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In the NSW planning profession, we can’t quite believe it. After years of complaint about good strategy being ignored or lost in translation, public transport that impressed only the passing tourist, and a schizophrenic approach to ecology and agriculture versus mining and urban development, there is now a real chance that we are in the process of building a lasting legacy of which we can be proud.

Planning for resilience requires us to identify and analyse the shocks and stresses that confront us – be they social, political, economic or environmental – and, in doing so, be better prepared to deal with them and build a stronger city.

This issue of *New Planner* explores key aspects of resilience as it relates to planning. In the previous issue, I collaborated on an article that described Sydney’s new journey to become one of the world’s 100 Resilient Cities as sponsored by the Rockefeller Foundation. An initial workshop held last year brought together many of the key players to explore what stresses and shocks confront Sydney. The material gathered from that workshop will form the basis of work on a metropolitan Resilience Strategy, and in this issue we are pleased to introduce readers to the person charged with that task: the new Chief Resilience Officer for Sydney, Beck Dawson.

Despite being faced with what many would think a gargantuan task, Beck is calmly rolling up her sleeves to work with the key stakeholders and the many communities across Sydney. She is analysing the shocks and stresses confronting Sydney, and framing a strategy that will make the city more resilient.

Roger Swinbourne discusses how the planning and delivery of infrastructure is being reimagined in the ‘growing city’, in pursuit of building a strong spatial focus on delivery.

As planners, we have long understood the critical importance of sustainability and have designed our towns and cities around principles of accessibility, fairness, efficiency, health, and wellbeing. We will, of course, go on striving for environmental and social sustainability without which there can be no economic sustainability. However, to complement sustainability there is now acknowledgment of the power of planning for resilience.

**GUEST EDITORIAL**

**Resilience: bouncing back and leaping forward**

Norma Shankie-Williams MPIA, Strategic Planning Lead, Willoughby Council
of greater resilience. He uses Broadway in Sydney as an example of this new thinking.

Alison Rothwell and Professor Bill Bellotti shed new light on the issue of food security. Resilience requires that we consider our ability to continue to feed ourselves and sustain a viable agricultural economy in the face of a changing climate and continued urban development. Is food production the yang of the urban growth yin? As towns and cities grow, we must factor in our ability to continue to produce fresh food to feed the growing population.

Nicole Rogers explores how new construction techniques are being employed for greater resilience in the future. She uses earthquake-devastated Christchurch to demonstrate how some of these new techniques are being trialled to great effect.

A number of the Journal’s regular columnists also delve into the topic of resilience, adding further diversity and debate to this issue. I commend their articles to you.

Resilience is a characteristic that is admired in people. Resilient individuals bounce back from set-backs like the old roly-poly toys some of us might remember from childhood. These individuals learn from experience to be better prepared in the future. From a strategic planning perspective, resilience has a lot to offer. We understand as planners how best to plan for growth to create an efficient, liveable city, but the continuous demand for more or cheaper housing often drives us towards areas at risk from flood or fire, isolation, contamination or unhealthy conditions.

Decisions about how and where to grow, and options for transforming existing precincts through improved accessibility and renewal, will all be better informed if we place a higher value on resilience. In doing so, the very communities for which we plan will be equipped to bounce back and leap forward towards a safe, healthy and productive future.

Norma Shankie-Williams is a strategic planner with more than 30 years’ experience, working both in Australia and the UK. Formerly Director of Metropolitan and Regional Planning in the NSW State Government, she became Technical Director Planning and Design at AECOM in 2014, and is currently leading strategic planning at Willoughby City Council.
I begin 2016 with optimism and I am excited about the opportunities that the year holds. I believe planners are a resilient bunch and despite the absence of a new Act – which many of us have been advocating for some time – changes are coming and planners are leading the way.

I would like to use my first column to acknowledge the great work of a few people who have inspired me over recent years and encouraged me to take on the role of President – an exciting but daunting position. First, Tony McNamara, a Life Fellow of the PIA, whose commitment to local government and the planning profession in general is unwavering. Local knowledge is invaluable in managing growth carefully so as to create new communities while protecting the existing. Tony has successfully managed to lead one of the fastest growing LGAs in Sydney while retaining the support and trust of his Council through promoting the value of planning and planners to them, and to the community at large.

2016 will be a big year for local government as amalgamations take place between councils. I see this process as a great opportunity for improved governance, planning and infrastructure provision at the local level. However, this will not be an easy task and it is important that local government planners are supported during this difficult time. I am confident that the resilience of planners will prevail and continue to keep local government planning relevant into the future. And I am pleased to see the return of the Local Government Planners column in 2016, beginning with this issue of New Planner.

A second person, Sarah Hill, has been a true inspiration with her enthusiasm for the value of planning in shaping the economy and cities. Sarah has been at the forefront for planning reform and cultural change and has never shied away from tackling the big issues with a focus on strategic planning. It is therefore pleasing to see that Sarah has been appointed as CEO of the Greater Sydney Commission. This offers a great opportunity for Sydney. As quoted in *The Sydney Morning Herald*, "the creation of the commission reflects an intention to give credentialed planners and experts more authority over the future of the city". It is, indeed, an exciting time which shows that resilience does pay off. As Sarah has demonstrated, persistence in advocating a more inclusive and better planning system does have dividends.

Third, a big thank you must go to David Ryan who has been the PIA NSW President for the last few years. David has done a marvellous job at a difficult time when planning reform stalled and ministers changed. He showed great resilience and continued to advocate a position to government that was considered in the best interests of our profession and for planning in the State.

It is through the work (and resilience) of planners such as Tony, Sarah and David that we, as a profession, are now better positioned to participate in important decisions for our communities throughout NSW.

As your new President I am determined to keep up the good work that my predecessors have done. The next couple of years will be very important for our profession and we need to continue to take opportunities that governments and others give to us to advocate our view in influencing planning in NSW. The PIA NSW Committee is committed to working hard for planners and the planning system, and numerous sub-committees have been formed to drive areas such as policy, membership, events, conference, professional development and communication.

I look forward to catching up with you throughout the year in my new role. Please come up and say hello, give me a call or more importantly become involved in the PIA.

Endnotes
When CS Hollings wrote about resilience and its application to both ecological economics and engineering in the early 1970s, he unwittingly encapsulated the challenges facing the NSW coast at the same time.

The resilience of a system refers to its ability to absorb shocks without changing state. In the early 1970s, the NSW coast was subjected to a series of severe storms that exposed the vulnerability of coastal development and its capacity to recover from sudden shocks, like coastal erosion and inundation. In particular, a 1-in-200 year storm hit the NSW coast in 1974, causing significant damage to NSW coastal properties.

The 1974 storms underscored the dynamic nature of our coastline and highlighted the exposure of many homes, businesses and infrastructure to erosion and inundation – the legacy of land use planning decisions made in earlier decades. Since then, state and local governments have sought to better control and manage coastal development to increase the ecological and engineering resilience of our coast. Yet, at the same time as governments have sought to better manage coastal planning, the pressures on our coast have grown at an accelerating pace.

Key challenges include managing population pressures, dealing with the legacy of risk from past planning decisions and responding to the impacts of changes to our climate. Today 80 per cent of us live within 50 kilometres of the ocean. Residential and industrial development, agriculture, tourism and recreational activities are intensifying along the coast and often competing for space and resources.

To provide just one example, there are more than 40 million visits to Sydney beaches each year alone. The coast supports a burgeoning saltwater estate generating an estimated $69 billion per year in value, including $44 billion in market values from tourism, boating industry, commercial fishing, and aquaculture and offshore energy, and an estimated $25.2 billion per year in non-market ecosystem service values.

To protect coastal assets, and to improve the resilience of coastal ecosystems, we need clear and effective planning, supported by relevant advice and evidence. Our knowledge and understanding of coastal processes has improved dramatically over the past 35 years since the existing Coastal Protection Act was first established in 1979.

We need to look ahead and adopt a modern, integrated and strategic coastal management framework that provides certainty for local communities and councils about coastal management priorities, and puts in place the support services they need, enables vulnerable communities to better manage current risks, and promotes public access to and enjoyment of the coast.

In November last year I released a coastal reform package for consultation, including:

- A new draft Coastal Management Bill to replace the current Coastal Protection Act 1979 and establish a simpler, more integrated contemporary legislative framework for the coast;
- An Explanation of Intended Effects for a new Coastal Management State Environmental Planning Policy that will operationalise the land use planning aspects of the reforms; and
- A new Coastal Management Manual that will better support local coastal management planning and council and community decision-making.

One of the major changes in the proposed legislation is redefining the coast into four distinct areas, each requiring different forms of management. These include coastal


Caves Beach, Lake Macquarie, NSW (Source: Bob Clout, Office of Environment & Heritage).
In November last year, Gary White commenced his role as the State’s first Chief Planner. To mark this historic occasion, New Planner’s Alice Strömstedt spoke to Gary about this new position and his aspirations for planning in NSW.

Alice Strömstedt (AS): Gary, tell us about your background in planning and what motivated you to accept the role of NSW’s first Chief Planner.

