FOREWORD ONE

Milica Bajić-Brković

ISOCARP President 2012-2015

Within the very heart of the planning profession is the urge to continuously search for better and more responsive ways of dealing with the challenges of urban development and growth. While in the past planners were mostly concerned with bringing together the disconnected or dispersed parts into a whole, and establishing a functional relationship between them, today's professionals are faced with much more complex tasks. Cities are recognized as multifaceted structures which are composed of resources, processes, and the effects of these processes. At the same time, we see a closer relationship developing between cities and their environs, and between cities and regions.

The cities of today are challenged with issues which were never present in earlier times. Climate change challenges rank among the most critical ones as their implications come across in almost every aspect of urban life. No less challenging is the dynamic and prevailing development of ICT which provides planners with remarkable opportunities for solving different urban problems and making cities better places for people, while at the same time stimulating them to grapple with challenges not previously experienced. Improved communications and accessibility to information, to institutions, and to people generally, have all opened up new horizons for planning and decision making at every level. Of limited use yesterday, today ICT presents as an intrinsic part of professional practice, while its powerful economic capacity is integral to the task of shaping development in regions and cities worldwide. There are also remarkable advancements in many other fields related to planning. Examples include the self-sufficient or autonomous house, the super-high speed transportation systems, or 'submarine' buildings – all of which could significantly affect planners' visions and alter the perceptions of the urban environments which we share today. The planning world is changing and a new culture of planning is emerging.

At the same time there are many urban issues which will remain a constant part of planners' work. However, the approach will be different, or the planning process may change, given that these more sophisticated ways of doing things are already available. The increasing variety of planning methodologies, tools and procedures is becoming a complementary part of innovative planning practice.

This book is about a changing world and about changing planning practice. From eleven different countries, the list of authors comprises Ethan Seltzer, Wolfgang Scholz, Janepher Shedrack, Tanya Dayaram, Peter Robinson, Nicole Wirz Schneider, Juan Luis de las Rivas Sanz, Karl F. Fischer, James Weirick, Laura Schatz, Awais Piracha, Dushko Bogunovich, George Mal Horner, Dallas Rogers, Fulong Wu, Lan Zhou and Stanley C. T. Yip. Through the efforts of Chris Gossop and Jim Colman (who kindly agreed to serve as co-editors of this publication), the ideas, knowledge and experience of these writers has become exciting reading material for learning, discovery and the stimulation of engaging with a new and fascinating culture of planning. To all of them I would like to extend my very warm thanks: to the authors for their commitment to the planning profession and generous sharing of their knowledge and experience with us all, and to Chris and Jim for their continuing dedication, patience and wise guidance in working with colleagues from around the world. I would also like to thank Sirui Yan, Vice President of ISOCARP, who so devotedly worked with the whole team. Last but not least, many thanks go to Lucian Perici who was the coordinator for the Review and to everyone else involved, including the copy-editor/proof-reader, Andrew Hitchen and the designer, Ricardo Moura. The Urban Planning Society of China (UPSC), our partner in many projects, joined us once again. It was with their generous help that this publication was made possible, and I gratefully thank them, especially Li Lin, production manager of the Society's *City Planning Review*. ■

FOREWORD TWO

John Minnery

Chair, Local Organising Committee,
ISOCARP Congress Brisbane 2013

Frontiers have always been important for planning. But in the same way that Faludi and others drew attention to the differences between theory IN planning and the theory OF planning, there are also differences between the frontiers OF planning and planning AT the frontier. Seen from the point of view of Brisbane, Australia's 'new world city' where ideas from Europe and the 'old world' mingle with ideas from the 'new world' in what some have called the Asian century, both are important.

The planning profession has been for a long time on the frontier, at the leading edge, of where things are happening. In the nineteenth century public concerns with health and housing led to the beginnings of the modern planning movement and helped create new and more humane living environments in the teeming industrial cities of Europe. Today planning helps create better communities, more creative cities and enhances urban sustainability in countries across the globe. Planners have taken a lead in preparing cities for climate change; they have helped in overcoming spatial social divides. In important ways, planners are at the frontier of human betterment. Many of the papers presented in Brisbane illustrate how this special kind of frontier mentality – planning at the urban and regional frontier -- plays a critical role in pushing the boundaries of urban, social, environmental and economic agendas.

Planning at the frontier has to address a plethora of emerging issues. The communications revolution has led to massive changes to things as diverse as the way people buy goods and services to patterns of social communication to the shape of peri-urban growth on the fringes of Indian cities. Planning has sought, although not always successfully, to cater for these changes. The scale of the frontier at which planning works is enormous; it is shaped by an abundance of exciting but also concerning transformations. Emerging issues include worldwide migration and demographic shifts, continuing urban poverty and urban inequality, concerns about crime and safety as well as vulnerability to natural hazards; but they also include the need to identify and protect the cherished historical places that may be overwhelmed by the onward march of change.

So the frontiers at which planning works are complex, growing and somewhat intimidating. Faced with these challenges we need to expand the frontiers of planning knowledge, the frontiers in planning. Planners need still to utilise the extensive body of knowledge and experience the profession has accumulated over the years but they also need to develop new knowledge at the frontiers of innovation and creativity and even new ways of approaching old problems. The contribution of an international collaborative organisation such as ISOCARP is critical here. Even though forces such as population increase and urbanisation are creating similar problems almost everywhere they can still have quite different local manifestations. Local conditions are important; they shape both responses and outcomes. Planning systems differ considerably in different countries where legislation, culture, language and history lead to dissimilar responses to what may be global problems. Thus, by sharing local experiences international organisations such as ISOCARP can help expand the frontiers of planning knowledge. New ways of dealing with common issues can be exposed. New innovations can be demonstrated. New ways of addressing old problems can be explored and debated.

