting in on this slope is just madness. Just madness. So I'm going to have to do something [laughs].

The plots themselves, as well as the scale of homes built on them, have a significant influence on subsequent interactions with nonhuman others. The 115 private blocks, each a minimum size of one acre, host large home structures that must have a minimum floor area of 200 square metres. Triple garages are common, driveways dramatic, and lawns extensive (see Chapter 6). With the surrounding environment in mind, the boundary fences between blocks are permeable post and wire fences – which allows for the movement of non-humans, as well as preserving the continuity of a natural vista (Figure 4.3). Continuing this theme, fences on property frontages must be 18 metres from the road verge. Typical block set-ups can be seen in Figure 4.4.

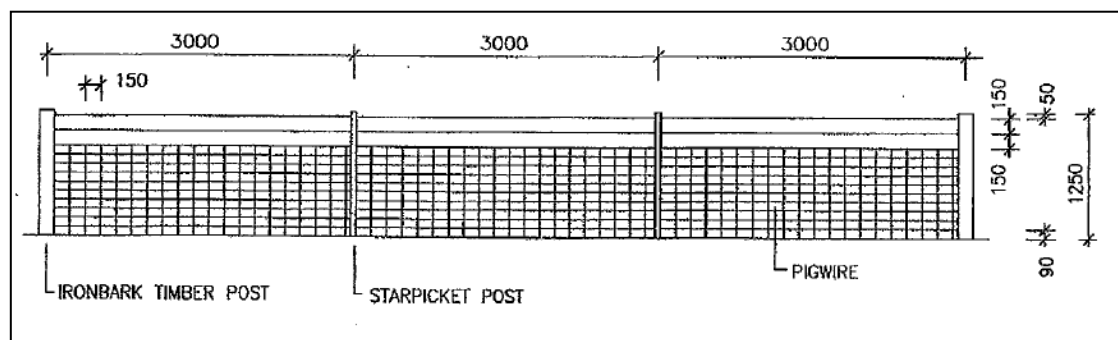


Figure 4.3 The concept schematic for a Ringlok brand fence design, as provided by the Community Management Statement. Fences are post and wire set-ups akin to rural property fences.

Source: Parish Patience 2000:47



Figure 4.4 Homes are 18 metres from the road, with lawn extending to the street verge. As seen in the final photo, this resident is attempting to 'grow' a fence, bypassing regulation (see Chapter 6), The Grange and The Vintage (April-October 2012)

With respect to communal space, a central hub has been built adjacent to the main vineyard, and contains facilities for the specific use of Nangarin residents. The provision of resident-only amenities is a common feature within the design of master-planned estates (Kenna 2010). For Nangarin residents, this hub provides access to a tennis court and a barbecue area (Figure 4.5). People who are not Nangarin residents are visibly excluded through the use of signs and locked gates – for which each resident has a key (Figure 4.6).



Figure 4.5 – The community facilities: a) the barbecue area, and b) the tennis court, Nangarin Estate (October 2012)



Figure 4.6 – Walking into this central hub is inhibited by signs marking it for the exclusive use of residents, The Vintage (March 2012)

Post-productive agriculture in the form of boutique vineyards has been noted by Abrams et al (2012) as a common feature of amenity migration. Located as a part of the zoning plan as Lot 3, the vineyard is owned and operated by Bradcorp, the estate developers. As stated by by-law 48.2 in the CMS, it is entirely separated from the residents themselves:

By-law 48.2: No proprietors or occupiers of lots in The Nangarin Vineyard Estate other than the proprietor or occupier of Lot 3 shall have access to the Vineyard.

Subsequently, due to this separation the vineyard was not in this thesis a focal setting for studying the interaction between humans and nature in Nangarin estate. However, residents were asked how they feel with respect the integration of the vineyard in the surrounding landscape. The response was overwhelmingly positive. Mark W. (51, Policeman, 10 years) was one of many to position the vineyard as a major feature in the landscape:

MW: If worse comes to worse, we can agree to bulldoze that and put olive trees in there, but it's Nangarin Vineyard Estate – not Nangarin Olive Estate, or Nangarin Cow Estate, someone has said we could put cows in there. So that's the main thing mate, is to preserve the integrity of that – because that's the future of the estate. Most people are very happy with that, otherwise why would you buy here?

This suggests that beyond views of post-productive agriculture as a marketing feature for the estate was the particular materiality of that agricultural activity: vineyards as a specific, scenic form of production that enable forms of cultural capital (Bourdieu 1984) to be accumulated for the estate above and beyond what might be possible via other agricultural land uses.

In terms of estate design, the other major feature is the streetscape. There are five streets in the estate – two major streets (The Vintage, The Grange) and three offshoot cul-de-sacs (The Ironbarks, The Vines, The Briars). The streetscape has been designed so vehicles can only enter and exit Nangarin via one road (The Vintage). The movement of vehicles is regulated through a residential speed limit (50 kilometres an hour) and the proliferation of designed slow points (see Figure 4.7) for the safety of both human and non-human users.



Figure 4.7. An example of road signage in the estate, presented to limit traffic speed. Here the road has been intentionally dog-legged to slow down cars, The Vintage (October 2012)

Indeed, the awareness of human and animal usage on the road and immediate verge is quite visible in the landscape. Upon arrival to the estate, a visitor is instantly informed by road signs of the likely presence of children, kangaroos, wombats and echidnas (Figure 4.8).



Figure 4.8 Welcome sign to Nangarin. Upon arrival, visitors are instantly cautioned to expect children and non-humans will be sharing the roadway, The Vintage (October 2012)

Nangarin estate also provides an informal wildlife corridor through the common property, running across the ridgeline between The Ironbarks and The Grange. This corridor happens to cross the major road in the estate, The Vintage, and is marked by kangaroo warning signs (see Figure 4.9).



Figure 4.9 The wildlife corridor, marked by kangaroo warning signs, The Vintage (March 2012)

As observed, this corridor is actively used by kangaroos (Figure 4.10).



Figure 4.10 Kangaroos using the wildlife corridor, The Vintage (June 2012). This particular group of kangaroos was captured following a morning interview with Paul W. Paul, who lives adjacent to the wildlife corridor, sees kangaroos and wallabies ‘every morning and every afternoon’.

The impetus for providing animals with a safe passage through the estate is particularly important as the adjacent road system (Barkers Lodge Road) is a particularly common site for roadkill (Figure 4.11):

CG: I was wondering if you'd ever seen a stray kangaroo on the road, or anything like that?

KM: Never seen a carcass... Unlike when you go in the town, you'll see, on Barkers Lodge, you'll see wombats and kangaroos, quite a few wombats and that's a shame. That's an 80km zone, but so many people – more than 100kms. We go swimming early, to the local pool, and we leave here 5 o'clock in the morning. I'll get tailgated every morning. (Kevin M., 63, retired, 6 years).



Figure 4.11 Roadkill observed heading towards Picton from Nangarin Estate on Barker's Lodge Road, Picton (September 2012)

Continuing this theme of integrating the use of the estate for non-humans, the Community Management Statement presents a recommended species list of trees and shrubs for planting within in the estate, expressed as a series of 'landscape standards'. With regards to the previous landscape, one of Wollondilly Council's stipulations for the Development Application was that building did not modify patches of remnant Cumberland Plain Woodland, which run along Stonequarry Creek (Bradcorp 1997:28).

The use of the estate, and subsequently how the estate design mobilises its human and non-human residents, will be further discussed in Chapters 5-7.

4.3 Regulatory Framework & Participatory Governance

Beyond urban design, it is important to explore how humans negotiate this space through the frameworks of regulation and governance. There has been a general shift from government to governance in management structures – non-participatory forms of government are now considered illegitimate, ineffective and undemocratic (Bulkeley & Mol 2003). In terms of master-planned estates, this trend is reflected in the establishment of Community Title. Community Title can be defined as the subdivision of land for residential developments with shared property, where the estate is maintained by residents rather than the local council – although it is located and within part of a Local Government Area (Kenna & Stevenson 2010). In such arrangements residential lots are still sites of private jurisdiction – regulated by Torrens Title.

Bajracharya & Khan (2010) note a long history of resident community associations taking over once the developer has completed the estate. After 75 percent of lots were occupied, Bradcorp handed the management of the estate over to the Nangarin community in 2001, and an executive committee was formed. Nangarin's executive committee, comprised of up to nine Nangarin residents, makes decisions on behalf of the lot owners – acting as an intermediary between the Strata manager and the Nangarin community. In terms of roles, the executive committee oversees the day-to-day operation of essential services. The nine members of the committee are assigned portfolios:

- Chairman
- Treasurer
- Secretary
- Lantana monitor
- Fire monitor
- 2 sewerage monitors (Treatment monitor, Electrical monitor)
- 2 general members

At face value, the portfolio of the executive committee brings the issues of fire, lantana and the sewerage system (represented by the treatment and electrical monitors) to the fore.

Residents are given the opportunity to contribute by presenting items for the agenda of committee meetings. Nangarin runs its own community website, and residents have the opportunity to raise any concerns through email. Residents can also contact the Strata manager directly. The major site for input is the Annual General Meeting (AGM), held each year in November. Doubling as a Christmas party for residents, the AGM involves the election of a new committee, and the chance for residents to raise any issues with the majority of residents present. The AGM has not been a site of controversy, which was interpreted by Matt F. (60, AV manager, 7 years) as a sign that residents are happy with how the estate is run:

MF: The AGM's are not very controversial, or they haven't been to date – which shows that there is satisfaction with the way that the estate's being managed.

Brian S. (45, project manager, 9 years) shared this sentiment:

BS: There are people on the committee now that are genuine smart operators; they have the interest of our local community at heart... It's like when something's not broke, don't fix it, and they seem to be doing a good job.

Upon arrival to the estate, each resident is introduced to the regulatory framework of the estate through a welcome package, which contains an introductory letter from the Executive Committee (Box C). The acceptable behaviour of residents is suggested through the covenants of the Community Management Statement – which acknowledges the integrity of the surrounding environment. For example, keeping pets in new amenity

landscapes can disrupt wildlife migration patterns (cf. Abrams et al 2012). Consequently, the responsible keeping of animals is a strict site for regulation – as can be expected in an estate where living amongst nature is an important part of the estate theme. All animals are expected to be restricted to residential lots, especially cats:

By-law 33.4: All animals must be contained wholly within your own lot, and when taken upon community property any dog must be on a leash. Dogs may only be kept on a lot if they are housed in a dog-proof area, behind the main building on any lot. Cats must be kept inside the house at all times, and not allowed outside.

When asked about living under community title and within a regulatory framework, most residents responded positively, and were supportive of the rigid structure provided by the covenants. Boyd W. (32, Pilot, 2 years) and Matt F. suggested that community title was an important factor in facilitating a sense of community amongst residents:

BW: Well, I suppose you could say it's a little bit restrictive – but in the other sense the idea of the CMS is to ensure harmonious living. You know what the little blurb says at the start; effectively it's for harmonious living in the estate. There's building standards, regulations and things you need to comply with. Basically, it's just to set a standard in the estate for visual appearance, but also there's still privacy and peace and quiet and that sort of thing – that's what it's there for. But yes, it can be restrictive sometimes.

-

MF: The other thing I think with a community title estate like this is that you develop a common interest in the community lands, and how best to maintain them. We all appreciate the investment that the broader community lands are, and the value of the properties etcetera. Just that good intent to do the best by the whole estate.

Box C: Letter of introduction for new residents

Dear Resident,

On behalf of your neighbours and the Nangarin Executive Committee, I would like to welcome you as our newest resident of the Nangarin Vineyard Estate.

The Estate has been operating as a Community Estate since 2001 when the original developers, Bradcorp formally handed over the management to the residents at the 2001 Annual General Meeting. As a resident, you now belong to that Community and are able to contribute to the effective running of the Estate. Even if you do not wish to be actively involved in the Executive Committee, your co-operation and compliance with the Community Management Statement will ensure that the Estate retains its peaceful rural environment and ensures the longevity of the environment and equally as important to all residents, preserves your investment.

You are asked to log on to the Estates' website www.nangarin.com and register your email address as soon as possible. This will ensure that you are able to book the facilities, including the Tennis Court and Barbecue area, as well as being kept up to date with activities such as clean up days, Christmas functions or the occasional 'no particular reason get together.' You can also register for the Estate newsletter which will be forwarded to you several times throughout the year.

The website will also provide you with links to local attractions, some history and plenty of information regarding the Operation of the Estate and an electronic copy of the Community Management Statement. You will also be able to communicate with members of the Executive Committee with suggestions or questions via info@nangarin.com and even contact myself directly via email on [\[email address removed\]](#)

There is one key that gives you access to the Estates facilities, if you have not received your key at settlement, can you please contact me directly and I will arrange for one to be made available.

Again I take this opportunity to formally welcome you to the Nangarin Community and I look forward to working with you to preserve the unique environment that is, the Nangarin Vineyard Estate.

When asked if regulation affected how they lived in the estate, the majority of residents interviewed believed that Community Title and the covenants had no negative effect.

Regulation was cited as being 'reasonable' and largely 'common-sense':

KW: It has no impact on me whatsoever, I don't even think about it. You pay your fees, and that's it. I couldn't care less [laughs]. (Kerrie W., 45, Police Analyst, 10 years)

-

LF: I don't feel there's any restrictions at all. You read through it, you accept what's there – the type of fences, the number of animals is reasonable. I just feel that it hasn't felt restrictive in any way. (Laura F., 61, Teacher, 7 years)

-

KM: I feel most of that contract, the charter, is common sense... We found there's a lot of leniency here. And its 95% common sense. You can have dogs, you can have chooks, you can have a horse! Anything that someone would want on 2 acres, you can have. (Kevin M.)

This consensus suggests that the majority of residents were like-minded in their approaches towards living within the confines of a semi-rural estate framework. However, it is important to note that regulation is not enforceable. This was noted in discussion with the chair of the Executive Committee (EC):

EC: One of the issues they've found is the ability to be able to enforce strata regulations. It's almost a toothless tiger.

It is largely the result of residents' goodwill as to meeting these guidelines. When these guidelines are not met, there is the potential for neighbourly conflict. This has important consequences for living with nature in the estate – and will be elaborated upon in later chapters.

4.4 Conclusion

This chapter identified key aspects of the materiality and regulatory structure of Nangarin Estate, with a mind towards grounding this thesis in urban theory. With regards to the rural residential estate, a sensitive approach towards the environment in building design and retaining expanses of the remnant bushland has created a unique setting that invites a new intertwining of humans and non-humans. This overarching framework has far-reaching consequences for how the human residents of Nangarin estate can use and construct space.

Returning to Ingold, this chapter has detailed how the estate was *built*. Upon arrival and residency at Nangarin estate, each resident was presented with the same setting and the same regulatory guidelines. However, there are inevitable differences that will arise between the way humans *dwell* in this space – how they inscribe meaning to their surroundings, and subsequently how they enrol these surroundings in their everyday rhythms. It is these differences in practice that will inform the viability of urban design experiments such as Nangarin estate. The following two chapters detail how Nangarin residents have enrolled the estate in their everyday rhythms – how they engage with the estate, and how they have set about to construct a garden space. Attention turns first to how the materiality of the estate was negotiated through walking.

5

Streetscapes & Scrub: Walking within Nangarin Estate

5.1 Introduction

The following two chapters detail the complexity of interactions that take place between humans and nature within the setting of Nangarin Vineyard Estate. For residents living in an estate setting that has incorporated extensive rural landuse and remnant bushland within a residential framework, the interview schedule was largely concerned with how the occupants of Nangarin Vineyard negotiate the space – their homes, and the estate setting as a whole. This movement was understood as a level of interaction that residents shared with the surrounding environment and its non-human inhabitants. As well as the retelling of experience through a semi-structured interview schedule, the inscription of the walking element into the interview process allowed for an embodied analysis of this negotiation of space.