Gary White (GW): My career in planning spans 40 years – comprising 30 years in local Government, nearly four years in private enterprise and six years in State Government. Most of my career has centred on Queensland, although I have worked on projects in all states, particularly when in private enterprise.

Two key factors motivated me to accept the role of Chief Planner. The first was the positive opportunities presented by city shaping infrastructure investment in Sydney; the second was the positive attitude of the NSW Government, Minister Stokes and the Department of Planning and Environment around the planning agenda.

AS: What are your key responsibilities as Chief Planner?

GW: The Chief Planner is responsible for providing strategic planning advice and guidance across a range of planning challenges, and to be available to assist the various parts of the Department of Planning and Environment around the planning agenda.

AS: What do you believe are the main challenges facing planning in NSW and how can these challenges be addressed?

GW: For a variety of reasons, NSW has systematically created a very complex planning system over time – those within the system know this and there is a genuine desire to unlock this complexity and simplify planning; instead of a precautionary ‘foot on the brake’ approach focussing on what might be a problem and layering of controls.

Many planning issues could be addressed by adopting a more strategic focus, emphasising what is wanted – that is, desired outcomes – over what might be perceived as problems.

AS: The NSW Government recently announced the structure of the Greater Sydney Commission. What will be your involvement with the Commission?

GW: The Greater Sydney Commission establishes a model and positive implementation framework that is well suited to Sydney and its planning needs. I see myself sitting alongside the Commission providing strategic advice as needed.

AS: You have spoken about the importance of storytelling to help inform communities about planning. What does this look like in practice and how can we better utilise storytelling in strategic planning?

GW: Many people will know I am a strategic planning tragic – I believe this to be the whole basis for planning. I have used the term ‘story telling’ because it provides the context for why we plan in the first place. Telling first, ‘where a place has come from’, second, ‘where is it heading’, and then asking, ‘where does it want to go?’ [this is the vision] and ‘how does it get there?’ This is the starting point for developing Local Environmental Plans, transport plans and infrastructure plans as the delivery tools of planning.

Story telling or strategic planning is also the best approach for communicating with communities and enabling them to understand desired intentions.

AS: What steps can we take to make the NSW planning system more efficient?

GW: The NSW planning system should have a more strategic focus and intent. The system should concentrate on delivering outcomes as opposed to the precautionary ‘foot on the brake’ approach and second guessing what might be a problem.

AS: How has your involvement with PIA over the years shaped your planning career?

GW: My involvement with PIA has enabled me to position myself around the issues that are close to me as a planner. PIA has presented me with opportunities to engage and put forward my views and share these with others. It has been a great advocacy platform – for instance, it enabled me to push for a much needed regional plan for South East Queensland.

AS: Who or what has had the greatest influence on you as a planner?

GW: I enjoy seeing outcomes materialise and the role that planning can play in this. For example, in 2004 I was instrumental in preparing a vision for the revitalisation of the Ipswich CBD in Queensland. This vision refocused the city centre back onto the Bremer River. This was a 15 year plan and to see this materialise in less than ten years as envisaged was very rewarding.

AS: What do you hope to have achieved when you reflect on your time as Chief Planner?

GW: I hope that I will have made an active contribution to a very exciting city shaping period in Sydney’s history and helped contribute to a better understanding of how planning in NSW might be simplified, so that it delivers better outcomes for the people living in this state.
Resilience and growth

Roger Swinbourne, Associate Director, Urban Systems Advisory, AECOM

Australia is already one of the world’s most urbanised countries and our rates of urbanisation continue to grow. With increased urbanisation comes pressure on existing, often ageing, social and physical infrastructure. The urban planning profession holds a critical responsibility in managing our cities through this change in order to enable effective transitions to a preferred future state.

The traditional approach to planning Australian cities is becoming an increasingly challenging paradigm. If our cities are to succeed, we need to recalibrate our thinking on service demand, infrastructure capacity and design efficiency in line with changing community expectations, in order to achieve more sustainable and resilient outcomes.

Resilience and the planning process

As Australian planners are asked to create a framework for growth, they are also increasingly asked to focus on resilience, through better management of risks associated with potential shocks or stresses that may impact future communities. Planners need to consider how to bring this thinking into the planning process to enable growth while creating a more robust and resilient place for the communities of the future. As an example, the Sydney Metropolitan Region is currently embarking on its resilience planning with the support of the 100 Resilient Cities Program (100RC). This is a program that supports cities to identify and plan for possible future shocks and stresses. Some of the key features identified in the early planning workshops for Sydney included risks from ageing infrastructure, infrastructure failure and housing affordability. These risks are only set to increase with the Sydney population growth expected to reach 8.5 million by 2061 (ABS).

Precincts

Currently in NSW, infill and urban renewal are being prioritised to manage growth, placing increased pressure on existing urban infrastructure. The focus on urban infill also increases the level of complexity of the planning challenge due to the large number of stakeholders and the complexity of the existing infrastructure (social and physical). Traditional approaches driving solutions through heavily-engineered or -designed responses are being challenged by governance, economic and engagement factors.

Emerging research and global best practice in planning demonstrates that empowering communities to collaborate within precincts and to develop and own local solutions is delivering both greater resilience and greater independence at a precinct scale. This is being further enhanced through the use of emergent technologies and business models that enable better economic and social collaboration to realise improved precinct planning outcomes and resilience. For our cities to transition effectively while providing for the future social, economic and environmental standards we expect, we require a systems-oriented approach with effective community engagement.

Energy and water examples – from Broadway to Bondi

An example of a precinct-scale solution can be seen within the Central Park development in Sydney on the old Carlton and United Breweries site which includes residential, retail, community and commercial uses as well as a precinct-scale energy and water utility. The new development boasts Australia’s first private trigeneration system that became operational in November 2014 with the first of two 1.1-megawatt gas turbines providing electricity, heating and cooling as well as a black water recycling system providing for non-potable water needs. These systems were installed to enable growth within a constrained infrastructure environment, reduce carbon intensity and optimise local efficiencies.

Adaptive servicing using alternative approaches to manage demand and supply at precinct scales is being applied to both physical and social infrastructure. The CRC for Low Carbon Living, which is an industry and academic research partnership, has an entire research stream dedicated to precincts, with key considerations given to integrating the interlinked aspects of energy, water, waste, transport and buildings – all of which have significant carbon impacts as well as human health impacts. One of the research projects, Empowering Broadway, is focused on setting up a Living Laboratory for the precinct that includes Central Park, UTS and Sydney Institute of TAFE. This is a project being led by AECOM, Brookfield Multiplex (Flow Systems), City of Sydney and Sydney TAFE. The University of Technology Sydney has identified an area at Broadway that could become the focus of the living laboratory investigating precinct-scale resilience.

The Empowering Broadway project is focused on better understanding how to transition existing urban precincts to alleviate the infrastructure pressure to enable growth, and also facilitate more sustainable, low carbon energy and water solutions. The research is looking towards designing a toolkit to enable building owners, managers and operators, policy makers, and utilities to affordably and more easily enable
more sustainable water and energy systems within existing or changing precincts. This will seek to provide a roadmap to enable growth while also improving the sustainability and resilience of the local community.

Another current example is in the Waverley local government area, where Waverley Council is actively working on a precinct-scale solution to manage its growth, improve resilience and drive improved efficiencies for Bondi Junction through its Green Infrastructure Master Plan. This project involves working closely with stakeholders across the Bondi Junction community to enable them to take steps towards improved energy and water efficiency to achieve a 30% carbon reduction and no net increase in water by 2020 over a 2004/2005 baseline year. This Plan will provide greater resilience through improved efficiency, lower operating costs and reduced carbon emissions.

**Conclusions**

There are significant challenges facing our cities and the planning profession’s response to this will be critical to enable a more sustainable and resilient future. As a profession, it is essential that urban planners not only plan for current risks, shocks and stresses, but consider potential future shocks and stresses in their planning responses. We need to recognise the limitations of traditional approaches to planning and be able to adapt systems as well as engage and empower local communities to take more responsibility and control over the urban outcomes. This will require a change in our thinking on service demand, infrastructure capacity and design responses to deliver on community expectations and realise more sustainable and resilient outcomes for cities. For energy and water, we must take into account the entire system considering both behavioural and infrastructure solutions as well as emerging information, governance and economic models. The same principles apply for other physical and social infrastructure within our communities where change is required to better manage future risk, shocks and stresses through improving local service capacity and resilience.

**NOTE:** These are the views of the author and do not represent the views of AECOM.

Roger Swinbourne is an urban systems consultant with sixteen years’ experience in both consulting and government in Australia, Europe and the Middle East. Roger works across AECOM’s strategic planning, master planning, infrastructure and urban design studios with the property and development industry and government to set strategies and deliver improved social, economic and environmental outcomes for clients and their projects. Roger’s recent experience in urban sustainability and resilience has been in preparing the Bondi Junction Green Infrastructure Master Plan, facilitating a session at the 100 Resilient Cities Sydney Workshop and research lead on the Empowering Broadway low carbon transition project.
Resilient cities: the future of food

Alison Rothwell, School of Science and Health, Western Sydney University
Bill Bellotti, Western Sydney University and Global Change Institute, University of Queensland

Food security will be a defining challenge in coming decades. As cities grow and expand into peri-urban rural landscapes there is inevitable conflict between the competing demands of urban housing and food production.