ISOCARP is only one of many agencies at the frontier of planning knowledge. It is important that we all work to expand this knowledge frontier. Planning plays a critical role at the frontiers of both global and local change; but it can continue to play this important role only if all planners continue to expand the frontiers of planning knowledge. ■

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EDITORIAL

Jim Colman · Chris Gossop

This issue of the ISOCARP Review coincides with the centenary of the birth of Canberra – one of the world's youngest capital cities. And the City of Brisbane (host to the Society's 49th World Congress) will bring planners from around the world to visit one of the world's youngest nations. It is a fact often forgotten that barely 200 years have passed since Australia's continental mass was first mapped with sufficient accuracy to enable its size and shape to be contemplated by outsiders and to be better understood by its indigenous peoples. As for Brisbane, it remained a speck on the map of the country's eastern seaboard for several decades after the first European settlement was established further south in Sydney in 1788. It was not until the mid 1800s that the British colony of Queensland started to achieve global prominence, and Brisbane (as its capital) moved from its very tentative childhood through adolescence to its emergence today as a great Pacific Rim city.

These morsels of history are presented here as a reminder that when one comes to consider the growth and development of cities from a global perspective (as Lewis Mumford did in 1961 in his classic The City in History), Australia might be seen as a relative new-comer. Yet such impressions can be deceptive. If one digs into the recent history of planning in this country there are some surprises to be found; and the story of Canberra is undoubtedly the most exciting of these. Others include early national town planning conferences in Adelaide (1917) and Brisbane (1918) and the gradual introduction of state-based planning legislation over the ensuing decades. Today, with a national population of around 22 million, every state and local authority has planning powers. Every state is a player in the conservation of heritage and the protection of the natural environment. Planning is taught in most of the nation's universities. And the Australian Planning Institute is an influential voice for the profession at every level.

Such is the local context for Review 09 and ISOCARP's 49th World Congress.

In a global context, this issue of the Review takes us into territory which carries a number of salutary messages for today's urbanists. They range from the perplexing yet quietly optimistic piece on climate change by Ethan Seltzer, to the fascinating case studies from China and Spain, and on to the farthest reaches of Oceania with the story of the unique Tongan project by Mal Horner. The twelve papers herein serve to emphasize once again the extraordinarily wide canvas against which today's planners work – a canvas which would have been beyond the imagination of the modern profession's founders. To a large extent, those pioneers saw planning as being little more than an amalgam or extension of architecture, engineering and surveying. Today (as the papers demonstrate yet again) professional horizons are seemingly boundless. Today, the typical project calls for teamwork, skill-sharing and interdisciplinary collaboration on an unprecedented scale. Today, the computer has replaced the slide-rule, drawing board and T-square and the digital revolution has brought with it new challenges and opportunities and possibly risks - for practitioners working at every scale from tiny village to mega-city.

In Brisbane, the 2013 Congress will be dealing with these new influences under the banner of Frontiers for Planning - evolving and declining models of city planning practice. This issue of the Review has been planned to complement the rich array of Congress papers on the 'frontier' theme with a selection of pieces from professional planners working in the Old and New worlds, in China, in Australasia, and in Oceania.

Each story is illustrative of a 'frontier' of planning which is being explored – somewhere around the globe- at this very moment. And beyond these frontiers will be others whose stories are yet to be told. Each story is different. And yet each is the same – in that people's needs invariably underpin the problematique; local political and cultural influences are always present; solutions demand both short and long-term visions; and one or more 'champions' are needed to steer the project through to completion.

Perhaps it is in the role of champion that planners can best find their professional feet in the exciting yet often turbulent world of contemporary practice. It is certainly reasonable to claim that amongst urban professionals, planners – by training and aptitude – are best placed to push for a holistic view of the situation at hand whilst simultaneously pondering the scope for exploiting to the full the benefits of bringing other experts into the game. This is not to assert that leadership is the exclusive domain of the planner. But it is to assert that, when it comes to complex urban problems, planners are at the frontier, taking a lead in building the intellectual bridges and networks and problem-solving processes which are pre-requisites for success. The editorial team suggest that the papers which follow provide sound evidence in support of this assertion.

So which particular frontiers are covered? Perhaps the first – and most daunting - is that of climate change to which we have already referred (Seltzer). This vital new area for the planner poses challenges which are at the heart of a number of our articles.

Thus it underpins the planning of metropolitan Auckland - New Zealand's largest city. On the one hand we have the official vision which emphasises densification and the compact city idea; on the other the alternative version advanced by our author which is based on a decentralist model and the use of smaller, off- grid utilities (Bogunovitch). Climate change is of critical importance for the planning of Tonga's human settlements given the acute threat posed by sea level rise (Horner). And it underpins China's eco cities and the major demonstration programme that is now being pursued (Yip).

Those demonstration cities form a key part of China's massive urbanisation. Two further papers from China present contrasting approaches to accommodating such change. Jiangsu's village improvement programme provides an inspiring vision for the revival of village life as a counter focus for economic development (Fulong Wu, Lan Zhou) and the reinvention of Shantou shows how new 'organic' forms of master planning can retain the physical heritage and unique culture of this important coastal city (Wang, Dubbeling). Both experiences are at the true frontiers of planning in this rapidly changing country.

The proof of a plan's effectiveness lies in its implementation and in the quality of its results. The lessons from past mistakes show all too clearly that getting it right is important 'frontier territory'. Notable examples of truly effective 'frontier' planning can be seen in our Spanish case studies which reveal the results achieved in Bilbao and Vitoria (JL de las Rivas). And from Africa the contrasting pictures of Dar es Salaam in Tanzania and Durban in South Africa demonstrate the importance of adopting appropriate development control policies which can not only provide new homes but also cater for peoples' livelihoods as a fundamental part of the planning for these cities (Scholz et al). Yet another frontier relates to the difficulty of deciding how development should be funded given the limits to the public purse in many countries. As our Sydney example shows,

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new public-private mechanisms are emerging but they are not without risk (Rogers)

Then there is the importance of a long term vision and of maintaining a commitment to that vision. We can see this in our case study of Canberra (Fischer and Weirick). Here – despite several decades of political and economic vicissitudes, and a recent phase of 'short termism' and diminished planning – the magnificent initial vision for the city centre has largely survived. And we can see the effects of narrow political influences in our comparative study of New South Wales and Ontario where 'tinkering' with the prevailing system and 'the amendment syndrome' run counter to a long term outlook and vision (Schatz and Piracha). In complete contrast we have the example of Basel where three countries have pooled their planning functions to operate across national frontiers in the long term interests of each of them (Wirz).