This chapter explores how Nangarin residents interact with the estate via an evaluation of the potential for walking exhibited by estate design. The argument of this chapter is centred on how walking is a territorialising practice (Waitt et al 2009, Gill et al 2009). The walking interview revealed these territories – which have important outcomes for how humans interact with nature in this setting.

5.2 Topography & Temporality

The walking interview explored place-based embodiment and engagement – but in planning and designing interviews the inherent difficulties of traversing such a variable streetscape had been overlooked. This became a process of negotiation, because the capacity and willingness of each participant to partake in a physically exerting walk varied. For some residents, like Matt F., the streetscape was a positive fitness challenge:

MF: Look, I think it's as good as a gym [laughs], you've got a very undulating domain as such.

CG: It is quite a walk, I'll say that.

MF: And it's a half an hour walk that you can do. So in 30 minutes you can go through a whole series of heart rates, depending on which track you choose to take through it.

For others, the extent of the slope was preventative. Annette P. (52, housewife, 2 years) was already limited in terms of her mobility, and this was exacerbated by the topography:

AP: I use the track a lot when the kids are out, particularly when they were little in pram – if they got a bit tired you could put them in there, and it's a nice walk. Bit hard up the hill, I tend to go up to halfway and then back because that hill's tough... I just find the incline a bit hard, particularly with the pram, so I sort of stick to that level part.

It is also important to remember that the average age of residents involved in this study was 62. This brought inherent limitations to both the route and the duration of the walk.

It is also important to consider when the interviews took place – acknowledging the importance of temporality. The interviews and associated walks largely occurred on weekends between 9am and 3pm, in the (Australian) winter months of June and July. The weather for each interview was recorded using the 'Weather' application on an iPhone 4S. Walking around the estate in the winter months was not a common occurrence – inhibited by the cold and by daylight savings. The seasonal influence on mobility was noted by Annette C. (50, Auditor, 11 years) and Matt F.:

CG: I was wondering how you use the estate, so besides your home where else would you go?

AC: Oh, I walk, I walk my dogs – not so much at the moment, because when I get home it's too dark and it's freezing, right? In summer I'll get home of an afternoon and grab the boys and we'll go for a walk right around the estate, right round the back of the sewerage, all the way around.

-

MF: The unfortunate thing for me is during winter, I'm leaving home in the dark and coming home in the dark.

If it had have been possible to undertake the schedule for this thesis in the summer, it is expected that the willingness of participants to walk would have been greater.

5.3 Walking In A Designed Landscape

Before discussing the walking practices of Nangarin residents, it is important to acknowledge the materiality of design, and how this works to facilitate mobility for residents of Nangarin estate. At face value, Nangarin expresses the walking potential akin to a gated suburban estate (cf. Burke 2001). Indeed, the estate is symbolically gated – spatially bounded by productive landuse, the physical boundary of Stonequarry Creek, and a major regional road (Barker's Lodge Road). The internal design of secure suburban estates provide 'next to no pedestrian facilities, other than 'shared roadways' of cul-de-sac design' (Burke 2001:146). Similarly, Nangarin estate is built around five streets, all of which end in cul-de-sacs. Additionally, there seems to be few motivations for trip-making in the estate, other than accessing the community amenities. In other words, it is very unlikely – or even easy – to walk from Nangarin estate out into surrounding areas. Early experiences of negotiating Nangarin myself during self-tours is discussed in Box D.

Box D. Nangarin as an 'outsider' – first impressions

The negative stigma of entering a bounded community – where resistance to my presence was already an expectation – was further exacerbated by the estate design. The materiality of Nangarin has effectively designed visitors out. I first entered Nangarin in my car, turning in off Barkers Lodge Road. If you are not a resident there are no places to park a car, besides jutting out on the street verge. This rigidity became more apparent as I began to walk the estate. The streetscape is bare – besides the road itself, there are no footpaths (Figure 5.1). Indeed, the only visibly obvious place to walk – this central track around the vineyard, the dams and the sewerage system – is both physically and symbolically gated. As an outsider, the last thing I wanted to do was create any problems and breach these restrictions.

As I increased the frequency of these self-tours, the task of walking Nangarin's streetscape became very familiar very quickly. Ultimately, following the walking interviews I was able to access the embodied knowledges of Nangarin residents, and effectively 'unlock' the restricted mobility of the estate.



Figure 5.1 The Vintage streetscape, designed with an absence of footpaths, enrolls the road as a ‘shared roadway’ – similar to that of a secure suburban estate, The Vintage (July 2012)

Where Nangarin is different to a gated estate is the integration of the natural landscape into the streetscape. While the Development Application boasts bridleways along Stonequarry Creek and bush tracks, these are not demarcated in the landscape and have ambiguous, elusive entrances. Figure 5.2 shows the entrance to a pathway along Stonequarry Creek, which traverses the bushland between The Briars and The Vines. It is largely self-motivation that governs the interaction with these natural spaces for Nangarin residents.

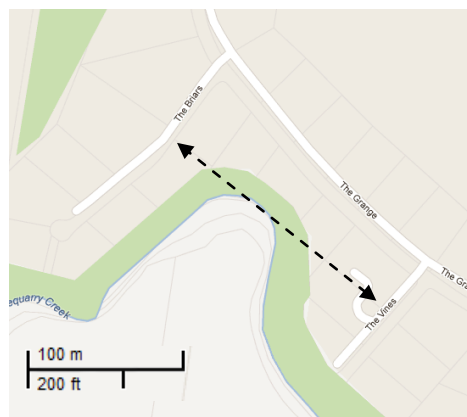


Figure 5.2 Informed by residents, ambiguous entrances to the bush could be seen, The Vines (July 2012)

The design of master-planned estates has an overriding influence on the capacity for residents to enrol the surrounding environment. The walking interview became an evaluation of whether or not the mobility of Nangarin residents was centralised by design.

5.4 Walking & Territorialising

For those 13 participants that did walk, the GPS tracks that were produced are shown in Figure 5.3. Each flag icon denotes the beginning of a new track.

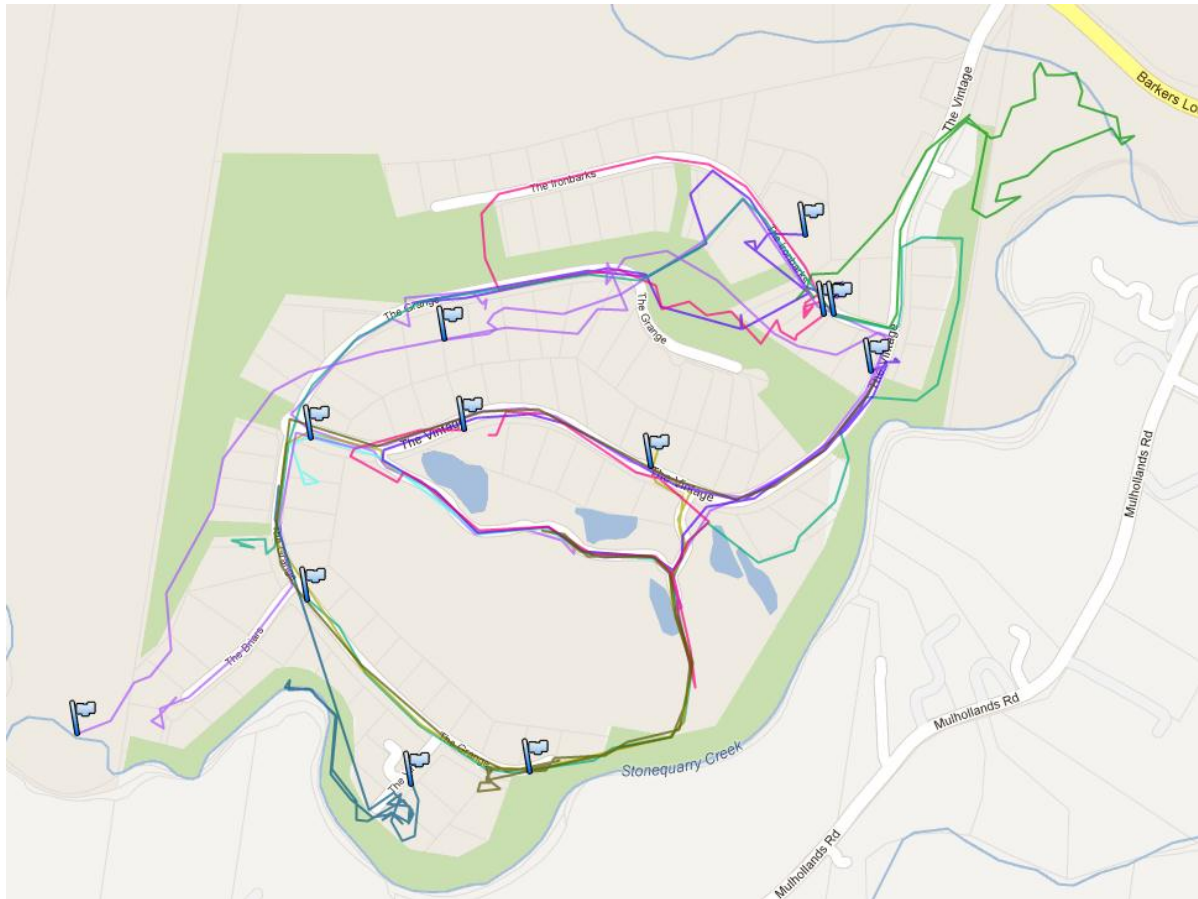


Figure 5.3 Raw GPS tracks as produced by the QStarz software package. Each of the 13 tracks is represented as a different colour, and combined in the one output to visualise walking trends
Base Map Source: Google Maps

Regular habitual walking in place is a process of boundary making and territorialising, of negotiating ‘the possibilities of making dis/connections with human and non-human worlds’ (Waitt et al 2009:44). Walking is a spatialising practice of place-making, and involves the user of urban space following “the thicks and thins of an urban ‘text’ they write without being able to read it” (de Certeau 1984:158). These thicks and thins are weighted paths followed through space, an expression of spatial rhythms. Following this, the GPS tracks become an overt expression of the thicks and thins of Nangarin estate, and the subsequent boundaries made by Nangarin residents.

The tracks express a clear correlation with ‘designed’ mobility. While the duration and length of walks was variable, on the whole participants adhered to the streetscape, and incorporated the central track around the vineyard. Denise W. (56, housewife, 2 years) noted the convenience offered by the streetscape:

DW: You can go for a safe walk, you know? You don't have to go out on the road there [Barker's Lodge Road] and try to do the traffic, you can easily walk – well, you can go round and round and round if you want, you can walk as many kilometres as you want safely, which I think is good.

This account also highlights how participants viewed Nangarin as a safe, controlled space, separate from the noise and danger of public roads 'out there' beyond the estate's perimeter.

Use of the community-exclusive facilities – the tennis court and the barbecue area – was another site worth exploring. When looking at the estate, these features were a major motivating factor for trip-making, and for leaving the home space.

Keeping in mind the continuity of natural topography, the central walking track (Figure 5.4) has been built on the flattest region of land in the estate – and is a more useable site for Nangarin residents than the grade of the roads.



Figure 5.4 – The central walking track leads the walker along a pathway adjacent to the vineyard and dams. This photo captures the 'flatness' of the pathway, compared to the streetscape, Nangarin Estate (October 2012)

There was consensus that the availability of a communal area was a positive feature within the landscape. George K. (68, retired, 8 years), who regularly entertains large groups of people in the estate through his church group, was quite vocal about the usefulness of the space:

GK: We use the barbecue and tennis court facilities. We've got a big family, and it's a terrific venue if you want to have a gathering of your family. It's away from the house, you've got the wide open spaces, you've got a facility which you can use over there. It's like being out at a National Park or something like that.

Usefulness was also noted by Annette C., who has a particularly challenging block in terms of topography. The community area provides her with a useable space for training her dogs:

AC: I take my dogs over there to train them for my dog showing, because I've got so much more land. Because our land is not flat, it's hard to do that, and if I want to separate them I can't do that because the other one is on the back of the other one's tail. If I just want to train one I can take him over the other side, and I've got all this land that I can train him with.

Here a very particular entanglement of humans and nonhumans unfurled: as a participant recounted a specific form of mobility to a flatter piece of the estate topography where animal training took place.

Extending the argument to a different form of mobility, the driving practices of Nangarin residents were viewed as a zone of friction. When residents did not adhere to the regulatory framework and inhibitive design of the streetscape, the movement of vehicles subsequently endangered non-humans – particularly when considering the main wildlife corridor in the estate requires the non-human to cross the busiest road in the estate. Use of the road was certainly more-than-human – residents recounted experiences of slowing down for snakes, echidnas, wombats and duck populations. Annette C, whose residential lot borders the wildlife corridor, had a place-based embodiment with the driving practices of fellow Nangarin residents. She discussed her passionate feelings when a kangaroo was hit in the estate:

AC: About a week and a half ago I was driving out of the estate and someone had hit a kangaroo. That really hurts me, that really hurt – because they won't slow down... If you slow down, and they tell you to do 50 going through there, you will see them. If they come out, you will see them, because normally they don't just hop out. You will see them sitting on the side of the road. But there are people in here that just fly through. They don't care. Don't live here. Go and live somewhere else where there's no animals, and you don't have to worry. All you've got to worry about then is the police. That's my attitude, might be a bit hard but that's how I am.

Peter B. (32, engineer, 4 years) noted in fact that the undulating streetscape increases the impetus for drivers to speed (Figure 5.5):

PB: You get into the car and you cruise down the road, and it's all downhill on the way out. There's a few sweeping bends, and obviously the chicane. It's important that we're attentive when we're driving in the estate. I haven't hit an animal, which is good [laughs].



Figure 5.5 Designing an estate that retains natural topography indirectly creates hills and chicanes, encouraging cars to speed, The Grange (May 2012)

Although the majority of residents interviewed displayed an effort to adhere to the estate theme, deviance from regulatory structures by just some residents challenges the success of the unique design qualities of Nangarin estate and similar urban frameworks.

Because the aim of this thesis was to examine Nangarin Vineyard Estate as a vehicle for providing a new way of living with nature, it was important to evaluate walking practice beyond the streetscape, and explore one point of difference offered by the marketing of Nangarin estate – the proliferation of remnant bushland. While this thesis attempts to analyse a hybrid landscape from a relational ontology, this does not discredit the influence of ‘nature’ discourses expressed by Nangarin residents on how they interacted daily with the environment. There is an influential fixity surrounding ideas of nature, or ‘nature-talk’, and ‘far from having put the idea of nature to rest, critical geographers still have important things to discover and say about it’ (Castree 2004:194).

To gauge the nature-talk of Nangarin residents, residents were asked what made the estate feel natural to them. Responses were varied:

BH: *The trees, and the birds. There’s still a reasonable amount of remnant bushland left – original trees, plus regrowth – and the birds. They’re the most obvious natural elements.*

-

AH (62 Psychology professor, 4 years): *The thing I like most, I guess, is this rolling countryside. This type of countryside is what I like most of all. It’s by definition ‘natural’.*

-

MF: *I think for us, where we’re located, the only thing opposite us is bushland. So that, plus your own sort of bushland to the back of the property. For me, the vineyards are a very important aspect of that – that view of the vineyards is quite serene.*

-

KW: ...I think it's those pockets of community land that are throughout the estate. You can go to other acreage estates, and I feel some – not all – but a lot of them it's like everything has been bulldozed, and it's house after house after house. I love the fact that there's bushland. Wherever you see bush over there, no-one can build there – you know, it's not a block of land. I think that's really appealing to me.