A recent study utilising life cycle assessment has identified preferred development scenarios that satisfy both housing and future food requirements with reduced environmental impacts.

Towards more resilient food futures

Most Australians would be surprised to learn that their food consumption is the single largest contributor to the size of their ecological footprint. Food and agriculture accounts for around 70% of our nation’s freshwater use and 30% of our greenhouse gas emissions. Further, agriculture is the dominant use of land worldwide. By 2050, demand for food is expected to be 70% higher than today, the combined result of a 30% increase in population and a 40% increase in demand due to changed dietary patterns associated with rising incomes. This increased demand for food will place unprecedented pressure on our natural resources. Already, food and agriculture are both villain and victim in several key environmental concerns including climate change, biodiversity loss, and eutrophication (nutrient pollution of water resources).

The challenge of future food security will require coordinated interventions across government policy, the private sector activities, and individual choices and behaviour. The planning profession has a key role to play, providing the broad infrastructure that can greatly ameliorate or exacerbate environmental impacts into the future. The bad news is that, to date, peri-urban planning has largely ignored the competing claims from urban development and food production on land and water resources. The good news is that there is considerable opportunity for multifunctional land use, combining both food and housing at reduced cost to the environment.

Recent developments in food-friendly urban development

In terms of food and nutrition security, Australia is indeed the lucky country. Most Australians have access to a safe, healthy, diverse and affordable food system – what is there to worry about?

However, there is plenty of cause for concern if we accept that food systems should be good, clean, and fair (good for our health, clean for the environment, fair for the businesses along the supply chain)1. Australians are experiencing an obesity epidemic, related to over-consumption of highly-processed foods combined with too little physical activity. As mentioned earlier, food and agriculture account for the majority of land use and related land degradation, majority freshwater extraction with environmental consequences, and high greenhouse gas emissions associated with land clearing, ruminant livestock and fertiliser use. Food and agriculture are also embroiled in many ethical issues related to intensive animal production, genetically modified food, and equity and fairness issues related to power relations between our supermarket duopoly and food producers.

Table 1. Example peri-urban (PU) land-use scenario narratives (from Rothwell et al, 2015).

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Narrative</th>
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| **G_F ’Business as usual’** | **Housing system** 1 ha of PU horticultural land is transformed to greenfield housing (detached single dwellings).  
**Horticultural system** 1 ha of PU field lettuce production is displaced by greenfield housing to a more remote field production location. The remote field farm is required to produce and transport the same quantity of produce to the city’s central fruit and vegetable market as the displaced PU farms.  
**Afforestation** Nil. |
| **I_HTG_A ’Multifunctional land use’** | **Housing system** The same population as that housed in scenario G_F is housed in infill, inner suburban apartment-type housing. There is no change to the 1 ha of PU horticultural land as a result of housing.  
**Horticultural system** PU field lettuce production has been replaced by a HTG.  
**Afforestation** The reduced land area requirements of a higher-output HTG spares PU land for afforestation. |
and processors. On this basis, it is easy to conclude that our current food system is neither clean, nor good, nor fair.

There has been a strong government and community response to these concerns, and the private sector is also seeing new opportunities. Examples include the growth of community gardens and farmers’ markets, more direct producer-to-consumer supply chains, and new business models that guarantee producers a fair share of the food consumers purchase price. Industry is making great advances in efficiency, producing more food per unit of input. Overall, there is room for optimism, but perhaps what is most lacking is an integrated response to the complex challenge of food security.

**Western Sydney case study**

Urbanisation is a global trend. Cities are getting bigger and some of our most productive and valuable arable land is converting to housing. This often proceeds with little consideration of the consequences for local food production or future food security. A recent doctoral research project sought to address this by exploring the trade-offs between future housing and food production using western Sydney as a case study.

The study applied life cycle assessment (LCA) methodology to compare alternative housing and food production scenarios in terms of their environmental impacts (Table 1). Each scenario is able to house an equivalent residential population while delivering equal quantities of fresh food to a city market. LCA is particularly relevant for this kind of study as it takes a ‘cradle to grave’ or supply chain approach to defined activities, accounting for environmental impacts associated with production, processing, distribution, and consumption. Contrasting urban development scenarios were constructed including ‘business as usual’ [G_F greenfield housing displacing food production] and a more nuanced ‘multifunctional land use’ [I_HTG_A infill housing, high technology greenhouse, and afforestation] scenario. Environmental indicators included greenhouse gas emissions and other pollution metrics (Figure 1).

Some of the key findings included:
- Business as usual [G_F] is the worst performing scenario in terms of environmental impacts.
- New housing developments [roads, housing construction, ongoing energy consumption, etc.] had a much greater environmental impact than existing food production [cultivation, irrigation, fertilisers, harvesting, transport, processing, etc.] activities.

![Figure 1. Life cycle inventory captured within the system boundary for: (a) the food system; and (b) the housing system (Rothwell et al, 2015).](image)
Multifunctional land use (I_HTG_A); combining infill housing with high technology greenhouse vegetable production, has the potential to house and feed the same population with 25-43 percent less environmental impact.

Both direct and indirect (e.g. displacing food production further from the city) environmental impacts are significant and need to be considered.

The novelty and significance of this study lies in the comprehensive accounting of a range of environmental impacts associated with both housing and food production. In this way significant trade-offs between housing and food production were made transparent, facilitating informed discussion of alternative development pathways. Ideally, stakeholder engagement would evaluate these alternative scenarios, providing community input to the process.

The study identified preferred peri-urban development scenarios combining housing and future food security, with significant reductions in environmental impacts. However, these preferred scenarios are unlikely to be realised under current planning strategies (for example, A Plan for Growing Sydney) that favour continued expansion of greenfield housing development into the peri-urban fringe.

**Implications for planners**

The Rothwell study\(^\text{1}\) identified preferred peri-urban development scenarios, but perhaps more importantly, it prototyped a process for incorporating LCA principles and procedures into the planning process. Can LCA approaches be incorporated into routine planning practice? Only the planning profession can answer this question. Potential implications include:

- A broadening of the planning ‘worldview’ to include food and nutrition security in future peri-urban development.
- A process for evaluating environmental and food security consequences of specific development pathways.
- Avoiding unintended consequences, e.g. A more systemic approach incorporating broader stakeholder engagement and deliberate consideration of a wider set of criteria.

In summary, LCA has much to offer the planning process in identifying preferred future scenarios. It provides an integrated framework for developing and evaluating scenarios across a range of environmental indicators. The approach outlined requires ongoing development, best achieved in partnership with a planning authority committed to urban resilience.

Alison Rothwell is a PhD candidate at Western Sydney University. Her research has focused on sustainable food systems, including analysing how compelling demands for peri-urban land impact the combined environmental performance of food and housing. She is in the final stages of preparing her thesis.

Professor Bill Bellotti is an agricultural scientist with a background in agronomy, farming systems and international agricultural research for rural development. The research discussed here was undertaken while Bill held the Vincent Fairfax Family Foundation Chair in Sustainable Agriculture and Rural Development at Western Sydney University. In 2016 he commenced a new role as Professor and Director of the Food Systems Program in the Global Change Institute at The University of Queensland.

**Endnotes**

As Sydney joins the Rockefeller Foundation’s pioneering 100 Resilient Cities program, it’s time to start the conversation about our city’s response to globalisation, urbanisation and climate change. Beck Dawson, Sydney’s new Chief Resilience Officer, talks to Norma Shankie-Williams about her new role.

Norma Shankie-Williams (NS-W): What is a chief resilience officer? Tell us a bit about your background.

Beck Dawson (BD): As Sydney’s first Chief Resilience Officer through 100 Resilient Cities, my role is to lead a city-wide conversation about the long term strength and resilience of the whole of metropolitan Sydney – from its buildings and different precincts to its many communities and their needs.

The City of Sydney hosts the program and we are working with metropolitan councils, State Government, business and the community sector to create a resilience strategy for Sydney.

My expertise is in property sustainability and I previously led the sustainability and responsible investment areas for the major property company, Investa Property Group. This included research and support for the Australian Business Roundtable for Disaster Resilience and Safer Communities.

NS-W: What do you see as the main challenges for Sydney?

BD: Sydney is now part of the 100 Resilient Cities (100 RC) framework, and the focus of resilience globally is absolutely one of governance.

With major urban growth likely to happen in Western Sydney, how do we share the economic opportunities with everyone over the next 20–30 years? Hot issues will be affordable housing and housing affordability, transport and active living for health and cohesive communities – and all in the context of more extreme weather or other disruptive shocks.

We need to understand the pressures on agricultural land around the city and the green spaces within it, balancing these pressures so we can continue to feed ourselves and ensure clean air.

NS-W: Which cities will you look to for inspiration?

BD: Being part of the global 100 RC program we have the opportunity to meet and learn from other cities in the network to provide inspiration and ideas for good planning.