Conclusion

The sub-title of our book is 'Visionary futures for human settlements'. From the example of Canberra we see what happens when the long view of planning is interrupted by short term political or narrow departmental considerations. But the short term fix can often mean ill considered, sub-optimal, developments leaving a poor legacy in social and environmental terms, and no guarantees that the physical improvements and economic opportunities that may have been created will genuinely meet an area's long term needs - or prevail into the future. This is an argument for a return to the frontier of holistic planning which balances the economic, the social and the environmental factors and applies into the long term. Given the global imperative to move towards a low carbon world, that implies twenty or even fifty year timescales and a vision to match.

Such are some of the important messages which are revealed in Review 09. The editorial team records its very sincere thanks to all the invited authors for their valued (and varied) contributions to this latest issue. In so doing, we hope that the results of their efforts will help to stimulate fresh thinking and action as the planning profession moves across yet more new frontiers in human settlements - across the globe. ■

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The Brisbane River.
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CANBERRA AS AN EXEMPLAR OF INTERNATIONAL ORIENTATIONS IN CITY AND REGIONAL PLANNING

Karl F. Fischer · James Weirick

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Figure 1: Canberra, looking south – this visionary rendering from 1969 captures the built reality of the city as it approached the millennium

Figure 2: Parliament House, Canberra, looking north across the symbolic centre of the Australian National Capital towards the city centre; Parliamentary Triangle to the right

Canberra is a city with a population of 375,000, composed of a network of separate, predominantly low-density "New Towns", each with its own urban core separated by hills and green belts. At the centre, on both sides of the artificial lake, lies the "historic city", today's North and South Canberra, for which the Griffin Plan was designed in 1911. To the east of the centrally planned urban area (towards the bottom left corner of the rendering) lie the historic town of Queanbeyan and the privatised airport, where significant development has taken place in recent years.

INTRODUCTION

This year (2013), Australia's capital, Canberra, is celebrating its centennial. For the field of planning research in the ISOCARP context, the city, its plans and processes of development are of exceptional significance. A century of planned development in a situation of public land ownership in the Aus tralian Capital Territory (ACT), excised from the state of New South Wales in 1908, has created something like an open air museum of modern and post-modern planning and urban design (Fischer 1984, 1989). In addition to city planning, regional planning played a role too, starting with the selection of the site for the new capital and culminating in the 1970s in the concept of a regional network of decentralised New Towns described as "an exemplar for many decentralised Australian cities" (Lansdown 1971). While the associated plans for extending the urban areas of Canberra beyond the borders of the Australian Capital Territory were buried in the 1980s, thinking at the regional level has recently been revived, with studies of the Sydney-Canberra Corridor; potential High Speed Rail connections to Sydney and Melbourne; bushfire risk in the forests and wilderness areas surrounding the ACT following disastrous fires in 2003; water resource management; and cross-border suburban development.

Beginning with an international competition in 1911 and its references to the 1910 Town Planning Conference in London, planning for Canberra was firmly anchored within an international context. The original prize-winning scheme by the Chicago architects (and former members of Frank Lloyd Wright's Studio) Walter Burley Griffin and Marion Mahony Griffin (Weirick 2011) was expanded and transformed by post-war British and American models of city planning. In the 1970s and '80s, the "Canberra Model of Development" (NCDC 1970b) was exported internationally through the secondment of Canberra planning staff to Dodoma, the capital of Tanzania. And most recently at the centennial, visions of urban renaissance and new development plans are again set within international networks ranging from the OECD (OECD 2002) to the Capitals Alliance of national capital planners and policy makers launched in Canberra in 2002 (Capitals Alliance, 2003).

CANBERRA AS AN OPEN AIR MUSEUM OF PLANNING IN THE AGE OF MODERNISM

The major reason why it is so illuminating to look at Canberra lies in the cultural function the city has had to fulfil. Since its conception in the pre-federation constitutional debates of the 1890s, the mission of the new city on a new, inland site (Figure 3) was not simply to be an administrative capital of the new Commonwealth of Australia, but also to become the prestigious symbol of a young nation: in fact an "ideal city – the pride of time" (Harrison 1995).

An area of 911 square miles (2368 km²) was excised from the surrounding state of New South Wales to create the Australian Capital Territory. From the outset, Canberra was endowed with planning powers and resources (between the 1950s and 1980s especially), of which planners

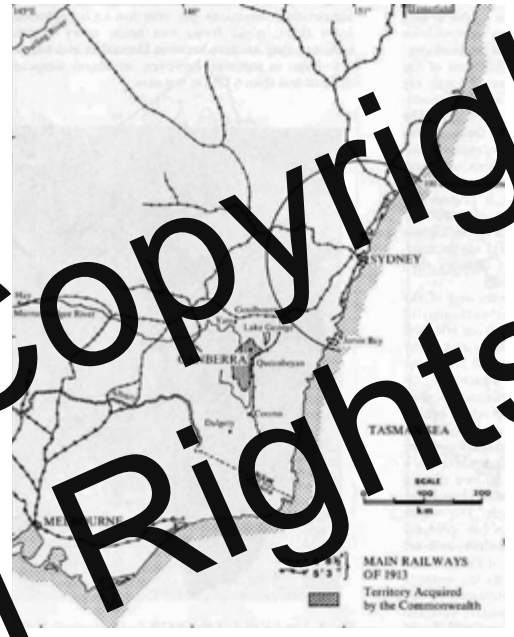

Figure 3: The site of Canberra and the Australian Capital Territory (ACT)
The foundation of Canberra took place in a climate of competition between the colonial capitals of Sydney and Melbourne. This was reflected in different practices ranging from different railway gauges to traditions of liberalism vs. free trade. To prevent Canberra from becoming an economic satellite of Sydney, the capital had to be "distant not less than one hundred miles from Sydney". On the other hand, Australia was able to learn from its bitter experience with a land-speculating 'squattocracy' of grazers, and consequently to create a system of public owner-ship of land for its capital.

elsewhere could only dream. Over significant periods of time, these resources included support from central government, a high degree of planning control on the basis of public ownership of land administered through a leasehold system, and generous finance. In the absence of citizen representation in governance of the city (it was not until 1988 that Canberra attained self-government) – these exceptionally favourable circumstances enabled the planners to develop their visions of an ideal new town and capital. In the heyday of the powerful National Capital Development Commission (NCDC) between 1957 and 1[illegible] in the 1980s, Canberra was a planners' paradise.

