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Making sense of suburbia:

A spatial history of a small rural town in New Zealand

The Breathe Urban Village Competition:

Why did it fail to deliver?

An investigation into the use of visualisations
on the Resource Consent Process

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Lincoln Planning Review is the journal of the Lincoln University Planning Association (LUPA) and is the online publication produced twice each year and primarily edited by students.

The vision is “to be the pre-eminent source of information on planning issues, research and education in and affecting the Central upper South Island.

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EDITORIAL

This 2017 issue of the Lincoln Planning Review has been put together during what can only be described as the most exciting general election campaign held in New Zealand. Exciting, not just for the potential for significant change but also for the difference in the policy agenda being seriously debated on core issues such as inequality, environmental sustainability, concrete action on climate change, and potential changes to the regulations around planning, particularly in larger urban centres where housing availability and transport congestion have grown significantly in recent years. The result, once coalition and confidence and supply arrangements were finalised, signals that a new policy agenda is on the way, an agenda that encompasses much of the research and teaching that occurs here at Lincoln University. Most of these issues are an ever present part of the everyday lives of those who are part of the Lincoln campus, whether as lecturers, researchers, managers or as students. Science, research, policy and planning are all dependent on the political environment and the decision-making process, however this occurs.

Many of the papers in this 2017 issue of the Lincoln Planning Review reflect the political nature of the issues and policies that have been vigorously discussed by both politicians and voters over the last few months. They also demonstrate clearly the quality of the research that is being undertaken at Lincoln University by staff and students alike. It is particularly exciting to see the work produced by those who will be our future leaders, whether as academics, or politicians or whatever the myriad of opportunities offered to them.

The first three papers, all peer reviewed, relate to planning historically and today. The old adage that we can always learn from the past is certainly the case here. We begin, most appropriately, with an historical account of the growth of the Lincoln township by Roy Montgomery, Shannon Page and Nancy Borrie, who emphasis the durability of the suburban residential subdivision despite a series of substantial political shocks and seismic shifts.

Lin Roberts, in analysing the international competition run to design and build an urban village in the city centre to stimulate residential development as part of the Christchurch rebuild (the Breathe Urban Village), provides us with an in-depth account of the government's ultimate failure to support this development, despite substantial evidence of the success and benefits of urban regeneration ventures (underwritten by public funding) elsewhere.

And Ben Baird and Hamish Rennie take us into the use of visualisations or images as part of the resource consent process, suggesting that the potential to mislead calls for greater accuracy in the use of such tools as part of the planning process.

New Zealand's environmental sustainability, water quality and the impact the dairy sector has here prompted Ronlyn Duncan's research into the impact this ongoing political debate has on farmers. Her findings suggest farmers intent on improved farming practice continue to be 'stigmatised' due to a 'lag-effect' that operates across the considerable period of time needed to see the impacts here.

The five papers in the Field Notes and Case Studies section are all student contributions. Not surprisingly, they range from policies on the international stage to local political decisions alongside the nature and ideas around planning. Chloe Ney points us to the structural inequality that perpetuates the impacts of climate change globally and undermines international climate agreements such as

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the Paris Climate Accord. Her argument is that a world environmental agency is needed to deal with regional adaptation strategies, particularly resettlement programmes for climate-displaced migrants. In focusing on New Zealand's freshwater debate, James Ranstead outlines the issues behind the proposed Ruataniwha dam and points us to the tensions exposed here and the precedents that could be set through government action. And Mandille Alcee, an international student from Saint Lucia in the Caribbean, looks at the key environmental and social issues surrounding wind energy generation in New Zealand. The two planning related papers included here provide first an assessment of the different planning approaches that have emerged over time in this discipline: modern, collaborative and spatial planning. In looking at the key differences here, Pippa Huddleston suggests an amalgamation of the strengths in all three models. The second paper, by Richard Sheild, takes us into the role of justice in planning and challenges professional planners to consider how they deal with such issues.

Next, the political theme continues through interviews with two previous Lincoln students who have gone on to pursue political careers – Nicky Snoynink and Nicole Reid. Both talk about the role that their time as post-grad students at Lincoln University played in this decision.

This is followed by a look at the work currently being done by Lincoln's environmental planning team along with the University of Canterbury on disaster risk and resilience. While Hamish Rennie describes the papers now on offer in this field, Alex McCormack provides a most enlightening illustration of the learning gained as a graduate of the Master of Environmental Policy and Management programme alongside the actual experience of being a council planner and active participant in the Kaikoura earthquakes in November 2016.

A conference report follows along with information on past students, awards and scholarships granted and the many publications of Lincoln staff over the 2016/2017 period. This list of publications shows a healthy level of contribution to the academic field within which we all work.

This issue also includes a book review by Mike O'Connell. It is important to state that due to my being a co-editor of this publication, Mike's review was edited by Hamish Rennie.

Over recent years, those teaching planning related papers at Lincoln have worked closely with the public and private sectors, especially local authorities across the broad Canterbury region, and many involved in the earthquake recovery process and the now current focus on increasing resilience within our communities. Very good relationships have been established as part of this process that are very valuable for our students' learning and their potential work opportunities. I am often more than surprised by the amount of work done by those who come into our campus to share their knowledge and strengthen our teaching. We are grateful for the huge amount of input provided. I am not sure we say this enough but our academic community is greatly strengthened by support so willingly given.

Jean Drage
Acting Editor-in-Chief



Making sense of suburbia: A spatial history of a small rural town in New Zealand

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ABSTRACT

Theories of urban planning are often associated with particular movements such as Modernism and New Urbanism, or with key thinkers such as Jane Jacobs, or urban designers such as Kevin Lynch and Jan Gehl. However, much planning activity proceeds privately and at a small scale, or “street-by-street,” so to speak. Only upon later reflection do patterns or trends seem to emerge. This discussion tracks changes in urban planning thought and practice by close scrutiny of the largely unremarkable unit of urban planning practice: the suburban residential subdivision. Analysis and interpretation centres on the establishment in the mid-nineteenth century of a very small rural village in the South Island of New Zealand, and the growth that has occurred subsequently. Changes in town layout in plan or overhead view over time is a principal tool for analysis in this discussion accompanied by contextual or explanatory argumentation. It is concluded that both incrementalism and major shocks, or seismic shifts, serve to perpetuate rather than disrupt or significantly alter the standard urban planning typology of privately-owned single homes on land parcels of between 500-1000m², or the stereotypical ‘quarter acre’ dream as it often referred to in New Zealand.

Keywords: incrementalism; neo-liberalism; private development; low-density; quarter-acre ruralism; seismic shocks; suburbia

1. INTRODUCTION

Theories of urban planning are often associated with particular movements such as Modernism and New Urbanism, or with key thinkers such as Jane Jacobs, or urban designers such as Kevin Lynch and Jan Gehl. However, much planning activity proceeds privately at a small scale, or ‘street-by-street’, so to speak. Only upon later reflection do patterns or trends seem to emerge. This discussion tracks changes in urban planning thought and practice by close scrutiny of the largely unremarkable unit of urban planning practice: the suburban residential subdivision. Analysis and interpretation centres on the establishment in the mid-nineteenth century of a very small rural village in the South Island of New Zealand and the growth that has occurred subsequently. The town, called Lincoln, has for much of its history 150-year history had a population of less than 1500 inhabitants. Over the last two decades, however, Lincoln has more than tripled in population to now carry nearly 5000 inhabitants and it looks set to keep expanding in a

broader context of long-term decline in many rural populations elsewhere in New Zealand.

The methodological approach taken in this study is to couple an historic narrative with historic town planning maps. This allows changes in urban planning thought and practice over time to be tracked (or evidenced) in the urban form as it grows over time. In addition, this study is underpinned by the fact that two of the authors live in Lincoln while all three authors work at Lincoln University that is less than a kilometre away. Unlike other studies, where residents, planners, developers and builders are often interviewed and maps act as illustrative extras we have chosen to focus on the particular spatial representation, or misrepresentation, that maps provide. This is partly because Lincoln is a small town where most people know each other’s business and because there are great sensitivities locally about who has bought or sold what piece of land for development purposes and who has exerted influence in local body politics. Therefore, we do not examine landholders or developers specifically as feelings are still running high in

some quarters about who has profited from residential subdivision in Lincoln. Also, we do not go into detail about the way houses are constructed, how they look, or how the streetscape has changed over time. In essence, they have not changed much at all. The single family home on a section with a garden is the overwhelming norm. Lincoln, to all intents and purposes, now resembles the classic image of quiet suburbia. We prefer instead to ask if the changes in town layout as shown through maps over time can tell us about the influence of larger planning theories and trends. We conclude that even with a major natural disaster event such as the Canterbury earthquakes of 2010-2012, there has been little radical change to the town-making typology over the past 150 years. Low-density suburban development centred on the single family home connected by access roads appears to be a durable or obdurate form, depending upon one's point of view. We believe that it is important to understand the factors that perpetuate 'the quarter acre dream' rather than attempt to dismiss or leave it unanalysed as a phenomenon. In other words, we think it important to study things as they have happened, rather than what theorists and planning practitioners think should or should not have happened. The 'so what' of this discussion hinges on our belief in the importance of establishing the growth patterns first, and then applying interpretation, rather than making case studies fit existing theory.

2. SUBURBIA IN PLANNING THEORY

The terms 'suburb', 'suburban' and 'suburbia' are difficult to separate from polarised views of what has happened in urban planning and urban growth over the past century. At one time suburb merely meant land between a town and surrounding farms or land which closely adjoined the town or city core. In New Zealand in 1849, for example, as plans for a new settlement called Canterbury were being drafted, the initial specifications for urban and rural land sections were 1000 acres of town land divided into half-acre town sections, 1000 acres of 'suburban' allotments of ten acres adjoining the town, and rural sections of no less than fifty acres on the surrounding agricultural plains (Retter 1977, p.38). In the latter half of the twentieth century, influential writers such as Jane Jacobs, Lewis Mumford and William H. Whyte launched stinging assaults on urban planners and their tolerance, if

not outright encouragement for growth outside of cities in the suburbs (Jacobs 1961; Whyte 1956; Mumford 1966). In more recent times, suburbia has come to represent everything that has gone wrong with urban planning and society at large in terms of declining social capital (Putnam 2000). It has been a constant target for those espousing principles of New Urbanism and a return to the typology of the 'traditional neighbourhood'. It is often difficult to dissociate suburbia from the pejorative term 'sprawl' (Kunstler 1993; Duany, Plater-Zyberk, and Speck 2000). The most frequently-cited paradigm for deadly suburbia in these and other publications is the Levitt Brothers' 'Levittown', three versions of which were established in New York, Pennsylvania and New Jersey between the late 1940s and the early 1960s.

From ecological and environmental perspectives critiques of suburban sprawl seem valid: suburbia combined with excessive dependence on private motor vehicles worsen greenhouse gas emissions and this is unsustainable. Sprawl also exacerbates inner city decline which has severe implications for municipalities and those urban dwellers who cannot relocate to newer developments. What is less clear is whether the social and cultural consequences of urban growth by suburban expansion are harmful and undesirable and whether, in a post-fossil fuel dependent world, suburbia will seem like a catastrophic and disruptive maladaptation. Even so, some commentators have attempted to refute the more simplistic critiques of suburbia as wasteful of land (Bruegmann 2005) or harmful to social capital formation and retention (Brueckner and Largey 2006).

Other, more even-handed studies of suburbia have shown that life in low-density residential subdivisions is no worse than higher-density living environments, and that more nuanced degrees of adaptation by homeowners to make their places stand out and impress their neighbours takes place than is acknowledged. For example, Robert Venturi and Denise Scott Brown are best known for their counter-commentary on the value of commercial, roadside architecture to argue that imagination and creativity are to be found there even if it is not 'high culture' (Venturi, Scott Brown, and Izenour 1972). What is less well-known is their application of this interest in adaptation and differentiation to the average American suburb, most notably in their 'Learning

from Levittown or Remedial Housing for Architecture' studio at the Yale Department of Architecture in 1970 (Lautin 2010). For them, as is probably the case in the minds of many suburban dwellers, the private residential house and section can be a site for self-expression and the vernacular. In other words 'difference' can be expressed in very subtle ways.

The most notable close reading of suburban life remains Gans' *The Levittowners* (Gans 1967). The principle finding of that study, where Gans lived in the new community as a participant observer, was that social ties and sociability were no more weak or absent than in urban areas such as Boston's West End, which Gans had studied earlier (Gans 1962). His interviews with Levittown residents confirmed that there was a sense of community even if the forms it took seemed more passive and very localised compared with traditional public life in inner city neighbourhoods. Of greater interest for planners was Gans' painstaking attention to the ways in which the Levitt family, or more correctly, father and brothers, saw themselves as community-builders in their own right. He documents their initial plans, battles with municipalities, battles with their own project managers and consultants to produce far more than simple financial profit, although that of course was paramount.

It is also easy to overlook the fact that private developers have often imbibed the ideas and visions of key planning figures. Rybczynski's *Last Harvest* highlights the influence of Frank Lloyd Wright's Usonian house design on Levittown:

'The Great Neck house, one of the first Usonians, was larger than the houses that the Levitts would build; it cost \$35,000 and took ten months to construct, but it had a powerful effect on the young Alfred [Levitt].' (Rybczynski 2007, p.160)

In Rybczynski's narrative about the creation of New Daleville (a new development near Philadelphia in the early 2000's), the principle linkage between a developer's actions and high planning ideals is not with Wright but with New Urbanism. Just as the Levitts had to modify and moderate the ideals of Wright in order to democratise utopia in suburban form, so private developer Joe Duckworth (who was influenced by Andres Duany and Seaside, Florida in the mid-1990s) had to compromise in order to realise his

vision of a neo-traditional community in peri-urban Pennsylvania. The underlying point made by Rybczynski, and this is reinforced by Jackson in *Crabgrass Frontier* (Jackson 1985) is that suburb-making, for North America at least, is the principal form of urban development. Clever inner city redevelopment notwithstanding, there is little likelihood that the appetite for private home ownership in low-density neighbourhood will change.

Although patterns of urbanisation in North America, should not be read as a desirable trend at a global level, Jackson anchors the phenomenon in a characteristically American outlook of middle-class aspirations:

'The United States has thus far been unique in four important respects that can be summed up in the following sentence: affluent and middle-class Americans live in suburban areas that are far from their work places, in homes that they own and in the centre of yards that by urban standards elsewhere are enormous.' (Jackson 1985, p.6)

Jackson adds: 'Only New Zealand, Australia, and Canada, all with strong frontier traditions, small populations, and a British-induced cultural dislike of cities, share the American experience.' (Jackson 1985, p.7). Lincoln would appear to qualify as a classic frontier town.

3. LINCOLN TOWNSHIP 1862-1948: INCREMENTAL GROWTH

The person responsible for the establishment of Lincoln was James Edward FitzGerald, an Irishman with strong connections to the Canterbury Association¹. An ambitious politician and social reformer, but an indifferent farmer plagued by heart problems from an early age, FitzGerald worked as Secretary for the Association in 1849. The main goal of the Association, in effect a private settlement organisation, was to establish an agricultural colony of small farmers and labourers, backed by the Church of England. The fact that the six main European settlements of New Zealand other than Auckland were created by joint stock or subscription-based private companies linked to the New Zealand Company is sometimes overlooked in the limited coverage of planning history per se in this country (Burns, 1989). Historians, however, have made much of the impetus of private land speculation as the driving force of colonisation whether as critique of

¹See Bowring et al. 2001, pp. 51-56, Penney (1979) and Singleton (2007) for a more detailed history of Lincoln

social inequality within European society (Eldred-Grigg 1980) or as the reason behind the ruthless dispossession and oppression of the indigenous Māori (Burns and Richardson 1989; Evison 1997). In the South Island of New Zealand this speculation manifested as the carving up of the majority of arable land into sheep stations or pastoral runs, either privately owned or leased from the Crown. FitzGerald, in partnership with other businessmen, leased some 27,000 acres (11,000 hectares) of pastoral runs in the 1850s, later freeholding some 3000 acres (1200 hectares) of that land in the early 1860s. This was known as the 'Springs Run' (Acland, 1951).

Many of the names associated with the Canterbury Association are mentioned in the context of what appeared to be shameless land-grabbing in the narratives referred to in the paragraph above, especially in relation to land purchases from Māori. FitzGerald, by contrast, is seen in a slightly better light (McAloon 2006, p.207) and in the case of Lincoln, which was carved out of the remaining 3000 acres of the syndicate-owned pastoral run FitzGerald seems to have invested some personal sentiment in the exercise. He named the streets after himself, members of his family and the family seat in Ireland. True to Association ideals, however, Lincoln was located near the nominal site of one of six projected agricultural towns to be strategically sited on the 300,000 acres that comprised the prime arable land on the Canterbury Plains. It is worth noting at this point that the intended sizes of towns, according to original Canterbury Association plans in 1848, was 1,000 acres for the main town, five hundred acres for the port town and five hundred acres for the 'secondary towns', each to be laid out in quarter-acre sections (Retter 1977, p.25). FitzGerald's town was far more modest in scale covering little more than 80 acres (33 hectares). A Market Square was included in the design but was not actually surveyed off formally and businesses were distributed along the main street running east to west.

The original layout for Lincoln is shown in Figure 1. FitzGerald chose this part of his estate for at least two reasons. The easy availability of fresh running water for setting up a flour mill was a key consideration in setting out a town because by the early 1860s wheat-growing had outstripped returns from sheep and dairy farming. The first mill was not established until 1867 but others followed (Bowring et al, 2001). Slow running, spring-fed creeks and streams were a scarce

phenomenon on the plains. And in a sense FitzGerald was merely reproducing in miniature the approach taken by Association surveyors in the siting of Christchurch in 1850 (Montgomery 2006). In Christchurch the town was deliberately overlain on top of a meandering river and the reasoning was both for navigation by boat i.e., trade access, and because it was regarded as a healthy amenity for citizens. The other reason was that a crossroads had been made already which connected outlying properties and farms with the city. Although original sale plans do not appear to have survived, the original layout is consistent with the streets and proportions of the town centre that exist in the present day. Newspaper advertising of June 1862 shows that FitzGerald divided the town into quarter-acre sections with a price of £12 per section (Singleton et al. 2007, p.296).

It is evident that FitzGerald applied the standard rectilinear grid, a common typology in colonial settlement, and it was only varied here because of the run of the river and the need to accommodate already established road lines. Also in keeping with convention FitzGerald named the roads around the edges as 'North Belt', 'West Belt', 'East Belt' and 'South Belt'. Four main blocks of twenty-four quarter-acre town sections were laid out which produced twenty-five acres of neatly disposed parcels of land to the west. Another twenty-five acres of land was laid out less uniformly to the east. Lincoln was therefore a town with a putative total area for housing of fifty acres or just over 20 hectares and we have projected onto this 1862 plan the configuration of sections that appeared in the years that followed (see Figure 1). The total area within the original

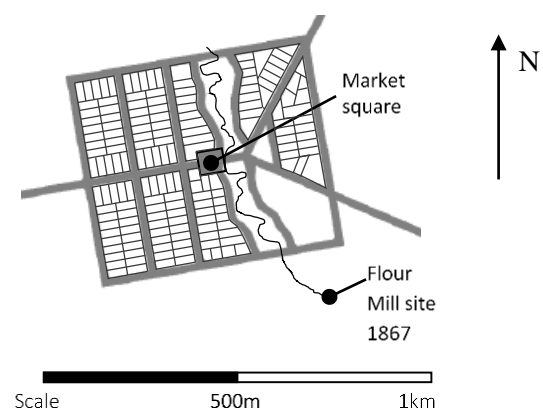


Figure 1. Original layout of Lincoln Township in 1862 with an estimation of section layout. Derived from More (2011) and LINZ (2016)

grid shown in Figure 1 was approximately 81 acres or 33 hectares which would have allowed for roads and public spaces and a number of larger and smaller than average sections to cope with the asymmetrical form caused by existing features. The town roads as shown are to some extent fanciful; they would have been little more than lines marked on the ground or graded tracks at best for several years during the 1860s and even well into the twentieth century many of the town roads remained unfinished. For the sake of consistency we show them as made in all illustrations.

The fact that FitzGerald created a town of only fifty-acres of residential sections when the original Lincoln envisaged by the Canterbury Association was to be 500 acres in size reflects the limited demand for town sections away from Christchurch or the port during the first ten years of settlement. It is important to note that the Canterbury Association had a distinctly anti-urban attitude to settlement. They favoured several market towns of equal size and a capital that was only twice the size of those towns (Retter, 1977, P.25). Life in the new settlement was to be low-density but civilised and FitzGerald respects this sentiment in his model town. In any case there would, in principle, have been nearly 200 quarter acre sections available for purchase in 1862. Not all would have

been sold immediately. Those with spare cash or capital, merchants in particular, would have bought several adjoining sections at once in order to gain premium locations with room for expansion. A slow but steady infill of single family homes and small businesses followed over the next several decades. By 1948 the population had grown to 400 and the number of houses totalled 102 (Jackman, Mason, and Densem 1973, p.3)

In fact, as can be seen from Figure 2, the only major change visible from an overhead perspective over the next eighty years is the addition of a branch railway and the establishment of schools and recreational domains to the north. Whether it was deliberate or not these moves had the effect of helping to create a greenbelt or at least a buffer beyond the formally labelled town belts. The railway line may not appear relevant in terms of broader planning paradigms, however towns throughout New Zealand scrambled to be included in the freight and passenger connectivity afforded by rail transport. Branch railways were possible only after the Vogel government intervened in economic and infrastructure planning at the national level in the 1870s by borrowing heavily to fund the building of public assets such as schools and railways. Branch railways extensions no doubt cemented Lincoln's slow but steady development.

To the extent that growth was steady but slow Lincoln fits unexceptionally into local history narratives that cover the wider district (Penney 1979; Ellesmere Camera Club. 1997; Singleton et al. 2007). Most rural towns in the area did the same. The most distinctive difference, however, is the establishment nearby of a number of central government institutions in the decades following the town's founding. The Provincial Government purchased 250 acres of land on which Canterbury Agriculture College (later Lincoln University) was established in 1880. (Jackman, Mason, and Densem 1973, p.2). Crown scientific research agencies such as the Wheat Research Institute, created in 1928, and an expanded Agronomy Division, set up in 1936, took up large areas of land to the south and west between the college and the township (Galbreath and New Zealand. Department of Internal Affairs. Historical Branch. 1998, pp.39-47). These facilities carried, and continue to carry, special land zoning designations that for many decades limited expansion, subdivision or alternative non-rural activity.

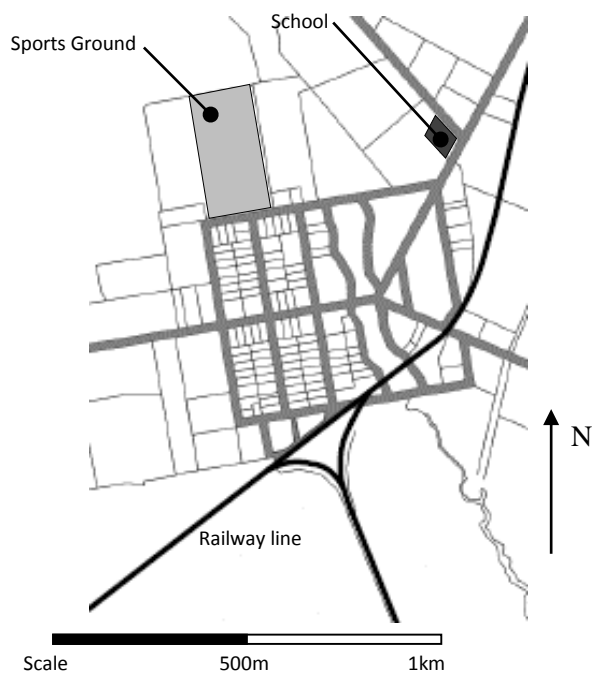


Figure 2. Lincoln Township in 1948. Derived from Jackman et al. (1973) and LINZ (2016)

4. LINCOLN TOWNSHIP 1950-1984: INCREMENTALISM REAFFIRMED

Putting aside the unusual land-use zoning for educational and research purposes for Canterbury Agricultural College, Lincoln was situated in an overwhelmingly rural setting, with all of the contests over scarce services, especially roading infrastructure, and all of the parochialism that goes with small rural populations spread across large geographic areas (Bush, 1980). From 1911 to 1963 Lincoln sat within the local government unit of Springs County comprising some of 90 square miles (23309ha). Immediately to the east, literally across a Boundary Road, was another County, Paparua. Ellesmere and Halswell Counties were not far distant to the west and east of Lincoln respectively. Amalgamation of Ellesmere and Springs Counties in 1963 and Halswell with Paparua in 1968 did little to urbanise these local authorities in their outlooks. Amalgamation was driven principally by the economies of scale needed for the continued provision of rural infrastructure. For example, at the time of amalgamation, Springs, Ellesmere, Halswell and Paparua Counties differed in terms of priorities, policies and rules. The popular view of Paparua County amongst adjoining local authorities was that despite being closer to Christchurch it was more rural in influence and attitude than the other counties (McBride and Hopwood, 1990).

This point about the influence of small rural councils, typically dominated by farmers and farming interests, is important in terms of understanding planning paradigms in New Zealand's past and their mutability or lack thereof. A kind of frontier rurality, based on self-sufficiency and distaste for bureaucracy has underpinned land settlement in New Zealand since European colonisation and colonialism (Pawson and Brooking 2002). Consequently, various iterations of planning legislation such as the Town Planning Act (1926) and the Town and Country Planning Act (1953; 1977) have been designed so as to abrogate farming interests only rarely. Local government or county boundaries were often delineated to create relatively small, autonomous rural local authorities that, proportionally speaking, had more standing than urban councils. This meant that up until the 1980s voting rights in some counties, including Ellesmere, were frequently based on size of land-holding rather than the one-person-one-vote principle. Memon argues that throughout the late nineteenth century and well into the twentieth century, land-use planning was tilted in favour of rural interests, with agriculture and forestry omitted from high degrees of regulation, and the protection of private property rights trumping social and environmental concerns: 'In fact, it is only during the last 30 years, following the enactment of the revised Act in 1953, that territorial authorities have gradually

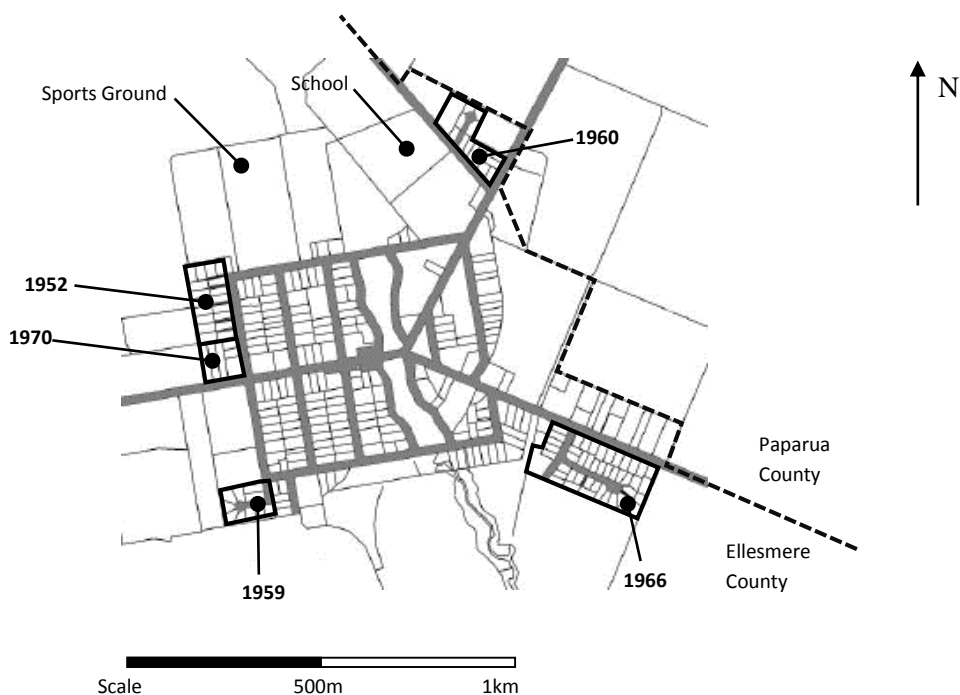


Figure 3. Lincoln Township in 1973 Derived from Jackman et al. (1973) and LINZ (2016)

and somewhat grudgingly come to accept a necessity for public intervention in allocation and management of land use' (Memon 1991, p.30).

Lincoln retained its original modest proportions for more than a century. This can be seen from Figure 3 which shows the town's footprint in 1973. Five additions have taken place and all except the one to the south east (1966) are modest in scale. Three of the five additions have been laid out in a classic post-war residential typology, especially popular in North America, the cul-de-sac. Section sizes were consistent with the existing town average of around 800-1000m². These subdivisions would have most likely passed through the formal land-use change process from petitioning or lobbying of the council by individual farmers or groups of farmers, one or more of whom may have been county councillors, seeking to maximise their strategic location on the outer edge of the town (McBride and Hopwood, 1990). As mentioned earlier, steady infill or internal subdivision within the original town subdivision would have continued, but it is important to note the local council boundary to the north east deterred growth; Paparua County had no reason or mandate to encourage the growth of Lincoln. The population in 1971 had nearly doubled to 770 and there were 217 houses (Jackman, Mason, and Densem 1973, p.3). Still, this tally barely exceeds the original projection by FitzGerald of the town's potential density a hundred years earlier of some 200 private sections.

This slow pace of growth continued into the early 1980s. Such stability over a period of more than a century coincides with the fact that for most of this time the ruling central government parliamentary party, known as the 'National Party' from 1936, was considered to be highly conservative and was strongly aligned with protecting farming and business interests against urban influences and rapid social change (James, 2012). The conventional view is that the urban/rural divide is highly entrenched in New Zealand. Rural interests remain disproportionately dominant, even when urban drift is taken into account, usually to large cities. The so-called 'dairy boom' that started in the early 2000's with record export sales and prices for dairy-product commodities to markets in China in particular has helped to offset the draining effects of urban migration patterns. Yet Lincoln appears to have become more urban than rural over time, or more accurately, it has become more suburban.

5. LINCOLN TOWNSHIP 1984-2016: A SERIES OF 'SHOCKS' THAT LEAVES SUBURBIA AS THE NEW MIDDLE GROUND

While many rural townships in New Zealand appear to have remained relatively static during the late 20th Century/early 21st Century, the predominant trend has been one of decay or shrinkage; it has often been said that 'Rural towns are dying'. This is not the case with Lincoln. Recently it has been labelled, along with Rolleston, as one of the fastest growing towns in the fastest growing district in the country (Selwyn District Council, 2015). However, this path to growth has not been smooth. In fact, the past forty years have been marked by a series of shocks and this has shaped and reshaped the town's form in subtle ways.