New York’s recent OneNYC plan is astounding. It’s a comprehensive approach to governance between the city and its regions, with lots of hard data and clear targets.

New Orleans is focussing on education to build cultural and economic opportunities. The city’s plan looks to 2050 from the perspective of a person born in 2015. It explores what this person’s life will be like and the opportunities they’ll be able to access.

Mexico City has a new transport investment hierarchy that prioritises walking, cycling and public transport options - a huge step for a city known for being one giant traffic jam!

Rotterdam has focused on water management. It’s also been innovative in cyber resilience and we can learn a lot from their experience.

San Juan in Puerto Rico and Rio de Janeiro are investing in water infrastructure – aware of the health, wellbeing and business costs of not having clean water and sanitation. What’s interesting for Sydney is how they developed attractive investment models that influenced business and political decision making.

NS-W: How will your resilience work engage planners and integrate with existing initiatives in Sydney?

BD: We have the opportunity to adapt our planning system so Sydney can more effectively face the challenges of globalisation, urbanisation and a changing climate.

Disruptions in our city cause significant financial, social and environmental costs to people, communities, business and governments.

A resilient city expects and plans for these disruptions. A resilient city understands how to mitigate the negative impacts of disruptions and enable revitalisation post any disruption.

Resilience planning is about how we can strategically integrate thinking across different disciplines and promote cooperation with planners and all parts of state government.

NS-W: What will a resilient Sydney look like?

BD: A resilient city is well-governed, economically strong, and offers equal access to jobs, amenities, transport and green space. It is ready and cooperative in the face of any kind of disruption.

As a participant in the Australian Business Roundtable for Disaster Resilience and Safer Communities I came to understand the impact disasters already have on our communities and economy. Acting now to strategically plan for resilience can save lives, save money and promote equity and innovation as our city grows.

We aim to make the most of this opportunity through 100RC and invite people to find out about the program and get involved in understanding resilience for all areas of practice in the city. We can all contribute to ensuring our growing city survives, adapts and thrives in a changing global economy and climate.

Workshops to discuss a Resilience Strategy for metropolitan Sydney are happening across the city during 2016. To find out more go to: www.cityofsydney.nsw.gov.au/vision/towards-2030/resilient-sydney www.100resilientcities.org/
Construction for a resilient city – a city that, across its physical, organisational and social facets has the ability to persevere and recover in the face of acute or chronic adversity through adaptability, resourcefulness, inclusivity and innovation – is about contributing to, enabling and executing the plans and programs laid out during the planning and design processes.

Construction is traditionally seen as the ‘end of the pipeline’ in delivering the physical infrastructure that makes and supports our cities. Construction is the start of bringing planning to fruition and, as a result, constructors have a great responsibility in bringing those plans to life.

Construction organisations are much more than mere suppliers of plant and labour for building the physical infrastructure of the cities we live in. Construction for a resilient city requires as strong a focus on socio-economic considerations and the human aspects of communities, as on the delivery of the hard, physical infrastructure.

Resilient constructors create resilient cities

The aspects that make a city resilient also drive their ongoing reshaping through resourceful, inclusive, integrated, adaptable, innovative, mobile and high quality construction.

Within this, construction organisations are much more than mere suppliers of plant and labour for building the physical infrastructure of the cities we live in. Construction for a resilient city requires as strong a focus on socio-economic considerations and the human aspects of communities, as on the delivery of the hard, physical infrastructure.

Collaboration and “co-opetition”

Successful constructors will also need to collaborate and embrace the concept of “co-opetition” for greater resilience. “Co-opetition” is cooperative competition, or sharing and cooperating with competitors and other partners to deliver more innovative and sustainable outcomes. Resilient cities will rely on constructors and their partners, clients and proponents working with communities to build long-term, positive and collaborative relationships.

These relationships must be adaptable and elastic, but sufficiently tough to resist the “shocks” of commercial, financial and resource constraints, and take time to build.

Stronger Christchurch Infrastructure Rebuild Team

A great example of this type of organisational relationship that McConnell Dowell are currently involved in is with the Stronger Christchurch Infrastructure Rebuild Team (SCIRT). This team is made up of developers, architects, project managers, and public representatives and other stakeholders, who are working together to ensure the resilience and strength of the local community.

As well as being the custodians of the safety and health of workers, the local community and environment, a socio-economic focus is applied by constructors through employment opportunities and providing chances to learn new skills.

It is well known that constructors are an important supplier of livelihoods for employees, subcontractors and the broader supply chain. Successful constructors are educators, trainers and communicators, directly responsible for upskilling the workforce and contributing to the resilience and strength of the local community.

The most positive construction outcomes occur when there is early involvement from a constructor with all other contributors. Earlier involvement gives the community, public representatives and other stakeholders more time to interpret and contribute, as well as greater ownership of the process. The community’s thoughts and ideas become ingrained in the project so the overall outcome is more likely to suit everyone’s needs and provide a robust, shock-resistant outcome.
up of a number of different representatives from local organisations dedicated to rebuilding Christchurch’s earthquake damaged infrastructure and undertaking the largest civil construction program in New Zealand’s history.

SCIRT have a strong resilience focus which not only relates to the actual physical infrastructure, but to the communities and the database of information from their activities. This gives them a very complete and up-to-date dataset to be able to manage their infrastructure into the future.

The SCRIT programme is prioritised against set criteria with each delivery team awarded a percentage of work based on their performance in Key Result Areas against a 20% baseline. This commercial framework ensures value for money through competition, whilst also demanding collaboration through its pain / gain share mechanism. All parties share the risks; they also share information with each other on what they find when they dig into the ground.

Construction for a resilient city goes hand in hand with sustainable construction. Constructors hold a considerable responsibility as the executors and drivers of more robust, adaptable, innovative and forward-thinking outcomes.

**Gold Coast Light Rail**

Another of McConnell Dowell’s recent success stories is Stage One of the Gold Coast Light Rail project – an ambitious, city-changing infrastructure project that integrated new and existing transport systems to provide more sustainable transport options for residents and visitors to the Gold Coast. The Company, in association with its joint venture design and construct partners, committed to delivering a sustainable transport solution, and to delivering it in a sustainable manner.

Aside from the innovations that led to considerable materials, water and carbon emissions savings from a baseline design, McConnell Dowell was also able to contribute to the socio-economic resilience of the city. Over 96% of project employees were recruited from the extended Gold Coast Area (target: 82.5%), with over 80% living within the Gold Coast City Council area. The Project delivered a tailored training program, providing over 250,000 hours of deemed training (target: 188,000 hours) and providing 80 traineeships and cadetships (target: 50).

**Construction for a resilient city: no longer about “end of the pipeline” delivery**

The shaping, growth and development of resilient cities is about collaboration, co-opetition, consideration and inclusion of organisational and societal aspects and resources. It’s about tapping into the depth of knowledge and experience in the workforce and the local community, and sharing and increasing local contributions and accountability. We’re constructing for the community, not for our own sakes after all!

Construction for a resilient city is about being resilient as construction organisations and as an industry as a whole. In making our cities more resilient we make companies more resilient, and better equipped to help shape the cities of the future.

Nicole Rogers is the Group Environmental Manager at major engineering, construction, building and maintenance contractor, McConnell Dowell, and has over thirteen years’ experience in sustainability and environmental management. Nicole is an Infrastructure Sustainability Accredited Professional and is Co-Chair of the ISCA Contractor Working Group.

Nicole has carried out environmental management and sustainability project work in Australasia, Europe, the UK and Africa. She has worked across a range of sectors including master planning, transportation, infrastructure, property management, heavy industry and mining and construction. Nicole also has significant experience in sustainability advisory, engagement and implementation.
ePlanning in New South Wales took a significant step forward in late 2015 with the proclamation of the ePlanning provisions in the Environmental Planning and Assessment Amendment Act 2014 and the establishment of the NSW Planning Portal. This article outlines key statutory provisions for a NSW digital planning system.

The New South Wales ePlanning program is transforming the planning system from a paper-based system into an online environment. This includes a range of tools and services that enable businesses and the community to access and transact with planning information from anywhere at any time.

The program was announced in the State’s 2014-15 Budget as part of the push towards digital government through the NSW ICT Strategy. Background on the NSW ePlanning program is in New Planner, Issue 101 (December 2014).

The ePlanning program aims to create a legislative framework that allows most interactions with the planning system to be conducted online. Relevant data will be made available in real time and decision makers can be confident that the data they are relying on accurately reflects the law.

NSW planning database and NSW Planning Portal

30 November 2015 marked a significant milestone for the NSW ePlanning program, with commencement of the provisions in the Environmental Planning and Assessment Amendment Act 2014 (the Amending Act) that relate to ePlanning.

These provisions established the NSW planning database and the NSW Planning Portal (www.planningportal.nsw.gov.au). The Planning Portal website is used by the Secretary of the Department of Planning and Environment to provide public access to the planning services and information in the NSW planning database.