As one of the prompts for the walking interview was a place where residents felt close to nature, this 'nature-talk' informed the resultant walking routes. This correlation was noted by Waitt et al (2009) in a study of local engagement with urban bushland. Nevertheless, while the natural surrounds were clearly cited as an essential aspect of the natural vista and the estate aesthetic, 'nature' was an uncommon inclusion in the route of walking interviews. Both Sue T. (60, retired, 4 years) and Pat F. (60, Teacher, 8 years) expressed a reluctance to use the space:

CG: Do you use the community bushland at all? I was wondering.

ST: No, no.

CG: Is there a reason for that?

ST: No, just not interested in bushland [laughs]. I don't know what I'd do in the bushland!

-

PF: Um, I'm not a bush person. I like the groomed lawn [laughs]. I suppose in terms of insects, and scratchies, and birds and all that sort of stuff I'm not really a bushwalker. I'd prefer to walk on the path that's there – you know, you can see what's on there. Even though it's a lot of duck poo sometimes.

The estate exhibits different 'natural' settings: from sporadic gums with an invasive-riddled understorey to secluded, preserved sites of remnant Cumberland Plain Woodland. The corridor between The Ironbarks and The Grange is the former, and includes easements for walking (Figure 5.6). The use of these easements, *human* territories, rather than through bushland itself was integrated with walks around the Nangarin streets.

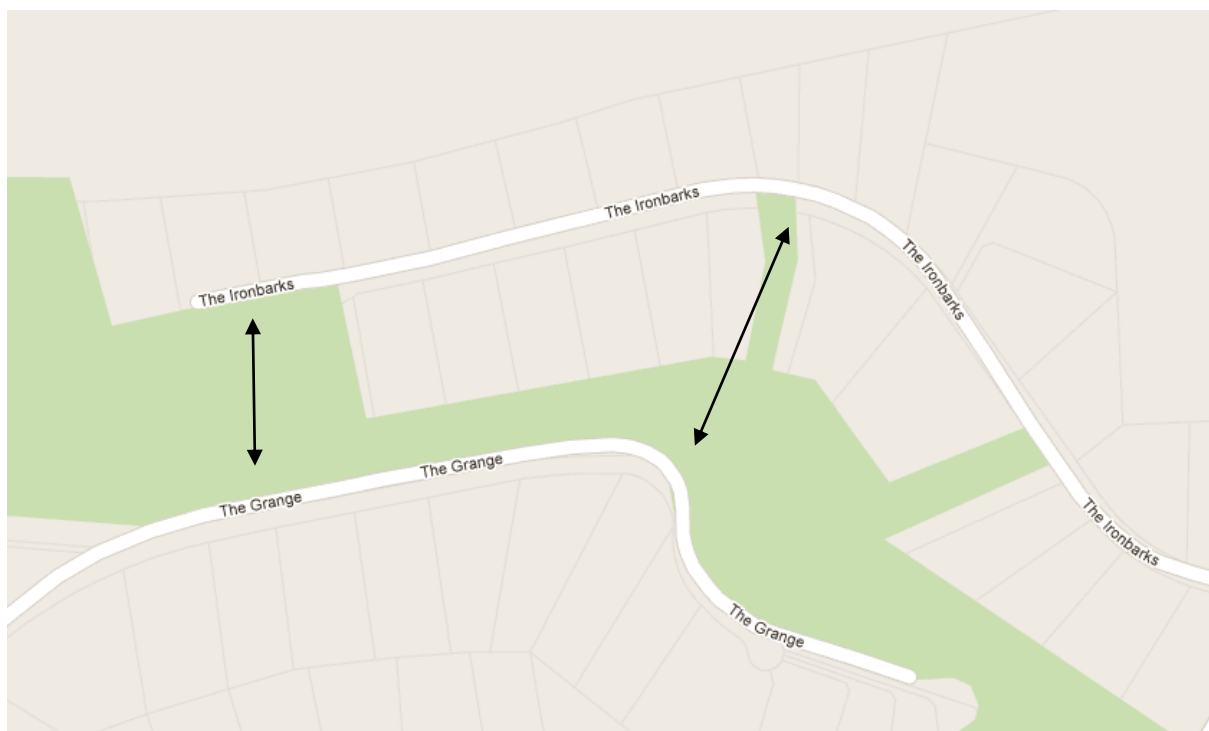


Figure 5.6 – An easement between The Ironbarks and The Grange. It is quite steep, and Laura F. said how this affected her use of it – “sometimes we go down that way [the bushland], I’m just not keen on walking back up that hill”, The Ironbarks (August 2012)

The pleasure of walking in nature spaces was informed by the agency of non-human animals (Waitt et al 2009). There was an excitement in witnessing the movement of animals. While on the walking tour, those who were 'bushwalkers' expressed a place-based knowledge of non-human movements, able to notice traces of animals in the landscape. Kevin and Lindsey M. (both 63 years old, retired, 6 years) used visible traces to hypothesise what animals had been inside the bushland adjacent to their house:

K: Now we think that because of the droppings, we think a few roos come through here. It's not fox poop, could be wombat...

L: That's probably a wombat hole here.

K: Could be. That could easily be a wombat hole. For sure.

Sam P. (62, Regulatory Manager, 5 years) also noted that where the grass had been chewed indicated the presence of kangaroos:

SP: You can see the tips of the grass, kangaroos have been through here. They've been squared off a bit.

CG: Oh, OK. That's a way you'd be able to tell?

SP: Yeah, you can tell if the tops have been chewed off a bit. The kangaroos have been having a bit of a chew of that kikuyu.

These walkers were keen to show the researcher a 'secret' side of Nangarin. Sam P. lives in The Vines, adjacent to a walking trail along Stonequarry Creek. While his opportunities to walk were limited by employment, Sam showed me a bush trail he believes very few people utilise:

CG: So you don't think that other residents would use this at all?

SP: I don't think so. I have seen people walking along here, but I just think everyone probably has pretty busy lives and they don't get to walk. A bit like us, we don't get to walk much these days because we're so busy. Those that have dogs tend to just walk

them around the streets of the estate – not that there's many streets – or round down to the barbecue area as you've seen I'm sure.

Walkers were keen to engage with non-humans, enrolling experiences of being a part of non-human rhythms with their enjoyment of walking around Nangarin estate.

5.5 Territories & the Non-Human

Non-humans played more than a passive role in how residents walked – they were also active in territorialising mobility. These territories were determined as 'beastly spaces', sites where a non-human is the governing agent.

The visual presence of non-human animals was very difficult to capture in photographic form (Box E), but multiple bird species, rabbits, foxes and kangaroos (dead and alive) were observed.

Instead, the 'scats, tracks and traces' (Triggs 2003) of non-humans were sought in self-tours of the estate, and cross-checked with a field guide. Figure 5.8 shows some of the variety in scats, tracks and traces observed in Nangarin estate.

Box E. The Fleeting Nature of Non-Human Encounters.

As self-tours began, I was eager to capture the movement of non-human actors in photographic form. This was much more difficult than I had anticipated. Non-humans observed had an inherent elusivity – once I had spotted a group of birds or a rabbit or fox darting across the street, by the time I got my camera out they had gone. Non-humans also negotiated my presence at certain proximities – the closer I got to be able to take a good photo, the more likely it was that the non-human subject would flee. This was very frustrating. As a result, it was rare to capture encounters with non-humans in photographs (Figure 5.7).



Figure 5.7 An encounter with a rabbit. Capturing this photo alone involved me chasing the rabbit, and negotiating the distance from which the rabbit would allow me to take a photo, The Grange (May 2012)



Figure 5.8 Various scats, tracks & traces observed on Nangarin self-tours: a) attributed to a wombat, b) scats of a fox (LHS) and a rabbit (RHS), c) more visually obvious non-human traces – dead animals, here showing a bluetongue (LHS) and a kookaburra (RHS), various streets (March-October 2012)

It is far beyond the scope of this thesis to attempt a comprehensive expression of non-human agency, incorporating multiple actors and multiple relations. Indeed, there is almost an infinite amount of subjects, from breezes to microbes, chemicals to clouds. Semi-structured walking interviews were useful to tap into the embodied experiences of Nangarin residents, and consequently revealed the dominant non-humans in the landscape (Ruming 2009, Power 2007). This would at least approximate how nonhumans enact their agency in everyday interactions with human residents. Two such examples were lantana and snakes: both of whom territorialised potential pathways.

Combined with the previously discussed limitations presented by street topography, the majority of the community bushland within Nangarin estate was overgrown with lantana (*Lantana camara*), further restricting the appeal of use. The agency of lantana – an invasive weed of national significance – has effectively monopolised the community corridor as a beastly space, as shown in Figure 5.9.



Figure 5.9. A 'beastly space': lantana growth in the community bushland, looking down from The Grange (July 2012)

Using the streetscape and community pathway over the bushland was generally the result of ease of use, as voiced by Annette C and Boyd W.:

CG: Do you use the community bushland at all?

AC: I used to. When we first moved in here, I used to walk.

CG: So in the bush?

AC: Well you can't really go through the bush, because you can't get out, right? You just can't get out. Over the last 10 years, just say beside us in that community corridor. That's gotten so overgrown.

-

CG: Do you have any relationship with the community bushland at all?

BW: Um, no not really. I'd probably say there isn't really any. I mean, there is, but it's not... I wouldn't say that there's any bushland that's readily available or there encouraged to be used.

As well as this, the potential presence of snakes was a commonly cited factor by residents for not actively engaging in the bushland. Snakes were seen as a threat in the landscape, something to be avoided, as discussed by Mike S (54, manufacturing manager, 11 years):

TS [Mike's wife, Therese]: We used to go down to the creek at the back here until we were told there were a lot of brown snakes down there. We don't go down there anymore.

MS: It's actually quite beautiful down there, the stream is gorgeous, but once we found out just how extensive potentially the brown snake population is down there it lost its shine somewhat.

The brown snake population becomes the governing agent of this 'beastly' bush space. The agency of snakes, however, had a temporality:

CG: Do you use that bushland at all?

KW: Again, it's kind of seasonally dependent. Like, I don't like going deep into the bush in summer because I am scared of snakes and I won't let the kids do that.

The snake-governed bush is only a beastly space in the summer, reflecting when snakes are active.

As well as this, the night was predominately a beastly space – reflecting everyday rhythms of Nangarin residents (see Chapter 6). Gallan & Gibson (2011) theorised the agency of the night, referring to the night in urban space as a ‘threatened ecological niche’ that some social movements have sought to protect (from light pollution especially). In Nangarin, there has been an effort to retain the ‘dark night’ through the sparseness of streetlights (Figure 5.10). This was noted by Greg W:

GW: I’m not one who thinks that there aren’t enough streetlights, for instance. This is essentially a rural estate – I don’t think the same standard should apply in terms of a streetlight every 20 metres or whatever the urban standard is.

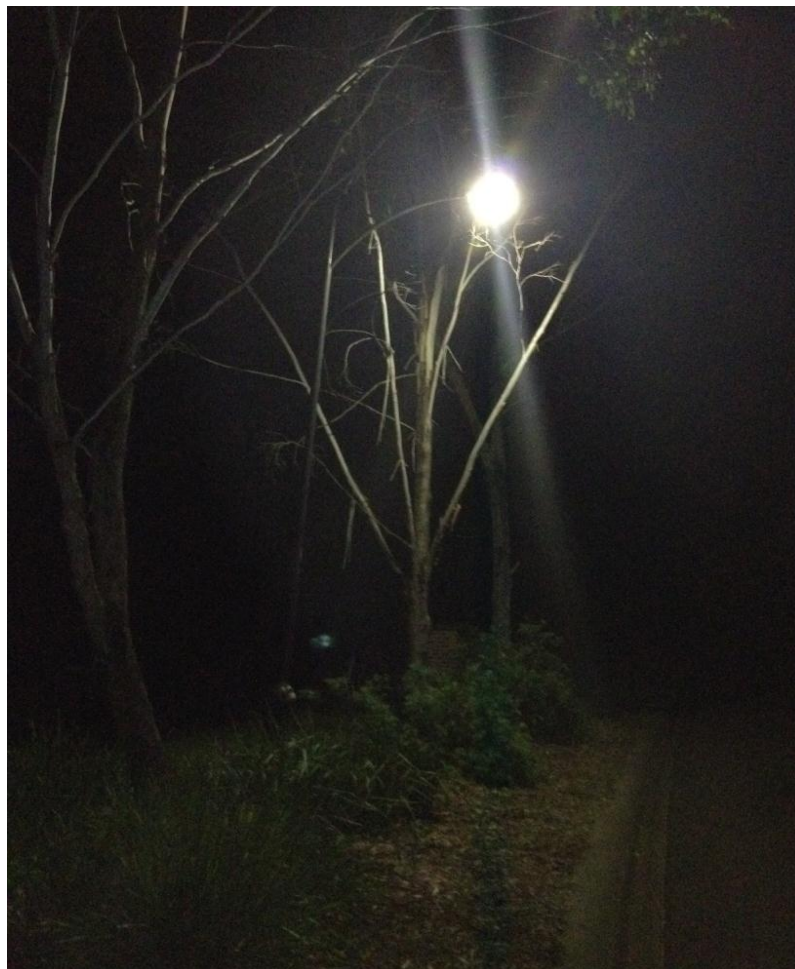


Figure 5.10 One of the self-tours focussed on Nangarin at night. Here, the understanding of space became more-than-visual, The Ironbarks (May 2012)

Mike S. and George K. expressed a more-than-visual account of public space at night, aware of the non-human night presence through retellings about hearing night sounds:

MS: Where we live, we're more likely to hear native animals making strange noises at night. I don't know what they are, but there's some animals at night that have some quite strange noisy mating rituals. We actually had a couple in our front garden, I thought somebody was being mugged!

Mike voices these night sounds as strange, foreign – 'beastly'. For George, the sounds of animals were positive, and preferable to the sounds of suburbia:

GK: It's nice sitting down at night, instead of hearing the cars go by you've got the crickets chirping away, the frogs going, the ducks going off [laughs]. Oh, it's those night sounds.

A more-than-human account is demanded in a space where there is an inseparable intertwining of residential landuse and the natural world. This reveals a further dimension to how Nangarin residents use the estate.

5.6 Walking & 'homebodies'

The boundaries exhibited by Nangarin residents in the walking tour follows the underlying mobility design, creating a spatial boundary between the streetscapes and the scrub. The ingraining of walking routes, of the thicks and thins of Nangarin estate, has important consequences for living amongst nature. This will be elaborated upon in Chapter 7.

Although the route was left up to the participant, they would often ask me where I wanted to go. Ultimately, the restricted designed potential for mobility resulted in residents expressing confusion at the task of walking in the estate. Annette C. cited a lack of walking options as a reason not to participate in the walk:

AC: Yeah, in terms of walks, you would have already been on them, all of them. So there's no more that I can show you.

Walking, then, was understood as a sporadic practice of place-making – not of the everyday, more of the now-and-then. It began emerging from the semi-structured interviews that the

major driver for this was size of the blocks – and the sheer potential for how they could be used. Annette C., who owned a two acre lot, could use her backyard for walking instead of walking the streetscape:

AC: But yeah, I don't tend to go very far anymore now, because I can just walk around in here. I've got so much land in here. As you saw, I can just go for a walk up the back. I don't have to go anywhere. It's purely a matter for me if I walk for walking them [the dogs], to get them out of here.