The first shock came in 1984 when the Labour Party took office in a landslide election victory. The domestic economy appeared to be at risk due to an overvalued and fixed currency and a constitutional crisis existed for a short period of time. Labour quickly moved to float the New Zealand dollar which reduced its value and initially benefitted exports and exporters, most of it tied to agricultural production. However, Labour also embarked upon other reforms that had major impacts on the farming sector. They began phasing out import licences and reducing import tariffs and this continued over the next decade. More crucially they removed subsidies to agriculture which had been running at 40 percent of returns. Many farmers suddenly found themselves having to think about diversification or exiting the industry. Selling land for urban or lifestyle block residential development was now something to be considered if not welcomed.

The second shock came in the shape of reforms to local government boundaries and representation. Beginning in 1985 with a review of some 850 local government entities comprised of hundreds of small town and rural councils and numerous special purpose bodies that existed at the time. A new Local Government Act in 1989 saw this figure reduced to only 86 regional and territorial local authorities (Thomas and Memon, 2007). This had major impacts in rural communities including Lincoln, which now found itself as only one town amongst many in a merger of nine county councils that formed a single Selwyn District Council. Mayors and councillors were now restricted to policy-making as council operations were professionalised along business

model lines. The reforms also allowed for greater representation of urban interests on council committees.

In line with the neo-liberal economic ideology of the Labour Government of the late 1980s, known locally as 'Rogernomics', a deliberate reference to 'Reaganomics' in the US and consistent with the privatisation policies of Prime Minister Margaret Thatcher in the UK during the same period, a number of central government agencies, including scientific research organisations, were corporatized to the extent that they were expected to return profits to the Crown as business entities. In the case of Lincoln it meant that from 1992 rebranded 'Crown Research Institutes' such as Crop and Food, AgResearch and Landcare Research had to review their operations and their assets and liabilities in business terms. As major landowners immediately to the north and west of the township, they had to reconsider whether owning large tracts of land here for crop trials made business sense. To a lesser extent this corporate view was extended to the tertiary education sector. While there was no thought of selling off or privatising New Zealand universities, Lincoln University included, assets and Crown landholdings at Lincoln such as research, demonstration or experimental farms, were now evaluated in terms of potential alternative returns or uses. In principle, such assets could now be liquidated.

The most significant change of the late 1980s and early 1990s, however, one which was to make the selling of surplus land assets more streamlined, was the drafting and passing of the Resource Management Act 1991. This statute set out the rules for the writing of a new generation of city and district plans and was markedly different from previous Town and Country Planning Acts in that it was not based on strict regulations that either allowed or permitted activities by way of fixed zoning. Instead, activities were to be permitted or 'consents' granted on the basis of the effects such activities had on the environment. This meant that no particular land use was sacrosanct except in the case of pre-existing nature reserves or fragile ecosystems, most of which was covered by other legislation. Farmland, hitherto designated as 'rural' land with specific prohibitions on subdivision and urban and commercial use, could now be converted to other uses as long as effects on the environment were deemed to be sufficiently 'avoided, remedied or mitigated'. The process was in principle quite

simple; a landowner could seek a 'plan change' to rezone land for another use. Viewed domestically and internationally as an unusually ambitious and comprehensive environmental 'super statute' the Resource Management Act 1991 replaced some 78 pieces of existing legislation.

This combination of reforms did not have an immediate effect upon the size and shape of Lincoln. Figure 4 shows that the decade after 1984 produced only a half-dozen cul-de-sac additions of 10-30 sections. Yet, it signals the start of what would be a phenomenal process a decade later. Farming families who had for generations seen themselves only as farmers now found themselves as de facto entrepreneurs if not developers due to market forces. Some sold their farms into the market without modification. Others sought zoning changes from rural to residential under the new RMA and then sold their land to developers. Some sought to retain their land-holdings and farming traditions by partial subdivision and sales while others did so as subdivision developers in their own right. Unlike the Levittown model, where the land was bought and houses built by the same company, here the development involved surveying of residential lots, provision of roading, lighting, sewerage and drainage services. Once the land was sold it was up to new owners to build their houses although a number of developers worked with building companies to host show homes on strategically-sited lots and provide special deals to potential buyers. One of the Crown Research Institutes, Landcare Research, even toyed with the idea of creating a 'green' subdivision in the late 1990s (Montgomery 2000, p.90) but the only concrete result during this period was the selling off or exchange of small parcels of land by one or other Crown Research Institute. Subdivision development was not helped by the cumbersome process of writing a new District Plan by the Selwyn District Council. All councils, whether large or small, struggled to draft new, non-prescriptive schemes or plans. In the case of Selwyn District Council there were so many opposing public submissions on its draft plan of 1995 that it was withdrawn completely in 1998 and redrafted. This had the effect of creating dual plans across the district, the proposed plan and the operative plan, which complicated the consent or variation-granting process.

However, the global financial bubble of the early 2000s, particularly around mortgage lending on real estate, and, paradoxically perhaps, given what happened to many farmers after

deregulation of the economy in the 1980s, a boom in global markets for dairy commodities, turned a number of rural regions with existing or potential irrigation capacity into major investment opportunities with very high returns. Farms were sold, aggregated and converted to dairy production almost overnight. Selwyn District became a prime example of this dairy boom and the small towns began to show the profits. Agri-businesses began to thrive again and associated plant and labour often moved out from the cities to the regions. On top of that middle-class New Zealanders wanted, in increasing numbers, to live rural lifestyles, not on the demanding 10-acre blocks that were popular in the 1970s and 1980s, but in comfortable, low-density suburban settings with a rural atmosphere.

The results of this shift in the global, regional and local economy and the impact of relatively conventional consumer preferences in real estate parcels can be seen in Figure 5. Lincoln appears to have exploded in growth. In 2001 Lincoln's population was 2142. In 2006 it had increased to 2727. By 2013 it had reached 3924 and as at 2015 it was around 4900. The map shows that the town's area has grown roughly ten-fold in the space of twenty years. This leap reflects only the land that has been surveyed off for private lots and

either sold and built upon, sold and held over for future construction or on the market as vacant lots. The bold black lines around the edges of the map show the total areas for new subdivisions that are in stages yet to be fully developed and sold into the market. In other words, potential for further accelerated growth is already in place.

As an example, the 2011 addition to the southwest, actually a joint venture between Lincoln University and the local Maori business incorporation Ngāi Tahu Property Limited which involved the conversion of a university dairy farm into private housing. When fully complete this development of 900 sections and 2700 people would alone more than double Lincoln's population as it was in the year 2001. Similarly, the 2011 and 2014 developments to the northeast, land that was included in a rival county until 1989, are only partially finished at 2016 and these would add several hundred more sections and thousands more residents.

The dates for particular subdivisions are also revealing. The first big wave of development in the early to mid-2000s reflects a global boom in property markets. It appears from the map that many small developers, including farmers-turned-developers, saw a good opportunity to convert parts of their properties into housing. Then,

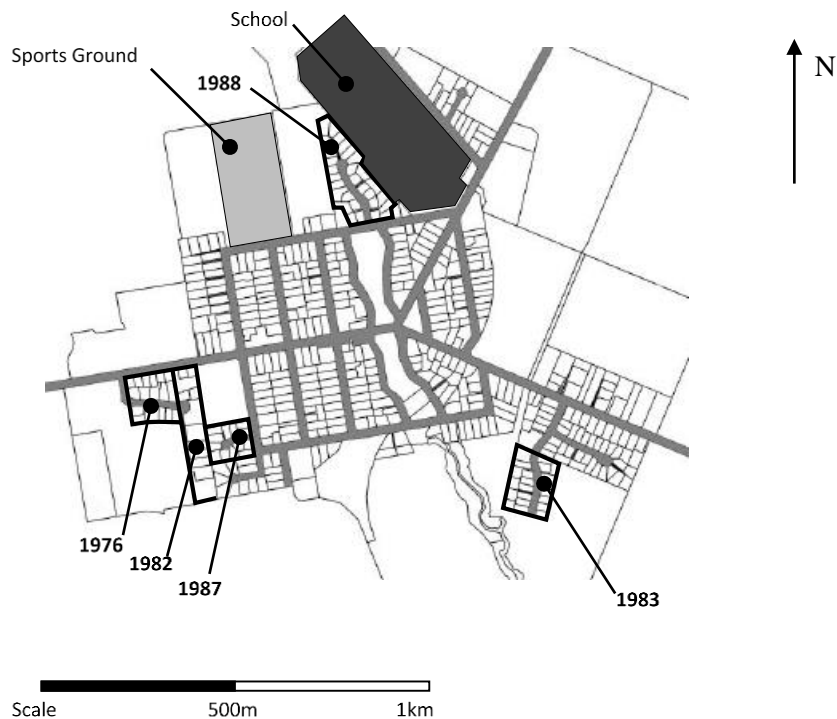


Figure 4. Lincoln Township in 1995 Derived from LINZ (2016)

interestingly there are no developments between 2008 and 2010, the years immediately following the so-called Global Financial Crisis. But then there is what appears to be a sudden reactivation of development, one not matched by many places anywhere else in New Zealand or in many Western countries for that matter, where overheated housing markets and economies had experienced catastrophic losses in many cases. This reactivation in development can also be attributed to a 'seismic shift' in the market in a literal sense.

A 7.1 magnitude earthquake in September 2010 centred to the west of Lincoln but which affected much of Christchurch and a devastating 6.3 magnitude aftershock in February 2011 caused great upheaval and dislocation. More than 5000 homes in the eastern suburbs of Christchurch were written off by central government and purchased from existing owners, leaving a large number of 'cashed-up' potential home-buyers looking or somewhere safer, and newer, to live. Lincoln offered an attractive prospect to quake

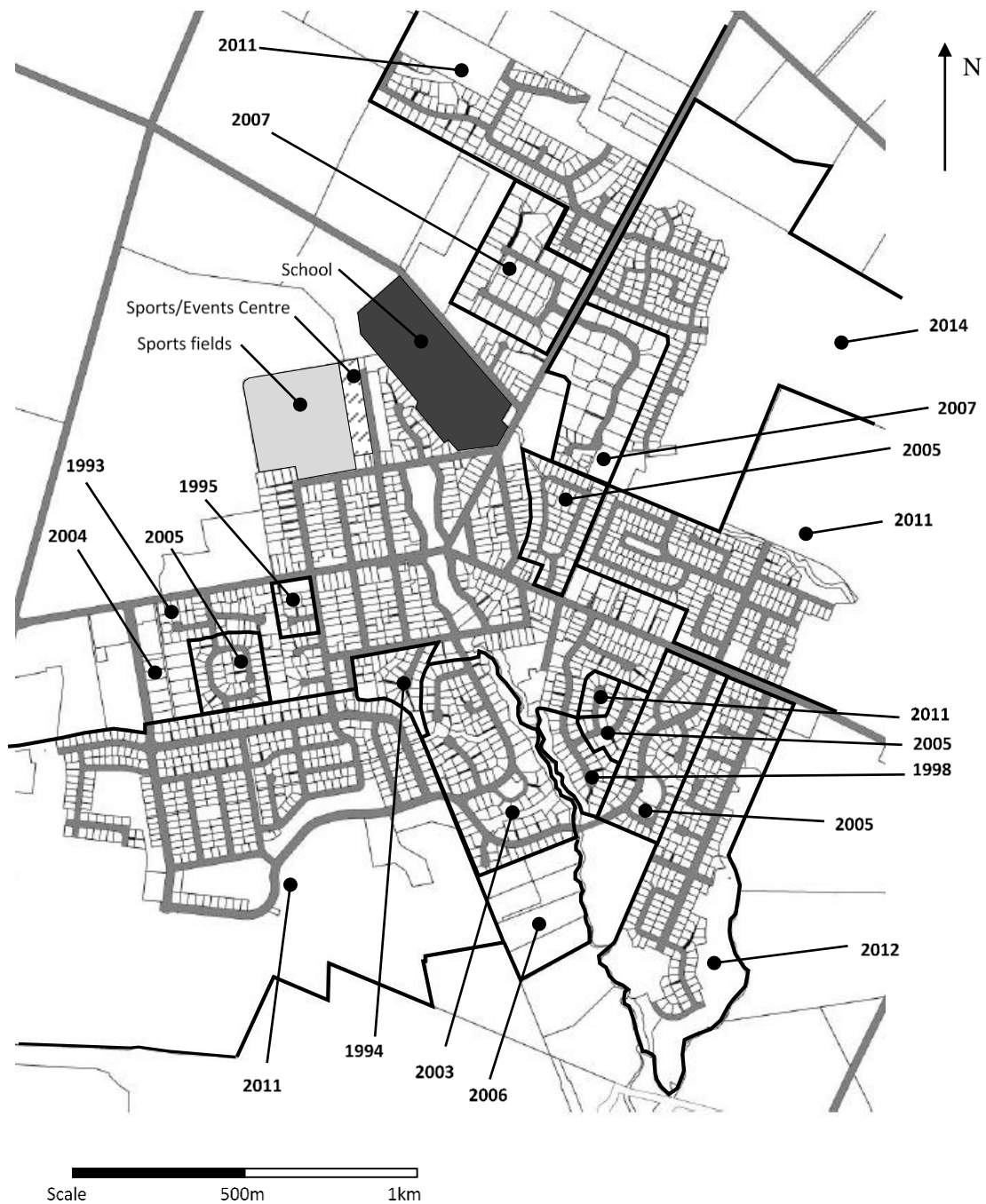


Figure 5. Lincoln Township in 2016. Derived from LINZ (2016)

'refugees' even though, ultimately, moving to Lincoln does not lessen the risk of harm from earthquakes given the South Island's widespread seismicity.

Yet, through all this exponential growth and flight from damaged suburbs elsewhere the typology of size and of layout is relatively unchanging. The influence of New Urbanist thinking is arguably present and can be seen in the greater connectivity of streets in certain subdivisions. Some of the newer subdivisions are connected by roads or walkways, particularly to the southwest but cul-de-sacs, so reviled by New Urbanists, seem to keep appearing in new developments. The size of land parcels seems relatively stable also although when examined closely most are actually smaller than the quarter acre, or 1011m², set out by FitzGerald in 1862. The two developments of 2007 on either side of the road to the northeast are notable for having larger sections of up to 2000-3000m² but the general range across all other new developments falls in the 600-800m² range. By contrast, the urban norm in Christchurch has historically been, and remains, 450-600m². So it appears that what people want, and are offered are sections slightly larger than those in the city but smaller than the class quarter acre. What the plan does not show is the footprint of buildings relative to section size. In this respect things have changed greatly from the nineteenth and twentieth centuries in terms of middle-class lifestyles and aspirations. For the whole of the Selwyn district, the average house size in 1940 was 112.9m², by 2000 this had grown to 219.4m² (QV, 2011). Minimum house sizes are now stipulated by subdivision covenants and design guidelines. As an example, in the large 2011 subdivision by Ngāi Tahu Property Limited to the south east, sections sizes of 500m² and less require a minimum dwelling size of 145m², which increases to 210m² for section sizes over 775m² (Ngāi Tahu, 2016). In Lincoln, as is the case with other suburban and rural locations in New Zealand and in Australia and North America the preference or mode for low-density living appears to be bigger houses on smaller plots of land where space and income permit.

As noted earlier Lincoln is currently, by some accounts, after Rolleston in the same district, the fastest growing town in the fastest growing local authority area in New Zealand, Selwyn District. Lincoln is not, despite the impression that may be formed from Figure 5, a free-for-all or tabula rasa for suburban developers. Thanks to the

earthquakes there are now far more stringent building regulations, particularly with regard to foundations. There are no cheap builds in the residential suburbs of Lincoln. While some are stricter than others body corporate rules and covenants apply to almost all new developments guaranteeing high degrees of social conformity. The District Council requires Outline Development Plans (ODPs) for new developments and there are strict standards and guidelines for infrastructure, stormwater, streetscaping, planting, lighting, open space and other amenities. The identification of Lincoln and Rolleston as future growth areas was prefigured in the Greater Christchurch Urban Development Strategy created by a cluster of local authorities and central government departments in 2007. Central government added urgency and legal weight to this proposal by way of the Canterbury Earthquake Recovery Authority's (CERA) Land Use Recovery Plan which was passed into law in December 2013. Lincoln was seen as a sensible metropolitan overflow site in the mid-2000s and the earthquakes have simply hot-housed the process it could be argued.

6. CONCLUSION: BACK TO THE FUTURE?

To that extent, perhaps Lincoln has simply been lucky. It stayed viable while other towns faded and was in the right place at the right time for the larger changes described above. But it is not a "wild west" town. The exponential growth has happened in the context of a strong existing community and strong social capital. Whenever designs for new residential developments are put forward there are detailed submissions from local residents who often seek design features very much in keeping with the principles of New Urbanism or Green Planning. University students and staff are often involved in local studies of environmental and landscape design. Lincoln has the distinction of being the first 'Envirotown' in New Zealand. Yet when one looks solely at maps of the town over time the consistent feature seems to be the aspiration for a genteel suburban life. It is important for planners and urban designers not to underestimate this tendency, a tendency that FitzGerald and other colonists had already embraced when Canterbury was founded. Given a choice people want their own private house on their own private piece of land. This goes beyond the local context. With the increasing role of private investments in suburban development

at the global level it is vital for planners and local communities to remember that relatively small, piecemeal residential subdivisions have become a durable phenomenon, not simply a fad or aberration. They may be flawed in a number of ways, both socially and environmentally, but they appear to be our proxy for the desire to live in a neighbourhood. The 'quarter acre dream' may already be impractical in many parts of the world and impractical in the long-term unless uncoupled from fossil fuel dependency. But as this spatial history of Lincoln indicates it is deeply-rooted and whatever we try to substitute for it will have to account for the human psychology that underlies this dream.

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The Breathe Urban Village Competition: Why did it fail to deliver?

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ABSTRACT

Successful urban regeneration projects generate benefits that are realised over a much longer timeframe than normal market developments and benefits well beyond those that can be uplifted by a market developer. Consequently there is substantial evidence in the literature that successful place-making and urban regeneration projects are usually public-private partnerships and involve a funder, usually local or central government, willing to contribute 'patient' capital. Following the 2010 and 2011 earthquakes that devastated the centre of Christchurch, there was an urgent need to rebuild and revitalise the heart of the city, and increasing the number of people living in or near the city centre was seen as a key ingredient of that. In October 2010, an international competition was launched to design and build an Urban Village, a project intended to stimulate renewed residential development in the city. The competition attracted 58 entrants from around world, and in October 2013 the winning team was chosen from four finalists. However the team failed to secure sufficient finance, and in November 2015 the Government announced that the development would not proceed. The Government was unwilling or unable to recognise that an insistence on a pure market approach would not deliver the innovative sustainable village asked for in the competition brief, and failed to factor in the opportunity cost to government, local government, local businesses and the wider Christchurch community of delaying by many years the residential development of the eastern side of the city. As a result, the early vision of the vitality that a thriving residential neighbourhood would bring to the city has not yet been realised

Keywords: urban regeneration; Breathe competition; urban village; market approach; 'patient capital' earthquake, Christchurch

1. INTRODUCTION

The earthquakes of September 2010 and February 2011 and the many subsequent aftershocks badly damaged many buildings in the centre of Christchurch, New Zealand. Once the buildings that were deemed hazardous or irreparable had been demolished, there were many city blocks left completely empty. However despite the physical and emotional devastation the earthquakes had wrought, a new hope began to blossom. Yes, the city faced a massive rebuild and regeneration challenge, but this was also seen as a once in a lifetime opportunity to build an exemplary sustainable city fit for the 21st century.

One flagship post-quake urban regeneration project was the design-and-build Breathe Urban Village competition, named 'Breathe' to reflect its purpose to breathe new life into the central city. The competition attracted 58 entrants from around the world, and in October 2013 the

winning team was selected from four finalists. However in November 2015, the Government announced the development would not proceed.

This paper reviews how the Breathe competition was set up and run, and explores some of the factors determining its ultimate failure. It is based on confidential interviews with three of the competition organisers, two of the judges, three of the four finalists, and one city councillor, and an analysis of key competition documents and of coverage of the project in The Press and other media. Some of the documents are publicly available (many in the Beacon Pathway's 'Toolkit for Residential Design and Build Competitions'¹), others the author had access to as a member of The Viva² Project, a partner in one of the four teams of finalists in the competition.

¹ www.beaconpathway.co.nz/further-research/article/a-toolkit-for-residential-design-and-build-competitions

² <http://thevivaproject.org.nz/>

While the trigger for the competition was a natural disaster, internationally there have been many inner city regeneration and ‘brownfield’³ projects addressing similar challenges - uninhabited, sparsely habited or underused blocks of land close to the city centre, a desire to bring people back to living in the inner city, and often problematic ground conditions (e.g. contaminated sites in post-industrial brownfield projects in Europe and North America, liquefaction-prone land in Christchurch). This means there is potential to learn from international regeneration projects, and since financing of the Breathe development proved such a critical factor, the paper first examines the international experience of how urban regeneration is led and funded. The following section documents how this competition emerged from recovery plans aiming to increase the number of people living in the inner city. The Breathe Competition is then introduced, and some of the factors that emerged as critical to the financial viability of the development are explored: the price, value and condition of the land; the challenge of resolving the tension between quality of design and cost; and the options the finalists presented to make the development financially viable. Finally the outcome of the competition is discussed and some conclusions.

2. WHO LEADS AND FUNDS URBAN REGENERATION?

Since the mid 20th century, many European and North American cities have experienced physical, economic, social and environmental decline, and regeneration emerged as a process that seeks to reverse the decay, raise value and kick-start markets (Adair et al., 2003a). Traditionally, such areas of decline have been considered by the private sector as zones of risk and uncertainty (McNamara, 1993; Adair et al., 2005) and regeneration projects have therefore usually been dependent upon some form of public-sector intervention to stimulate market activity.

³ Adams et al. (2010) compared North American and British approaches to brownfield development, and note that the policy emphasis in the UK is placed not on *why* land became vacant or derelict, but rather on the processes by which it might be put to use in future, whereas in the US the term brownfield refers to land where expansion or redevelopment is complicated by real or perceived environmental contamination.

Successful cities make a critical contribution to the competitive performance of the country as a whole (Adair et al., 2000), which may explain why central governments frequently play a key role in funding regeneration projects. For example, in the UK, central government has been heavily involved in the funding of urban regeneration from the 1960s right through to the present day (Berkeley et al. 2017). There is now a wealth of research and practical experience internationally about the process of successful urban regeneration (Roberts et al., 2017). And over recent decades there has been increasing recognition of the need for partnerships which acknowledge the complementary roles of the different partners – the role of the private sector in terms of stimulating property development and investment (Adair et al., 2000), and the equally important role of strong democratic local leadership, public participation and the use of public finance to attract increased private investment (Urban Task Force Report 1999). In the UK and across Europe, there is an established consensus that successful regeneration requires a strategically designed, locally or regionally based, multi-sector, multi-agency partnership approach (Carter & Roberts, 2017)

In many regeneration projects, local leadership is provided by city councils who recognise the many economic and social benefits to the city and the community of revitalising an area and bringing life and employment back into the city. In economic terms, this is acknowledging that good urban design can create positive ‘external benefits’ – benefits of an economic, social or environmental nature that accrue to the wider community and are not fully captured by the developer (Carmona et al., 2001). These benefits can include more local employment, revitalization of a depressed area, quality of life improvements, and increasing rating values and/or tax revenue from the project and surrounding development (MFE, 2005; Leinberger, 2007; Adam and Tiesdell, 2013).

Much less common internationally are successful examples of urban regeneration led solely by the private sector. There are a number of factors that make developers reluctant to take on such projects on their own. Three key factors are:

- Urban regeneration projects are much higher risk, tend to cost more and deliver a return over a much longer period than typical suburban greenfields developments

(Adair et al., 1999; Adair et al., 2003a; Leinberger, 2007; De Sousa, 2008; Trowers and Hamlin, 2016); or are perceived by developers and their investors as higher risk, principally because of an information deficit about the returns and risks (Adair et al., 2003a, b, c; Adair et al., 2005).

- The benefits of urban regeneration projects are widely spread, and so not all easily uplifted by the developer (Carmona et al., 2001; MFE, 2005)
- The methods used by both developers and their investors to analyse financial risk are not suited to evaluating both the longer time horizon of the return and multiple sources of value that urban regeneration projects generate (Leinberger, 2007; Adams and Tiesdell, 2013; Trowers and Hamlin, 2016).

Renewal locations are characterised by a perception of market failure (Adair et al. 2003a), so regeneration projects that seek to work against existing market trends are viewed as inherently risky. Indeed Adair et al. (1999) define urban regeneration as the process of reversing economic, social and physical decay that has reached the point where market forces alone will not suffice. Residential regeneration projects are therefore usually 'place-making' exercises that effectively seek to use good urban design to transform decaying or damaged neighbourhoods into vibrant mixed-use inner city neighbourhoods that are walkable, accessible, sustainable and liveable. If the project does not succeed in quickly slowing or reversing the decline, the developer and investors face significant financial risk. Even if the project does succeed, the benefits will accumulate over many decades (Leinberger, 2007), and so a developer who exits early will not share in any uplift in property value that takes place once the build-out period is complete - these are enjoyed by subsequent owners (Trowers and Hamlin 2016). Likewise many of the benefits of regeneration spill over into neighbouring areas, to the benefit of neighbouring property owners. The temptation for developers therefore is to maximise short-term gains and not to invest in features that can produce longer-term benefits (Trowers and Hamlin 2016).

Gyourko and Rybczynski (2001) and Leinberger (2007) argue that 'walkable' mixed-use urban areas, i.e. areas where most and possibly all of life's daily needs (shopping,

recreation, school, restaurants, employment, etc.) are reachable on foot or by transit, tend to cost more upfront due to a range of factors. These can include higher inner city land prices, higher construction costs (multi-story cf. single story), and the presence of multiple uses, or multiple types of a given product (e.g. a mixture of apartments, detached houses and row houses) which mean that the scale economies associated with mass-producing a single product often cannot be realized (Gyourko and Rybczynski, 2001; Leinberger, 2007). Such developments can also be more costly to finance because developers and financiers lack experience with 'non-conforming' mixed-use and/or high density, walkable projects, compared with suburban developments that have a known market and a commoditised product that developers and their financiers are familiar with (Leinberger, 2007) and perceive that their greater complexity increases risk (Gyourko and Rybczynski, 2001).

In contrast to a suburban greenfields development, where most of the capital return is reaped by the developer within the first seven years, urban regeneration projects tend to accrue value initially more slowly, but over a 10-20 year time span are much more valuable, and therefore long term investors in such projects are likely to see substantial financial returns as the project matures (Leinberger, 2007). However the tools used to evaluate equity investments in construction projects (such as discounted cash flow and internal rate of return) are appropriate for short-term (one to seven years) investment decisions, but are less able to evaluate mid- to long-term returns (beyond year five), which is when a walkable development has the strongest financial performance (Leinberger, 2007).

Developers may thus tend to emphasise short-run returns and curtail costs, whereas the community may favour a durable yet flexible outcome that provides lasting utility (MFE, 2005). Carmona et al. (2001, p.15) describe this as commercial pressures militating against long-term investment in design quality. Left to their own devices, real estate markets tend to induce disintegrated behaviour and create disintegrated places (Adams and Tiesdell 2013), and the result will be poorer urban design than is socially optimal (MFE, 2005).

The usual solution to this problem is to seek to de-risk the project for potential developers by contributing public funds, from either local or central governments, in recognition of the many

benefits that accrue from urban regeneration and good urban design. Leinberger (2007) however, focuses not on the public/private split, but on the short term/long term focus of the investors. He argues that the key need is for 'patient equity' – equity from investors that are willing to leave their money in a project over a period of years. While this patient capital most often comes from central or local government, it does occasionally come from the developer him- or herself, or from pension funds and other institutional investors, individual investors or non-profits (Leinberger, 2007). Deeg and Hardie (2016) have developed a framework to assess the continuum of investor patience, from hedge funds, actively managed funds and most banks at the impatient end, to passive funds, families/foundations, sovereign wealth funds, pension funds, life insurance and some individuals and angel investors towards the more patient end.

One development that would make it easier for developers to access both private and public sources of patient capital would be better methods of evaluating the value of such projects. The market is good at establishing a monetary 'exchange value' for a development, but market prices are poor indicators of the value of many collective benefits, for example social value, aesthetic value and other non-market concepts of worth, since their key feature consists of externalities which are not taken into account in the price for which the goods are sold (Carmona et al. 2001). Tyler et al. (2010) were commissioned by the UK Government to develop a methodology to assess the benefits and value for money of government interventions in regeneration. Using available UK data, they concluded that regeneration projects that involved acquisition, demolition and new build delivered a benefit/cost ratio of 5.5 (central valuation) or 3.7 (cautious valuation), while new build housing regeneration projects delivered a benefit/cost ratio of 2.6 (central valuation) or 1.7 (cautious valuation) (Tyler et al., 2010)⁴. The difficulty of assessing the potential value of regeneration projects is also addressed in a recent report titled 'Highly Valued, Hard to Value' (Trowers and Hamlin, 2016). The authors explored the range of attributes that characterize

⁴In developing the estimate, the authors assumed the benefits would take some time to emerge, say three years, but that they would then persist for 30 years (Tyler et al., 2010, p.87).

successful regeneration projects (i.e. projects which create attractive and well-designed places, that people and businesses want to live in and trade from and that produce positive financial rewards for promoters and developers), and identified valuation techniques that can capture some of these attributes that are not fully reflected in market prices.

3. HOW TO ENCOURAGE MORE PEOPLE TO LIVE IN INNER CITY CHRISTCHURCH

Even before the earthquakes, there had been strong interest from Christchurch City Council (CCC) and local business groups in increasing the number of people living in or near the city centre, as a way to energise and revitalise the inner city. Inner city residents provide increased custom to inner city businesses, but also having more people living, shopping and moving about the inner city simply makes the city feel more vibrant and alive. Following the widespread devastation caused by the earthquakes, the focus shifted very rapidly to how to rebuild the city, and the need to increase the number of people living within the 'four Avenues' (Moorhouse, Fitzgerald, Bealey and Rolleston) was an early refrain.

The *Canterbury Earthquake Recovery Act 2011* required the development of a draft Recovery Plan for the central business district (CBD) within 9 months of the Act coming into force on 18 April 2011, and specified that Christchurch City Council should lead that development (*Canterbury Earthquake Recovery Act 2011*, clause 17). Accordingly by December 2011, the Council had prepared a *Central City Plan Draft Central City Recovery Plan* for Ministerial Approval (CCRP, 2011). This plan drew strongly on the submissions to 'Share an Idea', the strongly supported public consultation process organised by CCC in May 2011.