The NSW planning database is an electronic repository of documents and other information – such as Ministerial planning orders, spatial datasets or other maps and documents incorporated by reference in environmental planning instruments – that are required to be published on the NSW Planning Portal. The database may also be extended (by regulation or by the Secretary) to include other items including development control plans and contributions plans.

The Secretary is required to maintain historic and current versions of the documents in the planning database, as well as all other material published on the Planning Portal. Importantly, the Amending Act allows the Secretary to certify content in the database and published on the portal as correct.

New standard technical requirements for spatial datasets and maps

Free online access to spatial datasets and maps contained in environmental planning instruments, as well as other types of plans, is a critical resource for planners.

Provisions in the Amending Act enable the Secretary to determine standard technical requirements for the preparation of environmental planning instruments, plans or other documents, including spatial datasets and maps, as well as the form of applications for consents, approvals or certificates.

The Amending Act requires a council or other planning body to provide the Secretary, when requested, with electronic files in a specified format of instruments, plans or other documents incorporated by reference in environmental planning instruments – that are required to be published on the NSW Planning Portal. The database may also be extended (by regulation or by the Secretary) to include other items including development control plans and contributions plans.

On 6 November 2015, the Secretary issued new Standard Technical Requirements for Spatial Datasets and Maps that updated and consolidated the existing standards for planning-related spatial datasets and maps.

The new standards took effect on 30 November 2015 and cover local environmental plans, state environmental planning policies, development control plans and contributions plans.

The standards shift the focus away from maps to spatial data as the legal source. For industry professionals and the community, the net result is that current planning data can be readily accessed and queried online.
through the planning portal’s interactive map viewer, saving hours in investigating the planning rules that apply state-wide or specifically to any given individual property.

**Councils submit spatial datasets online**

Councils and other planning bodies are now required to provide maps and spatial datasets to the Department as part of the plan-making process. They are also required to provide copies of development control plans and contributions plans to the Department once they have been adopted by council.

Since 30 November 2015, councils have been required to submit through the NSW Planning Portal the spatial datasets for the various planning layers incorporated by reference in the council’s local environmental plans.

The online submission system automatically checks the data against a number of the standard technical requirements and sends notification emails about the submission to the Department. If there are any issues with the data, the Department raises these with the council or other planning body making the submission, in order for any necessary amendments to be made.

With spatial data now managed through the portal, State and local government have a simpler and more reliable process for the lodgement, checking and publishing of their plans.

**Planning web map services**

From 30 November 2015, the Department made commonly used planning datasets, including land zoning, height of building, floor space ratio, minimum lot size and heritage, available for public use under open access licenses via the portal’s web map service (WMS).

While users can still download the same data as Geographic Information System (GIS) datasets, industry professionals will appreciate the ease with which current planning layers can be integrated into proprietary GIS systems by WMS when working on routine and strategic planning tasks.

**Staged implementation**

The NSW Planning Portal will be implemented in stages. Planned upgrades for 2016 include additional state and local planning datasets, new services such as tracking of state and local developments and the online lodgement of development applications and complying development certificates.

A phased implementation will facilitate the introduction of requirements to certify spatial data, giving the Department and other data custodians time to test standards for improved data access and exchange – on the basis that the data is for reference information only. Once these standards are established, the portal will become the source-of-truth for spatial planning information.

**Legislative changes in other jurisdictions**

The approach taken in NSW is resonating with other jurisdictions. Both Tasmania and South Australia (SA) have proposed legislative provisions that establish planning databases and publicly accessible portals.

In Tasmania, amendments to the Land Use Planning and Approvals Act 1993 [Tas.] commenced in April 2015. Those provisions established an electronic database of planning instruments, including state policies, planning directives, and regional land use strategies. The Tasmanian Planning Commission is required to establish and maintain an electronic zoning map as part of the database.

The Tasmanian Government has established iplan (www.iplan.tas.gov.au), the public portal to access Tasmania’s digital planning system. The portal provides access to planning documentation that has been prescribed by the Minister for Planning under the Act. The amendments also enable a range of planning processes to be undertaken electronically, including online applications and formal public submissions.

In SA, the Planning, Development and Infrastructure Bill 2015 [SA] before the Legislative Council provides for the Chief Executive of the State Planning Commission to maintain the SA planning portal to facilitate the online delivery of planning services and information.

The Chief Executive is to establish and maintain the SA planning database that produces – by accessing state planning policies, planning rules, including textual and spatial information – rules and information that apply to specific places within the state. The Bill also specifies that the Chief Executive must provide an online atlas and search facilities to allow people to search across the website and the database to find maps, including council zoning maps.

The Chief Executive would have the power to prepare and publish standards and specifications relevant to the SA planning portal, SA planning database, online atlas and search facility.

**An ePlanning community of practice**

The development of a digital planning system in NSW is guided by national and international best practice and principles of open data, standardisation of information, cloud-based as-a-service and open source applications. It comes as little surprise that similar approaches are being adopted across Australia.

Jurisdictions are modernising their planning systems to meet the challenges of maintaining the economic, environmental, social and cultural vibrancy of cities and regions while providing jobs, opportunities and affordable housing for their communities.

Perhaps it is now time for a national ePlanning community of practice, to share experiences and technical solutions, to educate the next wave of industry professionals, and to realise the opportunities presented by digital planning legislation.

**Peter Holt** is an accredited specialist in Local Government and Planning Law. He has worked for the Department since 2004 and is responsible for developing the necessary legal and policy frameworks to support the NSW Government’s ePlanning program.

**John Hudson** is the Director ePlanning. He has guided the development of the ePlanning program since 2008 and the organisational change management supporting the successful implementation of ePlanning.

**Gino Cavallaro** has over 20 years urban planning and design experience utilising spatial technologies to analyse and visualise market, environmental and social influences for federal and local government and clients in the private sector.
Welcome to our healthy built environments column for 2016 – the seventh year of bringing you news and views about what is happening across Australia and internationally in healthy planning. It is fitting that the first issue of New Planner for the year focuses on the theme of resilience.

Towards the close of 2015 world leaders met in Paris and agreed upon a global position for climate change acknowledgment and action. It is now incumbent upon us, particularly professionals such as planners, to embrace this hopeful vision and make it happen. Healthy planning has a key role to play in supporting the evolution of a resilient city with an equally resilient and resourceful population, supported by technically skilled, ethical and informed professionals.

In thinking about resilience, we propose a Model that forges the personal and professional in the context of healthy planning. We start with a broad conceptualisation of resilience and then unpack our ideas for you to consider.

**Defining resilience**

While there are many different definitions of resilience upon which we can draw, they generally incorporate two broad themes. First, is the notion of environmental readiness for shifting weather patterns and their accompanying impacts such as sea level rise, floods and wild fire. Second, are people’s physical and psychological abilities to bounce back and recover from adversity and in some cases, transform in new and positive ways. Resilience is the capacity of individuals, communities and systems to survive, adapt, and grow in the face of stress and shocks, and even transform when conditions require it. Adaptation occurs at the local level where social capital, community cohesiveness and individual responsibility are best able to be supported. This speaks to social equity and fairness in a newly constituted localised caring and nurturing urban community, as noted by internationally renowned Australian urbanist Brendan Gleeson. These conceptualisations reflect a comprehensive understanding of resilience. This is at the heart of our Model which links resilience with readiness to deal with whatever comes, as well as preventive action and attention to equity. These concepts are central to healthy planning.

**The Healthy Planning Model of Resilience**

Our Model comprises three segments.

1. **Personal Practices**

This is about individual attitudes to wellbeing and actions to support our own health, so that we can rise to the challenges presented by adversity. We well know that regular physical activity, a nutritious natural diet and time for socialisation, relaxation and fun are foundations for good physical and mental health. We espouse this for the community, but do we take the message seriously ourselves? How much do we consider our own health as an underpinning for resilience; readiness as community leaders and morally responsible professionals? Are we prepared to build connections with others in the places where we live and work and lead by example? Is this part of a personal ethic of care that we should nurture in ourselves and those around us as together we face unprecedented challenges and unpredictable changes to our way of life? Our response cannot be quarantined to the professional segment of our lives; resilience is required at all levels.

2. **Professional Practices**

This part of the Model focuses on the way we work as planning professionals, particularly employing the practices central to healthy planning:

- The use of an interdisciplinary framework – linking planning knowledge with economics and health; and working alongside environmentalists, community advocates, artists, local residents and the like.
- Partnership building across all sectors of government, industry and the not-for-profits – for example, ensuring that the provision of new physical infrastructure is accompanied by behaviour change programs to facilitate desired actions.
- The application of co-benefits – recognising that one policy can have multiple benefits, making it economically sustainable, as well as effective in gaining environmental, health and social benefits.
- The ways in which evidence is used to effectively guide policy development to underpin implementation on the ground.

