



## Conference Abstracts

### Day 1

#### Keynote: Universal design as a public good - can it deliver?

*Gerald Craddock*

We live in a diverse economic, social, cultural, organisational and environmental global system, with dynamics and interactions changing by the minute, often influenced by factors we have yet to comprehend. Regarded as an enabling concept, Universal Design (UD) faces significant challenges in gaining traction in this complex and fast changing world. The UN Convention on the Rights of Persons with Disabilities calls for governments to embrace UD in developing new products, services and environments. It is a landmark for the UD community and its significance cannot be underestimated. The Convention is now ratified by over 80% of countries in the world. This recognition has further enabled the embedding of UD in research development and innovation, education, policy, practice and industry.

Overcoming challenges requires the development of a global community collaborating and developing “use-inspired basic research”. This can only happen with clearly agreed taxonomies based on defined universal classifications such as the WHO International Classification of Function (ICF) and The *OmniClass* Construction Classification System for the construction industry (CEUD 2013). Delivering a strategy based on use-inspired research will require the UD community to partner at strategic, operational and policy levels with key stakeholders if the promise of UD is to be actually embedded within our societies.

At a strategic level, consideration must be given to collaborations and partnerships with communities of similar aspirations such as the sustainable/green community with its triple bottom line of People, Profit and Planet. The consideration of UD moving from a globalised concept to being embraced “glocally” will be important for UD to be sustainable. At an operational level, academics, designers, industrialists must be encouraged to adopt and apply the philosophical underpinning of UD that brings

together the exclusive and the inclusive worlds through design, and accepting the key elements of UD as best practice and sound economic sense. The reframing of standards from a minimum specification requirement to performance/success based criteria is also an important step in this direction.

At policy level governments need to focus on the challenges that embrace the true recognition of the economic, environmental and social sense of UD. Government officials must become the knowledge translators of complex issues and in so doing bridge the “know-do Gap” (WHO 2006). Government must also become honest brokers in providing a “safe harbour” that creates a collaborative environment in which diverse stakeholders engage and come to evidence-based, and context-informed recommendations for action that have the agreement of all. Finally, boundary spanners are required that proactively cross silos and connect disparate communities through education, collaboration knowledge sharing, and where all voices are equal in seeking to design better futures for every citizen.

### **Beyond universal design – what else can designers do?**

**Guy Luscombe**

The principles of universal design, as they are realised in buildings and products, focus on physical and physiological needs such as accessibility and of ease of use. However, despite being hinted at by principles of equitability and simplicity, the more emotional and psychological barriers, such as stigmatisation and social exclusion, are not usually actively addressed in building design. True universal design would surely address this and try to design for the whole person. But is it possible and if so, how can the more emotional and psychological needs be addressed in design? This presentation will draw upon an exploration of innovative buildings for older people completed as part of a Byera Hadley Travelling Scholarship study tour recently completed to suggest that there are ways to design for the whole person and provide a more thorough, richer and ultimately more inclusive universality.

### **Inclusion a necessity not an option**

**Geoff Barker**

Experience suggests that there are divergent views about the purpose of community engagement, what it involves and how it is carried out, which are often misguided and uninformed. A typical statement heard from time to time: *“We’ve already consulted with the people and we know what they need and want”*. This is compounded by statements from stakeholders warning the team that involving people wouldn’t work and a plethora of excuses as to why the project team should just get on and implement the project. This paper explores the context that faces every project and how this informs an engagement process that embraces the involvement and contributions of a diverse range of people, focusing on people being participants rather than merely recipients of development. This includes a need to demystify myths as well as achieve a broad range of diverse objectives which challenge any project team. It is therefore

important to have a quality engagement team with a comprehensive engagement plan. A brief summary of a major project in several Indigenous communities in the NT is used as an example.

Working simultaneously in 13 remote NT locations the project team engaged intensively with a broad range of people taking into account particular social and physical needs, designed, negotiated approvals, built and handed over to management entities 518 new houses and six new sub-divisions, including more than 20 per cent Aboriginal employment plus extensive training . However the real challenges and outcomes lay behind these statistics. These are explored showing a short film followed by an interactive conversation.

### **Slip resistance according to Goldilocks**

*Richard Bowman*

The Goldilocks principle dictates that liveable housing should have flooring that is just right. In terms of slip resistance this means not too slippery and not too rough (so as to be difficult to clean or likely to cause stumbles). This enlightened view runs contrary to some safety experts, who simply believe that specifying greater slip resistance is the effective panacea. People want to live in safe homely environments, not with senselessly mandated semi-industrial flooring. In a sensible world we would make informed decisions based on established data. In the world of slip resistance, there has been no infrastructural benchmarking. Undertaking any public good research is generally considered somebody else's responsibility due to the perceived high costs. Governments invest heavily in trying to prevent older people from falling, where researchers seek to devise increasingly incremental degrees of preserved health, fitness and postural stability, and to protect older people from being subjected to medically prescribed polypharmaceutical disorientation. Yet none of the duplicated biomedical multivariable studies have actually determined the available underfoot traction. Most falls by older people are likely to be due to biomedical causes rather than environmentally induced slips, but the whole community benefits from appropriate slip resistance levels.