The plan acknowledged the importance for the city's vitality and the viability of inner city businesses of having more people living in the inner city. Under the heading City Life, the plan stated that 'For the Central City's recovery to be successful, it requires a significant residential population to support business growth and development, and create a high level of activity and vibrancy' (CCRP, 2011 p.100), and sets out a goal of having 10,000 households including families living in the central city by 2030 (up from 7700 residents pre-quake). The plan recognized that quite a lot would need to change for the

inner city to become 'a great place to live' and set out some of the attributes that people are looking for. These include neighbourhoods that have a sense of identity, provide a choice of living environments and enable residents to enjoy and be part of a great community atmosphere; and greater choice of housing within financial reach of people in all stages and ages of life, from one-bedroom units through to multiple bedroom family houses to attract a diverse range of residents, including families who seek safe environments in which to raise their children. 'Different housing styles will be crucial to cater for different needs and homes may include gardens or balconies, private or communal garden space and no residential parking'. (CCRP, 2011, p.100).

The plan was realistic in recognizing that these changes were unlikely to occur left to the market alone, and announced the Council's intention to 'work with partners to lead by example to demonstrate what is possible' (CCRP, 2011, p.100). The plan outlines 'a package of initiatives and incentives to establish new living choices and create great neighbourhoods. The package is designed to ensure that living in the Central City is an option for everyone' (CCRP, 2011, p.100). These included residential incentives, social housing, affordable housing, neighbourhood initiatives, and a housing showcase, with a total budget allocated of \$35.7million.

The aim of the residential incentives package was to make 'the Central City an affordable choice for everyone' and get more people living in and enjoying life in the redeveloped Central City. The plan also envisaged a tool to raise the quality of the rebuild, in terms of both environmental and social sustainability and aesthetics, by linking incentives to meeting quality design criteria, and targeting the assistance to areas of the Central City where the greatest opportunities for creating new communities exist. The proposed incentives included both a Development Contributions rebate and a Central City Home Buyers Assistance Incentive.

One initiative introduced in the Council's CCRP was a Housing Showcase. The Housing Showcase initiative was designed to create a new mixed-use, thriving inner-city neighbourhood displaying medium density homes, based on sustainable design principles. Because its chief purpose was to influence other developments, the plan set out the Council's intention to develop it early in the

redevelopment process (2012-13) (CCRP, 2011 p.102). Implementation of the showcase was to involve 'a collaborative partnership between the Council, private industry and central government agencies, with the Council taking a leadership and facilitation role in the delivery of this project. A design competition will initiate the project and promote a mix of building designs, construction materials and methods all underpinned by sustainable and affordable design principles. The Council will consider establishing a number of housing showcases if the opportunity arises'. (CCRP, 2011 p.102).

The CCC Central City Recovery Plan was submitted to the Minister for Earthquake Recovery, Gerry Brownlee, in December 2011. Over the following months the 'Minister reviewed the Council's draft Recovery Plan, taking into account its impact, effect and funding implications, and came to the view that it could not be approved without amendment. In particular, there was insufficient information in the draft on how the Recovery Plan would be implemented and it proposed changes to the District Plan that were considered unnecessarily complex'⁵.

The Minister established a special unit within the Canterbury Earthquake Recovery Authority (CERA), namely the Christchurch Central Development Unit (CCDU), and this group, working in close collaboration with the Council, Te Rūnanga o Ngāi Tahu and other key stakeholders, led the creation of a revised plan, the *Christchurch Central Recovery Plan*. This plan contained within it a Blueprint Plan, a spatial framework for central Christchurch which 'describes the form in which the central city can be rebuilt as a whole, and defines the locations of 'anchor' projects, which will stimulate further development' (CCRP, 2012, p.33). This overview plan was published in July 2012, but the details concerning the residential sector emerged much later, in March 2014, in the chapter of the Recovery Plan entitled '*A Liveable City, Draft for public written comment*'⁶.

One of the anchor projects identified in the Blueprint was a Residential Demonstration Project, carrying through the Housing Showcase

⁵ www.ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/central-city-recovery-plan

⁶ <http://ceraarchive.dpmc.govt.nz/sites/default/files/Documents/christchurch-central-recovery-plan-draft-residential-chapter-16-july-2014.pdf>

idea in the earlier city council plan. A specific location for the Residential Demonstration Project was identified in the Blueprint, in an area to the north of Latimer Square (CCRP, 2012, p81-82), on a block of land at that stage not owned by the Crown. At that time (and still now), the chosen block was bordered to the east by a run down neighbourhood possibly also in need of regeneration, and to the west and south beyond Latimer Square by the cleared empty blocks designated in the Blueprint as ‘the East Frame’⁷.

The idea of kickstarting this development with a competition was not mentioned in the Blueprint, and unlike the CCC plan which had the Council taking a leadership and facilitation role in the delivery of the project, the lead agency was designated as the private sector, with CERA, CCC, Ministry of Business Innovation and Employment (MBIE) and Housing NZ Corporation nominated as partners.

4. BREATHE URBAN VILLAGE COMPETITION

In October 2012, an international competition was launched to design and build an Urban Village on this site. The competition brief was ‘to create an exemplar central city neighbourhood displaying medium density homes, based on sustainable design principles, to inspire and shape modern urban living in Christchurch’.

The competition was unusual in that rather than being simply a design competition, with the inherent risk that designs would be submitted that were beautiful but unbuildable for financial or other reasons, the competition required entrants to form a multi-disciplinary team that would be capable of buying the land and developing the design on the designated site.

The competition brief sets out the conditions for the competition, and identifies the organisers, partners and the judges. The organisers are named as the Ministry of Business, Innovation and Employment (MBIE), CCC, CERA/Christchurch Development Unit (CCDU) and Ngāi

Tahu, and the project sponsors as Cement and Concrete Association of NZ, NZ Steel, the Energy Efficiency and Conservation Authority (EECA), and Building Research Association of NZ. Beacon Pathway, the NZ Institute of Architects and NZ Institute of Landscape Architects are named as Project Supporters. The judging panel was led by Wellington-based architect Stuart Gardyne, and the other members were Kevin McCloud (UK Grand Designs), developer Martin Udale, landscape architect Di Lucas, engineer Kevin Simcock, Ngāi Tahu architect Huia Reriti and youth leader Zea Harman.

The competition attracted 58 entries from fifteen countries, including New Zealand, Australia, the United States, Europe, Egypt, Japan, China, Iran, India, and Indonesia. The entries showed amazing variety and creativity and prompted descriptions such as exciting, quirky, edgy, fascinating, fantastical, elegant, harmonious, and hobbit-like⁸, and in March 2013 a length of Worcester Boulevard was given over to display for the public⁹ the top 22 entries¹⁰.

Four finalists were selected for Stage 2 and asked to prepare more detailed plans. The finalists were Roger Walker, of Walker Architecture and Design, Wellington, with Ceres NZ Development; Jasmx architects, the Viva Project, Evergreen Realty and Latitude Group Development; Ganellen, the University of Technology Sydney and Design King Company Architects, of Australia; Anselmi Attiani Associated Architects & Cresco Group (Italy) and Holloway Builders (NZ)¹¹. In October 2013, the Anselmi Attiani/Cresco/Holloway team was selected as the winner, and they indicated they expected construction would begin mid-2014¹².

The key Government contribution to the project was the purchase by CERA of the parcels of land comprising the Breathe site (including part of Gressons Lane which previously ran across the centre of the site), and consolidation of them

⁷As at December 2017, the East Frame is still uninhabited, but Otakaro has stated it will complete the park to run down the centre of the block by Christmas (www.otakarold.co.nz/news/new-backyard-launched-for-christchurch/), and the framing has just gone up for the for the first 20 homes (of the planned 900) at the south end of the block www.stuff.co.nz/the-press/news/99221831/east-frame-apartments-start-taking-shape-in-central-christchurch

⁸www.stuff.co.nz/the-press/opinion/8386630/Grace-chaos-in-urban-village-designs

⁹www.stuff.co.nz/the-press/business/the-rebuild/8367049/Urban-Village-project-finalists-chosen Georgina Stylianou, Mar 02 2013

¹⁰<http://thevivaproject.org.nz/index.php/category/viva-projects/breathe/>

¹¹www.stuff.co.nz/the-press/opinion/8386630/Grace-chaos-in-urban-village-designs

¹²<http://bustler.net/news/3115/winner-of-the-christchurch-breathe-the-new-urban-village-project-competition>

into one title. This allowed integrated designs to be developed for the whole site, so an attractive and liveable balance of public space and private space, and of medium-density townhouse-style dwellings and higher density apartment blocks could be achieved.

4.1 Price, value and condition of the land

A clear aim of the competition organisers was to encourage the development of a replicable winning package that would provide a viable market template for other developers. This focus on an immediately replicable market solution meant that a conscious choice was made to have no long-term investment in the project from the Crown, or any of the other forms of financial sweetener found in other regeneration projects locally or internationally. It was made clear in the initial information about the competition that the Government was not planning to support the demonstration project financially, and wanted to recoup all the costs it incurred in buying the land and running the competition. However, how quickly it wanted its money back and how much it wanted back did not become clear until some months into the second stage of the competition.

In the initial competition pack, it was made clear that the winning entry was to deliver ‘a return to the Government to cover, as a minimum, the direct capital costs of facilitating this project’ (p.33). It is not yet publicly known how much the Government paid to purchase the block of land for the Breathe Village, but the decision to identify a specific block of land in the Blueprint for the Residential Demonstration Project before the Crown had ownership of the land would have inevitably placed the government in a weaker position when negotiating to buy the ten parcels of land making up the block. The vendors would have known the Government needed to buy the land to fulfill its public commitments so were probably able to command an elevated price. The initial competition pack¹³ stated ‘The land is being acquired by the Crown. The costs of acquisition are subject to negotiation by the present land owners and the Crown. Competitors are urged to concentrate in Stage 1 on the value of buildings and improvements and land values should be assumed as the registered land value. The actual land value will be introduced in Stage 2 of the

competition to provide for a full financial picture and potential support regarding the development’ (p.32).

On 4th January 2013, in the final 10 days of Stage 1 of the competition, entrants were provided with a template spreadsheet to complete financial costings and this spreadsheet included a ‘Notional land value (2007 land valuation)’ of \$4,829,000. Entrants were expected to include this cost for the land in the feasibility analysis that they submitted with their entry. Part way through Stage 2 of the competition the four finalists were sent a revised valuation of the block of land, dated 13 March 2013, which had been commissioned by the Central City Development Unit. The instructions for this valuation were ‘to establish the market value having regard to the Recovery Plan’ and placed the value of the land much higher, at \$5,985,000 (Confidential Open market valuation for the project site, 27 March 2013). Finalists were given to understand that offers for the land were expected to be in this ballpark.

The finalists queried the basis of this valuation. It was clarified that the new valuation had taken into account the higher amenity value that would in the future be provided by the East Frame, and the site’s location in the city and proximity to other planned new amenities. And whilst this valuation occurred prior to a confirmed development layout for the East Frame, ‘the likelihood that low rise residential development will occur along the eastern side of the Frame on Madras Street opposite the site was assumed’ (Breathe Stage 2 Competition Period – Questions & Answers, 6 June 2017). In other words, although developers were being asked to take the risk of being the first to start rebuilding in an area that was currently (and nearly 5 years later still is) a deserted wasteland, they were being asked to pay a price for the land which assumed all the potential developments around it had already happened.

As the competition progressed, it also became clear that the land quality also presented challenges. The initial competition pack made no reference to the fact the land was liquefiable land classed Technical Category 3 (TC3), meaning that remediation or special foundations would be required. Initially the organisers were unwilling to provide the finalists with any more detailed information about the land, meaning that to do a realistic design with realistic costings, they would have each had to pay individually for their own

¹³ www.beaconpathway.co.nz/images/uploads/Breathe_Competition_Information_Pack.PDF

geotechnical analysis. However, eventually in June 2013 the organisers made available to all the finalists an initial geotech survey of the site provided by Tonkin and Taylor, which allowed the teams to make some assumptions about what style of foundation would be needed.

At the end of Stage 2, one of the teams (Viva/Jasmax/Arcus Developments Ltd) informed the organisers that the information provided in Stage 2 about the higher price expected for the land and the physical constraints of the site had meant they had had to re-assess their design against the requirements to create a financially viable, sustainable and attractive living environment. 'This new information provided us with challenges we have been unable to solve... within the time constraints imposed by a competition ... After many, many months of dedicated work... we had been unable to produce a design that is financially viable, yet still meets our goals of environmental and social sustainability'¹⁴. The high land price demanded by the Government thus proved a bridge too far for this team, and ultimately for the winner as well (see below).

4.2 Evaluation criteria and resolving the tension between them

Eight evaluation criteria were developed for the competition. These criteria encompassed both the very best in sustainable urban design and place making, alongside financial criteria aimed at ensuring the winning development provided a viable market template for other developers, as well as meeting a need for more affordable accommodation in the inner city.

Three criteria related to the cost and financial feasibility of the proposal:

- **Viable** – the development must be commercially feasible and support the local and regional economy.
- **Affordable** – cater to the needs and budgets of a wide range of Christchurch residents.
- **Deliverable** – design concepts can be practically delivered by teams with the necessary experience, skills and resources to complete the project.

Five criteria were more design-oriented (though the innovation criteria could also apply to the financial aspects):

- **Liveable** – meet current and future lifestyle needs of its residents, foster strong community connections through a balance of private and public spaces, and enhance the surrounding neighbourhood.
- **Sustainable** – resource-efficient in design, construction and over the life of its use, and responsive to the local climate and ecology.
- **Enduring** – promote excellence in earthquake-resilience, safe and healthy design, and be adaptable and enduring for generations to come.
- **Distinctive** – the form and function of the development is well connected to, and enhances the local context, and provides a strong identity and sense of place.
- **Innovative** – the best ideas are used and creatively enhanced to deliver exceptional 21st century Central City living.

These criteria was explained in Stage 1 and further elaborated on in the Stage 2 Competition Briefing Document with a five page aspirational wish list summarising the very best standards in urban design, along with a desire for the development to be profitable, timely and deliver a return of its costs to the Government.

Inevitably there was some conflict between the eight criteria. For example, the general housing market in New Zealand has not made much progress in resolving the tension between cost and high levels of energy efficiency. In their review of housing affordability in New Zealand, the Productivity Commission found that New Zealand residential construction costs are in the order of 15-25 percent higher than in Australia and that 80 percent of new dwellings are valued in the upper two quartiles of the total housing market, meaning that new housing is generally well beyond the reach of middle to lower-income households (New Zealand Productivity Commission, 2012). These factors (among others) contribute to New Zealand housing being by some measures 'the most unaffordable in the world'¹⁵. However, most new builds meet only

¹⁴ Letter from Arcus Developments Ltd and The Viva Project to the Judges of the New Urban Village Breathe Competition, 2 August 2013, about the Arcus/Viva/Jasmax submission at end of Stage 2.

¹⁵ Newshub report on The Economist article on global house prices 11 March 2017 www.newshub.co.nz/home/money/2017/03/new-

minimum building code standards of energy and water efficiency, standards that the OECD have noted are less stringent than those in many other OECD countries (OECD, 2017). For example, the Green Building Council notes that the R-values (a measure of heat loss from ceilings, walls and floors) specified in the Building Code are 50 percent worse than many countries (Green Building Council, no date). Burgess (2011) concluded that new homes built to the Building Code standard could receive only 4 (out of a possible 10) stars on the Homestar™ rating scheme. Yet the competition was asking for designs which were both more affordable/better value for money, as well as more sustainable, accessible and liveable.

The Stage 2 competition briefing document informed finalists that all these eight criteria were of equal weight. However the same document introduced additional financial criteria, effectively changing the weighting between the design-related criteria and the financial criteria. The Judge's evaluation of each submission [against the original eight criteria] would now make up only 70% of the total score for the entry - the remaining marks would be allocated to the financial offer. The considerations in determining the mark for the financial offer were stated to be: risk allocated to organisers; value of the offer to the organisers; and acceptability of proposed variations to the Development Agreement's terms and conditions¹⁶. The Government's focus on recouping its costs and finding a model that could be picked up by other developers without any further financial input from Government was starting to outweigh the aspirational sustainable urban design criteria.

The quality of a design inevitably has some connection to the cost of a development and hence its viability. In most large projects, this tension between quality and cost is addressed by a 'value engineering' stage after the initial quantity surveyor estimates have come in, when ways to increase the value of the project are considered (in this context, value is defined as function divided by cost¹⁷). This requires clarity on the function(s) the project is seeking to

deliver, and where, for example, the project is aiming to meet multiple criteria, which ones are the most important, and which may be compromised on to make the project more financially viable or to deliver better on other criteria. However, in the Breathe process this tension between quality and cost was not addressed. No guidance was provided to the finalists (or asked for) about how to prioritise the original eight criteria, and it was clear from the final submissions that the teams differed in which criteria they gave most weight to.

The tension and ways to resolve it also appears not to have been considered by the judges in their own deliberations. In both Stage 1 and Stage 2 of the design, the judging panel (with the exception of the developer Martin Udale) focused on the quality of the design, and a separate financial team (plus Udale) reviewed the financial criteria and the financial offers of the teams.

4.3 Options to make the development viable

In the Stage 1 competition brief, after indicating that the Government wanted at a minimum to get back the direct capital costs of the project, the text acknowledged the challenges of the project and offered to work with the chosen developer on partnering opportunities to facilitate the development. 'As part of the Stage 1 submission, the entrant will provide their 'first thoughts' on these opportunities as listed. The detail and final shape of the partnering opportunities will be developed during Stage 2'. (Breathe Competition Information Pack, 2012, p.33). This wording does suggest some openness to considering other 'other partnering opportunities', but the statement about requiring the return of capital costs to the Government implied the 'partnership', at least with the Crown, was unlikely to be financial.

In the Stage 2 briefing document (p.7), the speed that the Government wanted its money back became clearer. While indicating teams could propose alternative options for how and when the land was paid for, it was stated that 'all entries will need to be converted to an equivalent NPV of 'cash price' based on:

- 1% deposit on signing of Agreement
- Final payment 23 months following site possession
- Organisers will retain a lien on site until final payment'.

zealand-housing-most-unaffordable-in-the-world-the-economist.html

¹⁶ www.beaconpathway.co.nz/images/uploads/Breathe_Stage_2_Competition_Briefing_Document.PDF

¹⁷ www.designingbuildings.co.uk/wiki/Value_engineering_in_building_design_and_construction

In other words, from the point of agreeing to build the village, the developer would be a debtor to the Crown - and also contractually obligated to deliver the village as designed by an agreed date. When it was pointed out by the finalists that a lien on the property would make it harder to secure other finance, the organisers simply replied 'A lien or similar form of security (including a caveat or mortgage) over the land is normal commercial practice where a deferred payment is proposed.' (Breathe Stage 2 Competition Period – Questions & Answers, Issued: 7 June 2013).

Despite the conflicting messages here, finalists did try to present other options to the organisers. The following are some of the options put to the organisers by the finalists:

- *Government to remediate the land before selling it to the winner.*
- *Government to partner in the development, rather than simply selling the land to the developer with conditions. Recognising that CERA was unlikely to want to take on any risk of loss in the development, its role in the partnership could be to put the land in at (initially) no cost, and then to take a profit share out of the development – i.e., the purchase price for the land from CERA would be calculated as a profit share, and not payable until the end of the development.*
- *Ganellen proposed a 'Build, Operate, Transfer' model with a government-secured loan to finance construction and delivery. The village they proposed was aimed at the rental market (primarily targeting students and the temporary workforce in the city during the rebuild), with Ganellen providing asset management for 20 years giving an annual return to the Government with this asset passed to government at the end of 20 years (King, 2014, p.413). In the final stages of the competition, Ganellen was invited back to the table to negotiate with the Government, but 'asked to modify their bid into a more conventional form. They ultimately refused the opportunity, believing that their proposed development model was the right one' (King, 2014, p.415).*
- *Jasmax/Viva's Stage 1 entry proposed a \$2m 'first start' incentive payment in*

recognition of risk taken by first rebuilders in a currently derelict abandoned area and the value of the project to the wider city in kickstarting repopulation of eastern side of city.

- *establish an Inner City Council Controlled Organisation that was then given ownership of land. The land could then have been made available for long-term lease on modest terms to residents, which would have meant that the primary cost for purchasers was the cost of the dwellings.*

None of these options were accepted. The organisers believed it was up to the private sector to both take the risk and reap the profits of stimulating residential developments in the inner city. Their focus on a replicable market solution without any longer term financial input from the central or local government meant that throughout the final negotiations with the four finalists, the Government maintained a focus on short-term market return (and arguably was seeking better-than market-returns to cover the fact it had paid more than market rates for the land).

It seems strange that the Government adopted this market only approach for a project aimed at revitalising Christchurch after a major earthquake, when the same year (2012) it had joined with Auckland Council to create the Tamaki Redevelopment Company to lead the regeneration of the Tamaki area over the next 15-25 years¹⁸, indicating an acceptance of a government role in regeneration in the Auckland context. Given that in its Central City Recovery Plan of December 2011, CCC indicated its willingness to lead the regeneration and play the role of patient capital, it is curious to speculate whether the outcome may have been different if CCC, rather than CERA, had been the purchaser of the land negotiating with the finalists.

More recently, the need for local and/or central government involvement in urban regeneration appears to have become more widely accepted in New Zealand. Council-owned regeneration vehicles have been created in

¹⁸ www.treasury.govt.nz/publications/briefings/2013-housing/11.htm, www.tamakiregeneration.co.nz/regeneration/our-community/news/urban-redevelopment-company-transform-tamaki

Auckland (Panuku Development Auckland¹⁹) and Christchurch (Development Christchurch²⁰) and approved for Wellington²¹, and in February 2017, the Government began consultation on proposed new Urban Development Authority legislation to enable publicly-controlled urban development authorities to access powers to acquire parcels of land and then plan and oversee the necessary development (New Zealand Government, 2017).

4.4 The Outcome

Almost until the project fell over, it was hailed as a success. The residential chapter of the Recovery Plan, published in July 2014, stated: 'The competition winning design was created by a team of international designers who partnered with a Canterbury construction firm. The winning entry demonstrated how high quality medium density housing can be delivered in Christchurch. The design showcases a well-balanced blend of style and quality with a range of innovative features, such as the use of the LVL timber system developed by the University of Canterbury, and the new Armadillo™ Foundation System developed by the team themselves'. Beacon Pathway provided a lot of practical advice during the competition and around 2014 developed a 'Toolkit for Residential Design and Build Competitions' which it has made available on its website²² so others could benefit from its experience of running what (at that stage) it clearly assumed to be a successful competition.

The winning team had indicated in October 2013 that the development would be underway by April 2014, but, by June 2015 construction still had not begun and their developer, Ian Smart, had not yet applied for building consents²³. Interviewed in July 2015, Gerry Brownlee, the Minister for Earthquake Recovery, effectively wiped his hands of the project saying that he thought the urban village 'should never have started in the first place...I think it's going to struggle to get off the ground '... I'm very

disappointed that people who said they would do something are not going to do it'²⁴. Further, The Press (3 July 2015) reported the Minister saying he was 'probably going to get in trouble' for giving his personal opinion, but it was frustrating to 'take the flak' for the project's delays when the people behind it did not deliver what they promised. He also said the project had 'nothing to do' with the Government and was the developer's responsibility'.

It appears the Minister's comments undermined the winning team's final chance to secure the additional financing needed to meet the elevated land price required by the Government. Following a request from Stuff in December 2015²⁵, documents released under the Official Information Act in July 2016²⁶ showed that two Chinese companies and an Italian regional government were among the project's potential funders, but that the Chinese backer pulled out after Brownlee's comments were aired. The Treasury insisted on CERA being paid \$5.1m for the earthquake damaged land, and Ian Smart (the developer in the winning team) could not find any valuation that matched that²⁶. As a result he was unable to secure finance that would allow paying any more than around \$4.7m for the land, and Treasury refused to allow CERA to part with it for less than \$5.1m. In November 2015, CERA announced that the development would not proceed.

The Minister for Canterbury Earthquake Recovery was unrepentant. When interviewed in July 2016, Gerry Brownlee said the Government did not want to buy up land and sell it at discount prices. 'You don't preserve land prices by doing that and [CERA] wasn't a charity'²⁶. He was either unaware or unconcerned that the elevated land prices were one of the key factors inhibiting the residential developments needed to bring people back into the city, and so delaying the city's recovery.

In response, Ian Smart stated that the failed project had cost him hundreds of thousands of dollars²⁶. However his was not the only team to

¹⁹ www.panuku.co.nz

²⁰ <https://dcl.org.nz/>

²¹ <http://www.stuff.co.nz/business/77708402/Urban-development-agency-idea-gets-green-light-from-Wellington-city-councillors>

²² www.beaconpathway.co.nz/further-research/article/a_toolkit_for_residential_design_and_build_competitions

²³ www.stuff.co.nz/the-press/business/the-rebuild/69432838/Christchurchs-Breathe-Urban-Village-delayed

²⁴ www.stuff.co.nz/the-press/business/the-rebuild/69935284/Recovery-Minister-Gerry-Brownlee-slates-Breathe-Urban-Village The Press 3 July 2015

²⁵ www.stuff.co.nz/the-press/business/the-rebuild/7534172/Scrapped-Breathe-competition-a-waste-of-time-and-money

²⁶ www.stuff.co.nz/business/81984571/gerry-brownlee-denies-blame-for-failed-breathe-residential-project

put in enormous time and resources into this project. Extrapolating from estimates of costs at each stage for the four finalists, it seems likely the 58 multi-disciplinary teams of entrants each spent \$20,000-40,000 in professional time in developing their concept plans, and each of the four teams of finalists a further \$50,000-\$60,000 preparing detailed plans, giving a total of roughly \$2 million of professional time between them, not to mention many hours of community time. If none of these village designs are built, then all this effort and international goodwill towards helping breathe life into the city has been wasted.

5. CONCLUSION

The potential benefits to the inner city's recovery of an early kickstart of residential development were significant. However central government was unwilling or unable to recognize that an insistence on a pure market approach would not deliver the innovative sustainable village asked for in the competition brief. This level of naïve neoliberal faith that the markets could deliver urban regeneration to a badly damaged city was not seen even in Margaret Thatcher's Britain, or in the decades since (Roberts, 2017; Berkley et al. 2017). In the UK, public sector funding was central to most urban regeneration efforts in the 1970s and 1980s. As a result, the evolving debate there has not been about whether public money should be involved, but about how to make better use of public funds to leverage private investment, how to foster the formation of public-private partnerships, and why it was important to increase local government and community involvement (Berkley et al. 2017, Roberts, 2017).

International experience would suggest that the sheer scale of the area of empty city land in the Christchurch inner city presents a significant 'first mover' disadvantage and high risk to the first developer seeking to turn an empty wasteland into a vibrant community. However, if such a project were successful, there would be significant benefits to the city and wider community, so a contribution of local or central government money would have been entirely appropriate. There are many ways such contributions can be made. Options include tax incentives, contribution of land (by gift or lease), subsidies for land costs or land value write-downs, loans for land purchase and/or

construction, site assembly, site remediation, additional density or height allowances, development contributions rebate, new infrastructure for transportation and facilities, open space and landscape beautification, and a home buyers assistance incentives (Meyer and Lyons, 2000; Kriken, 2010; CCRP, 2011; Raf Manji, pers.comm.).

In return for their subsidies, local or central governments or development agencies often seek to dictate, or at least influence, the type of use to which the site will be put (Meyer & Lyons, 2000). In the Breathe case, the Government wanted to dictate the site's use without making any financial contribution. The Government did indicate that no district plan rules would apply for the site, and has subsequently funded nearby amenities - the nearby Margaret Mahy Playground which opened in December 2015²⁷, and a park and paved areas through the centre of the nearby East Frame due for completion in early 2018²⁸. However, at the time of the competition and for that specific site, the only contribution made by the Government to reduce financial risk for the developer was to consolidate the site into one title. In return, it wanted a developer to take on all the first mover risk themselves, to pay the Government an elevated price for a liquefaction-prone piece of land, and then to enter a contract to deliver an agreed development on the land by an agreed date, therefore tying the developer's hand on what it did on that site.

When assessing a range of 'patient capital' options put to it by the finalists and the request by the finalists for a more reasonable valuation of the land, the Government failed to factor in the opportunity cost to itself, and to local government, local businesses and the wider Christchurch community of delaying by many years the residential development of the eastern side of the city. As a result, the development failed to eventuate. Five years since the initiation of the Breathe competition and seven years since the first earthquake, the city block designated for the Breathe village and a further 10 city blocks to

²⁷ www.stuff.co.nz/the-press/business/the-rebuild/75472074/How-much-did-Christchurchs-Margaret-Mahy-playground-cost

²⁸ www.otakarold.co.nz/anchor-projects/the-east-frame/

the west and south of the site remain empty and deserted. For want of a little patience about when and how it got its financial return, the early vision of the vitality that a thriving residential neighbourhood would bring to the city has not yet been realised.

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An investigation into the use of visualisations in the Resource Consent Process

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ABSTRACT

The use of Computer Aided Design (CAD) drawings or other static images (including photo-shop and simulations) to visualise potential future situations is common and powerful in planning processes. Its production, use and understanding in gaining planning permission in the New Zealand context is investigated through interviews with 13 architects and planners in Christchurch. The findings highlight the dilemma faced by planners in using visualisations and questions the drive for accuracy and realism in visualisations.

1. INTRODUCTION

Increasingly, visualisations or images pervade every aspect of our lives (Lange, 2001, p.179); from billboards to magazines, movies and live events. They offer almost instant information and are therefore considered an effective communication tool; as the old saying goes - a picture is worth a thousand words. Through better technology, these images appear increasingly realistic, with the promise of the concept that they portray being better able to be comprehended by the viewer (Appleton & Lovett, 2003, p. 117; Lewis, Casello, & Groulx, 2012, p. 100). However, is this sense of comprehension based on the assumption that increased realism means increased accuracy? Could an increase in realism blur the line between 'accurate' and 'idealistic' (Lange, 2001, p. 165)? Could 'realistic' images in fact mislead (Lewis, 2012, pp. 551-552) and, if so, how might the use of images affect decision-making in the planning process? This paper presents an analysis of the use of visualisations within New Zealand's land use planning process, specifically the resource

consent process through which planning permission is gained.

2. VISUALISATIONS AND PLANNING

The long history of the role of images and visualisation in planning has usually been discussed in the context of cartographic images and their power as a communicative device in decision-making processes (e.g., Faludi, 1996; Duhr, 2007). This communicative process includes both communicating to decision-makers and communicating their decisions to the public and other audiences. Visualisation, in the context of this paper, refers to the use of Computer Aided Design (CAD) drawings or other static images (including photo-shop and simulations) to represent potential future situations. These more commonly take the form of images or a series of images, with large scale projects sometimes producing flyovers (as seen in Figure 1). Although different in nature, it is probable that many of the advantages (e.g., awareness raising and concept communication) and disadvantages (e.g., utility in manipulating people and distorting facts) that have been identified for

cartographic representations of reality or design (Duhr, 2007) are applicable to visualisations.