In addition to these now accepted ways-of-working, planning professionals have a responsibility to question current practices, asking if they are resilient-ready. Moving away from the central provision of energy, food and water, towards more distributed and localised sourcing, is indicative of where this is already happening. The sharing economy is another example. But such practices inevitably challenge traditional orthodoxies, unsettle powerful elites and do not always operate smoothly and without unintended consequences [Airbnb for example – when rowdy holiday makers disturb local residents]. Nevertheless, it is mandatory for the contemporary professional to engage with creative and innovative ideas; no less for planners engaged in resilience work. Professional resilience is about recognising opportunity emerging from change and developing a suite of skills that are transferable to other jobs and activities, therefore rendering the planner a resilient professional in a turbulent employment environment.
3. Application of Healthy Planning
This is where healthy planning is applied with resilience in mind. It does not require new thinking or extra effort. Rather, it is a slight readjustment of context and an appreciation that the central tenets of healthy planning are environmentally sustainable and supportive of resilience. Access to, and use of a well-connected active transport network for everyone in the community is essential. Car dependence is not healthy, sustainable, nor resilient, especially when petrol supplies have been destroyed or must be heavily rationed. The provision of food security via community gardens, urban orchards and school kitchen gardens could well be the only immediate source of nutrition post disaster. The development of socially inclusive and connected communities, a key healthy planning principle, will help neighbours face adversity and support each other in its wake. This is an important aspect of mental health helping to build resilience to environmental challenges.4

Conclusion
Developing the resilience of our planet, its dependent natural systems and its people is critical in the face of unprecedented global environmental challenges. Planners play a central role in this huge task. We offer our Healthy Planning Model of Resilience as a way to bring personal understandings and insights into alignment with professional expertise and skills in the context of applying healthy planning principles. Healthy planning is increasingly acknowledged as core to good planning. It can also underpin resilience at the local level. The relevance of planning is creating a sustainable, healthy and resilient future for our planet and the life that is dependent upon it.5

Endnotes
1 Smart Growth America 2015, Building resilient states: a framework for agencies, see: smartgrowthamerica.org/resilience
4 Curtis, S 2010, Space, place and mental health, Ashgate, England.
In the Netherlands, the global financial crash of 2007 placed a number of important redevelopment projects on indefinite hold, testing the resilience of its cities. However, this crisis enabled several bottom-up initiatives to challenge the traditional Dutch top-down approach to planning, in particular in the Buiksloterham District in Amsterdam.

Last year I was the recipient of the PIA NSW Young Planners Traveller’s Cheque donated by BBC Consulting Planners. The cheque enabled me to attend the 51st International Society of City and Regional Planners (ISOCARP) Congress held in October 2015 in the Netherlands, Belgium and Germany.

The conference was organised around 12 themes discussed in 12 two-day workshops in 12 different cities within the Netherlands, Belgium and Germany. This was followed by three days of plenary sessions in Rotterdam, attended by participants from each workshop. Each theme was relevant worldwide, with some themes based around more traditional planning practices such as governance and sustainability, while others explored new issues like how we feed people in cities, and manage the rapid increase in bottom-up initiatives that are changing the way we plan.

Cooperative planning in Amsterdam

I attended the workshop in Amsterdam where the theme of cooperative planning was explored. People have always been implicit in planning in Amsterdam, with cooperative planning aiming to elevate and balance their interests alongside that of the government. The Dutch government owns most of the land in Amsterdam and is the single largest housing developer. Most residents, therefore, live in housing under long-term leasehold arrangements.

Planning in the Netherlands has traditionally been undertaken using a top-down approach since the post war era, evident in the highly planned and engineered Dutch landscape. The 1992 VINEX Spatial Plan exemplified this approach. It had a focus on developing “nodes” within the Randstad Area which led to the growth of the airport at Schiphol, the port of Rotterdam and the wider ring of cities including Amsterdam, Arnhem and Utrecht, where more than 85% of housing growth occurred during the 1990s and 2000s.

However, the Dutch economy, like many around the world, suffered when the global financial crisis hit in 2007. Major development projects were placed on hold indefinitely, shocking the Dutch development industry to its roots. But the crisis was also the catalyst for a number of bottom-up initiatives to challenge the traditional Dutch approach to planning and development.
Buiksloterham District, Amsterdam Noord

The Buiksloterham district in the north of Amsterdam (Amsterdam Noord) is a large former industrial area that is being redeveloped into a living and working quarter that will provide 3,500 new homes and 20,000m² of workspace. The district is being redeveloped from the bottom up with active participation from residents and cooperatives resulting in all development being underpinned by the latest innovations in clean building technologies.

This bottom-up movement was made possible due to the stalling of major redevelopment plans for the site as a result of the 2007 economic crisis. To kick start development in the area, large parcels of land were subdivided into smaller plots of land that were sold or leased to enable self-builders and building cooperatives to undertake a number of innovative projects. Projects include De Ceuveld, a sustainable urban development that is cleaning up a heavy polluted site, and Patch 22, a new housing project that has challenged the way the Dutch think about housing.

The De Ceuveld development involved the use of 15 recycled houseboats placed on site and retrofitted for a range of uses including offices, ateliers, music studios and cafes. The houseboats are surrounded by raised wooden walkways and landscaping that includes plant species that clean the polluted soils.

The Patch 22 development is primarily constructed out of wood and produces all its energy requirements through solar panels. Once complete later this year, it will be the tallest residential building in the Netherlands and will contain apartment shells where residents can purchase a blank canvas, allowing them to design the floor plan as they see fit and easily make changes when different stages of lives are reached.

The successes of these bottom-up initiatives in Buiksloterham are now recognised throughout the Netherlands. The Circulair Buiksloterham (Circular Buiksloterham) Manifesto2 was signed in March 2015 by 20 different parties including the local municipalities, universities, and planning and architecture firms. This Manifesto, in one part, sets the platform for future development in the Buiksloterham to embody the principles of circular living. On the other hand, it may prove to be an important document to protect Buiksloterham against large-scale and business-as-usual projects, now that the Dutch economy is growing once again.

The City Innovation Game: a tool for cooperative planning

The City Innovation Game, developed by Play the City, is a new cooperative planning tool that is being used by the Amsterdam municipality and small scale stakeholders in Buiksloterham to sell the idea of Circulair Buiksloterham to larger developers and housing companies.

The intent of the game is to encourage effective collaboration and cooperation between the government-owned housing companies and large developers with the small-scale stakeholders who have been responsible for the development of Buiksloterham to date.

The game involves four types of players: the large developer, the large housing company, building collectives and self-builders. Using a 5m x 5m playing board, each player selects a portion of the district to redevelop based on their target yields. Using scale models of different forms of housing including high rise and low rise, commercial uses, creative uses and green space, each player develops their plot. An innovation period follows where all players are required to identify areas where they create business models and partnerships (rather than competing) with other players to improve the overall sustainability and social outcomes of their developments.

There are no winners or losers in the game, with the game designed to promote creativity and collaboration between the varying competing interests in the redevelopment of Buiksloterham.

Resilience

One of the main learnings I took from the Congress was a new way of looking at resilience. Resilience is not only a test of how well a city can adapt to and manage a sudden shock or change, it is a test of the capacity of the city’s planners and planning system to be open to new ideas and innovation. Rather than react to these changes when they happen, we should be proactive as planners in our pursuit of a system and a culture that will encourage new attitudes and new tools to be developed during times of change.

Ensuring our planning systems are flexible and open to change concerns young generations and young planners the most; we have the ability to influence decisions that will allow our future ambitions to be turned into reality.

Lewis Westhoff is a qualified planner with experience in strategic and statutory planning, urban design, GIS and community consultation. He is currently working with Cardno in their Wollongong Office where he is involved in a diverse range of projects including residential subdivisions, mixed use commercial and residential developments, and aged care, health and industrial developments. In 2015, Lewis was the recipient of the PIA NSW Yong Planner’s Travellers Cheque, which enabled him to broaden his planning skillset by attending the ISOCARP Planning Congress in the Netherlands.

Endnotes

1 For a video on the De Ceuveld project, see: www.youtube.com/watch?v=D5eu3lH3BP4
2 For more information on Circulair Buiksloterham, see: buiksloterham.nl
3 For more information on the City Innovation Game and Play the City, see: www.playthecity.nl/19773/en/city-innovation-game

NSW Young Planners

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Catherine Gilbert
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NSW Land & Housing Corp.
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Urbis
Sutherland Council

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Australian local governments that have implemented sophisticated planning systems have seen an immediate improvement in community sentiment, by simplifying the often daunting task of preparing and lodging a development application.

Currently anyone wishing to submit a development application in New South Wales, for example, is met with layers of complex rules and red tape. Applicants must have a good understanding of what they are looking for to navigate regulations effectively. On top of this, the development application process can take up to 12 months, adding to the complexity of planning and development. This is the case not only at a local level, but also at a regional and state level.

Community feedback clearly articulates concerns with the existing process, saying the systems are difficult to use and it takes too much time for an application to be processed. This complexity creates undue delays, uncertainties and inconsistencies, often putting applicants off from proceeding with an application.

Impact of development delays on our economy

Not undertaking development has a flow-on effect to the building industry; projects slow down, project pipelines don’t occur and the whole ecosystem of suppliers, subcontractors and third parties is affected. Planning hold-ups mean housing construction hold-ups, which leads to a reduction in housing stock and a slowdown in the economy. In fact, in Australia there is already a considerable housing shortage issue.