This presentation will provide a sneak preview of outcomes of two current research projects: a psychophysical slip resistance study where experiential public participation should indicate what bathroom flooring is considered to be just right; and a pilot study using virtual reality environments to determine when pedestrians modify their gait and reduce their traction demand, thus enabling development of improved risk models relevant to specific situations. The ultimate aim is to get universal design slip resistance specifications just right.

### **Universal and inclusive design: Inter-professional perspectives**

*Helen Larkin*

The Design for Diversity initiative at Deakin University embeds universal design practice into the undergraduate curricular of architecture and occupational therapy

programs, thereby building inter-professional education. This initiative is informed by research that was undertaken to explore the perspectives and experiences of key industry stakeholders including, architects, occupational therapists, access consultants and key disability advocacy agencies. A total of 28 people participated in the qualitative study through either focus groups or individual telephone interviews. Six key themes emerged from the data being: what is universal/inclusive design; multiple stakeholders; what's holding us back; making it happen; skills required; and, bureaucracy. This paper will present the key findings from this study as well as an overview of how the Design for Diversity initiative continues to build capacity for inter-professional education and research related to universal/inclusive design practice. It will also highlight how this initiative aims to ensure that graduates are prepared and able to work in both existing and emerging areas of inter-professional practice.

### **Slips Trips and Falls: Access, safety and poetry in urban places**

*John Clarke*

Notwithstanding the recent attention to sustainability in Urban Design, there remains a vast difference between the aspirations of public authorities and designers and the built outcomes in our urban places. As a culture, and as designers and place managers, and as custodians of the public realm, we need to be more vigilant, better prepared, educated, and to better understand what is required of built environments. Issues of universal design and particularly accessibility and public safety continue to be misunderstood, and place management poorly conceived or implemented. Despite a mature design industry and the myriad of policies, regulations, and design guidelines; our urban places and connections fall far short of the goals we deserve. This is partly due to governance and budgetary allocations, but a quick survey of any of our urban places shows that as a culture we struggle with implementing design for safety and accessibility, let alone infusing our places of with human dignity and poetic experience.

This presentation examines the experience of design through visual examples and appraises some of the reasons for their failures and likely consequences in terms of safety and accessibility. Further evaluation reveals potential opportunities that might have been derived if technical, regulatory and OHS design techniques were methodically applied, and if the principles of universal design had been considered at the design and implementation stage. This may expose some the reasons why our endeavours are less than successful. Finally this presentation muses on the path ahead for designers and public authorities and what challenges they need to confront in the nature of future design management, regulation and policies to help bring about universal design.

### **Access and Inclusion in NSW: Working across government and community partners**

*Richard Hawkins and Abigail Gray*

The presentation will highlight the projects being undertaken to support greater inclusion of people with disability as part of the implementation of the National

Disability Strategy NSW Implementation Plan and the processes of partnering with community stakeholders and across government to bring about systemic reforms and address some of the more intractable barriers. The NSW Department of Family and Community Services is working on programs to support access and inclusion for all members of the community and to identify how accessible communities can be developed through consultation and incorporation of feedback from stakeholder groups, working across government agencies at all levels to support planning process and identifying opportunities to incorporate the principles of universal design.

### **Fair Play - inclusion begins in the playground**

*Bec Ho and Justine Perkins*

Fair play - inclusion begins in the playground is a discussion around how the creation of accessible and inclusive play spaces is changing the way people perceive the needs and abilities of those in our communities with differences. Five case studies will take participants on a journey to the playground, using photo, video and illustration to detail the experience. We will then look at simple and cost effective measures that decision makers and advocates can adopt to help ensure playgrounds meet the needs of all of our communities.

### **Design for access and inclusion in play spaces and parks: those devilish details that make a difference**

*Mary Jeavons*

The need for access to nature, parks, gardens and diverse outdoor play opportunities is well documented and fundamental to human wellbeing. Parks and open space become increasingly important as the densities of cities increase. The design of these important spaces is therefore critical in determining how individuals of all ages and abilities access the outdoor settings for play and recreation, physical activity, social interaction, respite and retreat, and engagement with nature.

This paper focuses on the design of parks and play spaces of all kinds and their potential for intergenerational play, social interaction and community building, and for interaction with the natural world. This is a contested domain. Play equipment in a neatly fenced rubber space, it is argued, cannot meet all of the play needs of today's children and families. To design quality play settings in urban environments, designers need to address challenging issues in play provision such as the need for: looseness and responsiveness in public parks to allow for hands-on engagement and creativity; self-directed, unstructured play; provision for risk taking behaviour; high levels of useability and multi functionality; and for diversity in the qualities of parks, play spaces and open space. A particularly thoughtful approach is required to provide and protect these and many other aspects of quality play and recreation environments, and to engage users of all ages and all abilities. As we broaden our concept of play, we can diversify the way we design to maximise useability. This richly illustrated presentation will show examples of

details that matter to maximise physical access, social inclusion and opportunities for all users to participate in outdoor play in parks. (Paper presented by Sally Jeavons.)