In a similar sense, Jeff S. (68, retired, 5 years) used his block as a site for family gatherings instead of the provided features:

JS: ...If you've only got 15-20 people or whatever, and you've got an acre or an acre and a half, then there's usually enough room for them to enjoy themselves. We usually have fairly regular cricket and football matches on down the back when everybody's here.

Mike S. referred to himself a 'homebody', and cited his block and backyard as where his activity in Nangarin estate was concentrated:

MS: We're pretty much homebodies, we like keeping the yard tidy and doing a lot of gardening. The back of the place is set up in such a way, we've got a pool and an entertainment area so we spend a lot of time here on weekends. It's a nice place to be.

Kerrie W. supported this sentiment, noting that the amount of work necessary to maintain a block of this size limited the capacity to use the community space:

KW: Obviously in winter there's heaps less to do, but that's when we do other types of maintenance – whether it be oiling timber, or that kind of thing. I just think it's one of those things that if you let it go, then you pay the price.

There is a discourse of 'homebody-ness' that comes out of these accounts (cf. Gorman-Murray 2012). Block size, maintenance and everyday rhythms combine to restrict bodily presence to the home space.

5.7 Conclusion

This chapter has explored how humans and non-humans have territorialised Nangarin estate. Urban design has effectively created potential pathways, designing how the estate could be negotiated, and it is the prerogative of participants to follow them. Despite the adjacency of bushland to explore; only human parts of the estate (the streetscape, the central walking track, the easements) have been enrolled into the 'thick' pathways followed by residents. It can be concluded that there is still an active distinction between place-making and the spheres of culture and nature. This reproduction of the culture-nature binary in walking practices was identified as a zone of friction.

The bush, which houses these beastly spaces governed by non-humans, was only explored tentatively by residents. While Wylie (2007) suggests that landscape is a world to live in, and not a scene to view, the bushland here was just largely an element of the vista.

Enacting the Nangarin homebody, it becomes clear that the main site for *everyday* interactions, for boundary-making between humans and their surrounding environment, was within the residential lot – encompassing the homes and gardens of residents. Chapter 6 will tease out the complexities of the Nangarin homebody, focussing on the construction and management of garden space.

6

Dwelling & Everyday Rhythms: Exploring Nangarin Gardens

6.1 Introduction

Chapter 6 is structured around evaluating how Nangarin residents *dwell* in the estate. Ingold (2000:186) suggests that ‘the forms that people build, whether in the imagination or on the ground, arise within the current of their involved activity, in the specific relational contexts of their practical engagement with their surroundings’. This chapter shifts the focal point of analysis to the homes of residents, exploring specifically how they have negotiated the framework of the rural residential estate to create a garden space.

The major differences between urban housing and rural residential housing are a bigger lot size, and larger distance between dwellings (Sinclair & Bunker 2012). Lots at Nangarin are a minimum size of one acre – four times the size of the typical suburban quarter-acre block. Houses can be much bigger – the minimum dwelling size being 200 square metres. Many were larger than this. Sue and Peter T. said:

ST: We couldn't find a suburban block big enough to do the size house we want – although we ended up larger than we really probably needed, but there you go.

CG: OK. Was it always your intent to move somewhere like this?

ST: I don't know, not really no.

PT: It was just because when we were looking we sort of drove down the South Coast, but as Sue said, we would have needed probably to purchase three or four suburban sized blocks and you just can't afford to do it, you know, with multiple rates and land value and stuff like that. We wanted a four bedroom house and we wanted a four car garage, and on one level, you can't fit that on any suburban – well, any affordable suburban block in Sydney.

The driver for Sue and Peter moving to Nangarin was less about the natural features of design, and more about the ability to create a ‘mega-home’, a home structure that would encompass three or four suburban blocks. Utilising lot size, this mega-home was a prominent landscape feature (Figure 6.1).



Figure 6.1 The mega-home in the Nangarin landscape as enabled by block size, various streets (October 2012)

As well as the home itself, lot size also enabled gardens to become particularly sizeable and complex. Productive activity is encouraged here, as is the residence of uncommon domestic animals on private blocks – horses for example (Bradcorp 1997:30). Through larger lot size Nangarin estate presents its human occupants with a greater potential for the use of private lots, and a greater creative license for how they can be constructed:

PT: When you're selling a 450sqm block of land for somebody to build a house on it, you don't have a hell of a lot of options, because you can't do a lot with a pocket handkerchief size of land. But out here, because we've all got at least 4000sqm, you can sort of play around with it and extract the best out of it... You've got the room to make the most of it, to be individual.

The construction of the garden spaces in Nangarin estate is intertwined with accommodating for the 'natural' surroundings. Landscape standards listed by the CMS present expected conditions for how residential lots are to be used and constructed. Property fences are deliberately of a 'rural' nature, facilitating the use of private lots as non-human thoroughfares (Figure 6.2). Tours of the gardens of Nangarin residents worked to explore how they negotiated this theme and this permeability in the construction of their home space.



Figure 6.2 Rural fencing on residential lots. This particular lot backs onto Stonequarry Creek, and the resident remarked on how this has encouraged a wombat into the garden: ‘the wombat is sort of a daily event, he’s coming closer and closer to the house’, The Briars (July 2012)

Nangarin offers a new way of living with nature – but nonetheless within a theme of complementing the natural surrounds Nangarin is still a residential estate for humans. Private blocks are regulated under Torrens Title; and the creation and maintenance of gardens and backyards is at the discretion of residents. This chapter is an examination of whether residents have engaged with these unique living opportunities – with a focus on the liminal space of the garden. Gardens are human statements, the carriers of meaning (Seddon 1997). The garden forms created by residents reflect Ingold’s *practical engagement* with their surroundings.

In what follows I examine the construction and knowledge behind garden spaces, the management and maintenance of the garden, and analyse the boundary-making practices exhibited by residents with respect to ‘outside’ nature. First, this chapter will explore the

temporality of Nangarin residents – and how their everyday rhythms influence their construction of, and engagement with, the home space.

6.2 Work & Weekends: An Overview of Human Rhythms

This section explores the temporal contexts of interview participants, and how this shapes practice. Everyone has access to the same number of hours in a day, but for some people time is not simply their own. People are bound to the ‘temporal infrastructures of society, such as the working day, the working week or the weekend’ (Shove et al 2012:129).

Employment is a major factor of the everyday routine. With respect to Nangarin residents, the working week shaped the temporal capacity for residents to interact with their surroundings.

Many residents interviewed were involved in commuting for work to Sydney and other regional centres (for example, Wollongong). Indeed, proximity to centres via the M5 Motorway was a positive feature identified in the initial development of Nangarin estate (Connolly & D’Costa 2001). Factoring in the commute means that working residents are away from the estate during the working day anywhere between eight and twelve hours of the day. Gallan & Gibson (2011), regarding the binary of day and night, note how day/night is dominantly construed as activity/inactivity. In effect, when Nangarin residents get home from work, the ‘day’ is effectively over.

Absent from the temporal infrastructure of the working week, the contact hours of retired residents on the estate were much greater. Anita D. (67, retired, 11 years) was one retired resident that expressed an enhanced level of engagement with the setting:

CG: It sounds like you’re very observant of what happens around your house.

AD: I suppose it’s because we are here more, you know. I can understand with those who are working five days a week, and then when they are here on the weekends they’ve got sports and the shopping, everything else to do.

Temporal experiences of place are born from practice (Shove et al 2012). Nangarin residents who partook in the rhythms of the working week were restricted to estate engagement on the weekend. For residents, the weekend was utilised for work and maintenance:

AH: ...And of course during the weekend I spend pretty much all day on the estate, on the property working on it and doing projects and stuff.

JR (John R., 48, construction manager, 11 years): Summertime it's always gardening and maintenance... certainly if we're here it's always about maintaining the house, trying to make the house look better. Nothing too much apart from that, really.

The following section explores these garden spaces – the maintenance of gardens, as well as the motivations behind what residents have planted – and subsequently how the garden space is negotiated.

6.3 Garden Spaces

The garden has become a popular site in human geography for exploring the complexity of interactions between humans and nature (see Hitchings 2003, Power 2005, Head & Muir 2007). The garden is a regulatory space where people's 'intentional relationships with plants and soil' come to the fore (Head & Muir 2006:53). Humans decide what to plant, where to plant it, what to allow in the garden space and what to restrict. However, non-humans are more than simply the raw material from which gardens are created (Power 2005). The garden is 'an ephemeral and precarious outcome' (Hitchings 2003:102) – it is a relational achievement between human and non-human, a shifting locus of power and performance between actors.

Walking in the garden space becomes 'research about plants with plants', a place-based engagement with the non-human (Hitchings & Jones 2004). Following Hitchings (2003), garden tours worked to enrol the material presence of non-humans – plants, animals, objects – and the different ways in how non-human behaviour was dealt with. This section contextualises Nangarin garden spaces, first turning to the gardening philosophies expressed by residents.

6.3.1 Gardening Philosophies

Power (2005:40) notes that gardens have been typically depicted as human spaces, and shaped 'according to the cultures, ideas and actions of the human gardener'. In an extensive study of suburban Australian gardens, Lesley Head & Pat Muir (2007) grouped gardeners

based on their gardening philosophies: what they had planted, and their planting attitudes. Conceptually, this grouping was followed here – gardeners placed along axes of nativeness (predominately native to predominately exotic) and gardening passion (non-gardeners to passionate gardeners).

It becomes useful then to explore the gardening philosophies of Nangarin residents – especially so considering that the relative importance of native flora and fauna in the landscape is supported by the inscribed landscape standards of the CMS. Engagement with this document was varied, but was largely utilised as a guideline for planting. Pat F. visibly planted some grevilleas so she would be seen as doing the ‘right thing’ (Figure 6.3):

PF: We planted originally when we first came eight different grevilleas down the driveway, because we were encouraged by the estate guidelines to put in natives... Although they're not my favourite flowers, we decided OK, let's put these down the front where they're very visible and know we're trying to do the right thing.



Figure 6.3 Grevilleas on Pat F's frontage, running along her fenceline – as demarcated by the red box, The Vintage (August 2012)

It became apparent in the responses of Nangarin residents that the sphere of nature was itself a site for new dualisms – most notably the native/non-native divide. Pre-empting a discussion of ‘nativeness’ and planting natives is an analysis of what ‘native’ means within a Nangarin context. Exclusion of the non-human in the dwelling space of Nangarin humans hinged largely on whether or not the actor in question held a status as native. The influence of nativeness in Australia has been critiqued by Trigger et al (2007) and Head (2012). Nativeness is equated with Australianness – an artificial conflation of nation with native. This is against a biological understanding of native as endemic species.

While they are not endemic to the coastal valley grassy woodlands system, to which the Cumberland Plain Woodland community belongs (Keith 2004:86), grevilleas were common inclusions in garden planting (Figure 6.4). This is because the grevillea is heavily enmeshed in the native-nation discourse (Head 2012).



Figure 6.4 The reproduction of grevilleas in Nangarin gardens. In terms of endemism, grevilleas are not local to the region.

The inclusion of 'natives' was passionately followed by Nangarin residents. As Annette C. put it:

AC: Anything that's native, anything, we'll be putting up there. The whole idea of this estate, really, is native... It's a native estate. Bradcorp built this estate around the animals that were already here, the native vegetation and the birds. We encourage everybody to keep it like that, keep them coming in.

It is important to note that many of the residents interviewed came from professions grounded in ecology – a biology academic, a herbicide manufacturer, a retired Rural Fire Service captain (refer to Table 3.1). These residents saw the planting of natives as common-sense, questioning the planting of exotics. Karen H., for example, was a University academic grounded in Biology who had only moved to Nangarin in the last twelve months. She inherited a garden space, and has actively sought to remove exotics, saying '*their time is numbered*' and sticking to what she saw as a pragmatic garden philosophy: food or natives.

KH: We choose plants that are suitable for the environment... we don't try and grow tropical things or anything like that, because that's just crazy.

The major motivating factor behind planting natives was that they were seen to be better suited to the growing conditions of Nangarin estate. This would inevitably make gardens low maintenance – important for the temporal practice of weekend gardeners.

CG: Do you think you favour natives?

LM: Yeah, simply because they don't require the attention. We had, how many years of drought... I'd just refuse to water plants. If they survive, they survive, if they don't, they don't. That kind of levelled it all out and the natives tend to survive where the others don't.

-

MF: Again, I think it comes back to your planning for it – that is that there are species which tend to be lower maintenance than others, and it's important to focus on the majority of plantings to fall into that category of low maintenance. And Australian natives are very much that sort of plant. You can put them in, the maintenance is

quite low, and that allows you to have accent plantings like roses which require maintenance.

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AC: Anything that we do plant – we're looking at putting in some more gardens and some trees up the side – they'll all be natives... I don't have the time to look after gardens where you've got roses and things like that...

Conversely, while there has been a significant encouragement towards the inclusion of native flora, this is not to say that the residential lots of Nangarin estate were entirely native. Private gardening is increasingly positioned as a display of status. The premise behind display gardening is aesthetic appeal, tied to themes of civic pride and 'keeping up with the Joneses', and contributing to an overall image or scene (Seddon 1997, Hitchings 2003, Power 2005). Some excluded wattles, banksias and grevilleas from garden spaces due to their perceived scruffy appearance, as expressed by Paul and Denise W.:

CG: So you haven't really tended towards planting natives here?

DW: No – I am not a lover of natives.

CG: Right. Is there a reason for that?

DW: Yeah – because they go all woody and crappy. They look like shite after a while [laughs].

PW: They fall over and die.

Paul & Denise instead created a garden space inspired by Oriental culture, and had created an Oriental-themed garden with bonsais. Garden *themes* are informed by these 'nature-talks', these reflections of human cultures and understandings (Castree 2004). Commonly, the property frontages of display gardeners were described as 'cottage gardens' – incorporating attractive perennial exotics. Garden maintenance was conducted with attention to detail – neat lines and edges, carpet lawns, manicured hedges. This was the case with John R.'s garden (Figure 6.5). Indeed, when asked about the reasoning behind his gardening philosophy, John said, '*Appearance, looks. She [his wife] wants to create a*

cottage feel, because the house suits a cottage look, and natives don't come under that criteria'.



Figure 6.5. An example of a display garden in Nangarin Estate. When asked about the gardening concept, John R said “It’s just all cottage plants primarily, and there was just a theme of white, purple, pink and blue”, The Vintage (October 2012)

The most common gardening philosophy observed in Nangarin was a combination of natives and exotics. Mike S.’s garden typified this theme:

MS: So we’ve sort of tried to stick a bit to native in the front yard, but the backyard is a bit of a blend of both. We’ve got a lot of very tall native trees, gums and eucalypts, in the backyard. But the main gardens themselves are more mixed species, and not necessarily natives. In fact, probably more not native.

Head & Muir (2006:53), like similar analyses of suburban gardens in Australia (Seddon 1997, Trigger & Mulcock 2005, NPWS 2002) also concluded that the most popular garden planting regimes were largely comprised of exotics, either alone or in combination with natives.

6.3.2 The Implications Of Block Size

This section focuses on the different framework for the garden space provided by a rural residential estate – block size. The size of the blocks creates the impetus for residents to become more involved in their own private spaces, as the increased spatial scale requires constant maintenance. When asked about how she used the estate, Kerrie W. noted the demands of block size, citing herself as a homebody:

KW: We're a bit boring, we just kind of hang at home. We do go out sometimes, but I do kind of think – we've seen people come and go here – and I think for some people it's too much work. They want to live on an acre but they don't really realise what's involved with it. And you don't have to have immaculate gardens, but in summer on an acre – man, you have to mow every week. Otherwise it just gets out of control. So yeah, we've seen that happen a few times.