Visualisations frequently appear during planning processes and may be considered as aiding the decision-making process by showing a future, with or without a proposed project or action. More cynically, they may be seen as an attempt to paint a more positive picture of the future of the project than might be the case. Visualisations generally accompany large scale, mostly commercial developments due to the significant cost involved in their creation, though they appear to be becoming generally more prevalent as technological costs decrease and the complexity of projects increase. The resource consent process is initiated when someone wishes to undertake an activity that is not otherwise permitted under the Resource Management Act 1991 (RMA), New Zealand's primary land use planning legislation.

Visualisations may be prepared by a wide range of people, from amateurs to urban designers, engineers, planners, and architects. Typically in the New Zealand planning processes, architects, especially landscape architects, are accepted as the experts on visual effects and prepare visualisations as part of an application for a resource consent. Resource consent planners at the local authority receiving the application are required to assess the application for its completeness, provide an initial screening of the scale and significance of impacts and determine what pathway the application will take. Implicit is that the information provided in the application enables the planner to gain a good understanding of the proposed action or project and is sufficiently accurate for an informed decision. If it is not then it is deemed incomplete and returned to the applicant. There is no legal requirement to include visualisations as part of an application, however visual effects are required to be addressed in application documents (cl.7(1)(b) of Schedule 4, RMA) and are often important parts of the consideration of effects on landscape and amenity values. The RMA process involves council planners determining the level of effects and subsequent type of

public (if any) notification based on their assessment (whether the effects of the application are more or less than minor). Usually the planners then produce a report to the person or panel that decides the application, and that report includes an assessment of the effects of the application against provisions in the plan's objectives, policies, and rules, and other relevant legislation. The views of the architects, planners, as well as the decision-makers, as to the purpose and role of the visualisation therefore appears important in the overall decision-making process. As our interest is in the perceived purpose of the visualisations provided with an application and the potential for manipulation or to focus discussion, our method comprises a comparison of the purpose for which architects perceive they are creating visualisations, and how planners interpret visualisations.

Although there has been research on using visualisations to assist assessments of the visual natural character of lands and seascapes (Froude 2011, chapter 8) and public preferences for particular types of coast (Thomson, 2003), there is little research relating to the effect of visualisations on the resource consent process. In fact, there is little agreement on how visualisations should be used and interpreted within the planning process (Baird, 2014), especially in New Zealand. This was highlighted in a debate in *Planning Quarterly*, the New Zealand Planning Institute's main publication for communicating activities, innovations, methods and ideas to professional planners. In an article in March 2007, Coggan (2007, p. 26) exudes excitement at the potential of visualisation technology within the planning process - 'there is no question that it is realistic and accurate', adding that people can 'take the visuals to the survey point and see for themselves that the base data is an accurate reflection of what they can see with the naked eye' (p. 26). However, in the following *Planning Quarterly* (June 2007), Carrie (2007) urges restraint when applying visualisation technology, noting there needs to be caution regarding 'the appropriateness of the technology ... and any reliance that the Court or planning profession

might place on its validity' (p. 29). This raises questions as to whether those using the improved technology for generating images are providing realistic information that can be relied on by decision-makers or whether a growing reliance on the technology is actually exacerbating the potential manipulability of planners, decision-makers and, if publicly notified, the community.

The potential for confusion between visualisation and reality is highlighted by the New Zealand Institute for Landscape Architecture's (NZILA's) Best Practice Guideline 10.1 for visual simulations (visualisations). On its opening page, under a series of before and after photographs and simulations, it states boldly that 'Visual Simulations can *accurately* portray in a *realistic* manner and in a realistic context, a proposed change or modification in the landscape' (NZILA Education Foundation, 2010, p.2, emphasis added). The guide subsequently states that visual simulations are 'not real life views' (p.3), but continues to repeat the words 'accurately' and 'realistic'- thereby adding weight to both those concepts and the perception that good quality visualisations deliver 'reality'. The courts appear also to expect accurate and realistic visualisations to aid them in their decision-making and have not been persuaded by visualisations that do not accurately portray the reality of a view, but when a visualisation is obviously poorly portraying reality (e.g., apparent pixelisation), decision-makers may set them aside (e.g., *Tram Lease Ltd v Auckland Council* [2015] EnvC 133). If, however, a visualisation is not obviously inaccurate it might be unwittingly accepted as accurate¹.

This is not to suggest that there is necessarily a deliberate attempt to mislead. If they do mislead, it may just be a consequence of how visualisations have evolved. Before

computer generated images, visualisations were unmistakably hand-drawn and therefore, 'can't be mistaken for anything but illustrations' (Xie, 2013). Images were justifiably understood as ideas, not reality (Faludi, 1996). But as technology has improved, better, cheaper visualisations are possible and subsequently there is greater potential for application or misapplication of visualisations (Lewis et al., 2012, p. 89). The increased use of computer technology and its capacity means every aspect of an image can be artificially contrived. As Xie (2013) describes it, 'adding beautiful furniture ... picking a flattering angle that's hard to physically photograph ... to producing lighting conditions that only exist in a fantasy world', and finally 'inserting trees or hip young people doing yoga'. Other factors such as sky colour, angle, use of transport, style and the context shown are all decisions made or assumed by the designer (Bressi, 1995, Wissen et al., 2008, Halbur & Haugh, 2010). Smallman and St. John (2005) argue that these decisions may, in fact, be subconscious - that it is not intended to deceive (p. 12). However, deception is possible.

Perception issues are exacerbated by the potential lack of direct connection between the creator and the viewer (Sheppard, 2001, p. 188). This is exemplified in understanding how the public interact with visualisations. The public only has the visualisation and the immediate context for points of reference unless they are involved in the process through either consultation or as a submitter. If neither, then they are one step removed from the process, and they have no ability to question or respond when images do not reflect the eventual reality. Their perception is distorted because of distance (Rabie, 1991, p. 57; Levy, 1995, p. 345).

¹ It has been stated by the courts generally that the need for accuracy is 'self-evident' in an assessment of environmental effects provided with an application. If an inaccuracy in that assessment is sufficient to have materially affected the decision then the conditions of a consent can be reviewed and if the adverse effects of the activity are 'significant' the consent can be

cancelled (*New Zealand Wind Farms Ltd v Palmerston North City Council* [2013] NZHC 1504). In practice, to achieve a cancellation (or even a review) is likely to involve substantial court action and costs. If an inaccuracy is not obvious it may be hard to argue that the adverse effects are significant even if they have materially affected decisions on notification or submissions.



Figure 1. Contrasting images of the riverfront. Top left: an image from The Terrace website (2014). The remaining two images are frames from a CCDU video (2014).

The Terrace development in Christchurch (a nearly completed post-2011 earthquake development that required planning permission) provides a useful example. The Terrace is situated along Oxford Terrace and before the earthquakes this was a popular bar and restaurant area. The Terrace is a development project that involves building three buildings for mixed use along the Avon River. The images reproduced in Figure 1, show three different visualisations of The Terrace, one by the promoter (downloaded from its website in 2014) and two that are from a flyover produced by the Christchurch City Development Unit's (CCDU's) Avon River Precinct development (2014). The visualisations serve similar purposes of portraying what the future appearance of this area will be, however there are obvious differences in the style of the images as well as the actual appearance of buildings and their context. Even in the two images from the one CCDU flyover video only seconds apart, there are two different riverscape developments shown as if it was the one seamless development. Having three images displayed together as in Figure 1 enables direct comparison and thereby alerts the viewer to their more obvious artificial nature.

When looked at individually and in more detail, it is notable that none is of a day of inclement weather, but otherwise there are few visual clues that might act as reference points for a viewer to assess the representativeness of the view as typical or otherwise. In fact, any information on the degree to which such images represent the average probable daily scene at a particular representative time of day or season is not provided, nor is there an explanation for differences in greenery and other features. An unrealistic luminous glow or halo-like 'shininess' permeates one of the images in which people appear transparent making it obvious that one image is clearly more artistic than the others. However, by contrast this also adds a greater sense of reality to the other images, which are, in fact, just as simulated.

Granted, these images are given the caveat 'artistic impressions only', however this comment cannot undo the impression created on the viewer, which is clouded by the distance of the viewer from the project/design brief. Their perception of the development, based on these images, may significantly influence their decision to engage in any decision-making process. For the audience, the purpose of an image as well as the designers' assumptions

(even subconscious) may remain unknown (Lewis, 2012, p. 562-563).

This example highlights the openness of the landscape in which visualisations operate. Smallman and St. John (2005) describe this developing visualisation 'landscape' as being like the 'wild west'. Other authors (Kidd 1998, Wissen et al., 2008), have suggested different ways to provide structure and confidence in the use and interpretation of visualisations. One of the most cited examples is Forester's (1982) framework for assessing visualisations. This is based around the key concepts of being comprehensive, trustworthy, legitimate and accurate. To be comprehensive, images need to be a clear and reliable representation of the project, while to be trustworthy implies a need to be transparent in the production process. Legitimacy relates to the rationale of the visualisation through disclosing information assumptions, and accuracy is a measure of its realism (which is difficult to define, as described above). These elements together form a broad framework for understanding the effectiveness of visualisations.

3. METHOD

This research used a qualitative approach, interviewing (face-to-face) seven architects and six planners in Christchurch (see Baird, 2014, for further details of the interviewees and the images used). The interviews followed a semi-structured approach with pre-circulated questions to help lead the conversation. The issues identified in the theory, encapsulated in Forester's (1982) framework, shaped the questions for first the architects and then the planners. These questions focused around key ideas, such as the perception, context and intended audience of visualisations and the use and awareness of composition techniques. The architects were interviewed first with the discussion focused on a visualisation they had been involved in creating. These visualisations were static images and, overall, five images were discussed. These images were not discussed in terms of specific consents, but rather in general terms. The planners were interviewed afterwards, discussing their perceptions of the same visualisations. This enabled a comparison

between how architects develop images and how planners interpret them, as well as if the way in which images were prepared affected the planners' assessment of effects. The discussion also examined how architects perceive planners will interpret the images and vice versa. As the sample size is small (a total of 13 interviewees), and is only of Christchurch practitioners, which might reflect a regional 'school' of thinking or approach, no attempt is made at statistical analysis. To maintain anonymity of the respondents, the responses are grouped generally under the title of the representative group: 'Architects' or 'Planners' (see Baird 2014, for a more detailed presentation of individual anonymised responses).

4. RESULTS

Architects interviewed generally considered that visualisations are composed with the clients in mind, not the public, planners or decision-makers. Architects said they believed that planners understand how images are developed and are not influenced by good design. In fact because of this, some, not all, architects said they made consent application images with elements of the original client-oriented images removed or diminished to make them more 'objective'. Architects said they generally composed images using a sunny day, from street view and eye height; though they varied in their approach to context, transport, and landscaping. The individual architect's responses were not consistent on how to prepare visualisations and how important context is; for example, some architects include neighbouring buildings for reference while others exclude them as they consider these would detract from the proposal. Architects described images as being accurate with artistic elements and any manipulation was unintended in 'trying to show the building in the best possible light ... you do massage a bit with some artistic license'.

Images were seen as helpful insofar as framing the debate. Architects agreed that visualisations have become increasingly popular as well as increasingly complex. Interestingly, if a visualisation was specifically

created for a consent, architects would downplay elements and remove additional information to provide more 'objectivity' to assist the decision-making process, or as one architect put it 'we put enough detail in it to get it approved'.

Planners said that the architects' visualisations were developed with their client in mind, but contradictions were evident in the planners' responses. They understood that images contained artistic elements and that accuracy is not as important early on (when they are first encountered in a resource consent process). Planners would follow up any differences between the plan and visualisation and vice versa, to ensure accuracy. This suggests that accuracy was considered important and that planners may have been asking for detail that might have been removed to be brought back in, or new material added.

Planners considered context as the most important element as it helped them understand the environmental effects and provided reference points. Planners were unsure what architects considered important in the image and were less aware of compositional techniques used by architects (e.g. the use of a sunny day and views from eye height), but were aware that 'it is always the nice fancy cars' in the visualisation. When asked, planners agreed that images could potentially influence their and the public's perception, but they considered that the images are beneficial in understanding the application. They also agreed that visualisations are becoming more common and increasingly complex, which can make them confusing, and that more information could help minimise these negative effects.

The planners and architects accepted that images are subjective, but said that they are still beneficial in communicating and initiating dialogue. Their responses indicated that they did not consider subjectivity necessarily meant the images were not credible representations of reality. Context, however, was a key element that differed between the two groups. Furthermore, planners said they do not fully

understand the image-generating technology though accepted that this is probably beyond their role. As one planner said 'I trust the architect to provide technical and professional advice'. So while they understood that visualisations could be manipulated and that they were not cognisant of many of the ways in which this might be achieved, planners continued to accept and use them.

5. DISCUSSION

This research shows that visualisations are at least initially prepared for a client's benefit, and not for assisting planning assessments². This gives rise to a paradox. Planners are not certain of the degree to which they can rely on the images provided. Consequently, it could be argued that the visualisations should be treated as nice additions to resource consent applications, but nonessential. However, without visualisations it would appear difficult for planners to assess visual effects for notification decisions, and the public's and decision-makers' subsequent consideration of the potential effects of the development would also be more difficult. Despite their awareness that visualisations can be manipulated planners agree that images are useful for comprehending a proposal. Consequently, an understanding by planners of the technology and assumptions and an agreed approach to context and composition may be necessary for visualisations to be legitimately and appropriately used by planners.

Lacking such knowledge, it appears that when a specific visualisation is created and included as part of a resource consent application, planners have a healthy level of scepticism that they rely on to hinder any attempt at manipulation. Xie's (2013) fears about the potential manipulability of every aspect of a visualisation is seemingly diminished by the lack of reliance on images that accompany resource consents and the preparedness to seek clarifications. However, as they still lack that technical knowledge of how the visualisations can be manipulated, when seeking clarifications and further

² This represents the difference between what Faludi (1996) refers to as the private domain in

which architects usually operate and the public domain in which planners work.

information planners remain susceptible to subtleties that lie within the images that shape their overall impression of a project. The responses from the interviewed architects indicate that they may be overestimating planners' understanding and ability to see through, what one architect described as, 'the flashy stuff' in visualisations. Lacking this awareness, architects may not make the production process sufficiently transparent.

This research suggests that the potential gains in the use and effectiveness of visualisation may not be through better technology, but better understanding of the means of producing visualisations; that a search for a common framework for projects and their visualisation would be better than the pursuit of more accurate images. Agreeing or stating, for example, the point of view used, a realistic sunlight angle, inclusion of important contextual buildings and appropriate (anticipated) use of people and cars provides the planner with a better understanding of the visual effects and overall impact of the project. An agreed framework might reduce the need for the present iterative approach between architects and planners, improving the efficiency of the process. Care would be needed to ensure that such a framework reduced, rather than reinforced, the element of manipulation present in statements such as including only sufficient detail 'to get it approved'. The NZILA's Best Practice Guideline might form a basis for such an agreed framework, although the extent to which the Guideline's current emphasis on accuracy and realism should be encouraged over more obviously artistic representations should be a matter for careful consideration.

While manipulability within the resource consent process may be minimised by the above steps, the question of how images may affect public understanding, being one step removed from the process, still remains. The public interaction and understanding of the visualisation process and how this might influence their engagement in planning processes would be a useful area of potential future research.

6. CONCLUSION

The increasingly sophisticated and complex technology available for visualisations has considerably increased the potential for seemingly accurate and realistic portrayals of present and future realities. To the extent that planners, decision-makers and the public might be influenced by such portrayals, visualisations remain powerful and there is scope for manipulation by those preparing them. At present, planners are caught in the dilemma of recognising that visualisations have utility in their decision-making processes, while being equally aware that the visualisations presented to them may be misleading or insufficient for them to have confidence in their use for assessing visual effects. This results in an iterative, interactive process between planner and architect that influences decisions on public notification, but might also be characterised as inefficient. The extent to which the resultant visualisations may influence decisions by the public and others, if notified, to engage in the planning process is unknown. The differences in depiction of the CCDU (2014) riverscape in Figure 1, for example, probably would be addressed in a resource consent process by the planner. Whether or not these differences are noticed and understood by the general public, and how these might influence the way in which they become involved in the resource consent process, is an open question. This places a considerable burden on planners in making decisions where images have been used to promote projects to the public and created expectations that may not be met in reality.

We suggest that clearly artistic visualisations remain important reminders to an audience to exercise caution in their reliance on the visualisation for understanding the actuality of the effects of a proposal. Architects overestimate the understanding planners have of visualisation techniques and their use. Planners need to become more familiar with the ways in which visualisation techniques are and can be used. At present, planners may be over-reliant on the architect's professional integrity which leaves planners open to misconceptions, deliberately

promoted or accidental. In particular, there is a need for transparency about the assumptions underlying and the decisions made as to what to include and exclude from a visualisation and the compositional techniques employed.

We conclude that a drive for accuracy and realism obfuscates the fact that visualisations are only partial and simplified representations of realities, current and future. This will not be solved through increased technological capability and sophistication in visualisation.

7. ACKNOWLEDGEMENTS

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'Lag-effect' politics and the politicisation of New Zealand farmers: Where to from here?

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ABSTRACT

Responding to diffuse agricultural pollution is plagued by the considerable period of time it can take before ecological thresholds are breached and the impacts of actions on land become evident in water. Reflecting on the recent election campaign and the findings of research conducted in 2013 to understand farmers' perspectives on media claims that agriculture is diminishing New Zealand's '100% Pure' brand, this paper examines the social and political dimensions of this lag-effect and argues that the politicisation of New Zealand farmers has gone too far. The paper examines the implications of lag-effect politics for farmers and the new government that has inherited an already fraught implementation phase of the National Policy Statement for Freshwater Management.

1. INTRODUCTION

The media spotlight became firmly fixed on dairy farmers and the impact of dairy farming on New Zealand's waterways in 2002 when Fish and Game launched its 'dirty dairying' campaign (Holland, 2014). Fast-forward a decade-and-a-half, while there has been considerable change in farm management practices, gains have been overwhelmed by a convergence of the legacy of past management practices (e.g. excessive fertilizer, deforestation, grazing on erosive slopes) and more recent effects of high levels of water abstraction and nutrient losses from intensified land use (MfE and Stats NZ, 2015, 2017; PCE, 2012, 2103). Nutrients, sediment and pathogens that might be considered minor in isolation can be significant when they move overland and/or through groundwater to accumulate in rivers, lakes, streams, estuaries and off-shore marine areas (Goolsby et al. 2001; Howard-Williams et al., 2010; Howden et al. 2013; Sanford and Pope, 2013). In terms of

nitrate, the present state of water quality reflects what has occurred in the past and depending on biophysical, geological and management factors, movement into waterways can take decades. Often referred to as the 'lag-effect', this means it can take some time before the effects of land use intensification make their way through the groundwater system (Howard-Williams et al., 2010; LAWF, 2010, 2012; PCE, 2012; Sanford and Pope, 2013). Importantly, the same delay applies to improvements in water quality due to better farm practices and the implementation of stricter rules and regulations. Hence, the issue of concern in this paper is that the lag-effect can have potentially unforeseen social and political consequences.

2. LAG-EFFECT POLITICS

Arguably, lag-effect politics played a role in the outcome of the recent New Zealand election. While there is much to question of the previous government's water policy reforms (e.g. see Duncan, 2013, 2014a, 2014b,

2017; LAWF, 2017a, 2017b; MfE, 2017), one could be forgiven for taking from the election campaign that little had been done by the previous government on water quality. In contrast, while some regional councils had moved before 2011 to address water quality through setting limits (e.g. Canterbury, Horizons, Waikato), rafts of limits and rules now exist in regional plans and consents across New Zealand to regulate farming with the intention to address water quality. The problem is, the limits and rules are not yet showing results and decision-makers have maintained that things are likely to get worse before they get better (e.g. Skelton and Caygill, 2013). Notably, water policy reforms have been occurring in the midst of a central government push to significantly increase agricultural production through expanding irrigation. The balancing act of aligning existing social, cultural, economic and environmental values and rights *as well as* squeezing as much as possible out of the resource seeks to force increases in agricultural production through innovation and resource efficiency while delivering environmental outcomes (MBIE, 2015) – otherwise known as ‘sustainable management’ as mandated under the *Resource Management Act, 1991*.

3. THE REALITIES OF SETTING RESOURCE LIMITS

Important for understanding the context for policy implementation, this ‘expand within limits’ philosophy that is now embedded in New Zealand’s National Policy Statement for Freshwater Management has been creating winners and losers across farm sectors. For example, in locations where grandparenting nitrate discharge allocations has occurred, setting limits has had equity implications for sheep and beef farmers with the potential property value of conversion to dairy no longer an option. This is because their nitrogen loss rates have been retained at low levels (albeit with some small room for movement in some sub-regions in Canterbury) while dairy farmers retain significantly higher loss rate allocations to reflect sunk investment. Arguably, these are the highly fraught, complex and sometimes unforeseen realities and consequences of

setting limits on a resource that is so intricately woven into national and regional economies. Setting limits is also pitting existing irrigators against new with irrigation schemes needing command area discharge allowance loads to proceed. This has meant the former see themselves mitigating nutrient losses to make way for the latter which could endanger everyone’s right to farm (e.g. see Duncan, 2014a, 2014b, 2017). Setting limits has also meant that opportunities for future conversions to dairy have been curtailed in many areas and irrigation schemes have been scaled back (e.g. North Canterbury’s Hurunui Water Project).

4. BEWILDERED FARMERS AND DISBELIEVING PUBLICS

Given the years of meetings, forums, hearings, submissions and so much more required of farmers and many others under the Canterbury Water Management Strategy and elsewhere across New Zealand to establish limits and rules that are now law in regional plans (see Memon et al. 2012 for a preliminary review; see also Duncan, 2014a, 2017), farmers were appearing understandably bewildered by accusations in the media during the 2017 election campaign that continually insinuated nothing was being done to address water quality. With evidence and the media appearing to confirm the worst and with reverberations of the dirty dairying campaign continuing and government policy promoting further intensification through irrigation expansion, claims that government and farmers were taking action fell on profoundly deaf ears. Such actions were deemed insignificant and claims that things would eventually get better were simply not believed.

5. POLICY IMPLEMENTATION – THE CHALLENGES

Blackstock et al. (2010, p. 5634), drawing on an international literature review of the influence on farmer behaviour of information provision, maintain that ‘well-reasoned, data based and logical messages should be effective in persuading farmers to adopt certain preventative measures or ‘best management practice’, so long as farmers are convinced that

there is a problem and that their actions can solve it'. These authors identify gaps in our understanding of the socio-cultural aspects of how farmers 'interpret, translate and respond to measures designed to mitigate diffuse pollution' (p. 5632) and how advice 'interacts with farmers' identities and cultures' (2010, p. 5635). These are important issues for the implementation of improved farm practices. Given how contentious dairy farming has become in New Zealand and the policy trajectories that are now in place that are creating turmoil across rural New Zealand, I focus on farmers' responses to media claims that agriculture is diminishing New Zealand's '100% Pure' brand and ask if the deepening politicisation of farmers in New Zealand has gone too far?

6. METHODS

Face-to-face semi-structured interviews were conducted during 2013 with 12 dairy farmers and 8 farmers who owned a mix of sheep/beef/arable farms. Situated across what is known as the Culverden Basin in North Canterbury, all farms were irrigated. The 8 mixed farms provided dairy support with cows grazing over winter with one farmer providing dairy support by only growing stock feed. Hence, all farms were involved in the dairy industry one way or another. Interviews of between 60-90 minutes duration were conducted in farmers' homes. Data was analysed using an initial coding process with analytical themes derived from the coded data (Cope, 2005). Interviews have been accompanied by the ongoing review of central government water policy reform documents and reports, regional council planning documents including public submissions, hearings evidence and scientific reports related to water quality limit-setting processes in Canterbury's Hurunui Waiau and Selwyn Waihora zones. Findings have also been informed by regular attendance at public meetings and regional plan hearings for these zones.

7. RESULTS

7.1 Lack of recognition

Being accused of ruining the New Zealand brand was very hard to take for the farmers interviewed given that all of them had been making changes on-farm for some time, often requiring considerable time and expense. For example, farmers had invested in improved irrigation systems (e.g. converting from flood to spray irrigation or improving how water was applied); they had changed fertiliser application systems and adopted a more frequent lower application fertiliser regime (which had cost implications); they were building up their soil to soak up nutrients; fencing stock from waterways and planting riparian margins. Dairy farmers had improved on-farm effluent management systems including making their holding dams much larger so they can apply effluent to land when it is suitable and to avoid ponding. Farmers felt these actions (that they had been told to take) were not being recognised by critics.

7.2 Media misrepresentation

Farmers were concerned that the media focuses on bad stories and, indeed, would take an isolated incident to paint the whole industry in a negative way. For example, 'the worst thing about the media is they'll take one or two examples and portray it as that's what New Zealand's all about – the water quality's *all* stuffed' (dairy farmer, respondent 6). Other farmers stated:

we record the news so we can bypass the rubbish, the sensationalistic rubbish ... they're very one sided and they only pick bad stories, they have to go for ratings I suppose but they're certainly not balanced reports if you ask my opinion. ... and then also you see pictures in the newspaper and they're just a picture they've picked up out of some picture file, it doesn't relate to anything (dairy farmer, respondent 10).

I don't mind objective journalism about the facts but there's so much bullshit it's just unreal – like this swimming hole thing, the number ... swimming areas that are not what they were a couple of years ago – well I saw some stats on them and most of them are urban, but yet the media or the politicians, the Greens and that will just, not necessarily directly accuse dairying but they'll insinuate it (dairy farmer, respondent 15).

The media was described as irresponsible, selective, biased, and a scaremonger.

7.3 A minority of farmers

Respondents acknowledged that there were farmers that were not following the rules. They were cast as ruining things for everyone and 'letting the side down'. I was told that there are 'bad farmers' just like there are 'bad reporters' and 'bad accountants' and that 'bad farmers' should be dealt with by authorities as they were tarnishing the whole industry and this was not fair to those doing the right thing.

7.4 Town folk

Farmers expressed disappointment and surprise that 'town folk' would get 'sucked in' by media reports and stories on the television that were clearly misrepresenting and exaggerating the link between agriculture and water quality. The point here was not that there are no negative stories, as the participants acknowledged there are problems. The concern was that all farmers were assumed 'bad'.

the [newspaper] editor was obviously anti-dairying there for a while and probably still is – every second page, every time you opened the paper there was an anti-dairying thing, well if the people read that eventually they'll believe it, it's called indoctrination, people just keep reading about dirty dairying, dirty

dairying, dirty dairying (dairy farmer, respondent 14).

Several farmers expressed disappointment that people would take what the media presented at face value. Some farmers attributed this problem to an ongoing disconnection between people in towns and farm life that had been far more interconnected in the past. The introduction of regulations around occupational health and safety were mentioned as now keeping people away from farms. Participants also talked about degraded urban waterways. Several participants were perplexed as to why people living with (and contributing to) degraded rivers in towns and cities expected rivers in agricultural areas, their workplace, to be pristine. They felt these were unrealistic expectations.

7.5 New Zealand's lifeblood

Representations of agriculture diminishing New Zealand's 'clean green' brand stood in stark contrast to the image farmers had of agriculture as underpinning not only the national economy over a very long period of time but also rural towns and the livelihoods of many. The question was raised: 'what would New Zealand do without farming?' with the observation that there was not much else going on. It was maintained by many farmers that New Zealand needed agriculture. It was also characterised as part of New Zealand's 'DNA'. 'I think they've [the media] got to be reasonably careful what they report on really. Agriculture, it's our life blood, that's what we do, that's what we've always done' (sheep farmer, respondent 18).

For all the years that I've been here and my father's been here, agriculture has been pretty important for this country, to keep it running ... there's obviously a dairy boom going on at the moment and they're all doing really well. I think the spin offs are for the whole population of New Zealand are pretty good through that; if we didn't have that at the moment as a country we might be

looking reasonably sick. I think farmers in general are pretty responsible and they do care about their land and what they put into it. Perhaps there would be a small minority that don't (sheep farmer, respondent 18).

7.6 Farmers by nature

The discussion opened topics about how farmers respond to the media claims and criticism. I was told that farmers prefer to avoid politics, were weak at answering back and probably sit back too much. I was also told that farmers are sick of the 'waffle' and just want to get on with their work. Farmers conceived themselves as responsible and caring about their land and waterways. They saw themselves as custodians and 'greenies' at heart. Indeed, one farmer maintained he did far more for conservation in terms of planting hundreds of trees and removing willows than the environmentalists he had encountered complaining about the rivers.

It makes me really cross because it's really one-sided and people say well why don't you stand up and argue but farmers are notorious for heads down bums up and to be fair, whose keeping the country afloat? (dairy farmer, respondent 10).

7.7 Invalidation of social identity – criticism beyond the media

Discussions with farmers also revealed some were encountering broader criticism than that of the media. A dairy farmer talked about being at a wedding when he announced to the group at his table that he was a dairy farmer. He said the tone of the conversation seriously changed at that point which made him feel like he should go and sit elsewhere because he felt he was making everyone feel uncomfortable. He said this had happened on other occasions. Further illustrating tensions, the wife of farmer expressed feelings of conflict:

friends, when they hear you've got an irrigator, you just feel that they think you're sucking the water out, you're ruining it ... I worry about those things ... but on the other hand, to survive in this world [you need water to farm] ... I always feel torn (wife of sheep and beef farmer, respondent 1).

This participant also made the point that in the past a family could live on a small piece of land and make a living without irrigation but this was no longer possible. Another sheep and beef farmer talked about the research his teenage daughter had felt compelled to do to educate her teachers and fellow students on the impact of farming and its contribution to the country. This participant had also encountered the opinions of 'town people':

you go out to a dinner with town people and they all say oh, you're from Culverden, oh is there much dairy farming up there? ... oh you're not one of those are you? Oh, it's bad this dairy farming and those horizontal pylons – they hate those – oh it's all just so bad what the farmers are doing. And I say well only 3% of New Zealand's water is used and 97% goes out to sea and 2% of it is used for irrigation. They think we're using all the water (sheep and beef farmer, respondent 8).

Another sheep and beef farmer explained that he had been subjected to verbal abuse by passers-by when shepherding his stock down a road near his home.