### **Where are the children? Positioning children, young people with a disability and their families in the universal design agenda.**

***Dr Lisa Stafford***

Creating environments friendly for all citizens needs to start with recognising human diversity at both policy and practice level. Too often, the human body has been homogenised into standardised forms, which has meant that some citizens, such as children and people who use mobility devices, have been ignored in designed environments. Barrier-free and Universal Design has been critically important in helping to remove such injustices encountered by people with a disability in general. However, children with disability still encounter significant barriers as they have remained largely absent within the universal design discourse.

This presentation seeks to open up a dialogue about children, young people and family's social spatial needs in universal design. Drawing on research and practice, the aim is to first, highlight how current practice, policy and legislation in Australia have failed to consider age diversity in universal design, specifically relating to children, young people with disabilities and their families. Second, the implications that follow when their needs have not been considered in urban spaces. At the end of the presentation it is hoped that people will be committed to thinking about children, young people and their family's spatial requirements in universal design, and support their place in policy and legislation progression. Without having a visible presence at all levels, they will continue to be overlooked, and as such will have to continue to avoid urban spaces because their needs are unmet.

### **Mutual involvement for inclusive practices in design**

***Cecília Peixoto Carvalho***

Despite the accepted advantages of user involvement in design projects, such as deeper understanding of people's needs, capabilities and aspirations, procedural difficulties are recognized and discouraging design teams. Moreover, when we consider users with disabilities, greater challenges are identified. This study is grounded on a participatory experience into the lives of people with disabilities, in which it became possible to observe that many of those stated problems in user involvement may actually be overcome or compensated with significant gains for design. This two years and still ongoing experience includes sport practices and other leisure activities. Our work showed that user involvement should not be assumed as a unilateral process in design development and that for better achievements, a bilateral process is needed. Involving and being involved with users apparently opens more possibilities of success.

### **Interrogating inclusivity with a person centred frame:**



### ***Diana Palmer***

This shift to centre does not threaten creativities of professions in service to the built, civic and natural environments. It demands instead a prick to active listening to engage in discussions of access, journey plans, threshold invitations, participants in and users of place and amenity. This sits in direct paradox to being done to, good for, gazed upon, shut out or assisted in. As a consequence the frames change for all practice when the whole person is the sovereign being in choice and control. This presentation will explore the attitudinal barriers to person-centredness and will give an example of process design for collaboration informed by human rights, and a case study of a commissioned temporary arts and experience space designed for people with disability and others by an artist with disability and its universal success. The call of this paper is that citizens and residents assume and demand their right to choice and control.

### **Engaging with communities and stakeholders in universal design**

#### ***Michelle Blicavs***

Planning and design for our public spaces often attracts great emotions from our communities. Public participation, or community engagement, is based on the belief that those who are affected by a decision have a right to be involved in the decision-making process. It includes the promise that the public's contribution will influence the decision. This presentation will provide some insights into how outrage can be minimised and how a better engagement process can result in better outcomes in planning and designing public infrastructure that meets the needs of the community. Included in the presentation are tools and techniques for engaging with the communities who use public places, and the importance of the promises made to the public and stakeholders whether that be through informing, consulting, involving, collaborating or empowering that community in the decision making process. This is particularly relevant when considering design for liveable communities for people regardless of their age, gender or ethnicity. Engagement is about reducing risk for decision makers and achieving better outcomes for communities and stakeholders.

### **From Adaptable to Universal Design: Implications for housing usability, marketability, and innovation**

#### ***Joanne Quinn***

The preference for Australia's ageing population and people with disabilities of all ages to remain living at home has led to increased focus on appropriate housing design. For nearly two decades the approach has been Adaptable Design: designing housing to be easier and less expensive to modify if an occupant's abilities decline in the future. Australian Standard *AS 4299-1995 Adaptable Housing* is the basis of numerous Australian design guidelines and state and local Government regulations, for housing for older people and people with disabilities. More recently, the Australian approach to provision of appropriate housing design has moved towards Universal Design. Whereas

Adaptable Design relies on ease of modifying housing to meet needs of people as they age or their abilities decline in the future, Universal Design is concerned with meeting the needs of people of all ages and the widest range of abilities, avoiding future modification. Application of Universal Design to housing has ranged from the minimum, critical features for occupants with reduced mobility, through to comprehensive and flexible features for a full range of occupants' physical, sensory and mental abilities.