It must be noted, however, that there have been other times too - times less favourable for planning and development. The beginnings of the city were almost stillborn by the outbreak of World War 1, but a flurry of activity in the 1920s saw Canberra established as the Seat of Government with a Provisional Parliament House. The onset of the Great Depression then led to a period of stagnation which persisted beyond World War 2 into the 1950s. Following self-government and the demise of the NCDC urban development entered a neo-liberal phase in which planning became a "non-word" to the extent that the "P" was eliminated from the acronym of the authority responsible for the national area functions.

An Examplar of Early Modernism: The "Griffin Plan"

But let us start at the beginning: the Griffin Plan, which in 2013, is at the centre of the centennial celebrations.

Presented in a superb set of drawings, the Griffins' competition scheme echoed principles of the L'Enfant plan for Washington DC, Haussmann's Paris and Burnham's plan for Chicago, and combined them - in a fascinating way - with those of the Garden City and the American parks movement. The Griffin Plan was a synthesis of amazingly advanced ideas on town planning – both in terms of design features and the planning theory of the day.

Features of the plan included: neighbourhood units (explicitly named as such in 1911) and diversified urban sub-centres connected by a suburban railway; a tramway system 'borne at public expense' financed out of the revenue of the lease-hold system; principles of water recycling; decentralised sewage treatment, urban forestry and urban horticulture; ideas on functional and social mix; and much more. In today's terms it could reasonably be described as an example of sustainability planning *par excellence*. Above all, the Griffin Plan was an inspired response to the landscape setting in the valley of the Molonglo River. The scheme created spatial drama with axial alignments focussed on the principal hills and the river dammed to create an artificial lake system across the flood prone lowlands at the centre of the city site. To the south a powerful symbolic schema for the Government Group - a Parliamentary Triangle - was proposed as a physical expression of democratic governance and the separation of powers under the Australian Constitution, culminating at the apex in a pantheon to national achievement on Capital Hill (Weirick 1998).

Figure 4: The "Griffin Plan": the prize winning scheme of 1912 by Walter Burley Griffin (1876-1937); the superb set of presentation drawings by Marion Mahony Griffin (1871-1961) were inscribed on the UNESCO Memory of the World register in 2003

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Figure 5: The 1918 Plan of City and Environs - the latest official general plan of the city signed by Griffin as Federal Capital Director of Design and Construction

The Development of Canberra during the 20th century: From urbanist conception to suburban concept

Although called to Australia to supervise construction of the capital, Griffin met considerable hostility to his plan; to his progressive views on planning, politics and society; and to his tenacious personality as an idealist. After the outbreak of World War I, the conditions for implementing his concepts changed dramatically. Griffin lost favour with the government; his contract as Director of Design and Construction was not renewed, and his involvement ceased in 1921. Following his departure, the rich semantic content of the plan was impoverished and changed. The essential shift in the ideal elements involved a change from the medium-density scheme and the clearly urban character implied by the Griffin plan to a suburban concept. The skeleton of wide *City Beautiful* avenues was fleshed out with bungalows, and Canberra entered an adolescent stage of several oddly configured garden suburbs in search of a city, or, as it seemed at the time, 'a good sheep station spoilt'.

New Impulses after World War II

Nevertheless, the development of the new capital city gathered momentum after the cessation of World War II hostilities when the decision to concentrate the national public service in Canberra was made. From the 1950s onwards, this resulted in annual population growth rates of around 10% for more than 10 years. In 1957 (partially as a security measure to bring together the various defence departments, hitherto headquartered in Sydney and Melbourne) Prime Minister Robert Menzies introduced federal legislation which created the NCDC as an exceptionally powerful organisation whose responsibilities lay in planning and developing the capital, and channelling its growth into functioning urban districts. Menzies ensured that the NCDC would have a large, single-line budget and a high degree of planning control based on continuation of the leasehold system. In the event, the NCDC acted as benevolent dictator until its New Town model was firmly on the ground. Canberra remained a city without self-government until late in 1988.

In the three decades between 1958 and 1988, the government sector burgeoned; a version of Griffin's lake system was created, giving great distinction to the inland setting, and named after him as "Lake Burley Griffin". On both sides of its central basin, the outlines of a symbolic centre were formed within the Parliamentary Triangle by a series of widely separated national institutions, culminating in a new and permanent Parliament House, completed in 1988 as a landscape gesture embedded within the profile of Capital Hill. And the city's population increased from 39,000 (1957) to 270,000 (1988), accommodated largely in a series of New Towns.

Lessons in Metropolitan Planning – from the 1950s to 1970s

Planning for the spatial pattern and inner structure of the Canberra metropolitan region involved a learning process with important practical implications, which unfortunately seem to have fallen into oblivion in the 21st century. The NCDC's first metro region plan, prepared in the early 1960s, closely followed Ebenezer Howard's famous 'Centre and Satellite' scheme with its radial-concentric configuration of self-contained cities set within a greenbelt (NCDC 1965).

But subsequent traffic modelling showed that traffic flows configured as freeways (emanating from a corona of satellites and converging on the projected Central Business District), would have drowned the city centre in a sea of asphalt. Two important conclusions were drawn from this modelling.

Firstly, as long as the motor car remained the dominant mode of transport in the ACT, a conventional CBD would suffer great traffic problems. The size and composition of Canberra's city centre would therefore have to differ from that of a conventional CBD. It would have to focus on highly specialized services, while a large share of the retail functions and office employment would have to be decentralised into the satellite "New Towns".