Extending this idea, Greg W. changed the scale of his normative garden maintenance to reflect his movement from a suburban block to an acre:

CG: Would you use a ride-on mower?

GW: Yes, I do – well predominately. There's the associated things, I like the edges – the concrete edges – to be trimmed up against the grass. So there's that. I do try to sweep, but I do have a blower. I've never been a great fan of leaf blowers, I think they're a bit of a scourge, but it's not until you move to a block like this that you realise. I've never had one on a suburban block, but I do have one here. But then there's the maintenance of the mulching and weeding and so on – again, I've always been a hand weeder until I moved here, but I must admit I've got a backpack with Roundup in it now, which I use from time to time, mainly under the fence-line so you don't get grass growing under the fence.

Block size thus 'ratchets' up device and energy use to maintain the garden aesthetic equivalent to that of a 'regular' suburban block (Shove 2003, cf. Gibson et al 2013). Block size increases the necessity for constant maintenance, mainly in the form of mowing expansive lawns. With respect to the scale of mowing, most residents had to use a ride-on mower. In addition, residents expressed a comparative difference between the need

for gardening in winter and summer, reflecting the growth patterns of grass species (Robbins 2007).

For most properties, the provision of so much space would ultimately result in what Greg W termed 'kikuyu paddocks' – expanses of manicured grass on residential lots (Figure 6.6).



Figure 6.6 The 'kikuyu paddock', a common feature of block set-up in Nangarin Estate, various streets (October 2012)

This prominent lawnscape was largely attributed to cost factors. As discussed by Jeff S., planting complex gardens became very costly on a one acre block (Figure 6.7):

JS: You can't necessarily afford to be doing all the things you'd like to be doing, because it's not cheap, you know. I put a small garden in there near the pool, near the filter room, and I already had the timber edging the garage, so I said to my wife, "It's not going to cost very much". By the time I'd finished, it was \$300-350 or something, and it would have only been about 4 metres!



Figure 6.7 Costly gardens: \$300-350 worth of plants in Jeff S's garden space, The Vines (July 2012)

Brian S. expressed a similar view, *"I think in total, we've probably done about 400 cubic metres of mulch just in here alone... You don't go and buy 5 plants, you're buying 20-50 plants at a time"*. Lot size also ratchets up financial outlay, lessening the potential for residents to deviate from the lawnscape and create and support complex gardens. Figure 6.8 shows one garden where significant effort has been made.



Figure 6.8 Due to the ratcheting of block size, the scale of inputs into complex gardens become temporally and financially costly, The Vintage (July 2012).

As well as being inhibitive (a zone of friction), block size was also constructive, a zone of traction with respect to the possibilities of garden creation. The provision of one acre lots worked to facilitate productive activity in Nangarin gardens. Jeff S stated simply, *'Well you've got enough room, so why not?'*

Of the residents interviewed, 14 gardens had incorporated some form of productive activity in their garden space, or had plans to do so. This took a myriad of forms; most commonly citrus fruit trees and low-scale vegetable gardens and 'veggie boxes' (Figure 6.9).



Figure 6.9 Variation of the scale of productive activity within the garden spaces of Nangarin residents: a) an enclosed citrus orchard, b) a bounded vegetable garden and c) a 'veggie box' – a small-scale variety of vegetables, various streets (June 2012)

The challenges created by block size were overcome in the way some residents constructed their living space. For Pat F., this involved symbolically sub-dividing her property and creating more of a manageable space. Indeed, she would have subdivided completely if it was not restricted by the CMS covenants:

PF: We have half of our acre, which is virtually now fenced off at the back, and a fella came around from one of the real estate agencies, and I actually asked the question – with the piece of land that we're not using virtually, it's open and it's flat and it's fenced off and hedged off, is there a possibility that we might be able to sell off that corner as a subdivision? And he said "Oh, no, no, the estate rules wouldn't allow you to do that"... So that would have been nice, and in our situation it makes sense because there is a little road that leads right beside the edge of our property and there's a good half block of emptiness... It's quite spacious.

In a similar sense Annette C., who lived on a two acre block bordering the wildlife corridor, cordoned off an area that she largely left to its own devices:

CG: Yeah, how would you mow a block like this?

AC: Well Greg's got a ride-on, and we've got a gate up the top. So he can get through up the top and mow all here, most of down the bottom here. But where we've got the trees on the other side, we're going to have to go through a process eventually of getting rid of just some of the really skinny ones that don't do anything. But we want to leave most of it there – we've got two acres here. That was what I liked, about having the other side of my block just natural. Just bush, you know. You've got people that live in here that have just cleared the whole block. To me, that's really silly... They might as well go and live in Harrington Park [a nearby residential estate] or something.

Both these divisions are shown in Figure 6.10.



Figure 6.10 Photo showing a) Pat F, and b) Annette C's block layout, and their negotiation of the space:
a) The leylandii pines act as a buffer, creating a living space and an exterior space. Despite this, the exterior space is still maintained, b) Annette C's garden space, half of which is maintained and half of which is left as bush. The delineations are shown by the red lines, The Vintage (July 2012)

Engagement with the garden space and its non-human elements is inherently tied to garden maintenance. It has already been established that engagement with the garden space is limited to the weekends, but what separates residents is their *desire* to work in and utilise the space – this gardening passion. The previous section noted that block size works to establish these ‘kikuyu paddocks’, which are a site of regular, constant maintenance. Robbins (2007:108) suggests that there is a ‘lawn aesthetic’ exhibited in suburban America – ‘an aesthetic lawn is something owed to the neighbours, and would face backlash otherwise’. Indeed, Annette P. and Pat F. likened neat, well groomed gardens to civic pride in Nangarin:

AP: I like the quality of the homes, and the fact that people take pride in their homes and gardens. And it's nice, and you can tell when you drive in. Driving back to some of the places around Oakdale [a nearby town] where we used to live, you can just – you know, some people's gardens are lousy and some people's aren't. Here, everybody keeps it to a good standard.

Despite the natural surrounds, garden maintenance in Nangarin estate is still an unwritten expectation, tied to this theme of complementing the natural landscape. There is a very particular sense of this ‘good standard’ in Nangarin estate, related to maintaining tidy and pleasant surroundings:

PF: We try to keep the garden pretty tidy, yeah. And everybody around here tends to. It's a neat estate, and I think that's part of – frankly, for me – it's part of the pleasant surroundings.

What results is a very particular rendering of nature in Nangarin garden spaces. The general adherence to this order and neatness is shown in a photograph of The Vintage streetscape (Figure 6.11).



Figure 6.11 The reproduction of this neat rendering of nature occurs on an estate-wide scale, The Vintage (October 2012)

One block in particular (Figure 6.12), which was no longer inhabited by human residents, had become, in the eyes of residents, wild and overgrown. This reflects the disorder attributed to ‘bad nature’ in a domestic space (Kaika 2005). Greg W. noted its subsequent infamy in the landscape:

GW: You know, the thing I’m upset about at the moment is the house that’s empty up on top of the hill here is just completely overgrown. But I understand, it’s the result of a broken family – there’s nothing much I can do about it except go ‘tsk, tsk’ as I drive past every day.



Figure 6.12 An untidy garden space, which is in conflict with this tidy, neat maintenance scheme. The irony is that this garden space is more ‘natural’ than the groomed lawn, tied to the once in vogue ‘gardenless’ form of English landscape gardening (Cosgrove 1984)

With the exception of one interviewed resident, garden maintenance was conducted on the whole by residents themselves. For Peter B. and Mike S., engaging with mowing was an enjoyable activity:

PB: And maintaining it for me is an outlet – I can just turn off for an hour or two and just mow the lawn. I really enjoy it.

-

MS: The gardens we love, in the last two years we’ve built another big garden out the back here. It’s a major feature of the property, and it’s my hobby. That’s how I relax on the weekends. Most people wouldn’t view it as relaxation, but working outside and working in the garden for me is restful, rather than a chore.

The enjoyment of performing this constant maintenance is linked to the homebody. Homebody-ness is an emotional investment (Gorman-Murray 2012) – residents invest significant amounts of time, money and effort towards how the garden looks, and how it reflects on the gardeners themselves.

Often, residents expressed a lack of willingness for solely maintaining the garden over the weekend. To combat this, their gardens were designed with respect to making them low maintenance – which would involve the planting of natives and drought-resistant exotics. Brian S., talking about the limitations of time, wanted his garden *‘not to be a labour of love, it’s more that it’s done so we can get out there’*.

Similarly, Nangarin residents that were more native-oriented gardeners were not as pedantic as their neighbours with respect to garden maintenance – and engaged with their garden space in different ways. For Karen H. a self-regulating lawn was preferred over creating a homogenous, manicured lawn:

KH: But we don’t really care about a monoculture lawn. Certainly up the back we have a lot of kidney weed, which is a local ground cover. That’s kind of nice, because it’s native, and not kikuyu [laughs] There’s a bit of paspalum, and a bit of microlaena, bit of couch, and quite a few things just thrown into the mix.

In a similar sense Bruce H., who had an upwards sloping block bordering the wildlife corridor, was keen to explore ways to foster the growth of native grasses (Figure 6.13):

BH: There is some kangaroo grass, which is a native grass, there is a patch here... So what I want to do is there’s none up there [on the ridge]. I wanted to try and get some going. It’s sort of hanging in in patches, there’s actually a big patch down on the front end of this block there. I’d like to get all that growing up there.



Figure 6.13 While overgrown with weeds, the back of Bruce H's garden space retains some kangaroo grass, an endemic ground cover. As a Biology professor, he is able to identify this through the weeds, The Ironbarks (June 2012)

The way in which garden spaces are constructed, and the relative valuation of natural elements, inherently shapes how humans and non-humans negotiate private space. As discussed in the following section, gardens, through the proliferation of borders and boundaries, can become both sites of exclusion and sites of inclusion for non-human agents.

6.4 Borders & Boundaries

By its very *nature*, the garden is more-than-human – more is at play than the planting schemes and maintenance practices of humans. Robbins (2007:16) reflects on the complexity created by the proliferation of a lawn: people 'attempt to purify, tend and maintain an object whose essential ecology is high maintenance, fussy and energy demanding'. Power (2005:48) suggests 'when plants can be understood to disrupt human plans, gardens can no longer be read as simple reflections of human cultures and understandings'.

In Nangarin estate, boundaries between space are permeable by design – ultimately facilitating the inclusion of non-humans in space. Boundaries were dually informed by gardening philosophies and ‘nature-talks’, as well as how the garden space was constructed. An insight into the interplay between the human and non-human is provided below, separating Nangarin gardens as inclusionary and exclusionary, and detailing the conditions that make them so.

This section will first begin with an analysis of the problematic discourse of *native*, and how an understanding of nativeness becomes enmeshed within the everyday rhythms of Nangarin residents. The argument of this section will then explore gardens as inclusionary and exclusionary space, and conclude by attempting to conceptualise the agency of landscape elements, moving away from non-human plants and animals and focussing on the agency of ‘things’ (Braun 2005).

6.4.1 Natives & Invasives

Invasive species are simply defined in opposition to ‘natives’ – invasives do not belong in the landscape because they do not belong within this native-nation discourse. The cultural assumptions of invasive non-humans are centred on the idea that they pose a significant threat to local biodiversity (Trigger et al 2007). This normative understanding of invasive species informs the resultant practices of conservation management (Hinchliffe 2007, Head 2012).

The significant invasive actors cited by Nangarin residents were foxes, rabbits, Indian myna birds and lantana. Attending to the limited scope of this thesis, the myna bird will be the actor in focus here – as it was cited as the most problematic non-human by residents in Nangarin estate (Figure 6.14). Mynas are often non-humans of significant public concern, as aggressive competitors with natives for nest sites, territory and food (Dhami 2009).



Figure 6.14 A myna bird spotted in a grevillea. Showing an invasive perched inside a native, this photograph is a great visualisation of the value systems at play: the presence of mynas was seen to a disruption of the 'native estate' theme, The Vintage (October 2012)

Kerrie W. and Jeff S. were the most emotive on the subject, pointing to their interference with native birds:

KW: I hate those bloody Indian myna birds... They're rats in the sky, I hate them! They chase the native birds away, they eat everything and anything. They're ugly, they make horrible noises, and they shouldn't be here. They're not part of this environment. We've got a trap in the estate that the community bought to try and trap 'em and kill 'em. Unfortunately because they're so smart it's really hard. But if I could shoot them, I would. I hate 'em.

-

CG: Do you feel like your garden attracts birds?

JS: Yeah, definitely. I've hesitated to put sort of a bird bath, if you like, or a bird house in the garden because I don't want to attract Indian mynas – because they're a real pain. If you do start to get a reasonable population of Indian mynas, as you're probably already aware, they're very aggressive birds. I'm concerned that the other birds would go somewhere else basically, there'd be no more lorikeets and things like that that you'd find here at the moment – because I think the Indian mynas would deter them from coming around.

The CMS and the Executive Committee of Nangarin estate reinforces this anti-myna culture, limiting their relative agency. The estate has established a myna bird trapping scheme, posited as one of the 'current projects' on the Nangarin website (Figure 6.15). Residents followed suit with prohibitive measures. In an extreme case, one resident owns a licensed air rifle, and actively shoots mynas – 'I've got 25 so far'.

Trapping of Common Mynas

Myna birds are recognised as a hazard to our environment and often referred to as the 'rat in the sky'. There are approved methods to humanely trap and dispose of these pests which are currently being considered. To assist us, we need residents to observe the birds at dusk with a view to locating the major nesting locations within the estate. Trapping is best conducted during the winter months.

If you have identified a possible nest, please inform the committee at info@nangarin.com.

Figure 6.15 Listed on the 'current projects' tab of the Nangarin website is the trapping of common mynas. This narrative of mynas as 'a hazard to our environment' further ingrains their outsider status.

Source: www.nangarin.com/projects

When the Executive Chair was asked about Indian myna populations, he cited their negative effects:

EC: Well, I think everyone knows that they keep a lot of the wildlife away, a lot of the wild birds away. I mean, what are they described as, rats in the sky? But they just don't serve any purpose. It's not as if we're targeting galahs or anything like that, they're vermin.

Invasive species – mynas, lantana – can better respond to fragmented natural environments than other non-humans (Dale et al 2005). The Indian myna evolved in an open woodland habitat in India, and is pre-adapted to cleared environments akin to suburban areas (Grarock et al 2012). As such, their presence is actually a symptom of residential development. Anita D. was one resident to state their awareness of this:

AD: We've done a lot of garden. We wanted less lawn – less grass, I should say... If I ever had the time, I'd get rid of a lot more [grass] again and put more native plants into that, because the mynas like big open spaces like grass.

This human-myna relationship is a feedback loop: the lawn-heavy materiality of gardens creates a preferred myna habitat, and encourages Indian myna populations. Mynas are rife in Nangarin estate because of how garden spaces are created and maintained. Subsequently, humans go to great lengths to solve the myna 'problem'. To deter mynas, residents need to construct their gardens differently.