A dairy farmer maintained he was being subjected to unwarranted scrutiny and criticism because although he had fenced his stock from waterways, beef cattle that were not subject to the same rules were still getting into waterways and their owners were not being held to account:

we've got a beef farmer next door to us - well there's sheep and beef guys all around here and a lot of their cows at the moment are all in the rivers [due to watercourses in hills drying up]. ... if they were black and white the greenies would be jumping up and down and there'd be helicopters flying around here and screaming but because they're red and white or black they don't seem to – there just doesn't seem to be the same worry (dairy farmer, respondent 6).

One participant, the wife of a dairy farmer, explained with much sadness how the trees they had planted on their farm over several generations had to be cut down to make way for the new spray irrigation system and the removal of the border-dyke flood irrigation system:

all those trees along those roadside paddocks have been pulled out so that's really sad. We are sad about them and a lot of people – man, the comments we get from people, everybody's got an opinion but nobody's got a wallet [to pay for a system to avoid removing trees and the staff to run it] – you know, so we were forced into it I'd say (wife of dairy farmer, respondent 10).

The trees provided shelter, shade and habitat but the wipe-off water from the flood irrigation system (which relied on gravity not electricity so ran at much lower cost) contributed contaminants, in particular phosphorus and pathogens, to waterways. Although a very large holding pond had been installed as a measure to stay within the border-dyke system and to avoid losing the trees and the use of electricity to irrigate, the system was no longer meeting efficiency requirements.

7.8 Pride

While there were negative emotions of disappointment, frustration, anger, unhappiness, hopelessness, surprise, feeling torn and feeling hurt, there was also an overriding sense of pride – pride in running a successful business, pride in being a farmer and making a contribution to the community and the national economy, and pride in being a New Zealander. Upon asking if he was embarrassed to say he was a dairy farmer, one respondent stated:

no, I'm absolutely proud of what I do. We've got kids that'll want to grow up in a rural environment and I think at the end of the day, most of us are greenies anyway. ... the history of farming is that there is a family element to it and a succession element and a feeling of being custodians of the land. Farmers aren't in farming for a one off, one year cash hit. You can erode a resource as much as you like for a one year cash hit but farmers are in it for the long haul. There are very few farmers that rape the land as such for profit and pull out, although there is a lot of negative publicity out there - I think a lot of it is ill-founded - and there is a bit of a tail end in the industry too that don't do us any favours (dairy farmer, respondent 3).

8. DISCUSSION

Given that farmers are key to addressing water quality, the research set out above sought to understand the socio-cultural context into which water policy reforms seek to intervene. Three key themes were identified: injustice, invalidation of social identity and pride. The results show that because farmers were making changes to their farm practices they felt wrongly targeted by the relentless criticism in newspapers and on the television and that town people had become indoctrinated by the 'dirty dairying' campaign. They also felt that justifiable

criticism of a few was resulting in the representation of all farmers as bad and all water quality 'stuffed'. Many felt powerless to refute such claims which they believed were untrue and misrepresentations of the situation they were seeing on their farm and in their local area. Farmers felt their positive actions were being overlooked or dismissed due to gross media misrepresentation and unrealistic expectations of '100% Pure'. A number of farmers characterised the media in terms of a 'machine' that constantly perpetuated misconceptions and untruths, in particular the 'dirty dairying' slogan. Invoking the 'machine' metaphor reflected concerns about the uncontrollability of the media and the futility of fighting back. This concern was exacerbated by the difficulty in shifting public opinion once it had been established, thus revealing feelings of hopelessness, anger, frustration, disappointment, unhappiness and confusion. Farmers believed strongly that they were making an important contribution to national and regional economies and could not see what else could fill the economic void if farming was gone which is what they thought many people wanted. Several participants maintained it was not usually in the nature of farmers to argue and rejected claims they do not care about the environment. They were concerned they were taking action but nobody was listening and it appeared nobody wanted to listen. It is also important to note that the interviews were undertaken before the myriad of implementation and equity issues set out earlier were known about.

Farmers are well aware of their portrayal in the media as the water quality problem. It is evident that they resist this framing for a range of reasons, for example, the contribution of agriculture to national and regional economies, day-to-day survival, what they see as unrealistic expectations and the extent to which media portrayals take reality out of context. Of course, it is important to acknowledge that the negative feelings and emotions expressed by farmers are similar to those expressed at public meetings and through social media by those who believe the water they drink and use for recreation has been (or will be) sullied by dairy farming.

While it is unknown, as yet, if the limits and rules that are currently being locked into place around farming across New Zealand will be enough to address water quality to everyone's satisfaction, farmers are confronting high costs to obtain and retain the right to farm and mitigate to meet required limits. The task of translating what can easily be described as a quagmire of rules and regulations into on-ground action to deliver the outcomes everyone wants is only just beginning. Implementation challenges in addressing diffuse pollution are not isolated to New Zealand. Across the world and for some time governments have been developing a range of policies to address the diffuse pollution of agricultural production (OECD, 2017) (e.g. the Water Framework Directive in Europe and the Total Maximum Daily Load regime in the United States) with varying levels of success and much disappointment (Barnes et al. 2013; Buelow, 2017; Copeland, 2014; Sims and Volk, 2013; Voulvoulis et al. 2017). New Zealand's property-scale regulatory and precautionary approach is unique and, as we have seen, not without its problems (see Duncan, 2014b).

9. CONCLUSIONS

It is evident that Fish and Game's dirty dairying campaign continues to reverberate through rural New Zealand and many would argue for good reason. However, the growing stigma around farming and farmers is not helping anyone. Has the politicisation of New Zealand farmers gone too far? I believe it has. Given that the new government has inherited a profoundly fraught and complex policy implementation phase under the National Policy Statement for Freshwater Management that has already created rifts within rural communities and across farm sectors, as well as cultivated defiance, uncertainty and frustration, ongoing work to address water quality will require considerable relationship building. There are no quick fixes to setting limits.

It would appear we are seeing the brutal effect of narrow depictions of apparently badly behaved farmers. Yet, farmers have to be part of the water quality solution. What farmers do on their farms is influenced by a range of social,

institutional and economic factors (e.g. family succession plans, new technologies, government investment, tax policy and incentives, land prices and values, availability of contractors, immigration rules, staffing issues, occupational health and safety regulations, enthusiasm, trust in leadership) and knowing what they are doing will make a difference (Blackstock et al. 2010; Morton and Brown, 2011). Evaluating how all these factors play out and intersect could provide useful insights for going forward. My observations from the discussions I had with farmers during the research reported here show that there is enormous capability and potential willingness that could be harnessed to go beyond the current approach which, for good reason, focuses individual farmers on property-scale limits. While addressing a cumulative effects problem at the individual farm scale has its merits from a policy and planning perspective, the impacts are not tangible at this scale and the required responses, just like the effects, are easily deemed insignificant. Hence, the current approach of zooming down from the catchment to the farm requires zooming back up a bit to a more appropriate scale, for example, that of a tributary where collective arrangements can be used to optimise on-ground actions, which really could make a difference. Furthermore, the social and political fallout of the 'expand within limits' philosophy that underpins the National Policy Statement for Freshwater Management requires a thorough examination and re-evaluation. Will the new government be punished by lag-effect politics as appears to have been the case for the last? Time will tell.

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Making a place for climate-impacted displacement in the Paris Climate Accord

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In 2015, New Zealand had the seventh highest gross emissions per person out of 41 industrialized countries, making it a significant contributor to the impacts of climate change (Gudsell, 2017). New Zealand is also in a region that is already experiencing severe climate displacement. One report estimates 318,000 people in Oceania have been displaced by sudden-onset disasters over the past five years - in 2012, Samoa and Fiji were among the ten countries worldwide with the highest per capita levels of displacement (Petz, 2013, as cited in Burson et al, 2013, p.10). As the impacts of climate change become more severe and more frequent, New Zealand and the remainder of industrial countries in the international community have a duty to confront the impending issue of climate-impacted displacement.

This paper analyzes how climate-impacted displacement is dealt with in the Paris Climate Accord, the most recent embodiment of efforts to develop an international environmental policy framework to address how to adapt to climate change impacts. Using Adger et al's (2006) 'four principles of fair adaptation', I argue that despite its focus on poverty reduction, the Accord perpetuates the structural inequality that has been present in previous international climate policy, such as the Kyoto Agreement. Therefore I suggest that new forms of governance are needed that have powers to monitor and enforce adaptation strategies that seek to resolve climate change justice issues. I also argue that New Zealand should not wait for the development of such international policy. It needs to begin to

develop and implement immigration and resettlement programs for Pacific Island migrants.

1. INTERNATIONAL CLIMATE POLICY AND INEQUALITY

Underlying efforts to develop international environmental policy to address climate change is persistent structural inequality. Structural inequality identifies that the world is politically organized based on global political-economic inequalities that result from the 'North-South line,' the political-economic divide between industrialized countries (the global North) and developing countries (the global South), upon which it is assumed that the North has the majority of bargaining power in international political-economic matters (Paterson, 2006).

This inequality in climate policy is both a procedural justice issue and a distributive justice issue. It is a distributive justice in nature in that it is concerned with disproportionate climate change impacts that the South must adapt to compared to the North (Paterson, 2006, p.65). It is also a procedural justice issue in nature because measures to address climate change are controlled by and benefit the North and minimize the political-economic needs of the South (Adger et al, 2006, p.599). Paterson suggests that the structure of the world economy has developed so that 'inequalities are integral to its operation and tend to be self-producing.' These inequalities are 'both at the root of the generation of environmental degradation and of the conflicts which pervade

attempts to resolve them' (Paterson, 2006, p.64).

Prior to the Paris Climate Accord, international environmental policy has relied on negotiating mechanisms like the Convention and the Kyoto Protocol. While making important steps towards international cooperation on climate change, these arrangements have also been challenged for reinforcing this structural inequality. One analysis is offered by Neil Adger and Jouni Paavola (2006), who argue that a climate change regime can only be designated as 'fair' if it is able to operationalize four principles to resolve key social justice issues in climate change: 'avoiding dangerous climate change, forward-looking responsibility, putting the most vulnerable first and equal participation of all' (Adger et al, 2006, p. 594). Such an approach seeks to equalize climate change adaptation by protecting the South from serious impacts while also empowering them.

According to Adger et al (2006), the climate change in 2005 regime was considered not 'fair' because it failed to address these four key social justice issues that have arisen in past approaches to climate change policy. The crucial concerns the climate change regime has with addressing these social justice issues are its inability to operationalise assistance and eliminate obstacles for fair participation for the benefit of the global South. This is because, past agreements like the Kyoto Protocol and the Convention do not have explicitly articulated plans or targets for addressing social justice issues, and therefore are unable to hold the global North accountable for making the climate change regime 'fair' (Adger et al, 2006, p.594 and pp.598-600).

2. THE PARIS CLIMATE ACCORD

The Paris Climate Accord made some significant changes in regard to climate-related inequality. Above all, parties that signed the Accord agreed not only to reduce emissions, but also to alleviate global poverty. This emphasis on the intrinsic relationship that climate change actions and impacts have with the eradication of poverty is an important first step in addressing the structural inequality

that underscores international environmental policy.

However, in many respects the Accord also continues many of the issues identified by Adger et al in their analysis of previous international climate policy regimes. Adger's first principle of fair adaptation – seek to avoid 'dangerous climate change' – presents several difficulties for the Accord because it is impossible to avoid dangerous climate change in some areas. In the Pacific region parts of the island nation of Tuvalu have had to be abandoned because of the severe impacts of climate change (Farbotko, 2012, p.385).

Another problem is the focus in the Accord on mitigation strategies, with comparatively little attention given to strategies to lessen the impact of climate change. Reflecting on earlier international climate policy, Adger et al argue that there is too much emphasis on mitigation efforts and too little on adaptation strategies for threatening climate change impacts that are threatening developing countries now. This focus persists in the Paris Climate Accord. Each state has a specific goal for reducing their greenhouse gas emissions as stated by the Nationally Determined Contribution in order to keep the increase in global average temperature to well below 2°C above pre-industrial levels, and to attempt to limit the temperature increase to 1.5°C, (Ministry for the Environment 2016). New Zealand itself is committed to reduce its greenhouse gas emissions by 30 percent below that of 2005 levels by the year 2030 (Ministry for the Environment 2016). By contrast, the goals for adaptation are 'enhancing the ability of countries to adapt and reduce vulnerability to the adverse impacts of climate change' and 'making sure that financial flows support the development of low-carbon and climate-resilient economies' (Ministry for the Environment 2016). These are very vague aims compared to the specificity of emission reduction goals, with no state-specific adaptation planning strategies or budgeting proposals for meeting these goals, and are ambiguous to the point of dysfunction. Ultimately, the provisions of the Accord do not seem like they will be effective for the goal of 'avoiding dangerous climate change'.

This mitigation-centred approach almost by default violates the remaining three principles of fair adaptation. It fails to be 'forward-looking by not developing specific strategies to adapt to climate change. It fails to 'put the vulnerable first' by focusing on mitigation rather than the urgent need for adaptation, instead placing the needs of countries exposed to climate change impacts on the backburner by failing to enforce the measures (however vague they are) that the Accord puts out for industrialized countries to aid developing countries. The Accord also fails to hold industrialized countries responsible for compensating developing countries for the harmful effects of anthropogenic climate change because it favors adaptation strategies that maintain possibilities for economic growth and competition over resolving climate change inequalities (Adger et al, 2006). Lastly, because the Accord is nonbinding, it fails to enforce the obligations of industrialized countries to meet their climate change goals, and therefore diminishes the participation of nations most exposed to climate change in planning for their own futures. This is because they are directly affected by the amount of aid for adaptation they do or do not receive from industrialized countries.

3. DEVELOPING CLIMATE-IMPACTED DISPLACEMENT LEGISLATION: RECOMMENDATIONS FOR NEW ZEALAND

Addressing the structural inequalities embedded in climate change justice issues requires a paradigm shift, one that more directly addresses the needs to climate-impacted displacement. One suggestion is for the development of an international agency to oversee North-South relations in international climate policy (Biermann, 2006; Adger et al, 2006). This agency could develop a specific visa category for climate-displaced migrants, as no provision exists under United Nations High Commissioner for Refugees Refugee convention to recognize these migrants as either refugees or as internally displaced peoples (Williams, 2008). Williams argues for the use of regional agreements between developed and developing states that operate under an international umbrella framework,

such as world environmental organization, for planning to receive and resettle migrants.

However, with the increasing frequency and severity of climate change impacts, it would be unwise and irresponsible for industrialized nations to wait for the development of such an agency. In regards to low-lying island nations in the Pacific, climate change impacts are affecting residents now, and will intensify in the future. As a member of the region, New Zealand has a crucial role to play in supporting these nations to plan both short-term and long-term resettlement strategies.

There is also a need for New Zealand to develop a visa category for climate-displaced migrants from Pacific Island states like Kiribati, Tuvalu, Tonga, and Samoa. New Zealand already has the groundwork for this laid out in the Pacific Access Category (PAC) that forms part of this country's refugee quota. PAC is a labour programme initiated in 2002 that grants residence to citizens of Tonga, Tuvalu, Kiribati and Samoa (Burson et al 2013, p.24; Farbotko et al, 2012, p.386; Patel, 2006, p.736). At present, PAC cannot currently effectively include climate change refugees because of the exhaustive restrictions it places on migration such as : stringent application restrictions and a ballot system that slow down the approval process; small entry quotas that are unable to cope with the resettlement of an influx of migrants; and its simple lack of design for urgently addressing the needs of migrants fleeing immediate, severe climate change impacts (Burson et al, 2013, p.24; Farbotko et al, 2012, p.386; Immigration New Zealand 2016). However, it has the potential to serve as a baseline framework for New Zealand to establish regional agreements with Tuvalu, Kiribati, Tonga, and Samoa to address climate-impacted migration.

4. CONCLUSION

Structural inequality that has led to and perpetuated the impacts of climate change continues to underscore international climate legislation, including the Paris Climate Accord. Climate-impacted displacement itself is a direct result of structural inequality that is becoming more and more pressing as climate

change impacts become more frequent and severe. This paper argues that new forms of governance are needed that reduce climate change justice issues resulting from structural inequality, for instance through the development of a world environmental agency that oversees regional adaptation strategies around the world. However, New Zealand should not wait for the development of such an agency. In particular, there is a need for New Zealand to develop and implement an immigration and resettlement program for Pacific Island migrants.

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The sustainability façade: An analysis of the Ruataniwha dam debate

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1. INTRODUCTION

The Ruataniwha dam is a pivotal issue in New Zealand's freshwater debate. First proposed in 2011, the dam encouraged a shift to more water intensive, more economical forms of agriculture, particularly dairy farming. It would provide greater farm revenue and stability, work towards the Ministry for Primary Industries target of doubling dairy exports by 2025, whilst also alleviating the Hawkes Bay region's declining numbers of youth, low employment and increasing crime rates through providing an estimated 3500 new jobs. These stated benefits occurred alongside controversy that fed the national freshwater debate; a shift from low intensity land-use to high intensity dairy farming, forming mono-cultural landscapes, and eroding New Zealand's highly regarded environmental integrity, primarily water quality. This debate was further complicated and contested through a land-swap plan between conservation and private land, which led to environmental lobby group Forest and Bird taking the development company to court and winning, soon followed by the government stating its intention to over-ride the court's decision and change the law.

This paper argues that the Ruataniwha dam highlights three emerging tensions in New Zealand environmental policy. First, the Ruataniwha dam brings into focus competing ideas of how the environment is valued in New Zealand, with friction between the two conflicting ideas of the environment being seen as an exchangeable good, or containing

more inherent value. Second, the debate is a potential marker of public rejection of dairy development at the expense of the environment, especially freshwater. Third, the intention of the National-led Government to over-rule the land-swap law threatens to set a dangerous precedent for future cases by driving the government agenda at the expense of public democracy.

2. ENVIRONMENT, SOCIETY AND CULTURE AT THE EXPENSE OF THE ECONOMY

The Ruataniwha dam as an issue has emerged alongside the freshwater debate in New Zealand. A 69 percent national rise in dairy cows since 1992 has contributed to increases in nitrate, phosphate, sediment and microbes in freshwater, which has contributed to a loss of childhood swimming holes, a reduction in freshwater organism diversity, and algal blooms (Cullen et al., 2006; Warne, 2017). Recognition of declining water quality and quantity has been growing throughout New Zealand in recent years, and public coordination and cooperation largely began in 2002 through Fish and Game's dirty dairying campaign and continued through other groups such as Greenpeace and Forest & Bird. (Cullen, 2006; Warne, 2017). Water quality and quantity is now regarded as New Zealand's number one environmental issue. It is this debate that has drawn so much attention to the Ruataniwha dam (Warne, 2017).

The Ruataniwha dam was a project to enable further expansion of dairy and is typical of nation-wide patterns; private benefit through agricultural economic gain at the

expense of degradation to the public good, being water. The Ruataniwha dam issue is ongoing in the midst of thick freshwater debate, spurred on by its sheer scale (the largest on-river dam since Prime Minister Robert Muldoon's Think Big Clyde Dam scheme of 1992), and the conservation land-swap/rule of law dilemma¹, creating a larger pool of concerned individuals (Macfie, 2016).

The council decision for the Ruataniwha dam not to go ahead is a potential first example of public rejection towards dairy expansion. Although there was initially considerable local support for the scheme due to the benefits provided above, there has been a gradual loss of support from influential parties, and active opposition from locals. Three years of resource consent analysis, with significant pressure from opposition groups, led to stricter land management and nitrogen and phosphorus conditions being imposed, somewhat easing the concerns of environmental groups, though demanding more costly on-farm practices (Carson, 2017, July 15; Hawkes Bay Regional Investment Company, 2013, March 6). However, opponents considered these restrictions to be inadequate.

Local iwi also became opposed to the dam through a lack of consultation, concerns about the environmental impacts, and questionable economic and social outcomes. Investors such as Ngāi Tahu pulled out due to its arguable economic benefits, and sources of funding are now being shifted to ratepayers and ACC (R. Norman, personal communication, August 16, 2017). Furthermore, Hawkes Bay regional councillors voted unanimously in opposition to the scheme due to mounting financial pressures, due in part to environmental obligations (Hawkes Bay Today, 2016; Lyon & Brackebush, 2017).

¹ The rule of law is the principle that people and institutions are subject to a fairly enforced law. It is therefore a rule of law dilemma that the National Government intended to change the law regarding conservation land-swaps after it lost the legal battle against Forest & Bird.

3. SQUEEZING THE ENVIRONMENT INTO THE ECONOMY

The Ruataniwha dam also brings to light a debate about how the environment is valued: whether conservation land can be considered an economically calculable exchangeable good, or an entity possessing inherent value worth protecting in its own right (Dryzek 1997). The National-led Government advocated for the former, which conflicts with growing consideration for the Māori world view, and a strong environmental ethic and attachment to park boundaries, which contributes to the latter.

Initial consent for the Ruataniwha dam was granted in 2010, allowing the Hawkes Bay Regional Investment Company² to apply for a land-swap, allowing current conservation land to become private land able to be flooded, and vice versa in exchange. This land swap was described as a 'net gain for conservation' by the Director-General of Conservation Lou Sanson, and the (then) Conservation Minister Maggie Barry (Carson, 2017, July 15). A 22 hectare riparian portion of the land that was to be flooded was part of the Ruahine Forest Park, and the developer, Hawkes Bay Regional Investment Company, applied to swap this with a nearby 170 hectare portion of private farmland (Warne, 2017). The Ruahine land has rare oxbow wetlands and already contains threatened and at-risk native plants, birds, lizards and bats, including iconic species such as the long-tailed bat and the New Zealand falcon. The 170ha of private land in exchange contains small segments of forest and wetlands, different underlying geology, and significant potential to provide more value once the farmland is retired (Warne, 2017).

This debate over conservation land being an economically calculable, tradeable entity and possessing inherent value is at the heart of many environmental policy arguments. Placing a 'value' on conservation land is a difficult task, going beyond monetary terms and looking at

² The Hawkes Bay Regional Investment Company is a council controlled organisation (CCO) that is set up to manage some of the Hawkes Bay Regional Council's larger infrastructure investments around the region

non-use values, such as intrinsic values (Warne, 2017). Biodiversity offsets are proliferating globally as a method of weak sustainable development, risking a mis-match in biodiversity value, often exacerbated by poor compliance, poor ecological outcomes, and a lack of in-depth exchange analysis (Brown & Penelope, 2016).

In New Zealand, there have previously been other land-swaps, which the former Minister for Conservation Maggie Barry has argued have been successful (Leslie, 2017; Warne, 2017). However, like the Ruataniwha case, these land-swaps have been of questionable ecological value. For example, the nearby Waikatea station farm development saw a conflict between DOC and landowners over land swap options, and the final agreement saw a net loss in biodiversity according to DOC, but a net gain according to the land owner and the courts (Norton, 2009). Cases like the Waikatea station and the Ruataniwha dam suggest that land swaps form more of a tokenistic front that expounds the importance of environmental values, but which in practice are overridden when development interests are threatened.

The Ruataniwha dam case has created an interesting legal precedent in New Zealand about the inherent value of conservation land. Forest and Bird filed a judicial review in the High Court challenging the Ruataniwha land-swap on the basis that only stewardship land can undergo land-swaps under the Conservation Act 1987 (Carson, 2017, July 15; Warne 2017). Although initial rulings considered the transfer to be within the broader purpose of the Conservation Act 1987, Forest and Bird appealed this decision and won (Warne, 2017). As the Court of Appeal said, 'designation [of non-stewardship conservation land] could only be revoked if its intrinsic values had been detrimentally affected such that it did not justify continued preservation and protection' (Warne, 2017). This decision was then appealed by the Government in the Supreme Court in February 2017, but they lost the case (Carson, 2017, July 15). The Supreme Court's 85-page decision made clear that the 22 hectares of Ruahine Forest Park land and the nearby 170 ha to be exchanged could be

considered to have even conservation value (Warne, 2017). However, they considered the Court of Appeal's ruling to be right; that specially protected conservation land cannot have its status revoked, even if it is for an exchange that enhances overall conservation value (Warne, 2017).

4. A LAW-CHANGE DILEMMA

Unlike most other developed nations, New Zealand's parliament is always supreme, and can override a court's decision. Following the Supreme Court's ruling, the National-led Government signalled its intent to over-rule the legal decision against the land-swap. The Conservation Minister and Prime Minister pursued a law change to allow, what is in their eyes, a trade-up from lower value to higher value conservation land (Warne, 2017).

The law change announcement is reminiscent of the Foreshore and Seabed Act 2004, which created public upheaval and arguably tarnished the then Labour-led Government's reputation (Hickford, 2017). Ownership and access to the coast and beaches came into focus in the early 2000's when the Court of Appeal overturned a case that ruled that Māori customary interest in the foreshore was lost when the once adjoining dry land had been purchased by the Crown (Hickford, 2017). Claims that Māori could potentially 'own' the beaches contributed to hostility amongst some sectors of society, and the Labour Government undermined the court's ruling through passing the Foreshore and Seabed Act 2004, declaring the land in question to be owned by the Crown, though allowing Māori to have guardianship over many areas (Hickford, 2017). The Foreshore and Seabed Act remains a controversial piece of legislation that saw relentless protests and drastic polling changes, and displays the impact of imposing legislation over a court's ruling of a contentious issue (Hickford, 2017).

In the case of the Ruataniwha dam, the controversy now surrounding the scheme is seriously putting its feasibility into question, even if the law is changed (R. Norman, personal communication, August 16, 2017). From the point of view of the National-led Government, enhancing flexibility improves

overall land use efficiency, but to the opposition, it creates a lack of certainty that grants greater ability to developers and government interests (Warne, 2017). Sir Geoffrey Palmer has argued that the law change would be ‘deeply offensive to the rule of law and a constitutional outrage’, questioning the point of the prior long-winded argument, when the court’s decision can be over-ruled by the executive (Palmer, 2017).

Moreover, public buy-in has been seriously undermined. Changing the law would be a blunt and centralised means of outweighing society’s voice, but would not lead to support for the project. The current majority of residents in the Hawkes Bay region are thought to oppose the dam, as do a vast number of New Zealanders through the freshwater and conservation land swap debates, an issue that crosses cultural boundaries (Carson, 2017). Complex issues like the Ruataniwha dam demand new approaches that can enable cooperation, genuine participation and understanding across multiple perspectives (Dryzek, 1997; Carson, 2017).

5. CONCLUSION

The Ruataniwha scheme has been highlighted as a pivotal turning point in the freshwater debate in New Zealand, thought to be the first case to meet the threshold for public rejection of dairy development at the expense of the environment. Tension between seeing the environment as an exchangeable good or containing more inherent value is also present, as shown with the conservation land-swap dilemma. Finally, the integrity of the rule of law is brought into question, and it is confirmed that a law change would set a dangerous precedent for other cases in the future.

The Ruataniwha dam has garnered significant attention as a symbol of the 2008 – 2017 National-led Government’s push for large-scale irrigation and the debate about freshwater quality in New Zealand. It developed into a conflict of its own; whilst offering development to a region in social and economic turmoil, it also threatened to contribute to the declining water quality of the region and the country. The discussion around

the dam has also brought into focus how the environment is valued in New Zealand, either as an economically calculable entity or as possessing inherent value. A building freshwater debate has highlighted the Ruataniwha as potential first evidence of society finding their limit of tolerance of dairy expansion. A conservation land-swap law is currently blocking project development, and the National-led Government’s intention to over-ride this with a law change put their commitment to representing the New Zealand voice into question. These challenges suggest that a sustainability façade has been placed on the Ruataniwha debate, involving inadequate consultation and collaboration, a failure to address societal perspectives, and a funnelling of the environment, society and cultural aspects into an agenda aiming for economic progression.

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Planning approaches that provide an alternative to modern planning: A critical assessment

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1. INTRODUCTION

The realm of planning has undergone many transformations in the last century, with successive 'turns' evolving to address the weaknesses of previous approaches. Whilst 'modern planning' dominated the post-war era, the 'communicative turn' of the 1970s – 1980s challenged the rational foundations of planning, and the apparent 'neutrality' of planners. Similarly, 'collaborative planning' has rejected the notion of privileged knowledge, instead turning to consultation and transdisciplinary approaches. The emphasis on process has led to concerns that the substance (or the outputs of planning) has been neglected. 'Spatial planning' is an example of a recent approach that attempts to unite procedural and substantial elements. The tensions between these three approaches often results in them being employed independently of one another. However, the planning models discussed in this paper do not represent distinct paradigms. Modern planning, collaborative planning and spatial planning define issues using different approaches, which influences their ability to provide comprehensive, sustainable solutions. Utilising a single approach to planning is insufficient to develop a sustainable solution to complex and uncertain planning issues. Rather, in this paper I argue that an integrated approach is needed to produce economically efficient, socially and culturally diverse, and environmentally sensitive solutions.

2. MODERN PLANNING

The inception of modern planning is credited to Le Corbusier, who developed his *City of Three Million* in 1922 (Deckker, 2000). It arose as an orderly response to 'scrawny' planning as, historically, cities evolved in a piecemeal fashion to satisfy individual interests (Adams, 1922, p. 157). Le Corbusier attempted to combat this by providing high-density living, green belts and efficient transport systems, to ensure the economic and cultural functions of the city were carried out effectively (Deckker, 2000). Although modern planning principles were upheld as the key to re-building and economically advancing cities post-war, the dominance of this planning approach was short-lived. Modern planning disregarded the historical context of a city, instead focussing on constructing an efficient 'machine'. Efficiency became the key indicator of success, which allowed plans to be compared between cities and nations (Irving, 1993).

Although this form of planning has been heavily criticised as lacking consideration for human scale (Schubert, 2014), the strengths of the modernist movement continue to be incorporated in contemporary planning projects. Modern planning offers a rational, technical approach to urban development, which appeals to those who desire an unambiguous city plan that supports social and economic efficiency. By associating the planning profession with a rational decision-making model, any planning decisions that are made are validated as being objective and 'true' (Irving, 1993). As modernity evolved out

of the era of mass-industrialisation, its focus on the efficient operation of cities and their systems was familiar and alluring. It also provided a common language in the planning industry, which can be regarded as being ultimately responsible for its rapid global adoption, and the reluctance of contemporary planners to abandon the approach.

Modern planning, in its purist post-war form, was a short-lived and controversial 'success'. By the early 1960s, the focus on efficient development and standardisation was seen to meet objective 'standards of living' but did not necessarily promote subjective 'quality of life'. Whilst significant improvements in sanitation and transportation were achieved, the implications of this planning approach for the identity of places and people was disastrous (Natrasony & Alexander, n.d.). 'Expert' technical knowledge often overrode community preferences and led to the development of plans and policies that failed to consider the values of the society they were regulating. In essence, modern planning attempted to solve the issues arising from industrialisation using the same mechanistic means with which industrial cities were created. Thus, although it provided efficient solutions to overcrowding and other societal ills, modern planning's disregard for the human scale created as many, if not more, problems as it solved.