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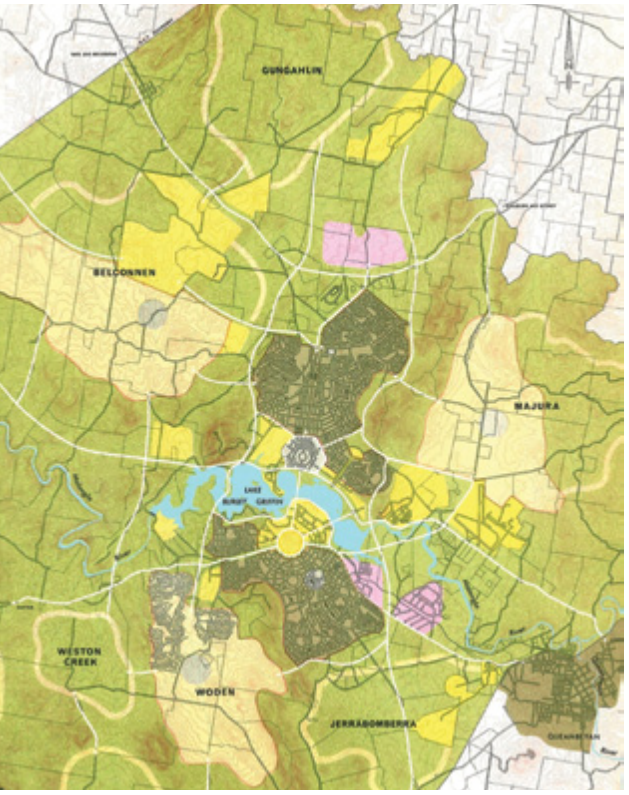

Figures 6 and 7: Planning for growth beyond the city designed by the Griffin: The Canberra Outline Plan published in the NCDC's "The Future Canberra" in 1965 envisaged a radial-concentric arrangement of satellites (left) closely modeled on Howard's Garden City diagram (right)

Figure 8 :The Y Plan: the NCDC's Strategy Plan for Metropolitan Growth, 1969-1970, a network of large, self-contained satellite towns stretched into the form of a linear city to accommodate a central rapid transport spine and to avoid high levels of automobile congestion at the City Center

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From radial-concentric to linear urban form

Secondly, the "New Towns" were stretched into the form of a linear city with "old Canberra" in the middle, connected by peripheral freeways and a central reservation for a public transport spine, planned for implementation when the population reached 500,000. Dividing the city at its northern end into two branches in the form of a Y was intended to make public transport on this spine more effective: the so-called "Y Plan" was born (NCDC 1970a).

The frame of the Y Plan was fleshed out with housing and shopping centres, community facilities and roads graded in perfect hierarchies and pre-determined values of houses and building block sizes. The product might be called "the perfectionist garden city metropolis". As such, Canberra is not simply 'the world's biggest Garden City'. There is no other city in which Howard's Garden City principles – updated in the light of late 20th century ideal concepts in all fields of planning – have been implemented in a similarly complete manner; ranging from a (moderately) revenue-producing leasehold system to a set of (moderately) autonomous, self-contained satellites" connected to a "central city" with its green core.

Canberra as a perfectionist manifestation of ideal concepts in planning

One of the most amazing features of the city is the degree to which the planning concepts of that earlier period have been implemented. This can be impressively demonstrated by comparing the visionary artistic rendering of Canberra drawn in the late 1960s (Figure 1), which depicts the city in the manner of an aerial photograph as it might have looked at the beginning of the 21st century, with an actual aerial photograph from 2000.

The two images are surprisingly similar. The city's functional and ground plan (Fischer 1989) looks very much like a diagram from a planning text book. It displays the built reality of the city, demonstrating that the hierarchical planning principles were applied with utmost precision: Canberra was a perfect manifestation of planners' ideal concepts in the era of high modernism – "the ideal Garden City Metropolis" (Fischer 2013).

CANBERRA AFTER "MODERNISM"

Developments following self-government

By 1988 it was becoming obvious that the underlying principles of governance without democratic representation of the local population, together with wholesale financing through federal government appropriations, could not be continued indefinitely. Self-government had to come, and a way of separating national capital costs from municipal costs had to be found. However, the particular arrangement chosen in 1989 created profound problems for the city and its development. One problem lay in the division of land ownership and planning responsibilities within the new two-level governance structure (national/municipal), whilst the other lay in the method of financing the ongoing process of urban development within the ACT.

Ideal concepts of neo-liberal development?

The division of land ownership and planning re-

AUCKLAND, NEW ZEALAND 2040: A RESILIENT, LINEAR CITY-REGION

Dushko Bogunovich

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Auckland is New Zealand's largest city and is being managed and planned by a single local authority covering the entire metropolitan region. A newly-elected council has produced the "Auckland Plan" which presents the official response to recent growth projections. This plan postulates a future urban form designed to curtail 'sprawl' and encourage compact, densified development within the existing urban boundaries. Underlying the plan are assumptions related to resource consumption, climate change, the need to protect rural lands on the fringe, the perceived loss of 'unspoiled' landscape, and other plan elements. The paper acknowledges the importance of these matters but argues for a different approach, demonstrating that a landscape-based methodology for 'ecological urbanism' can produce a radically new and arguably more sustainable urban form. Under this alternative model, the future Auckland could be a low-rise, regionally polycentric city supported by green, grey, and smart infrastructure with varying degrees of independence from the supply grids. The model was developed by Dushko Bogunovich and Matthew Bradbury and tested by the students of the DoLA at Unitec Institute of Technology, Auckland, under the academic leadership of the authors.

Source: Auckland Council

INTRODUCTION

Auckland is New Zealand's largest city. It is a conurbation rather than a single city, created over a period of about 150 years from more than twenty constituent cities and towns. However, New Zealanders refer to Auckland as one city, especially since 2010 when what had been commonly known as 'greater Auckland' was put under a single local government – the Auckland Council. The seven municipalities - four city councils and three rural districts - that used to comprise the Auckland region were merged into a single metropolitan region with a total population of about million and a half.

In 2011 the newly elected Auckland Council undertook to produce a long-term strategic vision for the 'super-city'. The document was simply named the 'Auckland Plan' [1] and its aim was to be comprehensive rather than sectoral (i.e. without particular emphasis on various aspects of the city's future – economic, physical, social or environmental).

Despite its aim to be comprehensive, it could be argued that the plan's central feature was the spatial strategy - a vision for the future physical form of the metropolitan area. The extra attention to the issue of urban form was understandable: not only had the city been growing fast throughout the 20th century but recent demographic projections were showing that it would continue to grow at a fast pace. The growth is generated from both inside (natural birth rates) and from outside (migration from the rest of the country and from overseas). It is now generally accepted that Auckland is likely to gain another million inhabitants in the next 30 years, reaching between 2.5 and 3 million between 2040 and 2050.