This argument now turns to another invasive non-human: pets. Domestic animals are considered to be 'subsidised predators' in amenity landscapes (Abrams et al 2012). Domestic non-humans are meant to be restricted to residential lots under the covenants (Chapter 4). Nevertheless, on self-tours dogs and cats were both photographed roaming the estate unattended (Figure 6.16). Responsible ownership of pets – particularly cats – was one heightened concern for interviewed residents in the estate. Annette C suggested 'if you're going to have animals, you've got to be responsible, and there's a lot of people in here that aren't'. Cats were generally excluded in the estate due to their negative practice of hunting native birds – Sue T recounting an experience with an estate cat:

ST: I think that allowing cats and dogs to run freely is a really big deterrent to wildlife – and that's one of the things that's nice about here, that there is wildlife to be seen. The rules are that the cats and dogs – well, I think it's a council rule – dogs aren't allowed to roam around, and cats. I've seen a particular cat that's had wildlife in its mouth, birds, several times. So to me it's the threat to the wildlife in the area... We come here to be able to live in a rural area with nature and animals, and yet stinking rotten cats are killing them.



Figure 6.16 Deviances to regulation – wandering dogs and cats as spotted on self-tours, a) The Ironbarks, b) The Grange (August-October 2012)

There is a contrast here – between the ‘pestiness’ of ‘wild’ animals (mynas) and the pestiness of domestic animals. The presences of both in the landscape are a direct consequence of human occupation. The problem with domestic animals lies with the humans who own them; the cat killing a bird is in its nature. This returns to regulations being a ‘toothless tiger’ – although regulatory frameworks show intent, the sanctity of freedom of choice is always upheld (Gibson et al 2013).

It is the attitudes and practices of humans that govern the success or failure of this different dwelling offered by Nangarin estate. Kevin M. saw pets as a dissonance in an environment that seamlessly integrates the natural surroundings:

CG: Have you got a particular memory of an encounter with an animal?

LM: That, and the little echidna that came down the driveway. He just waddled down the driveway and stuck his little nose in one of the bushes, with the rest of him sticking out. That, and the echidna that came right up to our son, he was just wandering in the bush and this echidna was just wandering around his legs. Beautiful. [pauses] There was a fox that looked in the door at me. There’s some neat wildlife here. Lots of big blue-tongue lizards too, they’re beautiful.

KM: You get used to having the wildlife, and that’s one of the reasons why we haven’t got a pet, because it’s hard to co-exist.

This idea was supported by Adele H., who enrolled outside nature as her ‘pets’ through the provision of bird baths and a frog pond:

CG: OK. Do you have any pets yourself?

AH: No, I don’t keep pets because a), they tie you down – so if you do want to go anywhere at any time you sort of can’t. And b) I probably get too obsessed with pets, and when they die it’s a major drama. So I prefer to have native animals, like frogs, and bird baths to encourage birds and stuff.

The views of Kevin and Adele are offering a zone of traction. With the absence of domestic animals, their valuation of nature is almost steward-like. Stewardship highlights the

responsibilities of landowners towards nature, and is a way to open up different ways of enacting rights and responsibilities in a residential environment (Lane & Watson 2012).

6.4.2 Inclusionary Gardens

In Nangarin estate, non-human entrance into the spaces of humans is an inevitable consequence of the inscribed permeable nature of property boundaries. The predisposition of inscribing categories of belonging to non-humans worked to shape the resultant use and construction of dwelling space, and had important consequences for the subsequent enrolment of non-humans in everyday practice.

Consequently, the presence of native non-humans was accepted and encouraged in the garden space by Nangarin residents. Residents were asked about a memorable encounter with nature in the estate, and many retold fleeting encounters with kangaroos, wallabies, echidnas and wombats in their gardens, as discussed by Sam P & Anita D:

MS: It's nice just watching. Most of our garden is native, where it could be, so particularly out the front where the natives are you get lots of native birds. So yeah, it's a nice area. We probably take it for granted now, but you become aware of it when people come to visit.

CG: OK. How are these encounters viewed in your opinion?

MS: By us? Oh, very positive. I think it's one of the things that we love about living here that you don't get in a built-up metropolitan area.

-

SP: The most memorable thing is probably just seeing the first echidna. I thought that was really nice, because they're not a common sight.

-

AD: Well, only probably what we've said, yeah. We were absolutely delighted when we saw this echidna wandering around, that's the first we've had like that – a really local native.

While being low maintenance, another major motivating factor cited by interviewed residents for planting natives was that native flora attracted bird populations – and to be more specific, *native* bird populations. They expressed forethought towards their gardening concepts, and how birds would use the space:

AC: Most importantly for me – the native trees bring the birds for the nectar... Anything that'll bring the birds in is great for me, that's probably my main aim with gardens is to bring the birds – all native gardens is my go, yeah.

-

AD: But the birds love it, and there's always flowers... they love the grevilleas, and we're hoping that with any of the tight dense ones that it's a safe place for the little birds.

There was a strong discourse in Nangarin residents towards assisting the rhythms of native birds, inscribing them in garden construction and practice. Kerrie W. was in tune with the temporality of bird populations, and facilitated the mating practices of the local King Parrot population through feeding them and harbouring them in her yard (Figure 6.17):

KW: Outside you'll see we've planted heaps of natives for the birds that are in this area. And in different seasons you can see what birds come, and what birds don't – and which ones come every year and what time of year they come... So I kind of figure if we can just feed the natives, and get them started, then they've got a chance, you know.



Figure 6.17: Visiting King parrots in Kerrie W.'s garden: "The main interaction we have, on an absolute regular basis is birds, the King parrots that come ever winter. So we make a point of putting out some very long feeders. The birds usually come about October-November, and then they're gone by the end of January. So they come, they breed, we feed them, they go, and they come back".

Source: Kerrie W (October 2011)

Similarly, Adele H altered the maintenance of her garden space (Figure 6.18), creating a corridor of bush for echidnas and other non-humans so they could cross her block safely:

AH: I have to be careful – I don't mow this little bit very often, and I don't mow that at all as you can see.

CG: Is there a reason why?

AH: Two reasons for that – the main one is you're in danger of severe erosion up there, because of the slope. So I've left it as natural bush... That stops the erosion. It's also a sanctuary for any echidna or anything else that's trying to cross the block. Otherwise they get harassed to death by the minors. So it's designed to encourage

echidnas and things, because they don't have to go over such flat land to get to the other side. Because like I said, the minors are murder.



Figure 6.18 Adele mows her block selectively – she retains a patch of wild grass (centre) as a cover to facilitate the safe passage of wombats and echidnas across her block, The Ironbarks (June 2012).

This section has discussed the various ways in which Nangarin gardens were inclusionary. Inclusionary gardens are understood as representing a zone of traction, a sympathy towards the non-human in garden space. This will be elaborated upon in Chapter 7. The argument now turns to the flip side of the coin – ways that gardens were exclusionary, and potential zones of friction.

6.4.3 Exclusionary Gardens

Gardens were also exclusionary. Biological fences were established on some property frontages as a means of contesting urban design. Rural fencing, while creating an open atmosphere and allowing a permeable border for non-humans, has no consideration for block privacy. The planting of *photinia* hedges and *leylandii* pines on property borders were common inclusions in the gardens visited. Brian S. planted *leylandii* pines and *photinias* together along his block boundary – *'it gives us quite a private area from both neighbours'*. A prominent example in the landscape was George K's garden. His block, which is adjacent to the street verge, is ambiguous as to where it begins and ends:

GK: Our trees are also planted because we're not allowed to put fences within 18 metres of the road itself, and we don't have 18 metres to the road because our block of land is fairly compressed width-wise. We find we've got to plant trees to just act as a demarcation to where we are.

Examples of these gardening trends are shown in Figures 6.19, showing the reproduction of planting leylandii pines and photinia hedges.



Figure 6.19 Biological borders, as leylandii pines (LHS) and photinia hedging (RHS), various streets (March-October 2012)

Reflecting this neat rendering of gardens and the lawn aesthetic, bad natures are excluded. One prominent example of bad nature in Nangarin estate was duck droppings. While ducks were cited as favourable non-humans in Nangarin estate, their mess was not – and ducks were then consequently excluded from this space. Mike S was in a constant struggle of cleaning his pool space (Figure 6.20), of returning a normative cleanliness to the garden space:

MS: We don't want to poison them, we don't want to hurt them, but we don't want them – it sounds petty, but when you've got white pavers around a swimming pool and you've got ducks and their ducklings coming in every morning and every evening to have their final swim and a drink, they literally shit all the way around the pool. So it becomes quite frustrating – you can't clean it when it's wet, and when it's dry it blows into the swimming pool.

This is a zone of friction – humans are not willing to change the materiality of their backyards to accommodate for ducks.



Figure 6.20 'Bad' nature in the home space. Mike tries to deter the ducks by stringing up fishing line around his pool fence: "We now put up fishing line. It can't be seen from the street, but it's quite extensive and the ducks come down, see it and they'll choof off. Once they've had one encounter with it, one thing I've learned about them is that they're very intelligent, so once they've encountered something that's not good for them they don't come back.

Similarly, Sam P. was vigilant towards removing bindiis and paspalum, going to a significant amount of effort to 'clean' the lawn:

SP: Well I'd rather not have weeds – bindiis and that sort of thing. In our family get togethers, people like to run around with no shoes on. If we have a game of soccer or cricket in the yard, it's nice to not have those sorts of weeds. And also I've got a bit of a problem with the weeds – basically this is a kikuyu lawn, but there's a lot of paspalum started coming through. Which is not a broad leafed weed, it's a grass. Consequently the broad leafed herbicides don't kill paspalum. One thing that I have been doing, up until a few months ago, is actually digging out the paspalum and transplanting kikuyu to those spots.

A productive garden was one site where the presence of non-humans was exclusionary. By its nature, growing fruit and vegetables in the garden will attract various non-humans. Nangarin residents particularly focussed on the interrupting presence of non-humans when producing food. There was a myriad of responses: rabbits dug up the garden and ate vegetables, cockatoos were destructive and stripped fruit trees, foxes could kill chickens. The extent of excluding problematic non-humans was governed by the attitude of the resident. While some were heavily invested in protecting their crops, others like Annette P. and Kevin M. were happy to share:

AP: I hope to have some plants out, and to encourage the animals. Then we'll just divide off what they can eat and what we can eat... The design idea is to pretty much only put in plants that will either feed us, or feed nature.

-

KM: We're going to lose a crop occasionally, I think.

KM: I wanted to have more citrus, but because of the cockatoos we've just left it with what we have.

LM: Now we're just contented to share. If we get the odd bit of citrus we're happy.

Sharing produce is another traction expressed by Nangarin residents towards a new way of living with nature – by accepting that animals will eat food if it is available to them, this shows a tolerance for the beastly natures of non-humans (Philo & Wilbert 2000).

6.5 Re-animating the Landscape

Non-human landscape elements beyond flora and fauna also enact relational agency, and demand to be acknowledged – following Latour's (1993) 'parliament of things'. The following section will theorise the agency expressed by some material landscape elements within Nangarin estate that are largely viewed as static – with respect to topography, fire and soil. Again, the human gaze and self-tours were utilised to reveal these prominent landscape actors.

6.5.1 Topography

The challenging topography retained in the design of Nangarin estate has already been discussed with respect to its limiting effect on mobility (see Chapter 5). Extending this, topography also influenced dwelling and practice. From the outset, gradient-based building restrictions position topography as a powerful agent in the landscape. A similar conclusion was reached by Ruming (2009) with respect to estate design. Topography is also tied to the aesthetic value of the estate – the creator of viewpoints and a part of the natural vista of 'rolling hills' (Figure 6.21).



Figure 6.21 The 'rolling hills', as seen from the top of The Grange (June 2012)

Topography has a latent relational agency – by shaping space before humans can enact their influence upon it, topography consequently forces humans to adjust. The agency of topography was at work from the outset, cited by residents as a telling factor in block selection. Peter B. and Greg W. both chose flat blocks to inhibit the restrictive usage of a steeper block:

GW: A lot of people say, "You haven't got a view, you need a view". I'd rather have a useable yard.

-

PB: When we were first looking at the estate we were looking at these blocks here, and they were just too hilly to be able to do anything that resembles a backyard, and you'd probably have to cut into the hill too much.

Adele H., who owned an upward sloping block, discussed the resultant challenge of maintenance:

AH: Probably the hardest thing about this block is the slope.

CG: Oh, I can see that.

AH: Because it not only slopes in one direction, it slopes in multiple directions. I have come close to killing myself on the ride-on a couple of times.

Topography also enrolls the agency of other non-humans, creating cyborgs (Haraway 1991). Cyborgs are collaborative efforts between actors. The combination of rainwater and topography creates a run-off cyborg – a mixing of the fluidity of water and a compromising of shear stress of slope. The run-off cyborg creates the necessity for drainage in dwelling space. Steeply sloped blocks often required the construction of extensive retaining walls. The backyard of Annette C. had the most extreme example of this – a four tiered, 87 metre long retaining wall, as shown below as Figure 6.22.



Figure 6.22 Annette C's backyard space, dominated by the retaining wall. They were forced into this situation by their contractor: "When the guy came out to dig out for the house, he dug out too much. He dug down too far", The Vintage (July 2012).

6.5.2 Fire

Nangarin estate has a fire history – a bushfire entered the estate in 2006, and burnt down a house adjacent to the community bushland on The Grange (Figure 6.23). This event markedly increased the awareness of fire risk in Nangarin.



Figure 6.23 The aftermath of the 2006 bushfire, as seen from The Grange (October 2006). Kevin M was there that day: “It raced through – I saw it coming through The Ironbarks, and I actually jumped in the car. You could smell it. And it was racing along through the grasses in the houses behind our street. It was just, you couldn’t run as fast. It was flying.”

Source: www.nangarin.com

The attitude of amenity migrants towards fire has been an important point of inquiry in post-productive landscapes. There is a marked awareness-action ‘gap’ between the place of bushfire in landholder’s everyday lives – where a lack of preparedness is not new (Eriksen & Gill 2011).

As a result of this fire history, the awareness-action gap in Nangarin estate is less severe. The Executive Committee have gone to considerable efforts to prepare the community for emergency management and the mitigation of fire damage. The Committee and the Fire Monitor in the estate have worked to provide fire cabinets in the landscape (Figure 6.24), and obtained a fire trailer for community use from the Rural Fire Service.



Figure 6.24 The contents of one of the fire cabinets placed on the streetscape of Nangarin estate. As described by the Executive's Fire Monitor: "What they have in them is some fire fighting equipment: canvas hoses of two different sizes, some helmets, some gloves and masks and so forth for smoke inhalation. So yeah, we've got those installed at strategic locations around the estate – primarily on the North and the Western sides of the estate where fires are most likely to be a risk", The Vines (July 2012)

In the interview with the Executive Chair, he expressed how fire risk had subsequently altered the planting strategy of the Nangarin landscape:

EC: The CMS talks about natives only... When we lost the house up on the hill a few years ago, that was one of the considerations. We agreed that natives would be used on the outer boundaries of the estate, such as along the creek line.

This awareness of planting natives and the resultant fire risk is visually apparent in how some residents have constructed their garden spaces:

GK: The type of trees that we've got to plant, it's mainly the leylandii pines. We'd love to have your gum trees, your natural natives around, but they're a huge fire risk. You know what gums are like, they catch alight and boy, they burn up the top like you wouldn't believe it. Near the house particularly the pine trees, they're more resistant to fire than any of the other trees, so that's why we've got those trees there.

The concerning point about this quote is that while George reacting to native fire risk, leylandii pines are in fact also fire accelerants. This shows a misbelief around what to plant. Other Nangarin garden spaces were more conscious of what to plant, and how to plant it:

MF: This is generally a great – it's myoporum, which is a native ground cover. It's great for erosion control and fire control. What we did, particularly after the fire, we revisited our planting list to see what the recommended species were.