This presentation draws on the findings of two research studies highlighting the differences between Adaptable and Universal Design approaches. In the AHURI research project *Dwelling, land and neighbourhood use by older home owners*, and doctoral research project *A home for all ages: Design of the home environment for an ageing population*, Adaptable and Universal Design criteria were applied to three contemporary dwelling designs: a separate house, an attached house, and an apartment. The studies afforded a comparison of Adaptable and Universal design approaches in Australian housing, particularly in regard to cost, impact of regulation, feasibility in design and construction processes, marketability, usability and amenity for all residents in the household, and potential for innovation.

### **Local government - friend or foe in the quest for Universal Housing Design**

#### **Noelle Hudson**

Local government is where policy decisions are made and implemented, directly influencing people's lives. Councils approve developments, apply planning law and develop inclusion policies for their residents, but this does not include how residences are built. In 2011, Queensland Action for Universal Housing Design (QAUHD) contacted all Queensland's local government authorities asking for their support for the adoption of universal housing design (UHD) and regulation for minimum access requirements in the Building Code of Australia. Support for UHD was strong, with 2:1 in favour of amending the Building Codes to include minimum access requirements. This support was strongest in South East Queensland meaning the majority of Queenslanders live in a Council that supports the changing the building codes. In fact, all urban councils that responded were in favour of the move, citing changing demographics of their residents, inclusive community practices and a need for an increased supply of accessible housing in their regions. While most councils acknowledged the building codes were outside of their jurisdiction, they stated changes to the Building Code of Australia were necessary to deliver the needed supply of accessible housing.

LGAs not in favour of the change referred to their lack of jurisdiction in changing the Building Codes, linked accessibility with affordability issues and stated existing building types within their areas were not conducive to universal design in housing. During this time, the Federal government has stated its commitment to ageing in place, Livable Housing Australia has been operating, and the National Disability Insurance Scheme has been adopted. QAUHD resurveyed all councils in February 2014 to chart the influence the federal policies on the attitudes of Queensland's LGAs towards adopting



UHD and regulation for minimum access requirements. This presentation showcases Queensland's local government's attitudes on regulation for minimum access requirements, and identifies issues in their sense of ownership in supporting universal housing for their constituents.

### **The house that Chris built: A user's perspective.**

#### ***Chris Nicholls***

In 2000, during a motorbike accident, Chris sustained a spinal Cord injury, resulting in complete paraplegia – Chris likes to stress that far from being a hoon, he was stationary at the time and was rear-ended by a truck! Having stayed in a number of rental properties since leaving hospital, he and his wife soon discovered what did and didn't work in a property with respect to being a wheelchair user with limited balance. In 2006 he designed his two-storey home, ensuring that it would meet all his needs. In 2007 that home was built by a project home building company.

In his presentation Chris explains the specific requirements of a home for someone with his disability, as well as the family they share it with, gives tips on things to look out for, explains why Australian Standards may well not suit everyone, speaks about the challenges of ensuring builders build what is requested, not what they think is best and discusses how to avoid the finished property looking like a hospital ward. Chris believes functionality and aesthetics can work together and should not be put in an "either or" category.

### **Remember hearing loss**

#### ***Carol Wilkinson***

It is vital that planners, architects and building designers consider people with hearing loss in order to enhance universal design of public spaces. Imagine you are going on a long awaited holiday. At the airport there is a delay to the flight but you are unsure why. A message comes over the PA system but you're having trouble understanding it because you have a hearing loss and, even with hearing aids, the noisy background makes it impossible for you to hear the announcement. It is the middle of the night at your hotel and the fire alarm goes off. Thank goodness it's a false alarm, because you don't sleep in your hearing aids and you were not woken by this auditory signal. The restaurants and cafes that you dine in whilst away are noisy and this makes it difficult to converse with the new people you are meeting on your tour as well as the staff.

All these difficulties could be avoided or at least improved upon if more thought had gone into the design of buildings and facilities. Hearing loss seems to be a forgotten disability in many ways, not the least when it comes to providing public facilities. At least twenty percent of the population experience hearing loss with younger people also affected. Consequently, it is amazing that there is not a greater awareness of providing an inclusive environment for people who are deaf or hearing impaired. This paper will

look at things that can help, whether at home or on holiday, and how it is much easier and cost effective it is to include them in design rather than retrofitting.