While there were some disagreements over demographic scenarios, the real issue was never

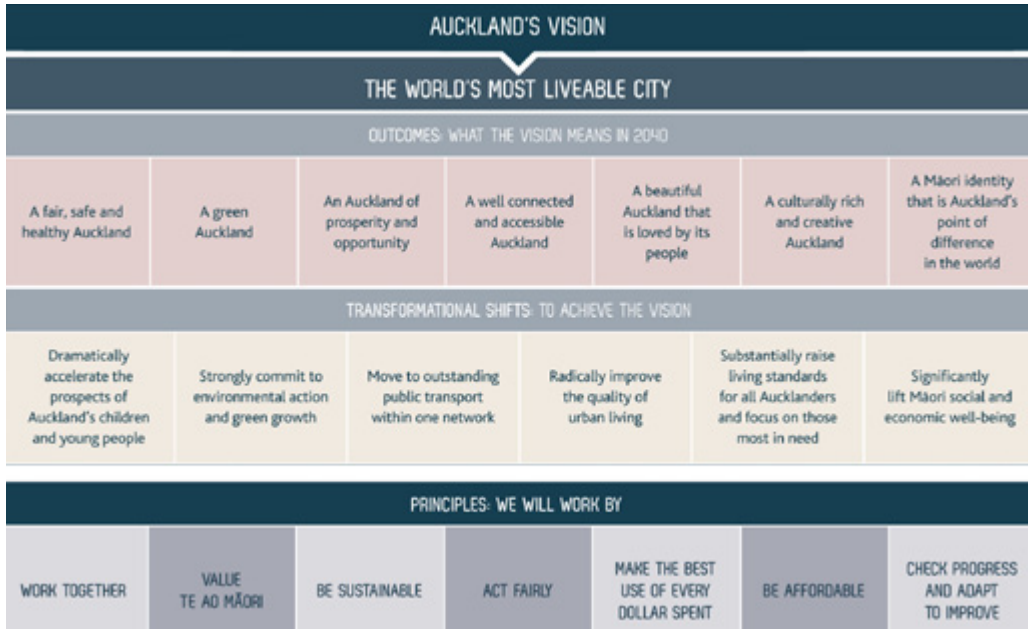

Figure 1: Auckland's Vision 2040.
Source: The Auckland Plan http://theplan.theaucklandplan.govt.nz/

the size of the population. Rather, the main debate (since 2011) has been about the future physical or urban form of Auckland - a continuation of an earlier discussion which went on for the better part of the second half of the 20th century. This discussion was about 'urban sprawl': the tendency for the city to grow horizontally rather than vertically. Like in most countries, this debate has been dominated by advocates of the 'compact city' idea. The prevalent low-density suburban model that shaped post-WWII Auckland had been blamed for a host of environmental, social and economic ills. From the outset, the council planning team took the position that 'urban sprawl' must be contained. To that end, the draft Auckland Plan stated that 70% of future growth had to be accommodated within the existing boundaries of the built-up area of the city, while only 30% would be allowed outside it, in the form of new, greenfield suburbs by the urban boundary and around a limited number of existing satellite settlements inside the region.

This paper outlines an alternative growth strategy for Auckland. This strategy differs significantly from the official 'compact city' vision (which now, in 2013, is being translated into a new, statutory document, the Unitary Plan). The main differences are about development density and the future urban form. This position of the authors[2] of the strategy is that the link between density and sustainability is much weaker than is generally assumed, and that the low-density development scenario – often rejected because of high servicing costs - is not necessarily as inefficient as is commonly depicted. These positions have been argued in the literature for some time now, whether as a direct critique of the 'compact city' (Newman 2005) or as calls for a new paradigm of urban sustainability (Bogunovich 2009).

We also anticipate – as well advocate – a major transformation of urban infrastructure over the next few decades. We see the typology and technology of urban infrastructure changing profoundly in the near future. There are several forces pulling in this direction, with climate change being the key driver. Important aspects of these anticipated transformations are decentralization and smaller scale and off-the-grid utilities operation. These will reinforce the already powerful centrifugal forces in the shaping of metropolitan form. This position runs counter to the predictions put forward by commentators who argue that 'peak