SP: We haven't planted any gum trees, or eucalypts in general, because they drop a lot of debris – branches, and leaves and so forth, which makes the lawn a bit harder to keep. But I'm also conscious of the fire risk, of having too much foliage around. I'm particularly conscious of having shrubs too close to the house. However, out the front we have got some gardens – my wife's got a little garden out the front of the house with a few flowers in it. As you'll see, there's another small garden at the front – which has lower growing plants that are less likely to be a fire hazard.

Nevertheless, this still didn't absolve Nangarin humans from neglecting the presence of fire. John D., a retired RFS fireman, attributed the loss of the house in 2006 to leaves in the gutter, and noted the lack of care for this in other people's homes:

JD: The two reasons that house burnt down was leaves in the gutter and embers. The house burned from the top-down, which is conducive to leaves in the gutter. I went afterwards and saw photos at the NSW Fire Service in Picton and the floor was pretty much intact. A lot of people think that it was mulch in the front lawn that caused the house to catch fire, but the floor hadn't really burned.

CG: Do you think that's because of a lack of awareness?

JD: Yeah, I don't know if next door's got it – you can see leaves in their roofing there. Next door has weeds and things growing out of the gutter. You just can't get through to some people.

This suggests that there is still an active gap between awareness and action around fire.

6.5.3 Soil

One thing that became quite apparent in initial self-tours of Nangarin estate was that some of the ways in which private space was managed were struggling to cope with prevailing biophysical conditions. This was apparent in the variable appearances of Nangarin lawns, as shown in Figure 6.25.



Figure 6.25. Patchy lawns – does this reveal the agency of soil? The Ironbarks (July 2012)

The sporadic growth of lawns created the impetus for exploring the agency of that non-human which supports plant growth – soil. When considering non-humans, the materiality of soil is under-theorised (Salisbury 2012). The agency of soil is waiting to be acknowledged. In terms of physical geography, soil is a crucial base for other non-human life – it supplies the nutrients for non-human flora to grow, and houses a myriad of invertebrate non-humans. Soil is far from a static landscape element; it is active, *alive*.

The agency of soil and soil landscapes is something that cannot be ignored when considering the steady movement of residential humans towards the rural-urban fringe, and

the subsequent expectations that humans inscribe on these soil landscapes. It was expected, for example, that within a residential setting, the soil would be able to foster the growth of a healthy, vibrant lawn. Mustafa et al (2010), in a study of lawns in coastal Florida, noted that despite the marked inappropriateness of turfgrass to the local ecology of poor soils, lawns were the dominant feature in residential areas. When the soil fails this task, it is up to humans to re-inscribe the soil, with chemicals and fertilisers, to suit this purpose (Robbins 2007). But as seen in Nangarin, soil can fight back.

Nangarin estate belongs geologically to the Wianamatta shale sub-group of the Sydney Basin. Characteristically, these are heavy clay soils comprised of shale and associated sandstone (Dunkerley 1973). Soil fertility is low to moderate, with a poor soil structure that makes the area very susceptible to slumps and slides (Hazelton & Tille 1990). As could be expected from an infertile clay soil, Nangarin residents described difficulties when negotiating the suitability of soil in their garden spaces. Mike S. cited the inscription of grass on the soil as an ongoing struggle – *‘We’ve been here 10 years and we’ve not been able to grow grass in some areas’*. This was especially pertinent with respect to supporting the sustained growth of the lawn. Sue T cited the soil as a major struggle in the garden space:

ST: You can’t just dig a hole and plant something. You’ve got to build it up with nutrition.

Combating the agency of soil required residents to extensively re-nourish the soilscape. Boyd W. replaced the clay with new topsoil and a combination of gypsum and chicken manure to facilitate the sustained growth of his photinia hedge:

BW: It’s amazing, it’s full of worms now and there was nothing in there before, just hard clay. The gypsum makes a big difference, it’s broken it up and it’s actually really nice soil.

The practice of re-nourishing the soil was exacerbated by the size of residential lots – once again, lot size ratcheting up consumption. John & Anita D. added *‘about 35 tonnes of crushed sandstone’* to support their grevillea garden (refer to Figure 6.4). Peter T noted that gypsum needed to be re-applied to have any lasting effect – *‘that’s an expensive proposition here when you buy it by the 20 kilo bag’* (Figure 6.26).



Figure 6.26 The result of excessive inputs in Sue & Peter's lawnscape – a homogenous, green lawn, The Ironbarks (October 2012)

During a self-tour, the researcher recorded an informal chat with a contract gardener. Due largely to the size of the block, the provision of fertilisers to maintain the lawn aesthetic was bewildering:

CG: You'd have to put a fair bit of fertiliser and stuff like that on it, to keep it going?

Gardener: Yeah. Me and me son spread it by hand. We spread, oh, uh, probably 20 tonne I think we spread on it.

There is always an inherent power struggle between humans and nature in the hybrid space of the garden. It is high time that the agency of soil is acknowledged. Residents should stop fighting the soil and accept its power, readjusting their gardening practices accordingly.

6.6 Conclusion

This chapter has focussed on garden spaces to explore how Nangarin residents dwell in the estate. The everyday rhythms of Nangarin humans are forcibly intertwined with the non-human by design. Despite this materiality, and the pervading influences of regulation and governance, it is largely the attitudes of residents that influence practice. The attitudes of residents tended to adhere to a neat, manicured rendering of nature – attempting to impose on a bushland setting a suburban idyll landscape of lawns, driveways and ‘mega-homes’. This suggests that residents have only adapted to difference of the rural residential estate in very limited means.

The following and concluding chapter of this thesis, Chapter 7, will explore this relationship through zones of friction and zones of traction – ruptures and resiliences that express the viability of this new way of living with nature that is facilitated by the rural residential estate.

7

Living With Nature?

Zones Of Friction & Zones Of Traction

7.1 Introduction

What kind of places can we humans make to live amongst, rather than against, nonhuman nature? This thesis has sought in its modest way to contribute to a wider search for how we as a society can better live with nature, rather than always imagining humans as separate beings impacting *on* the environment (Head 2008). Nangarin estate is one experiment in urban design, promoting deeper engagement with nature as productive (a vineyard, large lot sizes), as 'native' (remnant bushland, planting recommendations), and as 'everyday' (as captured in the 'Welcome to Nangarin' sign – Figure 4.8). Can rural residential estates be seen as a constructive response to this question, one potential answer to a more holistic lifeworld? This thesis has sought to tell the story of Nangarin estate in answer to these questions. This final chapter of the thesis brings the threads of discussion together in this way, addressing the aims of this thesis towards an evaluation of the interactions between humans and nature offered by the rural residential estate.

The developers of Nangarin estate have effectively created a material shell, facilitated by urban design and regulatory frameworks, for a shared space between humans and non-humans (Chapter 4). However, the cohesion of the interactions between humans and non-humans is ultimately an on-going project, a continually re-made product of human values and practices. Interactions between humans and nature were explored through the mobility routines of Nangarin residents (Chapter 5), and how residents subsequently negotiated the materiality of their residential lots to create a dwelling space (Chapter 6). Following the framework offered by Head et al. (in prep.), this chapter identifies zones of friction and zones of traction within everyday routines. Frictions and tractions work to 'illustrate different pathways of connection' (Head et al. in prep: 13). The burgeoning importance of greenfield areas as accommodating Sydney's future populations will present planners with similar post-productive 'canvases'. These zones of friction and zones of traction can be seen as *opportunities* and *threats* for undertaking a future design project of this nature, thus informing the design of similar urban experiments for urban planners.

This chapter will identify several zones of friction and zones of traction based on how interviewed Nangarin residents used and shaped space. These frictions and tractions will be explored in three overarching themes: *practice*, *dwelling*, and the *valuation* of nature.

7.2 Dwelling

Despite all of these unique design elements of Nangarin Vineyard Estate, it is still inherently a residential estate. Within the temporal textures of daily life, the estate is only an experiment of urban design if it is used experimentally. From the outset, the term *rural residential estate* is oxymoronic - instantly positioning its residents between two ways of living in tension. The above discussion of how Nangarin residents use the estate reveals a mixture of this competition; of maintaining suburban ideals, and integrating nature into everyday routines.

A zone of friction presented by the creation of dwelling spaces in Nangarin estate was the wide adoption of the suburban lawn aesthetic (Robbins 2007). This setting reinforces the separation of culture and nature – nature is instead ‘good’ nature and ‘bad’ nature, after Kaika (2005). ‘Good’ nature is accepted within the dwelling boundary, tied to themes of cleanliness, while ‘bad’ nature becomes the ‘other’, ‘the antipode to the comfortable, protected inside of the home’ (Kaika 2005:58). Bad nature is disorder and mess, visually excluded in the lawn aesthetic. Likewise residents were not willing to change garden designs to deter mynas (and instead problematised mynas as unwelcome pests, without acknowledging the human role in creating for them an inviting habitat) or to alter pool area design to accommodate ducks (and their droppings) (Chapter 6). Similarly, residents expressed disdain at the presence of weeds in the regulated monoculture lawn and embarked on ambitious attempts to alter soil ecology across large plots through importation of vast amounts of fertilizer. The production of a lawnscape is a constant struggle against ‘very basic material tendencies that come from well-established ecological principles’ (Robbins 2007:38). In these instances, the suburban aesthetic desire remains a zone of friction – a block preventing relations of accommodation and negotiation with already-present nonhuman others such as ducks, weeds and soil.

Gardens are signs of opulence, leisure and achievement (Robbins 2007). ‘Outside’ nature was accommodated within private space until it had some form of negative impact – challenging the suburban ideal of display gardening. That this friction remained stubbornly fixed was evident in the scale of labour required to mow lawns, to rid them of weeds (and to transplant desired grasses to replace weeds), to trap mynas and to ‘control’ gardens across very large blocks (Chapter 6). The rural residential estate thus stretched to the very limit the

extent to which modes of suburban residential dwelling could be upscaled on the material landscape. Block size is without doubt a ratchet here – maintenance and temporal and financial outlay is exacerbated by a landscape feature that is viewed as a positive step towards a new way of living with nature.

The strength of the suburban ideal aside, Nangarin estate has been designed to facilitate a different way of living amongst nature – and evidence abounds that life is different there. Non-humans, whether ‘good’ or ‘bad’ remain mobile, and that mobility is enhanced by permeable lot design and regulation. Several residents interviewed highlighted a zone of traction with respect to practice – their production of dwelling space was flexible, allowing co-habitation between human and non-human. This is best represented by residents sharing produce with non-humans, and enrolling outside nature as ‘pets’ (Chapter 6).

As discussed in Chapter 6, residents encouraged non-human groups – namely birds – into their produced space through native planting regimes, while some were willing to share home-grown produce. As well as this, some Nangarin residents were adaptive in terms of keeping domestic animals in the estate – preferring to view itinerant visiting fauna as their ‘pets’ rather than keep cats or dogs on their premises (Chapter 6).

7.3 Practice

The developers and managers of Nangarin Vineyard Estate have ingrained a theme where there is an identifiable effort to incorporate the needs of the surrounding environment. Regulatory structures have attempted to curb negative human practices within the estate, and encouraged the proliferation of natives through landscape standards. What is variable is the willingness of residents to adhere to this vision in their corresponding practices. Those residents who are unwilling continue to construct zones of friction towards this new way of living with nature (as with those unwilling to change driving behaviour or to restrict the mobility of domestic pets – Chapter 4 and 6 respectively).

The governing structures and covenants need to be thought of themselves as something that can evolve over time. Regulation here was termed a ‘toothless tiger’, existing as a set of guidelines, not enforceable rules. It can be both a zone of traction and friction – presenting blockages, but also governance itself can evolve. Perhaps regulation needs to become *restriction* here to facilitate and maintain successful tractions.

A zone of traction was that Nangarin residents were aware of the consequences of living in a 'rural' environment. This was best expressed in the way that the risk of fire was acknowledged and dealt with (Section 6.5). Overall, there has been an identifiable, overall attempt to mitigate potential fire damage in the estate. A general awareness of the risk of fire in a rural residential setting such as this suggests a constructive zone of traction for future similar developments.

Action towards mitigating fire risk and planting natives is a site of contradiction. A contradiction is an interplay between practices that cannot be easily disentangled. Do you plant gums and attract birds, but amplify fire danger? Or do you have vast lawns, which are a safer, less fire prone environment? It is considerations like these that must be thought about in the event of re-applying the materiality of Nangarin estate.

7.4 The valuation of nature

Nature (and its non-human constituents) was valued highly by residents. Engaging with nature was the motivation for walking (Chapter 5), and integrating with nature was a motivating factor for how garden spaces were set up (Chapter 6). Extending this was this steward-like relationship some residents shared with non-humans in their everyday rhythms and subsequent production of space. This intimate relationship pointed towards the development of a newfound responsibility felt towards how humans and non-humans should negotiate residential settings.

It became apparent analysing the exclusionary practices of Nangarin residents that the sphere of 'nature' was itself a complex site for new dualisms – most notably, the divide between native and non-native nature (Section 6.1). Indeed, people displayed very different attitudes towards natives and non-natives – for instance with bird species. Native bird populations were effectively facilitated by the native planting scheme, conversely Indian myna populations were actively discouraged and excluded.

This native-skewed culture of nature can be hypothesised as a zone of friction. The fixity of the lawn aesthetic effectively supplies mynas with a habitat, while residents simultaneously plot how to get rid of the problem. As such, if the permanence of lawns are retained, landuses such as the rural residential estate will require a shifting tolerance towards the

invasive non-human, challenging the normative predispositions of native and non-native status.

7.5 Conclusion

This thesis set out to explore the rural residential estate, assessing its viability for providing society with a new way of living with nature. The construction of Nangarin estate has effectively created a setting where the integration of bushland means the non-human is a constant source of interactions – their presence cannot be ignored. It can be concluded that while each resident is provided with the same material and regulatory framework, how they subsequently enrolled this setting in the use and construction of space is markedly different. This is attributed to the fixity and fluidity of practice and values, these zones of friction and zones of traction.

Annette C sums up the rural residential estate nicely:

AC: We're just, you know, houses inside a natural environment. That's the way that I look at it. It's not really a housing estate as such. The houses have been built around the natural environment that's already here. So it's a really nice feeling, that we're part of where they live – rather than them being a part of where we live. That's how I look at it, yeah.

Views such as this suggest that there is just cause for positioning the rural residential estate as a setting where humans can live better with nature - but the success of which is always contingent on the interplay of governance, materiality and practice.

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Appendices

Appendix A: Conditional Ethics Approval Notice**CONDITIONAL APPROVAL**

In reply please quote: HE12/202

24 May 2012

Professor Chris Gibson
Faculty of Science
Bldg 41.G08
University of Wollongong NSW 2522

Dear Professor Gibson

I am pleased to advise that this is a well written application and has been approved subject to the following conditions:

- 1 It is appropriate to include typical interview questions in the Participant Information Sheet to enable informed consent. Please insert some key questions and provide the revised Participant Information Sheet back to the Ethics Office before research commences.

Ethics Number: HE12/202

Project Title: Following the assemblage: relations between humans and nature in Nangarin Vineyard Estate, a semi-rural master planned estate in Sydney's South-West

Researchers: Professor Chris Gibson, Mr Charles Gillon

Reviewed Date: 24 May 2012

The University of Wollongong/ISLHD Social Sciences HREC is constituted and functions in accordance with the NHMRC *National Statement on Ethical Conduct in Human Research*. The HREC has reviewed the research proposal for compliance with the *National Statement* and approval of this project is conditional upon your continuing compliance with this document.