### **Measuring Wellbeing through the DIY Home Modifications: Point of Sale Support for People with Disability and their Carers project**

*Nicole McNamara and Catherine Bridge*

Appropriate home modifications contribute significantly to the wellbeing and safety of people with disability and their carers and can enable individuals to remain living in their own homes. Whilst home modifications have traditionally been delivered by government-funded programs in NSW such as the former Home and Community Care (HACC) Program and the current Community Care and Support Program (CCSP), these subsidised-modifications only represent a small percentage of home modifications nation-wide. This paper presents an exploratory study of Do-it-Yourself (DIY) home modifications in NSW to investigate the wellbeing benefits associated with undertaking home modifications outside of this service-delivery system. We define a DIY home modification as a project undertaken by a person with a disability or with the assistance of family members or friends. The positive impact that DIY can have on individual wellbeing is examined using preliminary findings from semi-structured interviews conducted with key informants from a range of disability organisations, relevant government agencies, hardware retailers, and retailer associations (whose members, clients and/or customers include people with disability and their carers). The preliminary findings identify the need for further research into DIY home modifications and wellbeing. The paper concludes by proposing a mixed-method approach to examine the relationship between DIY home modifications and wellbeing more closely, through employing an economic analysis coupled with qualitative interviews. (Researchers: Nicole McNamara and Catherine Bridge, presentation by Catherine Bridge)

### **The diverse impacts of home modifications – applying universal design principles to existing homes**

*Phillippa Carnemolla*

Applying universal design principles to an existing environment, as in the case of home modifications, can have significant impacts beyond the physical environment. Home modifications can be considered the application of universal design principles in the setting of an existing home environment. There is evidence to suggest that the impact of home modifications extends across both community and individuals. The implementation of home modifications impacts the availability of accessible housing supply in the community, and the care demands across the population. Home modifications also address the complex needs at an individual level of older people and those living with disability. Research in the fields of housing and health provides evidence that the impacts of home modification include improvements in accessibility, independence, caregiving support and wellbeing. This research explores the depth and

range of impacts of home modifications. This discussion is based upon the preliminary results of exploratory research developing an economic model of home modifications which will ultimately consider the associated costs and benefits of the home modifications impacts across the health and housing sectors.

## Day 2

### Panel Session 1

#### Population Ageing: More of the same?

*Kathryn Greiner AO*

Creating a Liveable Community for All means designing a community which is friendly and accessible to all. While it recognises that older people, people with a disability and carers have special needs to make their community more 'liveable', there is also significant overlap and much to be gained by collective effort. Liveable communities require forward thinking and planning of the physical and social environment, as well as a change in communal attitudes. These are critical to creating communities which enable people to lead active lives and access their communities easily and safely. Liveable communities provide opportunities for active citizenship, regardless of age, ability or caring responsibility.

#### Child Friendly by Design: Capturing the voices of children

*Nikke Gladwin:*

This introduction to Child Friendly by Design will share how the voices of children can influence the design of places, spaces and communities that are good for everyone. This short insight into the value of talking with children will share the highlights of including children's ideas and aspirations in urban design.

#### Universal Access is not Universal Design

*Mark Relf*

Legislation, regulations and standards relating access for people with disability have a role to play in creating more inclusive environments, but that is not the whole story. As with many rules and regulations there are times when situations arise where meeting all the statutory obligations fails to result in the desired outcome.

### Keynote: Making universal design a reality - confronting affordability

*Kay Saville-Smith*

Affordability is too often used to rationalise the delivery of poor design. However, universal design can be used to underpin and be locked into affordable

housing solutions. Ways in which universal design and affordability can work together will be discussed.

## Concurrent Sessions

### Universal Housing Design: Let's get going!

*Margaret Ward*

Universal housing design is a well-accepted concept amongst designers, policy makers and advocates for community inclusion. Basic access features in housing has both economic and social benefits, and they contribute to the sustainability and inclusivity of communities. Its implementation in building practice, however, has been poor. Recent research indicates that most developers, designers and builders rely on Australia's regulatory framework, the National Construction Code, to define their building practices, and in the absence of any access requirements for private spaces, the housing industry is unlikely to change its ways. Livable Housing Australia has taken a voluntary approach to transform building practices within the housing industry and has yet to prove its worth. From the achievements reported thus far, their 2020 target of all new housing providing minimum access features appears unlikely to be reached. Governments, industry representatives and advocates will soon be required to choose between supporting Livable Housing Australia's voluntary approach and reaching this 2020 target.

This paper reports on a project which analyses the responses to this dilemma by the community, government and industry representatives who supported Livable Housing Australia and the voluntary approach. It discusses the actions that have been taken to date, and what outcomes can be anticipated in the next five years. It compares Australia's experience with those of other similar countries, and concludes by suggesting that the more assertive approach of regulation will be necessary if the Australian housing industry is to adopt universal housing design.

### Housing Our Future: People-centred approach to sustainability

*Queenie Tran*

The Livable Housing Guidelines, a lifecycle housing approach to residential design and construction, encourages us to imagine a sustainable model of living where we can reframe sustainability through the integration of economic, social and environmental building practices. Australia's population is projected to reach 42 million by 2060. Of that, one quarter are expected to be over our current retirement age. The global phenomenon of population ageing is one that is to the forefront of national interest with potential policy implications. Aged care costs have been projected to rise from 0.8 per cent of GDP in 2009-10 to 1.8 per cent in 2049-50 with residential care accounting for up to 85 per cent of that figure.