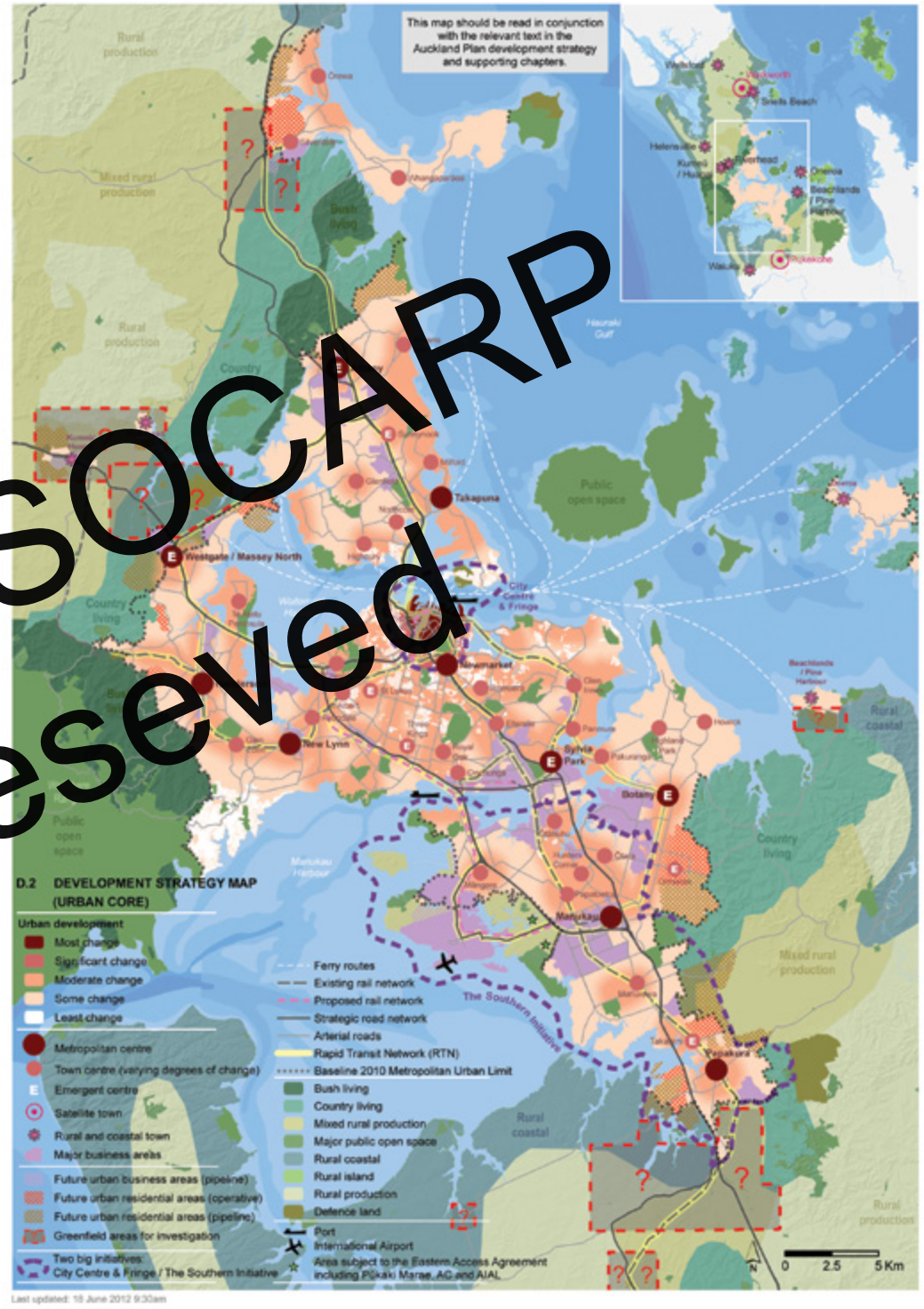

Figure 2: The Auckland Plan: The Spatial Development Strategy.
Source: http://theplan.theaucklandplan.govt.nz/

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oil' is imminent and the higher price of fuel will trigger a re-concentration of population and possibly even a 'shrinking' of metropolitan regions. In our view, urban decentralization and dispersion are irreversible, and will not be significantly affected by the rise in cost of personal mobility.

Based on such assumptions, we argue for an alternative split between development inside and outside the urban boundary, to that which is proposed by the Auckland Plan. We postulate that instead of the rigid '70% inside the urban area/30% outside the urban area' policy being actually implemented, it is more likely that exactly the opposite will happen: about 30% of all new development will take place inside the urban boundary, while 70% will go outside it, one way or another. This does not necessarily mean more urban sprawl; the 70% could be distributed in a planned manner between the new suburbs, satellite towns and villages, and other urban centres of the North Island outside the Auckland region.

We also argue that the 'urban-rural' split is an unduly crude categorization, and that such a 'black and white' view of the metropolitan landscape – "city" versus "country" - is no longer a useful urban planning concept. A model that better reflects the contemporary metropolitan region is one that acknowledges that the 'urban boundary' is blurred. Instead of two categories – urban and rural – this model operates with four categories of regional landscape - urban, suburban, peri-urban and ex-urban. In the case of Auckland and the vexing question of where to accommodate the future growth, a roughly even split between the four categories - about 25% in each – seems the best policy.

Our proposition also stems from the recognition that, in the face of climate change and probable future resource shortages, Auckland will have neither time nor money to rapidly and/or radically transform its predominantly suburban form. Consequently, a realistic and pragmatic approach would be to retrofit the present built form with a range of features, which would make the existing fabric more efficient and self-reliant regardless of density.

We actually question the wisdom of encouraging high population densities anywhere in New Zealand, not just in Auckland, on safety grounds. The whole country is vulnerable to a variety of natural and climate change-related hazards, and a policy of encouraging higher density development appears wilfully ignorant of its contribution to overall vulnerability.

THE AUCKLAND PLAN

The strategic exercise called the 'Auckland Plan' took place during a major reshaping of the urban planning agenda worldwide. Population growth, global economic competition, advancing climate change and looming resource shortages are high on the agendas of all big cities. 'Liveability', 'sustainability', 'competitiveness' and 'resilience' are now global buzzwords. Most cities are striving to reconcile these diverse objectives, rather than setting them against each other and seeking trade-offs.

The Auckland Plan recognises these trends. The document acknowledges that in a world of 9 or 10 billion people – with 5 or 6 billion dwelling in cities – it will be difficult to maintain the current levels of resource consumption and tolerate the present levels of waste generation. It also acknowledges that in a decade or two the effects of climate change will be severe and that this is likely to cause population shifts for reasons of safety and comfort. It believes, however, that New Zealand is less likely to be affected by this scenario, and that rather than having to deal with purely domestic problems, it is more likely it will be under external pressure to take refugees and immigrants from less fortunate countries.

The Plan puts a strong emphasis on the concept of 'liveability'. In future, cities will compete to attract skilled workers primarily by being liveable and by forging strong links between the education and business sectors.

> "Liveable cities need a competitive business climate and tax levels, a business-friendly culture, and excellent connectivity. To be recognised as innovation centres, cities will need to support education in the sciences and engineering; support the creation of leading research centres; foster closer links between those research centres and business; and foster collaboration between complementary sectors to encourage the development of new products and solutions to pressing issues." (Auckland Plan, 2010, p. 23)

Although it is not the capital, Auckland is New Zealand's largest city, its most important commercial centre and home to an estimated 1.5 million people - about a third of the country's total population. Auckland's economy is unrivalled by other New Zealand centres. The city is a hub of transport infrastructure with airports, ports, freight stations. Auckland is the gateway to the rest of this trade-dependent nation. Because of Auckland's economic importance and its role as a trade centre, the wellbeing of the entire country is closely intertwined with the city's success or failure.