3. COLLABORATIVE PLANNING

Every planning issue is multi-faceted, which requires decisions to be holistic, flexible and accommodating of different perspectives. Collaborative planning¹ recognises that the act of allocating and managing (a fundamental component of planning) is inherently political and, thus, cannot be solved by creating a single authority to manage resources on an integrated basis (Memon & Weber, 2008). This notion contrasts with modern planning's drive for standardisation. By distinguishing planning as a political activity, it follows that planning necessarily concerns the 'public'.

¹ Collaborative *planning* differs from collaborative *governance*, as it involves the State working with stakeholders, while reserving the supreme decision-making authority for itself. Alternatively,

Historically, the planning profession has relied on the technical knowledge of experts, however it is becoming evident that local knowledge also has value. Collaborative planning engenders mutual understanding between stakeholders, which gives rise to innovative solutions (Kim, 2010). Traditionally, planning was carried out by experts, which narrowed the scope of planning projects and decisions. By involving public, private and community entities, planners expose themselves to a variety of knowledge types. This advances the 'soft' infrastructure of society and builds the social capital that is necessary for lasting relationships (Healey, 1997). Another advantage of collaborative planning is that minority and community groups are given a position in planning and political debates. Collaborative planning is a mutual learning exercise, which pursues the acceptance of participants' worldviews via the discussion of individual perspectives, so a mutual advantageous consensus can be reached. However, as a greater number of people are involved, it is likely that the paradigmatic power imbalance between stakeholders will increase (Kim, 2010). This will lead to larger trade-offs being proposed, which are likely to adversely affect those with insufficient planning literacy disproportionately.

Despite the apparent advantages, collaborative planning is prone to unwieldiness and can be resource hungry. A principal weakness is the potential for it to become a tokenistic exercise, which means that although stakeholders are consulted, they have no power to determine what is included in the planning document (Arnstein, 1969). This is where the dichotomy between theory and practice lies. Many governments, including New Zealand, now require consultation as a part of the policy development process, however few actively encourage collaborative planning. It is arguable whether governments who boast of collaborative practices are operating as a facilitator of planning, or

collaborative governance seeks to devolve power from the State and allocate it to hybrid organisations (Rich & Stoker, 2014).

maintaining their role as the controller (Kim, 2010). In addition, it is not apparent who decides which community groups are considered to be affected in an effective collaborative planning situation. The lack of spatial and temporal definition around affected parties leaves collaborative planning lacking as an effective planning approach.

4. SPATIAL PLANNING

There is a great deal of debate as to what spatial planning is and how it should be done. Generally, spatial planning is used to provide guidance in 'situations that are characterised by uncertainty and conflict around spatial development, where there needs to be mutual learning' (Faludi, 2000, p. 304). Consequently, this planning approach might be applied in land-use decisions that are driven by specific (if contested) values, such as 'sustainable development' (Larsson, 2006). The realm of spatial planning could be seen to *formalise* the systemic approach to planning, rather than relying on an individual planner's education and integrity.

The spatial planning model provides principles to guide planners in a wider contemplation of planning problems and solutions. Firstly, effective spatial planning requires the vertical (between different stakeholders) and horizontal (between governmental sectors) integration of knowledge (FAO, 2015). Plans are no longer restricted to regulating land use, but also the social, economic, environmental and cultural interactions that occur as subsidiaries to land use. Secondly, the provisions developed in the context of spatial planning are based on the principles of subsidiarity and proportionality (FAO, 2015). These processes involve decentralising spatial planning to the levels of society at which it is most relevant, and defining the balance between rule implementation and enforcement (FAO, 2015). Finally, the practice of spatial planning is required to have foresight and dialogue, allowing all stakeholders to be a part of discussions on the future use of land and distribution of activities (FAO, 2015).

By applying these principles, spatial planning attempts to balance the modern

(substance focussed) and collaborative (process focussed) approaches to planning. Spatial planning has a focus on place-qualities and the spatial impact of development via the use of strategic frameworks for local authorities (Albrechts, 2004). These frameworks support the rescaling of agendas and policies, which encourages the different hierarchical levels of government to coordinate their work and resources (Albrechts, 2004). In addition, communication between governmental departments encourages dialogue between planners and decision-makers, which enhances the understanding between these two roles. The spatial planning process remains rational and logical – reducing the potential for collaboration to become unwieldy. Strong spatial and temporal boundaries are offered when deciding who should participate, which is a key difference from the collaborative planning process. Spatial planning boasts flexibility and awareness of future changes to the built, natural and social environments, however the methods of management of this change are omitted from discussion (Eggenberger & Partidário, 2000). This is, perhaps, why the methods of spatial planning are reminiscent of modern planning, as planners revert to the familiar structure.

5. CRITICAL ASSESSMENT

A fundamental element of problem-solving is problem-defining. Modern planning, collaborative planning and spatial planning define planning issues using different approaches, which influences the comprehensiveness of their solutions. Modern planning approaches problem solving autocratically, as planners are responsible for issue identification, definition and resolution. To a certain extent, spatial planning is similar to modern planning, as planning issues are identified by the authorities. However, these two models differ in that spatial planning requires that consultation with stakeholders takes place to increase the diversity of perspectives in the problem-solving process. Although this is admirable, a sustainable, widely accepted solution is likely to remain elusive because the prescribed issue may fail to

incorporate the values and world views of all stakeholders. Collaborative planning seeks to combat these issues by involving affected parties in the problem-identification phase of policy development, as well as the problem-solving phase.

In order to address complex issues, planning processes must be clear and directive to avoid ambiguity and unnecessary resource use. This is a weakness of collaborative planning, as it strives to involve and consult all the stakeholders that are involved in a planning project. Conversely, modern planning adopts the rational-comprehensive mode of decision making, which provides a succinct formula of problem identification, decision making, assessing alternatives, implementation and evaluation. As an answer to these contrasting approaches, spatial planning employs a structured, targeted approach to collaboration. Affected stakeholder groups are spatially and temporarily defined, which streamlines the collaboration process. Dispersing the modern template with collaborative practices allows the spatial approach to take into account social

factors while still striving for the most efficient outcome.

A prominent complication with planning is the inability of many plans to be scaled up or down from their original implementation level. The magnitude of a plan or policy's impact is likely to change depending on the scale it is viewed from. For example, two more street lamps illuminating a park may enhance the security for a neighbourhood, however this would likely be considered insignificant when viewed at the national scale. It is similarly difficult to scale-down to ensure national-scale policies are effective at the local level. This is where collaborative planning and modern planning falter. Standardisation in modern planning enables large-scale plans to be drafted, as it ensures consistency in vision and application (Gunn, 2010). However, modernism fails to consider the human scale in planning exercises, which is what collaborative approaches attempts to amend. Effective collaboration is not viable at the national-scale, as there are too many diverse stakeholder groups that would need to be involved. It is, however, effective at the local-

	Modern Planning	Collaborative Planning	Spatial Planning
Strengths	Efficient Unambiguous Accepted Effective at macro scale Provides standard template	Effective at micro scale Rejects prioritisation of knowledge Transdisciplinary Involves participants in problem identification	Structured Multi-faceted, transdisciplinary Able to be rescaled
Weaknesses	Insufficient consideration of human factor Technocratic Difficult to rescale	Ambiguous Can be unwieldy Difficult to rescale	Poorly defined Ambiguous Unclear methodology
Approach	Rational, technocratic, prescriptive	Inclusive, participatory, transdisciplinary	Transdisciplinary, prescriptive
Role of Planner	Expert	Facilitator	Expert
Problem Definition	Planners/Technical experts/Authorities	Planners and stakeholders	Planners/Technical experts/Authorities
Problem Resolution	Planning/Technical experts	Planners and stakeholders	Planners and stakeholders
Most effective scale	Macro (national, regional)	Micro (territorial authorities, community groups, iwi)	Can be scaled up and down

Table 1: Key differences between the three planning approaches

scale, as community groups can be consulted on place-specific issues. The balance between these two aspects is crucial to achieve, as this will determine whether target standards are met, and whether the appropriate people are consulted on matters. Spatial planning considers temporal and spatial scales, while pursuing inclusive decisions on future land use and development (FAO, 2015). This approach transcends the hierarchical levels of government and society, enabling the rescaling of plans and policies. The coordination between government departments facilitates spatial planning at the national-scale, while dialogue between stakeholders supports it at the local-scale.

Table 1 summarises the key differences between modern planning, collaborative planning and spatial planning, using the conclusions reached in the critical assessment.

6. CONCLUSION

Planning issues are complex, and require multifaceted solutions. Often a planning model is disregarded in favour of another that appears to provide a solution to the weaknesses of the initial model. However, as is discussed above, this is not as successful as it seems. Each planning approach offers a key strength to form an efficient, inclusive and adaptable planning process. Similarly, the weaknesses of each approach are compensated for by the strengths of the others. An integrated approach to planning that involves the problem-solving techniques of collaborative planning, the structured process of modern planning, and the ability to be rescaled that is present in spatial planning, will produce sustainable, timely solutions to complex issues. These approaches are not paradigms in their own right, as is demonstrated by the principles and aims that are common between them. Thus, it is possible to amalgamate the strengths of the above models to discover a planning approach that results in economically efficient, socially and culturally diverse, and environmentally sensitive outcomes.

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Planning and Social Justice: A Theoretical Analysis

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1. INTRODUCTION

The role of planning in furthering social justice is thoroughly researched (Uitermark & Nicholls, 2015; Cardoso & Breda-Vazquez, 2007). This should not be surprising when one considers planning arose from the desire to improve people's lives. In particular, the Marxist tradition heavily emphasises the role of planning in furthering social justice. A similar argument could also be made for more recent intellectual movements such as the 'sustainable cities' paradigm.

Despite this, there is minimal discussion regarding links between political philosophies or the work of political philosophers and planning theory. This is surprising when one considers how easily philosophical notions of justice can be linked into planning theories. This article provides such a link between planning theory and political philosophy, examining two key modern ideas of justice and how they align with prominent schools of planning thought. Here, the work of John Rawls (justice as equality) is shown to align with modernist planning theory, while the work of Robert Nozick (justice as liberty) is shown to align with neoliberalism. Awareness of such alignment is valuable, as it helps illuminate what might be called the 'end goal' of each planning approach, articulating the kind of society each seeks to create.

2. PLANNING AND SOCIAL JUSTICE

There are two especially prominent paradigms that focus on how planning can further social justice. These are Marxism and

the sustainable cities tradition, both of which have social justice at their cores.

It should surprise no-one that Marxism, a school of thought that originated from a desire to create a more just society, has been used as a lens through which to imagine an ideal planning theory and practice. The key idea inherent in Marxist planning is that planning cannot be separated from society; planning is determined by the economic structure of a society and works to further the dominant economic paradigm, which in the vast majority of cases, is capitalism (Allemendinger, 2002, p. 81). As Marxism views capitalist economies as unjust, then the same would also hold true of planning systems that are produced through the operation of a capitalist economy. Thus, for a Marxist, planning almost certainly could not be just without a capitalist economy being replaced by a socialist or communist economy. Because Marxists tend to view economic structure as inherently linked with social structure, the adoption of such an economic structure would then result in a more just social structure, and in the process, a more just planning framework.

Even some schools of thought that appear to be more focused on environmental justice nonetheless have a strong social justice ethos built into them. The sustainable cities movement is a prime example of this. Campbell (1996, p. 297) frames this movement as being about balancing the three conflicting priorities planners face: economy, environment and equity. He argues that, generally, a planner focussing on one aspect would ignore the others or see them as competition; for instance, an environmental

planner would see economic development as damaging to the environment and would likely focus on environmental preservation at the expense of social equity and economic development (Campbell, 1996, p. 298). Sustainable development eschews focussing on a single aspect of development; instead emphasising the balancing of the three competing aspects. This sustainable development paradigm is thus inherently interested in furthering social justice. The argument that sustainability cannot exist without equity and social considerations means that for a city or community to be sustainable it must emphasise social justice.

3. JUSTICE AS EQUALITY

One of the most prominent advocates of justice as equality was American liberal philosopher John Rawls. Rawls sought to prove that an equal society is most just and is what most people would choose to live in. He attempted to prove this using the notion of the 'veil of ignorance'. This principle argues that if an individual were to be presented with a theoretical society but be ignorant as to both his/her status in that society and the degree of inequality in that society, then rational individuals would prefer a society where all individuals are equal and receive equal treatment (Rawls, 1971, p. 136-141). In Rawls' example, all individuals presented with a hypothetical society have no information about the structure and wealth of the society they are being presented with. Individuals thus cannot take a chance on being in a wealthy or tolerant society; the hypothetical society could be extremely poor or riven with political conflict.

Furthermore, in Rawls' view, individuals do not know which generation they belong to; this is important to account for intergenerational justice such as resource consumption and environmental conservation (Rawls, 1971, p. 137). This uncertainty about a society's economic and political status is important; if an individual was presented with two societies, one poor but equal and one wealthy but unequal, that individual may gamble and choose the wealthy but unequal society on the chance that they end up as one of the wealthy

members of the society. Presented with such uncertainty, Rawls judges it irrational for individuals to gamble to get a 'good' society and rational to select a society with laws and services that emphasise equality. Based on this, Rawls determined that justice is about equality, as he believed he had proved most individuals would select such a society that is equal over one that is unequal.

4. JUSTICE AS LIBERTY

However, a contemporary of Rawls, Robert Nozick, disagreed with this notion of justice. He argued that justice is freedom, not equality. This stance argues that the state and its services are incompatible with individual freedom and thus with justice. One of Nozick's defining arguments is his stance on the size and role of the state in modern society. Nozick argues that the state's functions should be limited to basic law and order services and enforcing contracts between individuals or corporations and that anything more would inevitably violate the rights of individuals (Nozick, 1974, p. 113-118). Nozick's vision is in many ways utopic; individuals make agreements with one another via contracts and coexist in voluntarily created communities, with the role of state being only to ensure peace exists within these communities.

When individuals voluntarily enter such communities, it is with the understanding the state may enforce peace and contracts, but may do no more (Nozick, 1974, p. 297-307). Contracts here are explicit and only between individuals that willingly enter into them; there is no place for the kind of involuntary social contracts envisioned by Rawls. This is because individuals do not have the right to opt in or out of such social contracts, meaning they inherently violate an individual's liberty (Nozick, 1974, 297-307). Such a society would rely almost exclusively on the magic of the market to produce wealth and innovation, and Nozick argues that social inequalities that result from freely given payments are entirely just.

5. MODERNIST PLANNING THEORY

One of the oldest schools of thought in planning is modernism which traces its roots to planning's infancy. The earliest planning theorists such as Ebenezer Howard were motivated by appalling sanitation and crowded housing in industrial cities in Europe to design idealised cities that addressed these problems (Levy, 2013, p. 31-34). These cities would be lower density, with plenty of green space and robust infrastructure. The idea here was evidently to design cities in a way that provided some degree of equality for all, by giving all members of society (regardless of class) access to basic public goods such as adequate housing and sanitation.

Housing provision, in particular, reflected this ethos of equality. Modernist theorists and practitioners emphasised the need to provide social housing for those people unable to afford the private market. In the United States modernists introduced minimum housing standards, requiring courtyards to allow in light, adequate fire escapes, and separate bathrooms for each apartment unit (Levy, 2013, p. 34). This insistence on minimum standards of housing for all demonstrates a desire to reduce inequality, if not to totally eradicate it. Certainly, it reflects a desire to better the lot of all members of a society, and sees society as an inherently interconnected community rather than a sea of individuals.

The underlying belief here is clearly that planning should be used as an assertive tool to change the world for the better, and that there is one right way forwards into the future, based on science and rationality.

6. NEOLIBERAL PLANNING THEORY

Neoliberalism is a more recent paradigm than modernism, reaching its zenith in the 1980's. One of the distinguishing features of neoliberalism is its absolute prioritisation of the economy and economic development. As noted by Peck and Tickell (2002, p.394), neoliberalism promotes the notion that economic growth is all-important, and that economic growth must be achieved before any social welfare concerns can be addressed and jobs and growth are dealt with. Even then, health and education are not provided for the

betterment of society's wellbeing or for their own sake; instead they are provided solely to assist further economic growth via skills training or ensuring workers are healthy (Peck & Tickell, 2002, p. 394). Neoliberalism is thus incompatible with ideologies or models of political economy that do not prioritise economic growth and place emphasis on social services. Marxist-based or egalitarian ideologies in particular are treated with considerable hostility, as their emphasis on social improvement is considered antithetical to neoliberalism's approach (Peck & Tickell, 2002, p. 394).

The other key aspect neoliberalism is notable for, is its embrace of the market as the best means of achieving this growth; there is no place for the state outside of limited law enforcement duties. Indeed, this devotion to the market is perhaps what neoliberalism is best known for and most commonly associated with. This emphasis on the market is justified in that it is more efficient and fair than a state-controlled economy. The rationale behind the efficiency argument is that the profit motive encourages cost saving where possible (Peck & Tickell, 2002, p. 394). In terms of fairness, the fact that winners and losers are not picked by the state but by consumers and other businesses is argued to be a more just approach.

7. LINKING RAWLS AND MODERNISM

Underlying both Rawls' work and modernist planning theory is a strongly egalitarian ethos. Rawls was a great believer in the idea that all people should have the same rights under the law and the same access to a basic minimum standard of living. Certainly, he believed that a rational person would choose to live in an egalitarian society as possible if presented with the choice. This egalitarian belief is also strong in modernism. The early modernists proposed cities that had basic amenities such as housing and sanitation for all, believing absolutely that all people should have access to such services.

Additionally, both see communities as just that; inherently interlinked and interdependent groups of people, rather than a multitude of individuals whose paths may happen to cross. This is expressed most clearly

in modernism's focus on improving housing and sanitation for the benefit of all. Likewise, Rawls believed that rational individuals would choose to live in societies that offered the greatest benefit and protection to all members through greater equality.

Finally, there is a strong link between Rawls' veil of ignorance and what modernism seeks to provide. Rawls argued that if an individual was unaware of what kind of society he or she would be born into and what their position in society would be, all rational people would prefer one as equal as possible. A modernist society, in which all people (regardless of income) ought to have access to adequate housing and sanitation is clearly aligned here. A rational individual, according to Rawls, would likely select a society something like what modernists advocate, in which all members are provided with the same basic standard of living.

8. LINKING NOZICK AND NEOLIBERALISM

As Nozick's work was a significant inspiration for neoliberalism, it should not be surprising that the two are closely aligned.

Both, for instance, embrace and accept social and economic inequality, provided the inequality is the result of free actions. Neoliberalism accepts inequality as a natural result of a market-based economy; if an individual has a brilliant idea or works hard, they will be rewarded financially, and that is not only acceptable but proper and just. The commonality here is the notion that inequality is not necessarily bad, and is inevitable when people are allowed to innovate and exercise their free will.

Additionally, both Nozick and neoliberalism see a similar limited role for the state in modern society. Nozick made it clear he believed the state should exist only to provide law and order functions. Neoliberalism likewise advocates minimal government and minimal intervention in the market. While neoliberalism does not argue that the state should not be involved in healthcare and education and should restrict itself to law enforcement as Nozick does, the ideology does advocate a minimal role for the state, with its

priority being ensuring economic growth. This does not mean that Nozick or neoliberalism are anti-planning by any means; rather, advocates of neoliberalism would prefer a planning system that emphasises preserving private property rights.

Finally, both emphasise the primacy of the individual over the group. A key aspect of Nozick's work was his emphasis that individuals should not be forced to be part of a community. Instead, they should have the freedom to join communities or groups they want to associate with. Likewise, an individual should not be required to pay for services they do not make use of. While not stated so explicitly, this theme is also present in neoliberal thought. Neoliberalism values the market partially because it does reward individuals and does not force them to associate with others if they do not wish to.

9. CONCLUSION

There is a rich body of literature examining the role of justice in planning, notably the Marxist and sustainable cities schools of thought. However, there has been minimal engagement with philosophical notions of justice. This article has demonstrated that there are several ways in which political philosophy aligns with planning theory. Rawls' ideas of justice as fairness or equality clearly align with the modernist planning tradition. Likewise, Nozick and his idea of justice and liberty clearly aligns with neoliberalism.

From this research, we can conclude that there are indeed links between the theories of planning and political philosophies of justice. This raises questions for practicing planners about whether the plans they create are furthering social justice, and if so, what kind? Do we want to live in an equal world? If so, should planners be pursuing a modernist approach to create such a world? Likewise, when planners work under neoliberalism, is the society they envision the same as that envisioned by Nozick? If not, why is neoliberalism so dominant in planning? These are questions this paper cannot answer, but should be kept in mind by professional planners.

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An analysis of the key environmental and social issues surrounding wind energy generation in New Zealand

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1. INTRODUCTION

In New Zealand, the use of wind energy has been identified as one of the ways to assist in transitioning away from the need for fossil fuel-based energy. This source of energy has several benefits including, inter alia: minimal air and water pollution, green and renewable energy source, and reduced dependence on fossil fuels. Despite the benefits of wind energy, environmental and social issues continue to surface in response to an increase in wind energy generation in New Zealand. These environmental and social issues are analysed in this paper with consideration given to current legislative and policy instruments.

The generation of energy from renewable sources such as the wind can immensely assist a country in improving energy security, reducing greenhouse gas emissions, combating the adverse effect of climate change and responding to the global energy challenge (MfE, 2011). The exploration of wind energy has been highlighted as one of the renewable energy sources to be utilised to diversify New Zealand's energy mix to deliver efficient and affordable energy across the country, while also achieving renewable energy targets and meeting international obligations surrounding greenhouse emissions and climate change mitigation (MBIE, 2011). Furthermore, renewable energy sources such as the wind have been identified as one of the mitigation strategies to combat climate change and make countries less susceptible to the

volatility of fossil fuel prices (Saidur, Islam, Rahim, & Solangi, 2010).

2. BACKGROUND

New Zealand has a history of renewable energy generations in areas such as hydro, wind and geothermal energy. To build on this platform, the National-led government signalled its intentions to generate 90 percent of its energy from natural renewable sources by the year 2025, and by the year 2050 to reduce greenhouse gas emissions by 50 percent from the 1990 levels (MBIE, 2011). The wind has been identified as one of the renewable sources of energy that can contribute to achieving these targets.

For the first quarter of 2016 renewable energy generation contributed 82.2 percent of New Zealand's electricity with a 12.9 percent increase in wind energy generation from March 2015 to March 2016 (MBIE, 2016). This upward trend in wind energy generation is expected to continue in the future and play a significant role in diversifying the energy mix in New Zealand to meet the projected energy demand. To date, there are 19 wind farms either operating or under construction in New Zealand (EECA, n.d.). This demonstrates that New Zealand is well endowed with wind potential primarily due to its location and topography (Kelly, 2011).

Notwithstanding the wealth of the wind resource in New Zealand, there are environmental and social issues that arise from wind energy development. The environmental issues include earthworks, landscape effects,

loss of ecology, loss of wildlife, the displacement of other animals, erections of structures and dust. The social issues consider the noise generated from the wind turbines, the aesthetics as it relates to landscape, the visibility of wind turbines and proximity dwellings. In this regard, it is important to ascertain whether these environmental and social issues are adequately addressed under the existing legislative and policy environment.

3. LEGISLATIVE AND POLICY ENVIRONMENT

The Resource Management Act 1991 (RMA) is New Zealand's overarching legislation on the management of the environment. It aims to promote the sustainable use and management of the natural and physical resources fostering environmental protection while enabling the social, economic and cultural well-being of the people of New Zealand. The RMA facilitates a hierarchical approach to environmental management starting with central government outlining national objectives through the implementation of the National Policy Statements (NPS), National Environmental Standards (NES), and the New Zealand Coastal Policy Statement (NZCPS). From these national policy statements and standards, regional councils develop their own Regional Policy Statements (RPS) and Regional Plans (RP) and local councils develop their district plans from the RPS and RP. The hierarchical nature of the RMA ensures that District Plans are consonant with those developed at national and regional levels. In essence, plans made at the district or regional level or decisions taken must be in consensus with the provision under the RMA (Johnston, 2016).

Hence, the RMA is the overarching legislation governing wind energy projects but there is uncertainty that arises from its implementation during the wind energy process (Sagemüller, 2006). This uncertainty arises from the sometimes-varying interpretation of certain elements of the RMA and can trickle into the resource consent process as well as the assessment of environmental effects (AEE) requirements. Resource consent is required for wind energy projects under the RMA and aims to address the environmental and social issues such as

landscape, adverse visual effects, noise and loss of ecology (Palmer & Grinlinton, 2014).

Moreover, the uncertainty with the RMA also often results in wind energy projects being heard in the Environment Court, resulting in a long, expensive and highly contested process for wind energy projects (Kelly, 2011). This long and contested process may sometimes arise due to limited and discretionary public participation during the initial process as the public consultation process varies based on the developer and the proposed wind energy project (NZWEA, 2013). In addition, it is important to consider the cultural perspectives during the AEE as well as during public consultations due to the indigenous, cultural and historical value of proposed sites and the ancestral relationship between Māori and the environment (Sagemüller, 2006).

At each stage of the wind development process, there are certain activities and requirements necessary to successfully undertake a wind energy project. A review of the existing literature, policy, legislation and case studies revealed some key areas where environmental and social issues are addressed under existing legislation and policy in New Zealand. These issues are discussed below in relation to existing wind farms in New Zealand.

4. DISCUSSION

A wind farm is a system in which wind can be harnessed to generate electricity and can vary in terms of size, design, turbines and generating capacity (NZWEA, 2013). The location and design of wind farms will be based on inter alia, grid connectivity and the availability and direction of the wind resource. From the project proposal to decommission or upgrading a wind energy project goes through a very detailed development process which includes site selection, project feasibility, detailed assessment, consenting, project confirmation, construction, operations and maintenance and finally upgrading or decommissioning (NZWEA, 2013).

The first stage of the wind energy development project is site selection. At this stage preliminary work is undertaken to ascertain the extent of the wind resource, possible hurdles are identified and

consultation with landowner commenced. The next stage of the process is the project feasibility which explores the business case in terms of project design, development costs, and benefits as well as an initial assessment of the potential effects on the environment. This leads to the detailed assessment where a more detailed site assessment is undertaken to further investigate site design and environmental effects and is followed by the formal application for resource consent and consultation with regional and district councils. The consent process is location sensitive and in most cases, approval must be sought from both the regional and district councils.

If approval is granted the wind farm design and business case are finalised with supporting contracts and the signing of the purchasing power agreement. The project then moves into the construction stage with the erection and installation of towers and turbines. Upon completion, the wind farm is commissioned, and operation commences. The final stage of the wind development process is upgrading or decommissioning. If the wind farm is upgraded, all activities from the project feasibility stage need to be redone, whereas if the project is decommissioned the infrastructure must be removed and the land rehabilitated.

The following uses specific wind energy examples in New Zealand to illustrate the way in which environmental and social issues are addressed through the legislative and policy environment.

4.1 Resource Consent

The implementation and successful development of a wind energy project are dependent on the resource consent process which aims to address the environmental and social issues that may arise during development (Sagemüller, 2006). The consents required for the development of a wind farm include land use, subdivision, water permit, discharge permit and coastal permit (NZWEA, 2013). During the resource consent process, the council will determine whether the effects are minor and approval granted or further action is required (MfE, 2015).

4.2 Assessment of Environmental Effects (AEE)

To supplement the resource consent process, there is also a requirement for an AEE to be undertaken for proposed wind energy projects. An AEE provides an objective assessment of the potential impact of a project on the environment as well as possible ways that any adverse effects will be mitigated (MfE, 2006). The RMA provides general definitions and guidance on what are effects and what the environment encompasses. However, the AEE has been criticised for providing limited specific information for wind energy developers resulting in a lack of consistency in AEE applications and acts as a source of uncertainty for both developer and policymakers (Sagemüller, 2006).

4.3 RMA as a source of uncertainty

The uncertainty with the RMA arises due to a lack of clarity around certain aspects of the Act and its interpretation as well as a lack of specific requirements for wind energy projects (Sagemüller, 2006). For example, in the Waitahora wind project, Contact Energy proposed the development of a 58 wind turbines farm with the potential of generating a maximum of 156 megawatts of electricity. The initial resource consent in 2009 was not approved as the adverse effects were deemed major by the district council. The council argued that the project could have adverse effects on the water supply to the nearby rural community, adversely affect the landscape as well as a local horse stud. However, the Environment Court concluded that wind farm would not adversely affect the water supply and that the landscape effect and the effect on the horse stud were not substantial to warrant a rejection of the consent (Palmer & Grinlinton, 2014). In this case, the interpretation of minor effects was inferred differently by the Environment Court compared to the District Council, thus creating some uncertainty surrounding the RMA and how certain terms are defined and interpreted.

4.4 Environment Court

The Environment court provides an avenue for both developers and the public to appeal

consent decisions surrounding wind farms. For example, the West Wind - Wind Farm located in Makara, owned and operated by Meridian Energy has 62 wind turbines generating up to 142.6 megawatts of electricity. After initial consent was granted to the company to proceed with the project in 2007, residents and other private interest appealed the matter to the Environment Court. The argument against the proposed wind farm was that there were adverse effects in relation to the reflections from turbines blades, bird mortality, noise and sleep disturbance. However, the Environment Court ruled that the benefits to be derived from wind were great and the effects on the environment were minor and upheld the consent granted to Meridian Energy for the construction of the wind farm (Palmer & Grinlinton, 2014). The provision for appeal to the Environment Court is made under the RMA. However, as explained earlier, the RMA is a source of uncertainty and this uncertainty is most times the cause for appeal of wind energy projects (Sagemüller, 2006).

4.5 Long, costly, highly contested wind energy process

The long, costly, highly contested process is seen as one of the main obstacles to the development of wind energy in New Zealand (Kelly, 2011). This may be because of the involvement of the Environment Court when wind energy projects are appealed by residents or developers. The contesting of wind farms by residents can be attributed to negative public perception about wind farms. Graham, Stephenson, and Smith (2009) provide many reasons for negative public perception about wind farms such as farm size and shape, turbines, noise, landscape, adverse construction impact and NIMBYism commonly referred to as 'not in my backyard.'

For example, Kelly (2011) explained that it took a particular wind project two years to get through the consenting process costing the company an addition NZ\$120M. Another example was the Project Hayes wind energy development project earmarked for Central Otago. After spending millions of dollars and over five years going through consenting, the Environment and High Court, the company

decided to abandon the project. While some have highlighted that the high consenting cost is necessary to ensure environmental sustainability (Sagemüller, 2006), it is important to ensure that these costs don't serve as a barrier or disincentive to realising the full potential of wind energy in New Zealand.