Australia is the world’s tenth most socially advanced nation but a lack of housing is holding it back, according to a survey by US not-for-profit group Social Progress Imperative. Australia only ranks nineteenth in the world when it comes to shelter and fifty-first in terms of housing affordability.

While state planning reforms across the nation are currently putting a spotlight on planning processes, councils can’t afford to wait until these reforms are in place to make improvements. Reforms are often lengthy to implement and can be uncertain as changes in government impair rollout.

How can ePlanning reduce complexity?

ePlanning systems can transform the planning process by taking a templated, streamlined approach to managing all types of development applications. This approach is a significant departure from the traditional method of creating a different, highly customised process for each application type.

By introducing consistent processes, an ePlanning solution eliminates inefficiencies and delays in the development process by ensuring development applications are accurately managed. It also enables councils to meet digital government requirements, converting hard copy planning schemes into a single online source that is easy for the community to use.

A templated approach ensures all the right information is collected at the right time, reducing the workload for back-office staff who currently spend their time fielding questions about how to submit an application, or chasing up applications that are submitted incomplete or incorrectly.

For the community, it is a much more consumer-friendly way of undertaking an application, offering 24/7 access to information about the progress of an application online, without needing to go into a physical office.

Forward-thinking councils benefiting from ePlanning

After implementing an ePlanning solution, Liverpool Council in NSW sped up its development application processing times to just four days, from an average of 104 days. The council likened the introduction of ePlanning to “the planning equivalent of an express checkout lane”, enabling it to fast-track the construction of new houses in a high growth area. The self-service functionality puts the onus on developers to submit high-quality applications, with Council claiming the system will save home buyers money by increasing supply and reducing planning costs.

In 2013 meanwhile, NSW’s Warringah Council was rated one of the best performing councils in NSW after its implementation of an ePlanning solution. Over a two-year period the council improved its overall community satisfaction by 22 percent, with ePlanning simplifying and streamlining the community’s interactions with the council. Warringah transformed its image from one of the most complained-about councils in NSW to one of the state’s highest performers.

Why is ePlanning important?

With housing development critical to the health of the Australian economy, local government planning departments should already be exploring better planning systems that address current economic challenges, enable responsible development and deliver sustainability.

Council planning systems should be seen as an avenue to improve housing development and availability for the community, rather than an obstacle or hindrance. As the community increasingly expects all services to be delivered efficiently and digitally, an ePlanning solution is the only way forward for local governments.

Peter Suchting is the Group General Manager for local government at TechnologyOne, with 30 years’ experience in the enterprise software industry. A qualified accountant, Peter has held a variety of senior management roles in software development, product management, industry marketing and executive management. At TechnologyOne, Peter has overall responsibility for the strategy and direction of TechnologyOne’s solutions for local government.

Endnotes

2. See: housings stressed.org.au/get-the-facts/
When I went to my laptop and typed in the word “resilience” my search engine told me that it meant “the capacity to withstand stress and catastrophe.” Given the rapid rate of global population growth, demographic change, technological advancements, etc., it is becoming increasingly difficult to accurately predict the future.1

City planning and resilience
If we look back in history we can see examples of city planners assisting their communities to become more resilient. The practice of building walls to protect urban settlements from invasion is an example of building resilience into a city. The photograph below shows part of the city wall that protected Derry in Northern Ireland from invasion for centuries. Built in the seventeenth century, this wall assisted the city inhabitants in successfully surviving three sieges.

The rate of change
A report published in 2013 by Lloyds Register noted that the global population of 6.9 billion in 2010 was likely to climb to 8.3 billion by 2030. During this 20 year timeframe the report estimated that there will be a 40% increase in global demand for energy, coal production will double, and there will be a 40-50% increase in the world’s middle class (two thirds of this growth is expected to take place in China and India).2 Clearly the rate of change is increasing. This has important ramifications for Australia as one of the fastest growing developed nations in the world, as one of the world’s largest coal exporters and as a nation that sits within the Asia Pacific region.

Technological change
The Lloyds Register report identifies a number of potential global disruptive forces including the collapse of the US dollar and the rise of terrorism in the Middle East, and discusses a scenario of how such events might play out in the future. One of these scenarios which should be of particular interest to planners, is the potential for disruptive technologies to change future spatial patterns of employment.

Technologies like three dimensional printing and robotics have the potential to dramatically alter the way business is done around the globe. Three dimensional printing is the creation of a solid structure from a digital computer file.

This technology is likely to revolutionise the economics of manufacturing as objects can be printed in the home, office or on a work site.3 A Chinese company has already manufactured the components for a house which took just under a week to manufacture and assemble.4 These types of technologies have the potential to cause massive disruption to established industries and dramatically change where employment is located.

Planning implications
In preparing strategic plans it is becoming ever more difficult to deal with the spatial allocation of employment lands. Perhaps employment will not be located in large scale industrial and business precincts, as has been the case in the past. We are already seeing the impact that changing technologies are having on traditional manufacturing operations, which are closing down or downsizing and therefore require less land.

This issue will need to be addressed in the plans that the Greater Sydney Commission is responsible for preparing for the six Districts which make up the Greater Sydney region, and in the regional growth strategies that the Department of Planning and Environment is in the process of preparing and finalising for our coastal regions.

Planners are going to need to continue to build the resilience their communities may require so that they have the capacity to cope with the stress and economic shocks that are likely to be encountered in the future.

Endnotes
1 Hajkowicz, SA, Cook, H & Littleboy, A 2012, Our future world: global megatrends that will change the way we live, 2012 revision, CSIRO, Australia.
2 Lloyd’s Register, QinetiQ, University of Strathclyde 2013, Global marine trends 2030, London.
3 Sedghi, S & Hall, E 2015, 3D printing will have a bigger economic impact than the Internet, technology specialist says, ABC News, 2 April 2015.
Two Land and Environment Court judgments reported in recent issues of In the Courts have been scrutinised via appeal to the NSW Court of Appeal or subsequent judicial consideration.

In the Courts in September 2015 discussed a decision by the Land and Environment Court which found that a control in the Pittwater LEP 2014 was a prohibition rather than a development standard, and so cl. 6.6 of a Standard Instrument LEP could not be utilised to depart from this control (Karimbla Constructions Services (NSW) Pty Ltd v Pittwater Council [2015] NSWLEC 83). The control in question – a table in cl. 6.1(3) of the Pittwater LEP restricting the number of dwellings that could be erected – has since been reconsidered by the Court in a separate matter, and a similar interpretation has been applied (Lotus Project Management Pty Ltd v Pittwater Council [2015] NSWLEC 166).

The matter involved the refusal of development consent for the erection of 39 dwellings in two residential flat buildings under the Affordable Housing SEPP (AHSEPP). Two questions of law arose in deciding the appeal. The first was whether the floor space ratio provisions for affordable housing in cl. 13(2) of the AHSEPP applied to the proposed development. The second was whether the restriction on the number of permissible dwellings on the site contained in the table to cl. 6.1(3) of the Pittwater LEP was a development standard to which cl. 4.6 of the LEP applied. Under this table, a maximum of 9 dwellings could be built on the site.

On the first point the Court held that cl. 13(2) of the AHSEPP may apply to the development. However, this was qualified by the issue in contention in the second question of law – that is, whether cl. 6.1(3) was a development standard or a prohibition. On this second point, the Court followed the reasoning in Karimbla and held that the clause was not a development standard but a prohibition, and so the development as proposed was prohibited. As the AHSEPP only “applies to development that is permitted with consent under another environmental planning instrument” (cl. 101(1)), this meant that the AHSEPP provisions did not apply to the proposed development.
Ghost town

In a recent repeat of a 2013 episode of Top Gear, a youthful Jeremy Clarkson, James May and Richard Hammond raced around an apparently modern but deserted high rise city centre. It exists.

Ciudad Valdeluz is a new master planned transit oriented dormitory town 60 kilometres northeast of Madrid, Spain. When Spain’s high-speed train system announced in 2004 that it would be building a stop near Guadalajara on the much-travelled Barcelona-Madrid route, it was decided to build a new town of 30,000 people around it.

Construction commenced in 2006 but halted in 2008 due to the economic downturn with only 25% of the city completed. Today, Ciudad Valdeluz resembles a ghost town with a population of only 1,000, a supermarket, a corner shop and a medical centre open twice a week. A security patrol watches over the deserted streets and the empty buildings. Property values have fallen 80%.

(Sources: www.newsweek.com; www.desertedplaces.com; www.youtube.com).
**Car spaces to people spaces**

From giant games and craft workshops, to putt-putt, free BBQs and donuts, Brisbane’s inner-city was transformed on 18 September 2015 when Brisbane City Council took part in International PARK(ing) Day.

Council called for participants with teams choosing their preferred sites from a list of parking spaces promoted online. Spaces were allocated on a first-come-first-served basis to architecture, design and town planning firms, community and arts groups, and even one passionate individual. Council arranged the permits and developed a ‘How to PARK’ guide for participants. Safety bollards were dropped into place in the early hours of the morning to reserve spaces. To encourage community engagement, Council conducted a competition with a Judge’s Award for Best PARK and People’s Choice Award, selected by public vote.