The Plan also recognizes Auckland's unique physical character – the presence of natural landscape features in the city, its mild climate and the low-density residential environment which is well-suited to an outdoor lifestyle. Indeed, the Plan has adopted Mayor Len Brown's political platform that the overall aim for Auckland should be to become "the most liveable city in the world."[3]

This is not an unrealistic objective. Auckland already commands a high rank on the leading world indexes of quality of life:

- The Mercer ranked Auckland the 3rd in 2012;
- The Economist Intelligence Unit Livability Ranking declared Auckland 12th in 2012;
- The Monocle Most Livable Cities Index ranked Auckland the 10th in 2013.[4]

The economic rationale for creating the world's most liveable city is not difficult to understand. The aim is clear: to attract and retain the skilled and talented people and capital investment needed for a strong, high value-added economy. But this must be balanced with other objectives. And indeed, The Plan recognizes that good lifestyle and a growing economy are not enough: there also needs to be a more equitable wealth distribution and sustainable economy. A green Auckland with an emphasis on sustainability, fairness, safety and health would encourage prosperity and opportunity for all Aucklanders. And when it comes to a spatial development strategy, the Auckland Plan envisages that all these goals will be attained by pursuing the 'quality compact city' vision.

The 'quality compact city' will be achieved by increasing density within the urban boundaries. They were called 'metropolitan urban boundaries' (MULs) by previous councils, and have now been renamed as the 'rural-urban boundaries' (RUBs). Growth outside these boundaries would be permitted too but limited to a number of selected satellite locations, such as Warkworth and Pukekohe. High quality urban design and the preservation of rural land are key aspirations of this plan.

The compact city model proposed in The Auckland Plan is loosely based on New Urbanist thinking and a number of overseas case studies. They all suggest that increasing density is the solution to creating both a sustainable and a liveable city. The compact city model is seen as offering a chance to limit and contain the much-maligned urban sprawl that is seen to be taking over Auckland region. Increased densities will support a more efficient use of public transport, will reduce energy consumption, and will create a better social mix and stronger sense of community.

The Auckland Plan offers several principles which are seen as essential if the aim is to concentrate urban growth within a defined geographical limit and achieve a well-designed compact city. The overall aim is to put "quality" first by moving through a phase of generational change and transition to a compact urban form: by encouraging growth primarily within existing urban areas, by defining a rural-urban boundary with staged release of greenfield sites and by implementing a decade-by-decade program to augment housing supply.

Approximately 80% of the city's landmass is currently in rural use, and the Plan proposes to continue to keep these areas rural and productive by limiting urban development. A high priority is placed on protecting rural land in Auckland. It is recognised that there needs to be a 'sustainable balance' between production, protection and all activities associated with rural character. This will be achieved by generating greater economic growth whilst making better use of existing infrastructure. Greater social and cultural vitality throughout the region, rural character and productivity will be maintained, while adverse environmental impacts will be reduced.

Overall, it is fair to say that the Plan takes a somewhat reverential position with regard to the 'rural' and 'natural character' of the land which is inside the new region, but at the same time also outside the visible city. The underlying assump-

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tion appears to be that further suburban development would ruin the visual character of the green open space, which is perceived as 'unspoiled'. It is however well known that neither the remnant natural ecosystems/landscapes in Auckland region are really 'untouched', nor does the 'rural character' concept fittingly describe the new, quasi-industrial and lifestyle-residential character of the peri-urban belt.

AN ALTERNATIVE SPATIAL STRATEGY

The authors of this paper take a more tolerant view of the existing environment of suburbia. The suburbia of the 20th century may be an ecological sink and aesthetic eyesore in its present state, but this could change in the near future, as indicated in recent literature (Dunham-Jones 2008). Already, many Auckland suburbs are not visually offensive, and many are peppered with design, technology and innovation initiatives which are beginning to make them more sustainable – such as the growing Transition Towns movement.[5]

We believe that a cleaner, greener suburbia for Auckland is possible, and is to some degree - albeit by very small steps – already happening. It follows that a different take on urban sprawl is possible. A more tolerant view of the present suburbia would open our eyes to fresh, and perhaps even radical possibilities. For example, we could re-imagine Auckland by 2030 or 2040 as a metropolitan region of 3 million people where most of the urban fabric is operating as a giant 'farm' - a sprawling artificial landscape that harvests clean energy, food and rainwater, and treats and recycles its waste locally. Recent research shows that there is an enormous potential in the suburbs of Auckland to generate solar power and not only support the suburbs but also power the inner city (Byrd 2013).

We look favourably on the proposition that Auckland could or should become 'the most liveable city in the world'. But we question the rushed conclusion that 'liveability' necessarily means the same things as in European cities – excellent public transport, pedestrianized streets and packed sidewalk cafes. Our view is that if Auckland is to retain its status as one of the most liveable cities in the world, it has to exploit its low-density urban form. Low density is the very factor which makes Auckland's famous lifestyle possible. Rather than trying to become a sustainable compact city, and start an uphill battle to beat Zurich and Vienna on their terms, New Zealand's largest metropolis should play the global competition game on its own terms. Auckland should strive to become a superliveable, resilient urban region, at the core of which is a low-density city that settles comfortably into its extraordinary landscape and operates its metabolism in harmony with the local ecosystem.

The above proposition has economic ramifications beyond trying to attract overseas capital and talent. In the process of implementing a strategy for growth based on low-density sustainability, followed by a raft of innovative industries focused on green decentralised technology, many Auckland industries could embark on a voyage into the 'green knowledge economy'. This is a type of knowledge economy which many believe will be the key driver of the economy in the 21st century.[6]

Projects undertaken under our direction by students in the Department of Landscape Architecture at Unitec Institute of Technology in the first semester of 2012 have demonstrated that there are many possible ways (a range of settlement morphologies, housing typologies and so on) of implementing our strategy. Common to all these master planning experiments is that there are models of horizontal growth that protect New Zealand's natural and cultural heritage and avoid the 'endless sprawl' scenario. This assures us that a continuation of a growth policy for Auckland based on a centric, compact layout supported by traditional, expensive and vulnerable infrastructure and fenced off from one of the most desirable residential landscapes in the world – would be an environmental, cultural and economic mistake.

We argue for a different approach requiring a more tolerant attitude towards further horizontal growth, instead of embarking on an aggressive

Figure 3: The diagram representing the'Alternative Plan'for Auckland: the linear city acting as the urban spine of the metropolitan area, and the rest as an amorphous, partly self-sufficient suburbia and periurbia, oriented towards the natural landscape

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