Cynthia Banham explains universal housing to be “building a house to last its occupants' lifetimes so whatever happens, should they get injured or grow old, they will still be able to live independently.” However the success of universally designed houses rests on the design being one where it is “more capable of easy and cost-effective adaptation”. How does one quantify ease of adaptation and low-cost? Are architects and builders' understanding of ‘ease of adaptation’ and ‘low-cost’ the same as someone who has just been in an accident and is finds themselves a wheelchair user?

This paper addresses the different compromises faced by architects, builders and developers in addressing the key ideas of ease of adaptation and low-cost through case studies of projects and design solutions in order to achieve a universally designed home. Universally designed homes should be safer homes that are flexible, inexpensive in adaptation but still marketable. Through a series of scenarios, this paper initiates the comparisons in understanding the differences between retrofitting and purpose built universal homes through a long-term perspective of economic, social and environmental sustainability. This paper takes the perspective of an access consultant using case studies.

### **Banyule City Council – Making it happen: influencing private development to provide liveable homes in local communities.**

*Shawn Neilsen and Joel Elbourne*

This paper discusses the lessons, implementation and the policy context in Victorian Local Government in providing liveable homes in local communities. People of 65 years and over account for just over 15% of Banyule’s population, but by 2031 this figure is expected to reach nearly 20%. There is also projected to be some growth in the number of lone person households from 22% to 24% of all households. In addition approximately 20% of our population report experience a disability of some kind and more than 5,600 residents (4.8% of the population) report experience a disability that limits the core functioning. In response, Banyule Council has developed the Liveable Housing Project that is designed and motivated by a desire to improve local housing for these and other demographic groups. Since April 2013, Council has been requiring the incorporation of liveable housing features in new developments in line with the directions of Council’s Housing Strategy and Council’s Liveable Housing Guidelines which were developed in late 2012. Over 200 dwellings have proposed incorporation of Council’s Liveable Housing Guidelines since the launch of the guidelines in April 2013.

Council’s approach has been to use existing provisions within the Banyule Planning Scheme and apply specific guidelines that result in increased supply of housing that is able to meet the needs of current and future residents as they go through life. Council’s Liveable Housing Guidelines are implemented through Council’s statutory planning officers. Banyule has also focused on educating and engaging with the development community including hosting its first Sustainable Housing Forum in 2013.

This presentation will focus on the design and development of local initiatives to improve housing liveability; engagement with the development community; training and marketing of liveable housing and; the success of considering liveable/universal design at the planning stage. The presentation will concentrate on how local governments can proactively engage with the development community and develop initiatives to improve the design of new housing to benefit the full range of community members.

### **Universal Neighbourhood Design: Making place for multi-generations of all abilities** **Dr Lisa Stafford**

Neighbourhoods play an integral role in facilitating both individual and community wellbeing. They have been associated with engendering cohesive and healthy communities (Thompson & Magnin, 2012; Mees, 2012), sustainable mobility (William, 2005; Schenier & Kasper, 2003), and physical activity (Hume, Salmon, Ball, 2005). However, studies have also suggested that poorly planned neighbourhoods are unfriendly towards children (Horelli, 2007; UNICEF, 2012), people with disabilities (Stafford, 2013, Gleeson, 2001, Imrie, 1996) and older people (Baldwin et al, 2012; Judd, 2012, Judd et al, 2010; Vine et al. 2012). Despite this knowledge and known problems, the neighbourhood scale continues to receive inadequate consideration from a universal design perspective. In Australia, the 2011 enactment of the *Design for Access to Premises Standards* (2010), underpinned by *Disability Discrimination Act* (1992) and supported by Design for Access and Mobility Australian Standard suite (AS1428), resulted in the requirement of universal access to public buildings. Whilst, private homes (class 1A structures) were not included in this standard, along with public spaces, there is, however, intense advocacy and well-defined guidelines and programs promoting universally designed housing. However, there is little guidance for planners, developers and designers about how to make neighbourhoods accessible for multiple ages and abilities.

This presentation argues for the need to build an agenda for universal neighbourhood design, and an understanding of the foundations that are required to create neighbourhood environments that are friendly and inclusive of the diversity of ages and abilities. The presentation supports this through the discussion of findings from three studies: 1. a participatory study of seniors in south-east Queensland (SEQ) (Baldwin et al., 2012), 2. a person-environment study of children with physical disabilities and their families' participation in urban spaces in SEQ (Stafford, 2013), and 3. document analysis of neighbourhoods, UD and planning relating to multi-generations and abilities (Stafford, Baldwin and Beazley, 2014).

### **Creating environments that enable: stories of success** **Danielle McIntosh**

Dementia design is good design *per se*! So why is good design for older people and people with dementia rarely prioritised in the creation of liveable community



spaces? Older people and people with dementia require environments that will compensate for the myriad sensory, physical and cognitive changes that can strip away their independence. The built environment can have a positive impact on supporting older people and people with dementia to live well. This presentation will address how evidence based design principles and features can support dignity, wellbeing and inclusion. Experiences and success points from designing and building residential aged care services, independent living units, outdoor public spaces and community amenities, both within Australia and internationally will be discussed.