4.6 Discretionary public participation

It can be argued that the wind energy development process is highly contested because of the discretionary nature of public participation. During the wind energy development process, public participation is not compulsory and is undertaken by the developer who determines who the key stakeholders are that should be consulted during the process (NZWEA, 2013). As a result, not consulting with local communities on proposed wind farm may further illuminate the negative perception of wind farms and contribute to the long and expensive wind energy development process.

4.7 Cultural considerations

The RMA makes provisions to consider Māori views and cultural history stemming from the principles of the Treaty of Waitangi. For example, an application by Unison Networks Limited in 2007 for the establishment of a wind farm in Hawkes Bay was appealed to the Environment Court on cultural grounds based on the cultural relationship between Māori and the environment. The Environment Court undertook an analysis of the benefits of renewable energy versus the social well-being of residents and ruled that there were adverse visual and landscape effect associated with the proposed wind farm which was more than minor and could not be ignored (Palmer & Grinlinton, 2014). The court declined consent citing that the wind farm also adversely affects the cultural and ancestral relationship between Māori and the environment due to the major adverse effects on the landscape.

Therefore, it is important for developers and consenting authorities to consult with Māori during this process. This can be done through active consultation and using Iwi Management Plans for guidance. An Iwi

Management Plan is a resource management plan developed by an iwi or hapu and identifies and outline certain pertinent issues surrounding the use of natural and physical resources in their area (MfE, 2004). It can be used to complement the provisions in the RMA when making decisions on wind energy projects and inform developers on key cultural and historical issues that need to be considered during the process.

5. RECOMMENDATIONS

Based on the discussion above, the following recommendations may assist in improving the wind energy development process while also adequately addressing the potential environmental and social issues.

- Mapping and identification of sites specifically designated for wind energy generation based on areas deemed as having the greatest potential for wind, while also considering possible environmental and social issues.
- Encouraging mandatory stakeholder participation for wind energy project rather than discretionary consultation based on the developer and project.
- Provision of clearer and more specific guidelines for the establishment of wind energy projects based on the AEE requirements under the RMA (Sagemüller, 2006). The guidelines must provide specifics on the requirements for wind energy developers.
- The New Zealand government might consider classifying wind energy project and possibility other renewable energy projects as nationally significant proposals.
- Encourage small-scale wind energy generation to assist in realising the full potential of wind energy (Kelly, 2011). The installation of single wind turbines or a few wind turbines at strategic locations by residents or businesses may assist with the visibility issues as well as the noise and the environmental issues such as environmental degradation.

6. CONCLUSION

Overall, the RMA provides a structure within which wind energy development can be undertaken. It ensures that the potential environmental and social effects of wind energy projects are managed in a sustainable way. It is also clear that the resource consent process and the undertaking of an assessment of environmental effects (AEE) under the RMA are critical to identifying and addressing environmental and social issues in relation to wind energy projects.

Although, there are benefits to be derived from wind energy development, a prudent approach needs to be taken to ensure compliance with critical components of the RMA such as provision for Māori and for the undertaking of an AEE. Greater clarity is also required under the RMA to reduce uncertainty and for consistency in the decision-making process. The development process and timeframe should not be a disincentive as this can hamper future interest in wind energy. Nonetheless, the environmental and social issues are important and should be managed in a way that realises wind energy benefits while also ensuring sustainable environmental management.

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Political careers post Lincoln University

The highly political nature of many subjects taught in Lincoln University's Department of Environmental Management courses is reflected in subsequent career choices made by the following two alumni – Nicky Snoyink and Nicole Reid. Nicky and Nicole, both of whom achieved post-graduate degrees (the former in environmental policy and the latter in applied science) have subsequently gone on to pursue political careers. In light of an increased interest in politics around the 2017 general election and in policies related to the sustainability of our communities (along with an increase in younger candidates standing for election), Jean Drage talked with these two Lincoln graduates about the links between their time at Lincoln university and their subsequent decision to move into a political representative role.

Nicky SNOYINK



Nicky Snoyink has worked in nature and cultural tourism both in New Zealand and overseas. Her interest in and commitment to the values within our culture and our environment

over the last 20 years has meant a move into a political career was a natural step. Nicky stood for an elected councillor position on Environment Canterbury's council in 2016, getting a very respectable 9,284 votes in the Selwyn district – less than 2,000 votes behind the successful candidate. In the 2017 general election Nicky stood in the Selwyn electorate for the Opportunities Party, a new political party set up in 2016 that had a strong policy platform particularly around the environment and climate change.

Nicky initially studied at Lincoln in the 1980s when she did a Diploma in Parks and Recreation. She came back to do a Masters in

Environmental Policy in 2014 /2015 after watching the increasing impact of development on the environment and closely observing the consents process for the Central Plains Water Scheme (see LPR 7 (1-2), 2015, pp 16-22). Through this process she saw the effect that ordinary community member participation can have on a decision when the potential social impact of a project is presented, an impact which could not have been or was not addressed by the applicant. She also found that planners were not necessarily planning in the broad public interest and saw that she needed to participate to be able to have a say. But first she wanted to know how the political and legal system worked, how decision-makers came to their conclusions and how to influence this process. One paper she found particularly useful was Hamish Rennie's RMA law paper (LWST602) which explained the two interpretations used by the courts - overall broad judgement versus environmental bottom lines. The King Salmon decision regarding aquaculture in the Marlborough Sounds was a defining example of the use of these interpretations.¹

Her political career came next and was sparked by the timing of the first democratic

final decision. This Supreme Court decision is a departure from the approach used in previous court decisions and uses the 'avoid' part of the RMA to protect the natural environment from inappropriate development.

¹ *Environmental Defence Society v King Salmon [2014] NZSC 38 [75]* This Supreme Court decision interprets Part 2 of the RMA using implicit environmental bottom lines rather than weighing up the costs and benefits of an application using the overall broad judgement approach, to reach a

election for seats on the ECAN council in 2016², a step she believes she would never have taken without the knowledge and confidence gained through the research she undertook at Lincoln University, especially that related to the Central Plains Water Scheme and Indigenous Biodiversity which ties in closely to her work in nature and cultural tourism. Her goal in standing for the ECAN council was to ensure a stronger voice for the protection of indigenous biodiversity and a broader ecological systems approach. She believes that participation is the key and voting is just a small part of this. Sadly whilst the RMA provides for this, the processes have become intimidating for many. Hence, the defenders of the environment are now mainly NGOs, such as the Environment Protection Society, Forest and Bird and Fish and Game.

Nicole REID



'If you want to be part of the debate Nicole you need to be sitting at this table'

These words were the catalyst for Nicole to put her name forward for a seat on the

Selwyn District Council in 2016 in an election that saw her elected as the second highest polling candidate in the Selwyn Central ward. But it was at Lincoln University, while doing a Masters in Applied Science, where Nicole was first challenged to be involved in her community and speak out on issues that concerned her.

Lincoln was a natural fit for Nicole who has a long term interest in the environment. At high school she had been encouraged to think about engineering as an alternative to science so studied at Auckland University for a chemical engineering degree. After work with

New Zealand Dairy Group, the Auckland Regional Council and an environmental consultancy firm in Christchurch, she came to post-grad study at Lincoln to strengthen her environmental management and planning skills. This she did under a Masters in Applied Science as the thesis in this degree worked in better with the demands of also raising three children. The information gained and the debate generated through the ERST 604 paper (Advanced Urban, Regional and Resource Planning) provided her with knowledge of government and political process as well as the confidence to have a say.

Nicole's initial involvement in community politics began with the Rolleston Residents Association whom she approached for support for a Kea Crossing³ on Rolleston Drive with a friend to provide a safe route for their children to walk to school. After joining the residents association she was elected chair after a year. She subsequently made several submissions to Selwyn District Council on various things such as annual plan but soon realised, after she tried to interrupt council debate, that rather than submitting for the rest of her life, she would be better to be 'at the table'.

One year on, Nicole acknowledges that it is good to be there although she is really busy. The long term planning is in the process with some big projects to be considered (town centre master plan implementation, library/community centre, pool extension, etc.). The significant rate of growth in the Selwyn district as a result of population shifts since the Canterbury earthquakes has seen this local authority move from a rural base to being more urban (in 7 years, the population in Rolleston has doubled) and this has created its own challenges particularly around the need for new infrastructure.

Nicole is particularly interested in the worldwide movement on place making (making places where people will socialise which in turn builds communities) and active transport options so that we have happy and healthy communities. She chairs the Selwyn

² This first democratic election (since central government sacked the elected council in 2010 and replaced it with appointed commissioners) was for 7 of the 13 Environment Canterbury council seats.

³ Kea Crossings enable school children to safely cross busy roads at peak traffic times, particularly in the morning. While councils establish these crossings, they are run by local residents.

District Road Safety Committee and is on the Public Arts Committee and has recently been appointed to the Regional Water Committee representing both the Selwyn and Ashburton District Councils. She is also an associate member of the New Zealand Planning Institute. As a scientist, Nicole's challenge is the knowledge she has gained that not everyone thinks the same way and her need to balance the 'why' behind issues with her governance role.



The huge changes that have happened in Canterbury since the 2010/11 sequence of earthquakes are reflected in the increased focus on teaching and research around disaster risk and resilience in Lincoln University's Department of Environmental Management. Hamish Rennie outlines these changes in the department's programme whilst, Alex McCormack, one of the first graduates of the Master of Environmental Policy and Management degree who went on to work for the Kaikoura District Council, describes his 'up close and personal' experiences of the 2016 Kaikoura earthquake from both a council and a community perspective.

Disaster Risk and Resilience: Now a key part of Lincoln University's offerings and research

Hamish G. RENNIE

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Hazard risk and mitigation has always been a part of planning programmes and while sustainability is not the same as resilience, the two have much in common, especially in the context of climate change. Planners working with frameworks like the sustainable livelihoods framework incorporate core components of resilience into their everyday thinking. However, it is clear that the Canterbury earthquake sequence that commenced in 2010 has led to a much more active and sharper focus on disaster risk and resilience in Lincoln University's degrees, as is noted by Alex in the following comments on his experiences. Most of the staff in the Department of Environmental Management have experience in pre-disaster 'business as usual' planning and the disaster itself, and are living through and contributing to the subsequent recovery. In fact, one of our planning staff is a long-serving member of the Volunteer Fire Brigade. Much of our research and that of our students addresses issues related to planning for greater resilience to disasters, whether at the national policy level or the individual level, both in New Zealand and overseas (see publications list in this

issue). Notably, Lincoln University has established specific undergraduate and post-graduate courses on risk and resilience and now includes greater emphasis and case material on risk and resilience in most of its courses, including those contributing to the Master of Environmental Policy and Management and the Master of Planning.

Partly as a result of the collaborative research environment at Lincoln and the relationships developed with Canterbury University through the government's ten-year National Science Challenge – Resilience to Nature's Challenges, Lincoln and Canterbury Universities now offer a joint-degree (a 180 credit Masters in Disaster, Risk and Resilience) to develop students as specialist practitioners in this discipline. Canterbury focusses on the physical hazards and their direct management, while Lincoln provides courses relating to planning, policy, socio-political issues framing risk and resilience and building resilient communities. Lincoln also offers a 120 credit Post-Graduate Diploma and a 240 credit research-oriented Master of Applied Science (DRR), each with some courses taught by the University of Canterbury. These specialist

degrees are in addition to the ability to specialise in risk and resilience through course choices and a research dissertation in our New Zealand Planning Institute-accredited Master of Planning.

Would this have happened without the Canterbury earthquake sequence? Possibly, but our recent national survey of planning academics¹ shows that it would not have been to the same extent as it does when you have

living laboratories of urban and rural disaster and resilience on your doorstep, especially Christchurch, one of the Rockefeller Foundation's 100 Resilient Cities. It has been and continues to be 'interesting times' at Lincoln University, and offers wonderful opportunities for risk and resilience study, research and action.

Master of Disaster Risk and Resilience

If you're interested in a rewarding career that involves helping people to become more resilient in the face of adversity, the Master of Disaster, Risk and Resilience degree at Lincoln University can get you there. It's impossible to predict disasters before they happen, but vital to manage community responses to them after they have occurred.

Canterbury-based students are in a unique position to understand how to do this, and with the region still focused on disaster recovery and urban renewal following the 2010-2011 earthquakes, plenty of career opportunities are opening up.

The Master of Disaster, Risk and Resilience programme is jointly delivered by Lincoln University's Department of Environmental Management and the University of Canterbury's Department of Geological Sciences.

These institutions are well-equipped to teach the mechanics of disaster risk and resilience, having gained a large amount of practical knowledge from the Canterbury earthquakes.

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Visit www.lincoln.ac.nz to enrol now in the [Master of Disaster Risk and Resilience](#)

¹ Rennie, H.G. & J. Forsyth 2017 "The bad, the ugly and the good: Locating the consequences of the Canterbury earthquakes on the map of planning academia" paper presented to the Australian and

New Zealand Association of Planning Schools (ANZAPS) conference *ANZAPS 2017 Locating places, locating planning*, 2-4th November 2017, University of Tasmania, Hobart.



The reflections of a Lincoln graduate in a small council facing a big challenge

Alex McCORMACK

Master of Environmental Policy and Management, Lincoln University, New Zealand

Late in 2015 I graduated from the first class to complete the Master of Environmental Policy and Management Degree (MEPM). In May the following year I started work as Kaikōura District Council's (KDC) Planning Officer. Six months after I started, just as I was finding my feet, my introduction to small town local government changed dramatically. The 7.8Mw Hurunui/Kaikōura Earthquake event began. Not only did the earthquake throw me out of bed, it also threw this small local council into complete disarray. Despite my experience as a graduate being relatively short, the circumstances have given me some unique insights. Not only can I talk pros and cons of starting a career in a small local authority, but I can also detail what it's like to be a graduate in a pretty exceptional situation.

My experiences begin at Lincoln. I found myself in the MEPM programme because I wasn't content with the career options I had after graduation from another institution. Reflecting on what I really wanted in a career led me to the Resource Studies Programmes at Lincoln. I played it safe at first and started in a post-graduate certificate, however I quickly found that I was really enjoying the course. This made the decision to continue into the newly available MEPM programme a simple one.



Being a student at Lincoln after the Canterbury Earthquakes was an interesting time. As the facilities came down and the university adapted, so did the course content. Earthquake recovery policy and building disaster resilience were common themes.

Lectures on these topics were made more interesting and relevant due to the significant quantity of local examples available. This was particularly true of the Resource Management Law course. In this course we frequently examined and critiqued the response of government and local authorities to major natural disasters. I left Lincoln feeling well equipped for a diverse array of careers, however, being an optimist I never considered that I would be putting to use the post-disaster policy and planning aspects so soon after graduating (indeed if at all).

When I submitted the application to work in Kaikōura I had doubts about whether I could actually accept the job if it were offered to me. My reservations were due largely to the small size and relative isolation of the town itself. Moving to Kaikōura certainly did not match my stereotype of the graduate lifestyle. However following the interview my doubts about the social aspects were displaced by my realisation of the opportunities. Working in a small Council is characterised by significant diversity and

exposure. You end up being a jack of all trades, and a master of a least a few. In any week I could find myself considering freedom camping policy, meeting to discuss the Ohau Waterfall (baby seal) walkway, management of flooding hazard in the district, implementing changes to the RMA, considering strategies to promote cycling, or discussing biodiversity. I also began to see some advantages in the town itself, the more obvious of which included the ready access to some great backcountry and becoming involved in a tight community - for example joining the local fire brigade. I think being in a volunteer fire brigade will remain among my most rewarding experiences and would encourage anyone curious to find out more.

The earthquake shook things up in both a figurative and literal sense. The initial quake will stick with me for being both very long and very strong. It was so long that assuming it must be ending; I tried to get out of bed. As soon as I was upright I quickly found myself unable to stand. I was left crouching in the centre of my room as my bedroom furniture collapsed around me. When the initial shaking had subsided (and my flatmates all appeared OK) I made a quick dash to the fire station. The road was alive with people as everyone poured onto the street and headed for the hill. Turning into the West End (the main commercial street), I was genuinely surprised to find the buildings largely upright and intact.

For me and my fellow fire fighters the morning was a busy one. Whilst most people had a long nervous wait on the hill till sun-up we were responding to the limited information that was coming through. This saw us respond initially to the Elms Homestead collapse, and as the day progressed, to surveying the town and the accessible rural surrounds. Our work that day began to reveal the extent of damage to homes, land and key infrastructure. Early on day two I reported to Council, although for the next five weeks we were no longer a Council. The civic centre had transformed into an Emergency Operations Centre (EOC), the Council now a cog in the Civil Defence machine. Our role was to begin evaluating and responding to the long list of complex problems the district now faced.

Not long after starting at KDC I participated in a two hour introduction course to the Coordinated Incident Management System (CIMS). CIMS is the framework that Emergency Response (including Civil Defence) occurs within. As part of the Council induction I was assigned to the Planning and Intelligence Team. This would only become relevant should we ever find ourselves becoming Civil Defence, which no one seemed to regard as a likely scenario. So a two hour workshop was the extent of my pre-event exposure to Civil Defence. Luckily I'm a fast learner and have a back ground in the Defence Force. Indeed my time in the army reserve had included both a deployment to East Timor and responding to the Christchurch earthquakes.

Working in an EOC is a strange experience. It's challenging, the pace is fast, the tasks are complicated and the context is characterised by ambiguity. Our small Council of 22 staff was well supported. At times the EOC alone had over 100 personal from various councils plus New Zealand Defence Force staff, Red Cross, Fire Service, Police, central government and geotechnical experts. This helped immensely, but the routine was twelve hour + shifts every day, for four weeks straight. In that time we achieved a lot. My personal involvement included the acquisition of Civil Defences rental fleet; setting up the monitoring and forecasting programme for fuel supplies; working to keep evacuated Goose Bay residents informed on progress as we raced to understand the implications of a land slide Dam that had formed in the catchment above the settlement; and work to understand rural needs and how we could best meet those needs. While Council is small, we had a huge out-of-district work force. A key role for local staff was connecting other staff to local contacts and to staff in the EOC, as well as providing a continuity link between outgoing and incoming staff. There's no doubt an EOC is a stressful place to be, and the context is very much an unfortunate one, but none the less I loved it.

As the initial response work began to wind down it was replaced by recovery work. As a planner my role became guided not only by the District Plan and Resource Management Act

1991 (RMA), but now also by the Hurunui/Kaikōura Earthquakes Emergency Relief Act 2016, Hurunui/Kaikōura Earthquakes Recovery Act 2016 and Hurunui/Kaikōura Earthquakes Recovery (Coastal Route and other Matters) Order 2016. The new legislation made significant changes to the RMA. Our challenge was to apply this legislation in a manner that got the best outcomes for the community. The time spent at Lincoln looking into the Christchurch experience now seemed particularly relevant as we began to grapple with similar issues. For example, management of rock fall and slippage hazards were now issues that we also had to consider.

This is the first time I've been asked to reflect on my post-graduation experience. Given that two thirds of this experience has occurred in either a state of emergency or transition it can be easily described as unique. However I think that working in small territorial authority would always fit the description; and if you find yourself contemplating work in NZ's smaller districts, it is an experience I would recommend. Even without a major disaster it will be diverse, unique and rewarding.



International Symposium - Active Living and Environment: Towards a healthier and more sustainable future

Jillian FRATER

*Lecturer in Professional Planning Practice, Department of Environmental Management,
Lincoln University, New Zealand*

In August 2017, the University of Otago, Dunedin, hosted the inaugural International Symposium on Active Living and Environment (ALE). The symposium was designed to facilitate and grow an international multidisciplinary and multi-sector dialogue related to active living and environment. The themes of the symposium included health, transportation, environment and sustainability. The symposium was attended by approximately 80 people and brought together international and national experts from multiple sectors including academic, government, public health, urban design, transportation and the environment. International attendees came from Spain, Australia, Canada, the United States and the United Kingdom. In particular, there was a strong contingent from Spain as Sandra Mandic, the Chair of the ALE, has collaborated on several academic papers with academics from the University of Zaragoza and the University of Granada.

For me, the conference was an opportunity to reconnect, and connect in person, with academics I had collaborated with in writing two papers on adolescent cycling practises. These collaborations grew from the Built Environment and Active Transport to School Study (BEATS). This study investigated habits associated with transport to school, the neighbourhood environment and physical activity of Dunedin high school students <http://www.otago.ac.nz/beats/index.html>.

The three key note presentations that resonated most with me were those by

Andrew Jackson (Ministry of Transport), Anna Stevenson (Canterbury District Health Board) and Alex McMillan (University of Otago). Andrew discussed the future of transport in New Zealand including smart cities, autonomous vehicles, and the concept of mobility as a service (Maas). He explained that cost, comfort and convenience were the three factors that people would base their transport decisions on. Anna described how the health sector did well with chronic diseases but not so well with lifestyle diseases such as diabetes and cardiovascular disease, and recommended the health budget for this area of health be increased. Alex criticised neo-liberal approaches that equate economic growth with well-being and suggested this approach needs to be reconsidered by Government.

Together with James Young from the Greater Christchurch Urban Development Strategy, I presented a session on travel demand management and changing the travel behaviour of commuters returning to work in central Christchurch. This work was part of the Greater Christchurch Healthy Commuter programme and has involved presentations and one-on-one discussions with approximately 700 people working for organisations about to relocate to the central city following the earthquakes of 2010 and 2011. The intention of this programme was to encourage people to move away from single occupancy car trips and towards trips by foot, cycle, carpooling and public transport.

I appreciated the range of experts who came together for this symposium. In

particular, I consider the inclusion and discussion between those interested in public health, government and transportation was

very beneficial and I look forward to future opportunities where these sectors can come together.



Photo: Enrique Garcia Bengoechea, Jennifer Roberts, Daniel Camiletti Moiron, Ricardo Oliveira, Eduardo Generelo Lanaspá (seated), Alberto Aibar Solana, Palma Chillón, Sandra Mandić



Book Review

Local Government in New Zealand: Challenges and Choices

Edited by Jean Drage and Christine Cheyne

Auckland, NZ, Dunmore Publishing, 2016, ISBN 978-1-927212-25-7

Remarkably, very little has been published in book format on this important and much under-rated topic, that of local government in New Zealand. Local government, often viewed as the 'poor country cousin' of central government, has changed considerably, since the only significant previous text on the subject, Graham Bush's *Local Government and Politics in New Zealand*, was published in 1980.

Is this new book needed? The answer has to be 'yes'. In the twenty odd years since the 1995 update of Bush's treatise, much has changed in the New Zealand socio-political and biophysical environment. Challenges for local government arise from matters as diverse as Treaty Settlements, the reforms instituted by a three-term National government, the 2010-11 Canterbury earthquake sequence, the ongoing issues of water management and the legacy of the Global Financial Crisis.

In compiling the book, the co-editors have drawn together a group of experts in politics, media, planning and policy, a mix of academics and current or former local government practitioners.

The text touches upon, with a whiff of nostalgia, the days prior to the massive changes of the 1989 local body reorganisation when many electors knew their representatives personally. Nowadays, especially in larger urban centres, the average person in the street might know who the mayor is but would struggle to name a local councillor or community board member.

Jean Drage, co-editor and contributor, summarises in a nutshell what local government is about: '*[...] [it] is much more than a set of services, it's a legitimate and accountable form of local democracy within our communities*' (p.11). While our wider society might take the existence of local government for granted, this book highlights the precarious nature of local democratic institutions. It is often said that local government is a 'creature' of central government. Although it is highly unlikely, at the whim of the government of the day, local government as we know it could disappear overnight with a majority vote.

In the Introduction, Jean Drage (who also contributes to three chapters) describes four major threats to local government: continual change (reorganisation), threats to autonomy ('creeping centralisation'), funding and erosion of the 'community voice'. The chapter authors overlay these themes throughout a book broken into seven further parts and 19 chapters, examining the altering global context, Māori, local democracy, funding, governance and management, Auckland, and planning and legislation.

Chapters of note in Part 2 include Mike Reid's¹ look at local government in rapidly changing times (pp. 22-35), highlighting technologies (e.g. Councils responding to real-time info provided by citizens through apps), climate change (also covered in more detail by

¹ Mike Reid is a Principal Policy Analyst for Local Government New Zealand and one of the few active practitioners contributing to the text

Prue Taylor, pp. 36-59), globalisation, demographic changes, diversity and inequality.

Three chapters are devoted to Māori issues in Part 3. Here, the inclusion of a younger contributor with growing public commentator profile such as Morgan Godfery adds punch to the content and range of topics this text covers. He notes the shift away from *'ethnic representation to 'tangata whenua' representation [...] local authorities are in a relationship with 'local' Māori'* (p.76).

Part 4 covers local democracy - where the heart of the text lies – over six chapters. The co-editors weigh in with their own contributions on key interrelated topics (Ch. 9: Public participation; Ch. 10: Local government elections), of on-going importance (and concern) to machinations of local government. Co-editor Christine Cheyne identifies areas of concern which suggest *'that the future of local political participation in New Zealand is not positive'*, in particular noting the electorate's general dissatisfaction with politicians and bureaucrats plus the structures and processes which are *'frequently viewed as being self-serving, alienating, remote and unaccountable'* (p. 114).

The theme of Part 5 (with a single chapter) is funding. How local government is funded is an ever-present issue for citizens, annual rate rises seemingly 'out of control' with the level of rating not necessarily matching the quality of service. Being a local government practitioner myself, it is hard to escape a common topic of conversation about costs imposed on local government by central government which each new piece of legislation appears to bring with it. Christine Cheyne argues that critical is the need for genuine partnership *'[...] so that costs imposed [...] are fully understood and appropriately shared'*. Rather than sit by itself, this chapter would have been better located in Part 2, tying in with funding issues facing local government in a changing world, for example, the costs and liabilities for local government of tackling climate change mitigation and adaptation raised in Chapters 3 and 4.

Part 6 examines governance and management. Karen Johnston looks at the rise of influence of local governance decision-

making, providing historical context with a case study of the attempted revitalisation of Christchurch's central business district (prior to the 2010/11 earthquakes) outlining the subtleties of power-plays between the then Mayor, Councillors, staff and key stakeholders.

Auckland not surprisingly gets its own section (Part 7) with two authors looking at progress since the unitary model was introduced and aspects such as the role and influence of Auckland's Local Boards.

The final chapters in Part 8 look at the planning and legislative environment, examining collaborative planning and the tensions between central and local government over processes and resources. These two chapters would have benefited with some enhanced content in the light of what has unfolded in Canterbury since 2010, including specific Canterbury rebuild legislation, government commissioner appointment to the Canterbury Regional Council and the Christchurch District Plan review. An additional chapter would have been useful here to address some vexing regional issues such as water management and transport.

As for Auckland, space should similarly have been devoted to Canterbury in its own right, a region which has been a 'target' for central government since 2008 in terms of the ECan takeover in 2010 and the 'Wellington' exertion of regulatory clout and dominance of local decision-making (e.g. through the Canterbury Earthquake Recovery Act) during the post-quake rebuild and regeneration phases.

Importantly, the text is peppered with references to historical developments and some insightful case studies such as the story of the 2015 Mayoral by-election in Palmerston North (Ch. 14). There is also reference to the Greater Christchurch Urban Development Strategy Forum however it would have been nice to see this important local initiative fleshed out in a dedicated chapter.

More contributions from 'coal face' practitioners would also have been welcome. For example, it might have been useful to have a chapter dedicated to the nuances of community boards which in some parts of the country have considerable local influence and

delegated decision-making authority. Similarly, regional councils get less coverage (mainly in Ch. 21) than they merit throughout than territorial authorities.

So, is this new book needed? Yes, it is. By and large, it adds considerable depth and basis to the understanding of the challenges and choices faced by local government in the current age, particularly around the 'nitty gritty' of local, territorial, government – its democratic processes, governance and management. Overall though, it is less effective around regional local government and associated biophysical challenges.

During the process of reviewing this book, a new coalition government has been elected, bringing with it determined ambition and intent to alter policy direction around big topics such as climate change, immigration and housing. Given the rate of local and global change anticipated, I imagine a second edition will be required within ten years to again take stock.

Audience? Thoroughly researched, referenced and written, the text is probably of greater relevance to a post-graduate student contemplating embarking on a professional career in planning or policy analysis and needing to get a grasp on the intricacies of local government than to seasoned local government professionals.

*Reviewed by Mike O'Connell,
Senior Policy Analyst at Waimakariri District
Council*



Where are they now?



Brittany BRADLEY-CANE (MPlan)

Brittany Bradley-Cane currently works as a Planner Level 2 at the Christchurch City Council. She started with the Council in mid-2015 as a Planning Technician on a casual basis whilst studying for the Masters in Planning at Lincoln University. This position mainly involved processing simple residential land use consents, giving advice to the general public and processing some Property Information Memos (PIMs). Following the completion of her Masters Degree, she has worked as a Planner Level 2 at council on a full-time basis. This role predominantly involves processing resource consent applications, attending pre-application meetings, and carrying out planning checks on Property Information Memos (PIMS). She has progressed to processing a wide variety of land use applications with increasing complexity and expert involvement.

Brittany graduated with a Bachelor of Science (2012-2014) from University of Canterbury before doing the Master of Planning (2015-2016) at Lincoln University. A significant contributing factor to Brittany choosing to attend Lincoln University was the

accreditation of the Master of Planning course by the New Zealand Planning Institute. For Brittany, completing the Masters in Planning Degree has been rewarding in a variety of ways: she has made some amazing friends; has been taught by experienced and knowledgeable lecturers; and has gained essential qualifications for a career in planning. Attending Lincoln University has challenged her way of thinking and has led to a wonderful job opportunity and some interesting adventures. Brittany emphasises that whilst resource consent planners do not write the District Plan, their role is pivotal in ensuring that the outcomes sought in the District Plan are achieved. Their collaboration with experts and applicants can lead to improved designs and overall better outcomes for the city. For young planners, mentoring from more experienced planners plays a pivotal role in their development.

Brittany's advice for young student planners is to do research before enrolling in a course and ask course co-ordinators for advice as while you will always come across challenges and sometimes failures this gives you experience and perspective. And actively seek out work experience opportunities – they can lead to full-time work when you finish studying.



Nikki Callinan (BEPP(Hons))

Nikki Callinan studied the Bachelor of Environmental Policy and Planning (Hons) finishing in November 2016. Nikki currently works at Ashcroft Homes in Auckland in the planning and subdivision management team, writing Land use/Subdivision resource consents for clients who are building houses with Ashcroft Homes and who want to subdivide their site. She helps manage these subdivisions - consulting with engineers, putting drainage out to tender and organising the drainage works, applying for services to install to their site such as power and telecommunications, and applying for s.224c certification so they can get certificates of title. What she likes about her job is that she gets to see the client's development progress from resource consent stage to the house getting built and the subdivision being finalised. She likes the variety of both planning and subdivision management.