A condition of approval by the HREC is the submission of a progress report annually and a final report on completion of your project. The progress report template is available at <http://www.uow.edu.au/research/rso/ethics/UOW009385.html>. This report must be completed, signed by the appropriate Head of School, and returned to the Research Services Office prior to the expiry date.

Appendix B: Participant Information Sheet



NANGARIN RESIDENTS AND NATURE: PARTICIPANT INFORMATION SHEET FOR INTERVIEW PARTICIPANTS

STUDENT RESEARCHER: Charles Gillon, Honours student, School of Earth & Environmental Sciences, University of Wollongong
Phone: 0418277336, Email: cwg317@uowmail.edu.au

SUPERVISOR: Professor Chris Gibson, School of Earth & Environmental Sciences, University of Wollongong
Phone: 4221 3448, Email: cgibson@uow.edu.au

RESEARCH AIMS

How do humans and nature interact within the setting of a semi-rural estate? The aims of the project are to analyse how regulation, urban design and everyday practices shape the complex, everyday interactions between humans and their surrounding environment, using Nangarin Vineyard Estate as the study site. This project addresses the possibilities of residential planning in greater Sydney, as well as responding to a wider concern of how humans can live 'better' with nature in society.

RESEARCH PROCEDURES

If you decide to take part, you will be asked to participate in a walking interview, focussing on your everyday practices in Nangarin Vineyard Estate. This will involve being interviewed in your home, and then for a short walk around the estate. The interview will take approximately one hour of your time, and you will only be asked to participate in this project on one occasion. **Key questions addressed by the interview include: How do residents use the space of Nangarin Vineyard Estate? How does nature affect residents in their homes and on their properties? Do residents interact with nature outside their homes, and if so where?** As the interview takes place you will also be asked to take place in two other activities. One is a photo exercise, which involves you taking a photo of an important element of nature in the estate. There is also the possibility of the walk being recorded using a GPS tracker. If you feel uncomfortable answering any questions, taking a photo, or being tracked by a GPS system, it is your right to decline.

USES OF DATA

This data will be recorded by the student researcher using a voice recorder. The soundfile created will be stored on the personal computer of the student researcher and used to transcribe the interview. Excerpts from your interview, or any photos or GPS tracks recorded, have the potential to be used by the student researcher as a part of their Honours thesis. The thesis is an assessable part of the completion of their undergraduate University studies.

POSSIBLE RISKS, INCONVENIENCES AND DISCOMFORTS

Apart from the hour it takes to conduct this interview, there should be no risks or inconveniences by you for participating. You will be given a small compensation for your participation, in the form of a \$20 gift card.

CONFIDENTIALITY

You have the option as a participant to remain anonymous, as excerpts from the interview, photo and GPS exercises may be used as part of a submitted Honours thesis. Your responses will be given a pseudonym in the thesis. However, given the size of Nangarin Vineyard Estate, participants are reminded that responses may still be identifiable by someone living in the estate, even with the use of a pseudonym. You are invited to request a copy of your transcript, and submit any edits. You will also be given the chance to view the finished thesis.

CONSENT

It is your choice whether you want to participate in this research. Consent will be formalised using a separate consent form, given to you by the student researcher before your participation. If you decide not to take part, your relationship with the University of Wollongong will not be affected. If you complete an interview and decide to withdraw your consent at a later date, you can contact the student researcher or their supervisor on their details at the top of this page. Again, your relationship with the University of Wollongong will not be affected.

ETHICS REVIEW AND COMPLAINTS

This study has been reviewed by the Human Research Ethics Committee (Social Science, Humanities and Behavioural Science) of the University of Wollongong. If you have any concerns or complaints regarding the way in which this research has been conducted, you can contact the University of Wollongong Ethics Manager on (02) 4221 4457.

If you have any immediate questions concerning this research you can ask the student researcher who is conducting the interview face to face. If you need further clarification, or have additional questions, you can contact their supervisor (Prof. Chris Gibson) on their details at the top of the page.

Thankyou for your participation in this study. This participant information sheet is yours to keep.

Appendix C: Consent Form



NANGARIN RESIDENTS AND NATURE: CONSENT FORM

STUDENT RESEARCHER: Charles Gillon, Honours student, School of Earth & Environmental Sciences, University of Wollongong

Phone: 0418277336, Email: cwg317@uowmail.edu.au

SUPERVISOR: Professor Chris Gibson, School of Earth & Environmental Sciences, University of Wollongong

Phone: 4221 3448, Email: cgibson@uow.edu.au

I, _____ *Name (please print)*

understand what the research is about. I have been given a Participant Information Sheet and I have had the opportunity to read it. I have had an opportunity to discuss the research project with Charles Gillon, who is undertaking this research through the University of Wollongong. I know if I have any further questions I can address them to Chris Gibson, at the contact details provided above.

I have been advised of the risks and inconveniences associated with this research. I agree to participate in a walking interview of approximately one hour in length around Nangarin Vineyard Estate. I understand that this involves taking one photo, at my choosing. Also, I may choose for this interview to be tracked using a GPS.

I am aware that my participation in this research is voluntary, and if I am worried about my involvement I can withdraw my consent without providing a reason. I have been informed that withdrawing my consent will not affect my relationship with the University of Wollongong. I am aware that I can contact the University of Wollongong Ethics Officer on (02) 4221 4457 if I have any concerns or complaints regarding the way in which research is or has been conducted.

By ticking the following list of activities, and signing and dating the form below, I am indicating my agreement to participate in:

- ☐ An informal walking interview, lasting approximately one hour, which will be recorded by the student researcher and later transcribed for potential use in a submitted thesis
- ☐ Taking a photograph during this interview, which may be published in a submitted thesis
- ☐ Being tracked by a GPS during this interview, which may be published in a submitted thesis

I understand that by ticking one of the boxes below, I am agreeing to remain anonymous in any published material:

- ☐ Excerpts from my interview will be given a pseudonym
- ☐ Excerpts from my interview may use my given name

I grant permission to reproduce any data from my participation as a part of the student researcher's Honours thesis, and any further academic publications.

Signed

Date

Terms & Conditions:

I understand that my personal particulars will be stored by Elyse Stanes, University of Wollongong, for a minimum of five years for record keeping and administrative purposes only, and will not be supplied to any other person or organisation for any other purpose.

Appendix D: Letterbox Drop Material, in order of sequence.

Dear Nangarin resident,

How do you interact with nature in your everyday practices?

Hi! My name is Charlie Gillon. I am a fourth year student at the University of Wollongong currently doing my Honours project. For my thesis, I have chosen to study how humans and nature interact in a semi-rural estate – Nangarin is ideal to explore this.

You may see me walking around as I conduct initial research on the design and qualities of the estate. Feel free to say hello, and if you have any questions on what I'm doing I'll be happy to answer.



In the coming weeks I'll be recruiting some residents for a short interview on their experiences living in Nangarin. If you wish to participate, or have any questions or comments, please send me an email at cwg317@uowmail.edu.au.

Also, if there are any residents with knowledge of the birds and plants present at Nangarin and have time to help me out, I would greatly appreciate some help – as I currently have no expertise on this!

Questions? Comments? Are you interested?

Contact me via email at cwg317@uowmail.edu.au

Thankyou!



Dear Nangarin resident,
How do you interact with nature in
your everyday practices?

Charlie Gillon, Honours Student, University of Wollongong

Email: cwg317@uowmail.edu.au



WHAT IS IT?

I am recruiting residents of Nangarin Vineyard Estate to participate in a short interview about your experiences living in Nangarin. The interview should take approximately one hour, and involves an interview at your home, and a short walk around the estate.

WHO CAN PARTICIPATE?

Any resident of Nangarin Vineyard Estate. You don't have to be a nature lover to participate, I'm asking anybody!

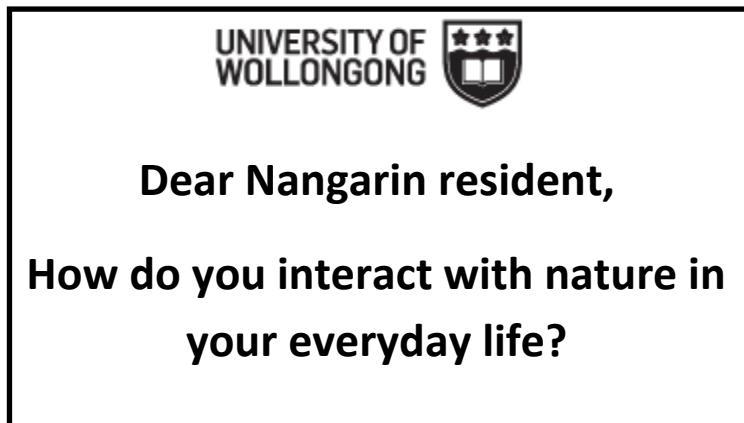
WHY AM I DOING IT?

Your responses to the interview will be recorded, and responses will be used as a part of my Honours thesis. The thesis is addressing how humans and nature interact in a semi-rural estate.

WHEN AM I DOING IT?

I am hoping to conduct the interviews from June – August. As for the time and date, this is entirely negotiable around your availability. There is a small reward for participating!

Express your interest by contacting me via email (cwg317@uowmail.edu.au)



Charlie Gillon, Honours Student, University of Wollongong

Email: cwg317@uowmail.edu.au

Phone: 0418 277 336



Hi! As you may be aware by now, over the last month I've been conducting interviews with residents of Nangarin for my honours thesis in Geography. I am interested in your experiences living in Nangarin, and especially how you interact with the surrounding environment.

I'm hoping to get the interviews finished by the end of July. This means that I have just under a month to get interviews finished. So far, 15 Nangarin households have participated, which has been great. However, I still need a few more. Any resident can participate!

If you would like to have your say on what it's like living in Nangarin, please get in touch with me at the above email address, or feel free to call or text me at the above phone number.

The interview should only take one hour, and when the interview takes place is up to you.

There is a gift voucher offered as a thank you for participating!

**Please express your interest by contacting me via phone or email:
(0418277336 or cwg317@uowmail.edu.au)**

Appendix E: Interview Schedule

Interview Schedule For Nangarin Residents

The interview has been designed to be semi-structured and conversational. There will be a fixed element at the home of the participant, followed by a short walk around Nangarin estate. This process should take approximately one hour, length depending largely on the enthusiasm of the participant in the walking tour.

Part One: At The Home

Simple introduction:

“Hi, thanks for being a part of my research. Tell me a bit about yourself... “

From this, get name, age, family structure, profession, hobbies?

***Background, Contextualising Personal Rhythms In Nangarin**

How long have you lived at Nangarin estate?

Do you know the history of the house at all?

Where did you move here from? Why did you move here?

How many hours do you spend in the estate daily? *Ask about the commute to work.*

Do you spend more time here on weekends?

What do you like about the estate? What do you dislike about the estate?

Would you ever move away from here? If so, why?

Do you feel a part of a community here? If so, why? If not, why not?

Do you feel safe here?

*** Nature In The Home**

Do you have any encounters with outside nature at home? Are any of these viewed as a problem?

Prompts: birds, bugs, pests, environmental wastes (leaf litter, branches), animals getting inside the property, inside the house.

The backyard: *This will involve a walking tour of their front/backyards – depending on how much they are willing to share.*

Do you use your garden? What kinds of things do you use it for?

Is there any overall concept in your garden?

Do you consider yourself to be a gardener? What have you planted? Why have you planted this?

Do you mow your lawn, how often?

What grows? What doesn't grow?

What struggles have you had gardening? How do you overcome these challenges? *Weeds, soil.*

***Regulation**

How is living with community title? Does it affect how you live in any way?

Issues that may come out:

- Pets. Do you have any pets? If so, what are they? If not, why not? Have you had any issues with owning a pet in the estate?

- House design. How much individuality are you allowed? What is regulated? Have you tried to add things to your property and been denied?

Part Two: The Walking Tour

Introduction is along the lines of

"Thanks for showing me around your property/garden. Now I was wondering if you'd be able to come with me on a short walk around Nangarin. When we are on this walk, I'd like you to take me to a place in the estate where you interact with nature often/a place that feels natural/a place that you enjoy in the estate. When we are here, I'd like you to take a photo of this place for me. Then we'll head back to your home and finish up".

***On The Walk.**

NOTE: It is expected that on the walk, we will encounter things that prompt conversation outside the questions below, depending on the time of day/weather/setting. This will form the basis for further discussion.

Walking Practices:

I was wondering how you use the estate. Besides your home, where else do you go in the estate?

Do you usually walk the estate? If so, when? Why at this time, and not at other times?

Why do you walk? *Exercise, pets, kids?*

If you don't walk, why not? *Lifestyle, lack of time, no interest, difficult to walk?*

How do you feel about the vineyard?

Community bushland, do you use this space? What do you use it for?

Do you use the community facilities? What, why?

Nature Questions:

Do you feel closer to nature/a part of nature here? What makes the estate feel 'natural' to you?

What animals do you see often/have you seen in the estate?

Prompting, for example: introduce the birds; “the birds are noisy, aren’t they?”

How is driving in the estate? *Fear of animals*. What about driving at night? *I have seen roadkill here, is it dangerous?*

In terms of plants and animals, is there anything that you feel doesn’t belong in the estate? Why?

How do you feel about fire risk in Nangarin?

Have you thought about ways that the bushland can be better managed?

Engagement With Nature:

Can you tell me about any encounters with nature that are particularly memorable?

Dependent on where we go on the walk:

Why have you chosen this place? What sort of emotions do you feel in this place?

Maybe ask about a particular memory, if one doesn’t come up naturally.

When walking back/finishing up, go to questions above if they weren’t covered. Also, there should have been particular points of inquiry that participants had a lot to say about. Ask people to expand on certain questions – focus on parts they were particularly passionate about.

Finishing up:

“Is there anything else you’d like to add? Thankyou for being a part of my research”.

Give the participant their reward.

In terms of consent: post-interview it will be useful to reaffirm what data will be used for, that they can contact the student researcher or supervisor with any concerns, and request edits of transcript data.

Appendix F: Interview Schedule with the Executive Chair

I was wondering if you could tell me about your role on the Executive Committee.

How long have you held this position?

How does the EC operate? What are the channels for residents to get involved?

How are people elected to join the committee?

I thought that the best way to discuss current issues in the estate would be to discuss the 'current projects' listed on the Nangarin website.

1. The sewerage plant – operational aspects

2. Estate beautification – what does this entail?

3. Fire fighting units – tell me about addressing fire concerns since the 2006 bushfire.

What strategies have you employed?

Is there an estate risk management plan and if so, can I access it?

4. Lantana eradication – I was wondering if you could tell me about this.

Why do you want to get rid of it?

What have you done so far, and plan to do in the future?

Have you thought about ways the bushland can be better managed? What about burning?

5. Trapping of mynas.

Why have they been specifically targeted?

What strategies are you employing to control mynas?

Are there any other animals in the estate that are viewed as a problem? If so, are there strategies in place to control these?

Wildlife care in the estate – what is looked after, why, how?

The vineyard.

Are there any other issues that have come out during your time on the committee?

Appendix G: Self-Tour Template

DATE:		TIME:	
WEATHER:			
OBSERVATIONS/THEMES:			
CARS:	IN	OUT	TOTAL
ANIMALS:			
PEOPLE:			
EMOTIONS/ FEELINGS:			
IMPORTANT PHOTOS:			
IMPORTANT OBSERVATIONS:			
POINTS OF INQUIRY FOR FURTHER VISITS:			