### **Universal Design in Sport and Recreation**

#### ***Sofi De Lesantis***

As Australians, sport and recreation forms an invaluable part of our cultural fabric. At the elite level it is a source of pride and unity, and at the grassroots level it is in many cases the heart of entire communities. For people to participate in sport and recreation—as players, coaches, officials, volunteers, or supporters, we need quality facilities that encourage people to participate.

Sporting facilities at both the elite and community levels share a commonality in that people come from all walks of life to participate: whether young or old, tall or short, with differing levels of ability and from countless different cultural backgrounds. In many instances sporting facilities also serve as a social hub, providing non-sporting-related community groups with a place to meet, interact and hold events.

Through the development of high-quality facilities, the principles of universal design can provide an opportunity like no other to facilitate inclusion. By incorporating universal design principles, we can ensure that not just some people, but *all people*, can feel included and share in the same experience without the need for differentiated or specialised/adapted features. Universal design has been implemented with tremendous success across many sporting facilities across Victoria and has played a key role in ensuring equitable access and an inclusive environment for all who come together to share their love of sport and recreation.

This presentation will encourage practical, insightful, and informative discussion about applying universal design thinking and principles in sport and recreation, from procurement and planning process to influencing design outcomes for a range of users and abilities, and how its use can lead to more active and engaged communities.

### **Utilising Universal Design on “Soft Infrastructure” for competitive advantage and greater economics returns.**

#### ***Bill Forrester***

We talk a lot about universal design in the context of making our built infrastructure fully inclusive. We need to expand the definition of universal design to the “Soft Infrastructure” especially in the areas of tourism, leisure, and recreation to change the culture of those industries towards customers with a disability. Many billions of

dollars have been spent on the building of accessible facilities all over the world over the last 20 years in compliance with building codes and anti-discrimination legislation, yet we are still faced with a lack of information on those facilities being made available to the very people that not only need the information, but the people who could yield an economic return on that investment.

The ageing population is driving a growing, but under-serviced tourism and leisure market that will be increasingly reliant on both accessible infrastructure, and products, services, and information. US research by McKinsey & Company predicts that by 2015, the baby boomer generation will command almost 60 percent of net U.S. wealth and 40 percent of spending. In many categories, like travel, boomers will represent over 50 percent of consumption. The impact on the Inclusive Travel sector is significant as over 40% will be retiring with some form of disability, raising the total value of direct expenditure to the Inclusive Tourism sector to over 25% of the market by 2020.

This presentation will examine the application of universal design principles to “Soft Infrastructure” to enhance the visitor experience through product development, marketing effectively with information and inclusive imagery, and training staff in how to make visitors with a disability welcome, resulting in competitive advantage and higher returns on investment.

### **Universal Design in Tourism - Put the Kettle on!**

**John Evernden**

One aspect of travel that we all dread is the unforeseen need for medical attention, which may be unavailable, out-of-hours or remote; but we take out travel insurance for such an event. This paper looks at common elements of tourist destinations and facilities that have the potential to cause inconvenience, accident or injury and explains how they could be improved for the benefit of people of all ages and abilities by the application of universal design principles. The elements identified range from the most universal of all needs: public toilets, to public domain issues such as parking arrangements and the location of street name signs; and to aspects of accommodation such as the provision of only one luggage rack in a twin-share room and the difficulty in filling the kettle in the bathroom washbasin.

### **Accessible transport, 10 years of progress**

**Gail Le Bransky**

Since the introduction of the *Disability Standards for Accessible Public Transport* in 2002 there have been considerable gains in the accessibility of public transport services in NSW. Transport for NSW is committed to an ongoing program to eliminate or reduce barriers to access to public transport services. A ‘customer first’ culture within has shifted Transport for NSW’s focus from compliance with standards to delivery of a high level of access and service for all customers. This paper will outline the steps taken

to improve accessibility of public transport services in NSW. In addition to outlining Transport for NSW's achievements in access, the paper will consider: what whole of journey accessibility means for an older person; how the local walking environment can support access to public transport; how customer service improvements can reduce difficulties in the physical environment and; possible barriers to full implementation of the Standards.

### **Planning regulation and design: How well do Sydney's bus planning guidelines meet universal design principles for public transport?**

*Liz Reedy*

Many developed countries have incorporated requirements of universal design in their laws and regulations. This presentation will compare and contrast progress made in Australia with other developed countries and discuss how Australia can improve its transport systems to be more inclusive. The audience will be encouraged to provide their views during this presentation.