*Queensland Planner, Summer 2015*

**Place DNA**

Place DNA analyses what makes a place different or distinctive, and generates planning and design policies that build on and strengthen those distinctions.

**Principle 1:** Make the best of what you have got: as a principle, is about the inherent qualities of a place.

**Principle 2:** Express Place DNA in your public realm: perhaps the most obvious and widely applied manifestation of Place DNA is in the design of a city’s public realm.

**Principle 3:** Reveal your Place Secrets: walkable towns are a delight if they allow secret aspects of Place DNA to be discovered, simply by wandering and exploring.

**Principle 4:** Get people onto the streets: a town’s people are the essence of its DNA.

**Principle 5:** Understand your Town’s development DNA: it is important to understand what’s different and distinctive about the development patterns of a place, and the causal factors that have created these patterns.

*Mike Scott, Planning News (VIC), June 2015*

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**Retailing**

Changes to the retail sector have resulted from retailers responding to and influencing the changing behaviour of consumers. These in turn are influenced by the changing way in which we live our lives. Over the past twenty years various changes to the retail sector have occurred that have significantly influenced how centres are planned, including:

- ‘Big box’ stores, many in out-of-centre locations;
- Supermarkets increasing from about 2,500m2 to 4,000m2 or larger;
- Overseas retailers establishing store networks that defy traditional activity centre hierarchy;
- Introduction of internet retailing;
- Improved convenience retailing associated with petrol stations.

Our challenge as a planning and development industry is to continue to maintain an ‘open mind’ as to what retailing may look like in the future. We need to ensure that our planning frameworks maintain a level of flexibility so that we benefit from future changes to retailing, whilst protecting the highly valued aspects of our centres.

*Nick Brisbane and Chris Hale, Planning News (VIC), June 2015*

**Planning in China**

China’s urban population has ‘roughly quadrupled in the last 35 years to more than 700 million and is likely to rise by a further 240 million over the next 35 years, lifting the urbanisation rate to around 75%.

One of the main elements of China’s approach to managing urbanisation is to plan for clusters of existing cities and new towns. China sees considerable value in gaining a better understanding of how groups of cities can work together to accommodate rapid economic and population growth.

China’s understanding is demonstrated at the Shanghai Urban Planning Exhibition Center, which provides a powerful reminder that China recognises that ‘planning works’. The Chinese know it is a key to building a more prosperous society.

*Lee Shostak, Town and Country Planning UK, Dec 2015*
Communes in France

The regional government re-organisation proposal recommends that communes should have at least 1,500 people. This potentially spells the curtains for thousands of small village administrations across France. The commune has a special place in the hearts of the French, especially the rural, and it is difficult to see many councillors or small administrations falling on their swords. My neighbours and I like to be able to pop in to our mairie, where the one paid official can fix most things. But our village is a commune of only 300 residents and so, in a kind of ‘duty to co-operate’, it has moved swiftly to join up with over 30 neighbouring small communes to create a communauté des communes.

For planning, our commune has adopted its own cadastral or local plan, with planning applications forwarded to the bureau for recommendations before decisions are taken locally. The technical aspects of planning are seen as simply another back-office function that can be ‘bought in’ from a higher tier. Residents seem quite content with the arrangement, as they know they are too small to justify a whole range of functions which can be supplied by the neighbouring hôtel de ville.

Graeme Bell, Town and Country Planning UK, October 2015

Vertical City in a Garden Industry

With growing recognition of the healing power of nature and the need to include flora and fauna in the planning of our cities, few emerging models of biophilic urbanism are as compelling as Singapore. Several years ago this city-nation changed its motto from “garden city” to “city in a garden.” Most impressive are the ways plants and nature are being incorporated into the design of the vertical realm in Singapore. It is happening through a number of interlocking policies — financial subsidies, research and development, an annual skyrise greening award — and development regulations. There is a landscape replacement policy that mandates a minimum of one-to-one replacement of ground-level nature with vertical green elements, and now a friendly competition by developers and architects to push well beyond these minimums. One soon-to-be built structure called Oasia Downtown, designed by the firm WOHA, boasts a 750 percent replacement value (or what we might describe in as a Green Area Ratio of 7.5, as companion to floor area ratio). Another example of the emerging Singapore approach to the vertical urban garden can be seen in the Park Royal on Pickering Hotel where every guest room in the 367-room hotel looks out onto plant-filled, contoured concrete terraces that were designed to suggest a natural landscape.

John Smit, Planning (USA), January 2016

Solar Energy in Dartmouth

With enough solar energy generated within its borders to power 3,250 homes, Dartmouth, Massachusetts (pop. 34,032) leads the state in renewable energy production. It is also one of the first communities in the country to offset 100 percent of its municipal government electricity use with renewables.

The 2007 Dartmouth Master Plan was a vehicle for the town’s leadership in sustainable energy. The plan identifies support for renewable energy as a goal, with action steps such as changing local regulations to promote renewable energy, developing alternative energy sources to meet municipal needs, and establishing goals for renewable energy use for municipal buildings.

Dartmouth leverages its solar revenues to support residential solar installations and fund energy efficiency projects. All its streetlights and the lights at the town hall are LEDs; a retrofit of the library is next.

Megan Day, Planning (USA), December 2015
Welcome to the first Inbox column of 2016, which highlights just how dynamic our industry is at the moment and how much change is on the planning horizon.

The launch of the Greater Sydney Commission and announcement of Council amalgamations could be seen as two of the biggest changes in NSW planning since the implementation of the EP&A Act in 1979. Both are likely to cause ripple effects across workplaces as the changes come to fruition.

News from the Department of Planning and Environment was extensive towards the end of 2015, with a number of significant employee movements. In the Planning Policy Division, Deborah Brill was appointed Director of Housing Policy. Danijela Karac was appointed Director of Planning Frameworks and Leah Schramm was appointed Director, Employment Policy and Systems. Matthew Jones, Executive Director of Community and Stakeholder Engagement, is taking up the role of Executive Director of Strategic Communications and Events at the Department of Premier and Cabinet.

Anthea Sargeant was appointed to the role of Executive Director, Key Sites and Industry Assessments in Planning Services.

To keep us on our toes, there have also been a number of team name changes and new teams established in the Department’s Resources and Industry Policy Division. The Assessment Policy Team will now be known as the Industry and Infrastructure Policy Team, which will lead the review of the Infrastructure SEPP and be led by Felicity Greenway. A new team focussed on the natural and built environment has also been created and charged with bringing together the Coastal and Natural Resources Policy Team, the Building Systems Unit, and the Sprinkler Implementation Program Team. The Team will be responsible for such things as the coastal reforms, marine estate management reforms and bushfire policy. Stephen Barry will be the Director of Resources Policy and Luke Walton the new Director of the Building and Environmental Policy.

After a 10 dedicated years in the NSW State Government across both Transport and Planning, Juliet Grant has accepted a new position as a Director at City Plan Strategy and Development. In the Sydney office, Juliet joins recently appointed Executive Director, Stephen Kerr (formally Planning Director at Rockdale Council). Amanda Wetzel (formally from the Department of Planning & Environment) has also joined as an Associate Director in the Newcastle office.

Stephanie Barker will help fill the void at the Department as she begins her role at the helm of the new Urban and Regional Planning Team. Also leaving the Department, Andrew Hill accepted a new position at Gosford Council, Cheramie Marsden returned to the private sector, and Lee Mulvey and Paul Robillard will be exploring new challenges when they depart in early-2016.

Marjorie Ferguson has left Canada Bay Council after 10 years as Manager of Strategic Planning to take up a Principal position at HillPDA. Marjorie is also PIA NSW Division President for the next two years and we wish her all the very best in this role.

Sarah Hill, former PIA NSW President and Director of HillPDA, has been appointed as the CEO of the Greater Sydney Commission – a fantastic opportunity and everyone at PIA extends their congratulations to Sarah.

Elton Consulting announced the significant expansion of their Canberra office with Dan Steward, Karen Wright, Matthew Meyer, Elizabeth Judd, Annabelle Pegrums, Agnieszka Liso, Sophie-Marie Efkaridis, Claire Middleton and Roz Chivers all forming part of the new team.

Towards the end of 2015, JBA congratulated several promotions within the company including their newest associate Chris Bain, new principal planner Stephen Gouge, new senior planner Harry Quartermain, and their new urban planner Matthew Norman.

At Architectus, Greg Burgon and Natalie Winsen received promotions to Associates. Congratulations.

We would also like to congratulate Geraldine Haigh, who is marking 12 months in her new venture as a sole trader planning consultant, GEM Planning Projects. Geraldine is also on the NSW Divisional Committee and is excited to see the recent changes that give city wide planning in Sydney a much higher profile and priority, with members of PIA holding key roles.

Do you know of any industry news, such as a recent recruitment, promotion or retirement, that would interest New Planner readers? If so, we’d love to hear from you! Send an email to newplanner@planning.org.au with ‘The Inbox’ in the subject line.
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