Nikki's time at Lincoln University helped contribute to her current role as the different courses taught her report writing and provided her with a good background to the resource consent progress. Her time spent at Lincoln University was a lot of fun. She jokingly says that if you can get through Hamish's LWST 602 class (Advanced Resource Management and Planning Law) you can get through almost anything in life.

Nikki really enjoys her chosen career but does want to further develop her planning skills. She would eventually like to work in urban design and planning to build on research she did in ERST 698 on the revitalisation of town centres and urban regeneration.



Rachel Cottam (BEPP(Hons))

Rachel is a Planner Level 2 in the Resource Consent Unit at Christchurch City Council. Her career choice was made when she was at Lincoln High School and heavily involved in Lincoln High Schools Enviro Council and in Lincoln and Rolleston's Envirotown. Since Year 11 of high school she has wanted to make a positive input into managing the environment and that is where she discovered the Environment Management and Planning degree at Lincoln. Lincoln University has provided her with the background knowledge and perspectives to understand the context of the processing resource consent and understanding other specialists input. She believes her Honours year in 2016 was her best year as it has helped her the most in her job mainly due to working on real life scenarios in her many papers, understanding case law and the importance of interpretation and different perspectives. Overall, Rachel sees Lincoln University as providing her with multiple life skills and experiences which have helped her to get where she is today.

Rachel's main role at Christchurch City Council is processing subdivision and some land use consents. She has also been doing both brownfield and greenfield developments and would like to increase complexity with her subdivision work. Rachel thoroughly enjoys her job at Council and hopes to increase her skills as she would like to develop into policy planning and/or urban design later in her career.



Sin Meun How (MPlan)

Sin Meun How was one of the seven students in the first batch of Master of Planning. Meun, as she is more fondly known, returned home to Malaysia after graduating in November 2016 to continue her service with the Malaysian Government. She is currently serving as the Senior Assistant Secretary at the Senior Citizens Unit, Policy and Strategic Planning Division of the Ministry of Women, Family and Community Development. Her main role involves assisting in reviewing and formulating policies and strategies for the well-being of senior citizens in Malaysia.

Meun found she couldn't connect the dots between older persons and planning when she was first posted to her current role nine months ago. But she later learnt that careful planning by local governments on the provision of infrastructure, facilities and services play an important role in improving the well-being of older persons. One of the areas she's currently focusing on is to study recommendations by various parties to empower local governments in Malaysia to take on more responsibilities to provide for senior citizens. She thinks that what she has learned at Lincoln, especially systematic comparisons of planning legislations and institutional structure between different countries, sustainable development policy planning and research skills have all equipped her with the foundation needed in reviewing consultant's reports, benchmarking international best practices and preparing for policy papers.



Matthew Klomp (MPlan)

Matthew completed a Master of Planning at Lincoln University in 2016. His dissertation was on the topic of mixed community housing which he found interesting given New Zealand's history as a welfare state and the current housing environment. Prior to this he studied at the University of Canterbury and University of Otago towards his Bachelor of Science. His interest in studying planning was sparked by an introductory lecture to the Master of Planning course at Otago. Matthew describes his time at Lincoln University as challenging and incredibly rewarding. The theory and practical knowledge he gained from his studies was able to be directly applied in his current job and he strongly recommends that every budding planner make the effort to get some relevant work experience before they step into full-time work.

Matthew's current role is as a planner in the Resource Consents Unit at the Christchurch City Council. This involves the processing of resource consent applications of varying nature and complexity as well as attending pre-application meetings with prospective applicants and general advice to the public. He finds this work fulfilling and can see himself continuing to practice planning for the foreseeable future.



Ella Shields (BEPP(Hons))

Ella is working as a Consultant Planner at Planz Consultants (a private planning and resource management company) in Christchurch. In this role she prepares resource consents on behalf of private clients, processes resource consents on behalf of councils and prepares scoping reports based on planning requirements for developers. She is enjoying working as a consultant in the private sector because of the experience she gets working for a range of clients under district and regional plans, in both Christchurch and around New Zealand.

After attending Southland Girls High School, Ella chose to study the Bachelor of Environmental Policy and Planning Honours Degree at Lincoln because of her interest in New Zealand's natural resources. The small community feel of Lincoln appealed to her as did its strong links to the rural sector. Her course gave her a solid grounding in planning practice and theory, an insight into contemporary planning issues and also enabled her to gain a New Zealand Planning Institute accredited degree. While studying, she did a summer research scholarship with the Waihora Ellesmere Trust. This research taught her the value of effective communication, organisation and building relationships, which she now knows are key skills in planning. In the future she hopes to venture further afield to the UK and experience planning in a different context and under different legislation. The opportunities are only growing in this field, so who knows where planning will take her!



James Tapper (MPlan)

James began studying a Masters of Planning at Lincoln University in 2015 and subsequently completed the course at the end of 2016. During that time, through the help of the Director of Planning Programmes at Lincoln he was able to obtain a summer job at Planz Consultants - a planning and resource management consultancy based in Central Christchurch. He continued to work part-time at Planz during the second year of his masters course before gaining full time employment with them at the end of the year. James says he has been incredibly well looked after by Planz, to the extent that they have even allowed him a 6 month sabbatical to play cricket in the UK! He feels very fortunate to have secured an ideal planning job in his hometown, and his time at Lincoln played a significant role in making that possible. The flexible and wide ranging course options at Lincoln, as well as the Environmental Management Department's pragmatic and personalised approach to study were major draw cards for him in opting to study at Lincoln. Throughout the course he was able to study a number of topics including environmental policy, water quality, resource management law and sports facility development. This not only equipped him with the skills needed to enter the workforce, but also taught him how to think independently which he has found to be a critical skill in his planning career to date.



Jessica Manhire (MPlan)

Jessica Manhire is a graduate policy planner at the Waimakariri District Council, her main task being to assist with the preparation of the new District Plan. She has helped to prepare issues and options papers for early consultation and project plans as well as assisting with the District Development Strategy which sets out the framework to

Her time at Lincoln University was directly relevant to her current role. For instance, they had group projects where they had to research and work as a team, creating mock policy documents and plans on difficult topics such as housing and urban development. Whilst at university she was also able to get her first planning experience working as a casual processing resource consents. The complexity of policy issues fascinates her as does the opportunity to work with others to try to solve issues and consider a range of information and possibilities to make a tangible difference.

Jessica feels that there is still a lot to learn. In the short-term she would like to become a more experienced planner, and be involved in all stages of developing a plan.

guide the District’s anticipated growth for the next 30 years. This will help to inform the District Plan. She has enjoyed being involved in a team environment where policy issues and planning frameworks are explored and discussed. And she loves the team of highly experienced planners she works with as they accept her and her ideas, despite being the only junior in the team. She is really enjoying her career so far.

Jessica first got interested in caring for the environment in high school as she felt that more could be done to look after it. This led her to take papers such as environment and society and environmental politics and policy as part of a Bachelor of Arts degree. Then she chose to study the Master of Planning at Lincoln University (2015-2016) because the degree had an environmental policy focus, and being close to home was a bonus.



Department of Environmental Management Staff Profiles



Jillian FRATER

Jillian Frater teaches Professional Practice to third year students at Lincoln University. She completed her undergraduate degree in Biology and Zoology at Auckland University, with a focus on marine biology. After a year of teacher training, Jillian taught at a high school in Auckland but then left to travel overseas for a few years. She returned to undertake a Masters of Applied Science in Resource Management at what was then CRM (Centre for Resource Management) at Lincoln. At the time, Roy Montgomery was a fellow student of hers and Geoff Kerr was a fresh-faced PhD student. She then worked for many years as a planner for central and local government, and as a planning consultant. After having children and working part-time, she recently completed her PhD in Geography at the University of Canterbury. Her PhD focused on behavioural change and adolescent cycling. Since her PhD she has published several papers including two in conjunction with colleagues at the School of Physical Education, Sport and Exercise Sciences at the University of Otago. She is currently finalising two more papers in relation to her PhD. Her main research interests are creating cities for people, the regeneration of Christchurch and transport planning.



Sylvia NISSEN

Sylvia is teaching third-year Environmental Policy and has previously taught introductory New Zealand Policy and Governance.

Sylvia is a Postdoctoral Fellow in the in the Department of Political Science and International Relations at the University of Canterbury and the Centre for the Understanding of Sustainable Prosperity (CUSP) at the University of Surrey, UK, led by Professor Tim Jackson. In this position, she is the Co-Ordinator of the project, CYCLES (Children and Youth in Cities, Lifestyles Evaluation and Sustainability), a study that seeks to understand the conditions that enable young people to live more sustainable, fulfilling lives in cities. The study examines the lifestyles of young people living in seven cities: Christchurch (New Zealand), Dhaka (Bangladesh), São Paulo (Brazil), New Delhi (India), Yokohama (Japan), Grahamstown (South Africa) and London (UK).

Sylvia received her doctorate in Political Science at the University of Canterbury earlier in 2017. For her research, she reconsidered the political action and agency of contemporary university students in Aotearoa, drawing on 70 in-depth interviews she collected with students at all eight of New Zealand's

universities. For this research, she was awarded the Kate Sheppard Memorial Trust Scholarship, as well as two national graduate essay prizes in political science and sociology.

Prior to her doctorate, Sylvia received a Master of Environmental Science in 2013 from Monash University, Australia, where she examined the issue of representation in Canterbury's water governance. She was also awarded First Class Honours in Political Science at the University of Canterbury in 2011, having spent the year being taught out of tents following the earthquakes. She has published widely in local and international journals and edited volumes, and is currently revising her doctoral research for publication as a book.



Awards

A special meeting of the Canterbury Westland Branch of the New Zealand Planning Institute on 31 August 2017 granted Honorary Membership of the Institute to Peter Skelton. They also made Sarah Dawson a Fellow of the Institute. Peter has had sixty years of legal, environmental, and resource management experience including a period as Associate Professor at Lincoln and in a lead role as a commissioner / councillor for Environment Canterbury (2010 -2017). Sarah has a lengthy catalogue of contributions and leadership roles with New Zealand Planning Institute and is currently the chair of the Lincoln University Planning Advisory Board.

Below are the citations provided at the time.

Honorary Membership of the New Zealand Planning Institute - Peter Skelton

The New Zealand Planning Institute is pleased to grant Peter Skelton Honorary Membership of the Institute.

The Institute acknowledges Peter's earlier statutory planning and Environment Court activities from 1978 to 2000 and the previous awards made to recognize those contributions to planning.

The Honorary Membership goes further to recognise Peter's sixty years of legal, environmental, and resource management experience including his more recent contributions to planning practice, plan development and plan implementation. Most particularly these contributions have been demonstrated over the past sixteen years in his lectures at Lincoln University (2000-2007) and in his lead role as a commissioner/councillor for the Canterbury Regional Council (2010 -2017).

Peter was for 10 years a partner in a legal firm from the mid1960s to the mid1970s and, following general legal practice, became a barrister specialising in planning and environmental law. He was appointed a Judge of the New Zealand Environment Court in 1978. The following 22 years saw him preside over many significant cases in many parts of the country.

Amongst these were the noteworthy cases of the Clyde High Dam and the River Conservation orders for the Buller, Ahuriri, Mataura, Rakaia and, Kawarau Rivers. He also presided over the

Doubtful Sound water export proposal, the Christchurch Metropolitan refuse landfill development and the Christchurch Northern Arterial. More recently as an Independent Hearing Commissioner he chaired the hearings on the Waikato Regional Plan Variation 5 proposals to establish a planning regime to control the loss of nitrates into Lake Taupo. The Lower Waitaki Valley hydro-electric proposal hearings were also in his care.

As a Judge in these Environment Court cases and managing statutory planning appeal processes he earned the respect and acknowledgement of his peers, friends and colleagues in both the legal and planning professions, and his care and attention was appreciated by all participants (appellants, applicants or submitters) in the cases under his authority. His work was recognised in 2000 when Peter was awarded the New Zealand Planning Institute's Alfred O. Glasse Award. Furthermore, Peter's contribution to environmental law, resource management and planning was nationally recognised in 2001 when he was made a Companion of the New Zealand Order of Merit.

Peter's current sixteen year phase of working directly in the areas of planning for natural resources began in 2001 when, in recognition of his explicit concerns for access to justice in the determination of these natural resource issues, he was appointed as the first chair of the Environmental Legal Assistance Fund Advisory Panel for the Ministry for the Environment. He filled that role for six years.

In 2000 Peter was appointed an Associate Professor at Lincoln University so contributing to training and education of students. On his retirement in 2008 Lincoln University awarded him the position of Honorary Professor. As recently as 2016 he also received the Honorary Degree of Doctor of Natural Resources from Lincoln University.

New Zealand Planning Institute Honorary Membership recognises his planning work and its influence on the content and format of the Canterbury Land and Water Regional Plan and the Canterbury Air Regional Plan. Peter was involved as a member of the team undertaking the development of the complex, catchment by catchment policy framework, leading up to the notification of these instruments. Then, as a commissioner/councillor receiving and responding to the recommendations of the independent hearing commissioners. His commissioner/councillor role of overseeing such a major regional planning exercise has been undertaken in a collaborative, even handed and professional manner. All involved, be they technical officers, community groups, councillors or commissioners have respected his open commitment and wisdom shown in this path-finding project.

In 2010 when the Environment Canterbury Councillors were dismissed by the Government and commissioners were appointed to undertake all the regional councils' functions in accordance with the special legislation, Peter Skelton successfully performed the functions of a commissioner while also being a key adviser to the Canterbury Regional Council. This has resulted in more successful outcomes for the range of regional functions now being undertaken by Environment Canterbury and is reflected in his continuing contribution following his renewed appointment as a councillor in 2016.

During his professional career Peter has also contributed to many other institutions. He was one of the founders of the Environment Institute of Australia and New Zealand (EIANZ) and its first Vice President (New Zealand). He has also been a member of the International Bar Association (Committee F Environmental Law). He has presented papers and participated in international conferences in Washington DC on mining law; Hobart University on enforcement; and Montreux in Switzerland on enforcement.

In New Zealand he has presented many papers on planning and resource management issues at

legal and other professional conferences and been guest speaker at a number of functions involving environmental professionals. He has also written numerous articles and commentaries for peer reviewed journals.

His previous professional affiliations and awards include being an Honorary Life Member of the Resource Management Law Association of New Zealand and also the Legal Research Foundation of New Zealand. In 2012 he was awarded the Principal Judge R J Bollard Lifetime Commemorative Award by the Resource Management Law Association for an exemplary contribution to the field of resource management theory and practice over a lengthy and distinguished career as a practicing lawyer.

Peter's core respect for the law, for the environment and his support for effective and relevant planning are evident in all his professional dealings. His quiet manner extends a friendly co-operation to all in the technical, professional, political and community identities involved in these programmes. He has shown a willingness to undertake extraordinarily difficult and at times new path finding planning techniques. He has progressed the prudent management of the Canterbury Regional Council's research, reporting and programmes so as to maintain regionally based strategies and environmental standards.

Peter's experience reflects the essence of the NZPI Constitution's five key Goals and his actions have fostered the Constitution's accompanying seven working Objectives.

Peter Skelton has travelled a long way in his sixty year professional pilgrimage. A journey that began as a lawyer and over time through specialising in planning and environmental law, has become an ever increasing concern for conservation and the environment, and in particular the planning processes that protect and provide for them. He continues that extraordinary career in the role of a regional councillor. This range of experience is unique and it is fitting that he be a full member of both the legal profession and the planning profession. Consequently, the New Zealand Planning Institute Board has resolved that Peter Skelton should join the small group of distinguished members and become the seventh Honorary Member of the New Zealand Planning Institute.

Fellow of the New Zealand Planning Institute – Sarah Dawson

Sarah Dawson has a highly distinguished professional planning career that has spanned four decades and reflects a level of commitment and accomplishment attained by few. Her outstanding contribution to the Institute, her influence on the advancement of planning practice and her leading role in some of New Zealand's major planning projects, collectively warrants her recognition as a Fellow of the New Zealand Planning Institute.

Sarah's contribution to the planning profession and Institute has previously been recognised with the presentation of a Distinguished Services Award in 1999. That award acknowledged her role as Chairperson of the NZPI Canterbury Branch (1994-1996), as an independent planning commissioner (from 1997) and of course her significant contribution to the profession as a planner/resource manager and mentor since her career commenced in 1977.

Since 1999, Sarah has continued to support the Institute and the profession with thoughtful leadership, hard work and her time. She has taken an active interest in improving the practice of planning as well as seeking to make planning an attractive and fulfilling career for her colleagues. She is also acutely aware of the need to mentor younger planners and readily provides professional coaching and guidance to those who come under her wings.

She has demonstrated her leadership as an Accredited RMA Hearings Commissioner (with chair endorsement since 2014) and is a longstanding member of the local branch interview panel for candidates applying for NZPI membership. Sarah continues to contribute to planning education as a member of the New Zealand Planning Institute Tertiary Training Institutions Accreditation Committee, where she has evaluated numerous planning programmes across the country, along with membership of the Lincoln University Planning Advisory Board.

Sarah has presented at numerous professional training workshops for both elected members and planners on subject matters including consenting practice, presentation of expert evidence, plan-making and case law. In 2014 she co-authored a think piece and presented at workshops, commissioned by the New Zealand Planning Institute, to help planners understand the implications of the King Salmon decision, a case in which she was professionally involved.

Not one to shy away from planning projects that are complex, highly technical and of high public interest, Sarah has worked on many regionally and nationally significant projects. Between 1997 and 2003 she led a multi-disciplinary team of consultants to obtain a privately requested plan change and associated regional consents for a new town for 5000 people (Pegasus in North Canterbury).

More recently she has provided extensive policy and consenting advice in respect of numerous aquaculture and marine farming proposals in the Marlborough Sounds, including application and AEE preparation in respect of New Zealand King Salmon's expanded salmon farming operations, culminating in presenting planning evidence to the associated Board of Inquiry.

For many years, Sarah has been heavily involved in projects involving renewable energy policy and infrastructure as an advisor to Meridian Energy including consenting relating to the Manapouri and Waitaki hydro power schemes, along with a large windfarm in Southland.

Sarah's technical expertise, experience and professional manner result in her being highly sought after by local authorities. Waimakariri, Christchurch, Kaikoura, Marlborough, Selwyn, Ashburton and Queenstown-Lakes District Councils have all engaged Sarah to assist them in undertaking their plan review and consenting functions.

Sarah's vast experience and planning expertise has also been sought by Central Government where she was appointed as an inaugural member of the Minister for the Environment's Advisory Board on Professional Development for RMA Decision Makers (2004-2008), as a member of Minister for the Environment's Reference Group on Resource Management Amendment in 1998 and most recently she has been appointed by the Minister for the Environment to the Environmental Legal Assistance Fund Advisory Panel.

Sarah is one of New Zealand's leading experts in the preparation of Assessments of Environmental Effects, having project-managed a wide range of AEEs, including some for very large projects which involved highly complex scientific aspects, with complex ecological or biophysical systems. She is skillful at managing and coordinating the input of technical expertise, distilling technical reports, writing AEEs, explaining complex concepts and summarising technical findings.

She is also a leading proponent in formulating conditions of consent for addressing complex effects, such as those required to establish adaptive management regimes in environmental settings where knowledge and information is still evolving.

More recently, she was appointed as a core member of the Independent Hearings Panel set up to hear submissions and make decisions on the Replacement Christchurch District Plan. In this capacity, Sarah displayed exemplary professionalism and expertise when engaging with witnesses, drafting decisions and mentoring planners within the Secretariat staff over the 2 years that the Panel sat. The respect for Sarah's plan-writing skills saw the Panel appointing Sarah with the task of working with the Secretariat, submitters and Council officers through the "working hearings", definitions amendment and

plan restructuring processes. Many planners, other witnesses and Counsel who appeared before the Panel can attest to her ability to quickly get to the heart of complex and wide-ranging planning issues, robustly testing evidence in a courteous and respectful manner. Throughout, Sarah's dry sense of humour was used effectively to diffuse tension and bring a touch of relief to the formal proceedings.

Sarah is described as having a very sharp mind, with incredible recollection and an 'eye for detail', while always able to 'see the big picture'. Professionalism, proficiency and personality are the hallmarks of Sarah's illustrious planning career. The New Zealand Planning Institute congratulates Sarah on her elevation to Fellow and recognise her outstanding service to the profession and to the advancement of the practice of planning in New Zealand.

Sir Bob Owens award - Chris Kissling

The Chartered Institute of Logistics and Transport AGM and Annual Awards Presentation Dinner was held on the 11th October 2017 at the Crowne Plaza Hotel Albert St. Auckland. Former professional planner and Professor of Transport in the Department of Environmental Management at Lincoln University, Emeritus Professor Chris Kissling, won the Sir Bob Owens award. The Award is not presented every year and is for 'an outstanding contribution to the logistics, transport or supply chain sectors. The winner is some-one who has promoted professionalism and excellence through leadership and example: they have encouraged young people to enter the sector and assisted them in their development, and they have provided personal leadership on a voluntary basis in the wider community beyond anything to do with their paid employment'.



Student Awards – 2016

Rachael Jane Brown was awarded the John Hayward Memorial Prize for 2016. This award is given to the most outstanding student completing a Master of Environmental Policy and Management, who has completed the requirements for the degree, and is based mainly on their academic performance in core subjects. This prize was previously awarded to the most outstanding student completing the Master of Environmental Policy degree but from 2016 onwards has changed to the most outstanding student completing the Master of Environmental Policy and Management degree. This award was created after the death of John Hayward in 1993. John Hayward was the founder of the Centre for Resource Management at Lincoln, as well as the Master of Science (Resource Management) degree, the precursor of the Master of Environmental Policy degree.

Alison Sarah Outram was awarded the Thomson Reuters Prize (formally Thomson Brookers) in Resource Management for 2016. This prize is awarded to the highest performing first year Master of Planning student, and is based on academic performance in core

subjects. Thomson Reuters are a leading provider of information and solutions to the legal, tax, accounting and business markets in New Zealand. Through their online and hard copies of the Resource Management Act and other relevant pieces of legislation they allow students to gain information and keep up to date with changes in resource management and planning law.

Pippa Huddleston was awarded the New Zealand Planning Institute Reginald Hammond Scholarship. This scholarship is awarded annually by the New Zealand Planning Institute for the final year of study for an accredited planning degree at the undergraduate or post-graduate level in New Zealand. The planning degree must be recognised as an Accredited degree in the year in which the application is made. The applicant must be a New Zealand citizen or have permanent resident status in New Zealand. The scholarship has a value of \$4,000 which is paid in April/May of the year in which the Award is held.

Summer Scholarships 2015/2016

Ella Shields: *Enhancing landholder implementation of expert advice in the Selwyn-Waihora catchment*

Supervised by Hamish Rennie, Adrienne Lomax
Funded by the Waihora Ellesmere Trust

Deborah Paterson: *Māori and Indigenous Agribusiness Pathways*

Supervised by Simon Lambert
Funded by the Lambert research account

Jamie Evans: *An investigation into digital farming in Canterbury*

Supervised by Shirley Gibbs, Pat Anthony, Kevin Moore
Funded by Canterbury Branch Royal Society of NZ

Olivia Lin: *Future-proofing the Styx website*

Supervised by Shirley Gibbs
Styx Living Laboratory Trust

Zac Taylor: *Managing visitor impacts on the New Zealand sub-Antarctic*

Supervised by Emma Stewart, Stephen Espiner
Canterbury Branch Royal Society of NZ

Hannah Wilson: *DesignLab*

Supervised by Mick Abbott
School of Landscape Architecture

Mees van Wagendonk: *DesignLab*

Supervised by Mick Abbott
School of Landscape Architecture

Li Xuejing: *DesignLab*

Supervised by Mick Abbott
School of Landscape Architecture

Hin Chun Woody Lee: *DesignLab*

Supervised by Mick Abbott
School of Landscape Architecture

Summer Scholarships 2016/2017

Max Curnow: *Making the case for a predator free Banks Peninsula / Te Pātaka o Rākaihautū*

Supervised by Geoff Kerr
Funded by Rod Donald Banks Peninsula Trust

Ali Outram: *Aspinall Scholarship: Viability of an online rural property access facility (Access Me)*

Supervised by Geoff Kerr
Funded by The Walking Access Commission

Irene Setiawan: *Investigation of the drying reaches of Avon River tributaries*

Supervised by Bryan Jenkins
Funded by ECAN/Waterways



Lincoln University Planning Publications: 2016/2017

Compiled by Hamish G. RENNIE and Jesse FORSYTH

The following list includes a compilation of planning related publications completed by Lincoln University staff in the Faculty of Environment Society and Design in 2016 and October 2017 in the Faculty of Environment Society and Design. We have included a couple from 2015 that were published late that year and are of particular interest. The publications cover a range of topics and the grouping is somewhat arbitrary. These publications are produced as the academics at the university complete research in their chosen field. As with all such compilations there have been some subjective decisions made as to what to include and exclude and the vagaries of computer system archives and search machines have not always been helpful. We have not included the many conference presentations and commissioned reports unless they are of special relevance to planners.

1. URBAN PLANNING, POLICY AND DESIGN

- Berke, P., Newman, G., Lee, J., Combs, T., Kolosna, C. and Salvesen, D. (2015). Evaluation of Networks of Plans and Vulnerability to Hazards and Climate Change: A Resilience Scorecard. *Journal of the American Planning Association* 81(4): 287-302.
<http://dx.doi.org/10.1080/01944363.2015.1093954>
- Bowring, J. (2017). *Melancholy and the Landscape: Locating Sadness, Memory and Reflection in the Landscape*. 184 pages. Routledge, Oxon, UK
- Bowring, J. (2016). 'Looking after things': Caring for sites of trauma in post-earthquake Christchurch, New Zealand. *Care and Design Bodies, Buildings, Cities*.
Editors: Bates C, Imrie R, and Kullman K.: 116-137. John Wiley & Sons, UK.
- Combs, T. S., Shay, E., Salvesen, D., Kolosna, C. and Madeley, M. (2016). Understanding the multiple dimensions of transportation disadvantage: the case of rural North Carolina. *Case Studies on Transport Policy* 4(2): 68-77
<https://doi.org/10.1016/j.cstp.2016.02.004>
- Dombroski, K., Watkins, A. F., Fitt, H., Frater, J., Banwell, K., Mackenzie, K. and Ko, S. Y. (2017). Journeying from "I" to "we": assembling hybrid caring collectives of geography doctoral scholars. *Journal of Geography in Higher Education*. 1-14.
- Drage, J. (2016). Do we underestimate the Political Strength of New Zealand's Local Government? *Policy Quarterly* 12 (4): 17-19.
<http://igps.victoria.ac.nz/publications/PQ/2016/PQ-Vol-12-No-4-2016.pdf>
- Drage, J. and Cheyne, C. (eds.) (2016). *Local Government in New Zealand: Challenges & Choices*. 277 pages. Dunmore Publishing Limited, Auckland.
- Elliot, E.E., Vallance, S. and Molles L.E. (2016). Coexisting with coyotes (*Canis latrans*) in an urban environment. *Urban Ecosystems*. 19(3): 1335-1350.
<https://link.springer.com/article/10.1007/s11252-016-0544-2>
- Fox-Kämper R., Wesener A., Munderlein D., Sondermann M., McWilliam W.J. and Kirk N. (2017). Urban community gardens: an evaluation of governance approaches and related enablers and barriers at different development stages. *Landscape and Urban Planning*

- <https://doi.org/10.1016/j.landurbplan.2017.06.023>
- Frater, J. (2015). Influences on cycling to school among teenagers: An investigation using the theory of planned behaviour and the prototype willingness model in Christchurch, New Zealand. (Unpublished doctoral thesis). University of Canterbury, Christchurch, New Zealand.
 - Frater, J., Kuijer, R. and Kingham, S. (2017). Why adolescents don't bicycle to school: Does the prototype/willingness model augment the theory of planned behaviour to explain intentions? *Transportation Research Part F: Traffic Psychology and Behaviour* 46(Part A): 250-259. <https://doi.org/10.1016/j.trf.2017.03.005>
 - Frater, J., Williams, J., Hopkins, D., Flaherty, C., Moore, A., Kingham, S., Kuijer, R. and Mandic, S. (2017). A tale of two New Zealand cities: Cycling to school among adolescents in Christchurch and Dunedin. *Transportation Research Part F: Traffic Psychology and Behaviour* 49(Supplement C): 205-214. <https://doi.org/10.1016/j.trf.2017.06.018>
 - Johnston, K.(2016).Urban and environmental planning. *Local Government in New Zealand : Challenges & Choices*. Editors: J.Drageand C.Cheyne. Dunmore Publishing Limited, Auckland.
 - Johnston, K. (2016). The nature of governance in New Zealand's local government. *Local Government in New Zealand : Challenges & Choices*. Editors: J.Drage and C.Cheyne. Dunmore Publishing Limited, Auckland.
 - Mackay, M. D. and Perkins, H. C. (2016). The globalising world of DIY house improvement: interpreting a cultural and commercial phenomenon. *Housing Studies* 32(6): 758-777. <http://dx.doi.org/10.1080/02673037.2016.1234031>
 - Mandic, S., Flaherty, C., Pocock, T., Mintoft-Jones, A., Frater, J., Chillón-Garzón, P. and García Bengoechea, E. (2016). Attitudes Towards Cycle Skills Training in New Zealand Adolescents. *Accident Analysis and Prevention* (42). 217-226.
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 - Montgomery, R. L. (2016). State intervention in a post-war suburban public housing project in Christchurch, New Zealand. *Articulo – Journal of Urban Research* 13 <https://articulo.revues.org/293>
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 - Rennie, H.G. and Vallance, S. (2016). Improving Technical Capacity to Plan and Manage Cities. *A State of New Zealand Report for Habitat III*. Reeves, D., Knight-Lenihan, S. and Mannakkara S. (eds.): 45-47. Urban Research Network, Auckland University. <https://cdn.auckland.ac.nz/assets/creative/schools-programmes-centres/URN/documents/A-State-of-NZ-Report.pdf>
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 - Schwebel, D. C., Combs, T., Rodriguez, D., Severson J. and Sisiopiku, V. (2016). Community-based pedestrian safety training in virtual reality: A pragmatic trial. *Accident Analysis & Prevention* 86 (Supplement C): 9-15. <https://doi.org/10.1016/j.aap.2015.10.002>

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 - Srijuntrapun, P., Fisher, D., and Rennie, H. G. (2017). Assessing the sustainability of tourism-related livelihoods in an urban World Heritage Site. *Journal of Heritage Tourism*, 1-16.
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- 2. RURAL AND ENVIRONMENTAL PLANNING**
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 - Brower, A.L. (2017). A case of using property rights to manage natural resources: land reform in the Godzone. *Case Studies in the Environment* 1(1):1-6.
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