### **Keynote: “Universal design embracing the whole mosaic that forms society: Ireland’s story”**

*Dr Gerald Craddock*

Universal design is built on the foundations of a "culture of accessibility" (World Disability Report 2011). For Ireland, a decade of significant change was initiated by the publication of “Strategy for Equality”, published in 1995. It detailed 402 recommendations on what was required to create a more equal society based on three years of consultation with people with disabilities and key stakeholders in Ireland. It initiated a series of equality legislation and government initiatives that laid the foundations for the landmark legislation in 2005 which incorporated the establishment of a statutory Centre for Excellence in Universal Design (CEUD).

Central to the implementation was the setting up of a physical centre as part of a government agency rather than within an academic institution. This involved further consultation with a range of stakeholders from the public, private, industry and user organisations covering people of any size, age, ability or disability to ensure the primary goals of CEUD met their needs.

Government resourcing of the centre involved the recruitment of staff with key skills covering the domains of ICT, built environment and product and services. This skill set facilitated the Centre to conduct research, generate standards, guidelines, toolkits which were considered essential for the diffusion of UD. Moreover it enabled the centre to demonstrate the paradigm shift from basic access and usability of services for people with disabilities, towards enabling independence and social participation for all through continual improvement. Creating this environment requires a more creative and

imaginative engagement “with” older people and people with disability. Providing evidence that their collective needs and issues are greater than their differences and that united they have the potential to create the “pull” in the market place rather than relying solely on the “push” of industry.

The resources and outputs helped to build capacity within the Irish design community to develop and implement universal designs that “delights the senses and lifts the human spirit” (Ostroff 2011). A core of the Centre’s work is engaging and diffusing UD into professional practices, public services and in particular into the education process covering both academic and continuing professional education. This is considered fundamental in transforming pre-professional and practising designers in understanding and appreciating diversity by embracing the needs and preferences of all citizens. The core incentive for services, product design and industry to adopt UD is the expansion of their customer base. From the government perspective it’s about a more inclusive and cohesive society.

Establishing a national universal design centre must be pursued with “apostolic zeal”, communicating the philosophy and vision of universal design as a unifying force that does not stifle but requires greater creativity, thinking and innovation. This can only happen through communities of practice that partners with diverse constituents both nationally and internationally, that delivers on the spirit of the United Nations Convention on the Rights of People with Disabilities (UNCRPD).

## **Panel Session 2**

*Chair: Deputy Lord Mayor City of Sydney Clr Robyn Kemmis*

*Panel: Dr Gerald Craddock, Ms Joe Manton, The Hon Susan Ryan AO, Ms Natalie Siegel-Brown, NSW Department of Family and Community Services*

Following Dr Craddock’s address about the process of setting up the Centre for Excellence in Universal Design in Ireland and the successes gained, the panel will discuss the potential for setting up a similar centre in Australia.

## **Poster abstracts**

### **Accessible public toilets and restrooms from an Islamic perspective**

*Alaa Bashiti*

The tourism industry has become the most successful service sector, one of its leading job-creators and foreign exchange-earners. Behind this success lies a fascinating understanding of people needs taking into consideration the variety of people abilities and religions. According to Pew Research Center (2012), one such group of people who have special requirements when it comes to using restrooms are Muslims, who make up 1.5 billion, or one quarter, of the world’s population. This makes Islam the second largest religion in the world. In Malaysia and most of Islamic countries, it is important to understand the 'Islamic toilet manner' as it can have direct implications for the design

and planning of toilet facilities as Islam advocates for matters of cleanliness. Among the most crucial problems to be solved if one wants to enjoy an outing is whether one is sure to find a toilet one can comfortably use outside of home. How should toilets outside one's dwelling be designed and distributed to ensure inclusive environment for everyone and to be used by Muslims?

This paper highlights what might be ideal standards for toilet provision, toilet design according to the Islamic principles and emphasising the importance of public toilets in creating accessible cities for everyone. In designing a public toilet, some elements should be stressed particularly on the understanding of users' needs. With the various types of users, there is a need for a universal design of a public toilet that is always clean, comfortable and safe as well as relaxing. More than half of Malaysia's population is Muslim as Islam is the official religion. The Department of Standard Malaysia (SIRIM) has initiated the publication of Malaysian Standards as guidelines for designers; architects, city planners, landscape architects, interior designers, and others who are involved in the construction of the built environment with universal design. Four standards on public toilets are to be developed.

### **Camps UD and Consultation**

#### ***Cathryn Grant***

The Victorian Government (Department of Transport, Planning and Local Infrastructure) owns five camp sites across Victoria, Australia. Each camp is uniquely located and provides accommodation, meals and sporting and recreation activities for groups. A government policy requires that the camps implement universal design. This aims to ensure that the widest range of users are considered in the camp activities, the built environment and overall activity programs. Universal design involves the "design of products and environments to be usable by all people, to the greatest extent possible, without adaptation or specialized design" and it is recognized that consultation with users will assist in achieving universal design. The poster will present the camps' current practices and policies in consulting with users, the local community and other relevant parties. This will be evaluated against evidence from the literature regarding best practice for consultation/participation concerning universal design. Recommendations for new processes and practices will also be presented.