



Home Modification Information Clearinghouse

Never Stand Still

Built Environment

# Newsletter

Edition 47 23 April 2018



## From the Editor

Welcome to the second instalment of the HMinfo Newsletter for 2018.

Since our January newsletter, the Clearinghouse has been involved in a large number of activities. The National Construction Code (NCC) 2019 was open for consultation from early March until the 13th of April 2018. The Verification Methods for the Access to and within a building (DV2), as well as for the Ramps have been based on the Home Modification Information Clearinghouse (Enabling Built Environments Program - EBEP) research. During the consultation period HMinfo submitted suggestions and improvements to the documents produced by EBEP as well as to other NCC documents.

March and April have been extra busy months for me, as I travelled to Japan and the UK, to participate in conferences related to age-friendly environments and inclusive design. From the 13th until the 15th of March, I participated in the Symposium "From room to region: Age-friendly environmental design and planning in the Western Asia Pacific", which took place in Kyushu University, in Fukuoka, Japan. I had the chance to present and discuss with academics from South East Asia the HMinfo 'DIYmodify' project and its effect on assisting consumers to make their homes more functional. Also, I made a presentation about the understanding of how space-design, access point provision, and services enable or disable, from a frail user perspective.

From the 9th until the 11th of April I participated in the 9th Cambridge Workshop on Universal Access and Assistive technology (CWUAAT), where I presented a research paper, recently published as a chapter named "Participatory Design Resulting in a 'Do-It-Yourself Home Modification' Smartphone App" in the peer-review book "[Breaking Down Barriers: Usability, Accessibility and Inclusive Design](#)", by Springer-Verlag, UK.

Back to the HMinfo research, our latest publication is called: [Summary Bulletin: Slip resistant Floor Surfaces](#). This report responds to recent Australian regulatory changes for slip resistance of floor surfaces within dwellings and on accessways in common areas of dwelling buildings. The current regulations and Australian Standards for slip resistance classification and testing are detailed, and their applicability to residential dwellings discussed. Methods for selecting appropriate slip resistant floor surfaces in new homes, and methods of modifying existing floor surfaces to make them more slip resistant, are also examined.

During the next few days, our new Summary Bulletin dealing with the critical parameters for ramp design is going to be published. This report gives a summary of the most important elements and parameters that consumers, architects, occupational therapists, builders and researchers should be aware of when considering the construction or installation of a new residential ramp, in a simple and descriptive way.

Our future work will be reviewing and updating research on lighting for people with impaired vision. So, stay tuned for these and other useful and informative research.

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## HMinfo Research

- Report submitted - Access01/Ramps1 - Desk Audit/Literature Review of Ramp Traversability by Wheelchairs and Mobility Scooters (Quantification and Metrics)
  - Draft Report submitted - Ramps 2 - Verification Method Traversability
  - Report submitted - Stairs1 - Desk Audit/Literature Review of Stair Traversability (Quantification and Metrics)
  - Draft Report submitted - Stairs2 - Verification Method Stair Traversability (Quantification and Metrics)
  - First Wayfinding submission - Access Handbook
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## Home Modification Resources

### Book review – Enlighten

The effect of light on humans is known for many years. The amount and quality of light affects our mood and our health, by regulating the circadian rhythms, vitamin D procurement, etc. As people get older, their sight can be significantly impaired by conditions like presbyopia, age-related macular degeneration, cataracts, glaucoma, etc. Due to these or other conditions, people might not be able to see clearly objects that are close, might see dark spots, objects moving or disappearing from the field of view, might experience difficulty seeing in low light conditions, sensitivity to glare, and other symptoms. These problems lead to reduced visual acuity, which could cause accidents (mainly falls), confusion and ultimately social isolation.

Older people with dementia might experience even more visual and sensory impairments, which lead to misinterpretation of their environment. Many of these symptoms are improved by providing more and better quality of light in a person's environment. Basic information, practical advice as well as specific lighting levels recommendations for good lighting design for care environments for people with dementia are provided in *Enlighten: Lighting for older people and people with dementia*, a book by D. McNair, R. Pollock and C. Cunningham.

*Enlighten* is a book for architects, electrical engineers, building code consultants, care staff and operators of buildings, as well as for people with dementia and their families. It is particularly useful for people that need to be introduced to the science of light and lighting and the impairments that accompany dementia, to provide spaces that enhance independency, dignity and quality of life for older people and people with dementia.

### Article review - Ensuring Access for All

This article by Lachlan Colquhoun in *Equal Access, Equal Opportunity* (online publication on 16 October, 2017) analyses the difference between Universal design and designing by simply complying to the regulations, through the words of Joe Manton, Director of Access Audits Australia. As many have said before every design decision has the potential to include or exclude human users.

Colquhoun's article stresses the fact that in both commercial and residential new buildings, compliance with the access regulations is the maximum that is done by construction companies and engineers. Unfortunately, compliance with access and disability standards falls short of any real consideration of inclusion. Instead inclusive design emphasises that understanding user diversity and consideration of variation in capabilities, needs and aspirations is essential for maximum joy and utility.

Colquhoun believes that universal design is not about ensuring access to people with disabilities, but instead it may help to ensure everyone is able to access, use and enjoy a building or space. For example, a shopping centre would be compliant if it only had ramps and/or lifts and toilets for people with disabilities. The corridors of the stores would not need to be wide enough for people using wheelchairs, or the glass elements would not have to be appropriately designed for the people with impaired vision. However, design decisions like the last two and many more simple elements that ensure equitable use of the buildings, might actually increase the number of people visiting the facilities that were built according to the Universal Design principles and thus the profits for the businesses.

Fortunately, architects, big property development companies and academics are starting to realise the importance of Universal Design and the benefits that could arise from its application and seek training opportunities. Possibly, this is the most important step into ensuring equity in the built environment.

You can read the article online [here](#).

## **Article review - Universal Design, Inclusive Design, and Intergenerational Design: Where Does My Research Fit?**

This article by Hongyang Lin, published in the January 2018 in the newsletter of the 'Design for All' Institute of India, discusses the similarities and differences of three design concepts: Universal design, Inclusive design and Intergenerational design.

Universal design is a user-centred approach, focusing on the needs, wants and limitations of end-users during the design process. It is usually referred to as "design for all". Inclusive design, according to the [Inclusive Design Research Centre](#), is the design that "considers the full range of human diversity".

These two definitions are very similar. However, Universal design is considered a more general and possibly a more difficult to achieve type of design, compared to Inclusive design, where the audience is the maximum possible. For example, universal design seeks to look at maximum population inclusion based on median profiles such as the Australian 90<sup>th</sup> percentile or A90 wheelchair principle as seen in the Disability (Access to Premises – Buildings) Standards which are designed to achieve more consistent, systemic and widespread improvements in non-discriminatory access for people with disability to publicly accessible buildings. Inclusive design on the other hand, seeks to look at who is excluded and the design barriers they encounter, as such, it often looks to innovation and bespoke design alternative solutions.

Intergenerational design requires designers to consider the needs of all age groups and usually introduces participatory approaches in the design process. This last characteristic is the greatest difference with Universal and Inclusive design where the process of design is user-centred, as explained earlier.

The article further discusses how these three concepts are associated with design for older adults and gives informative details and bibliography on the subject.

## **Website review - <http://www.enrichme.eu>**

The European project "[ENRICHME](#)" aims to enrich the day-to-day experiences of elderly people at their homes, by using technologies that enable health monitoring, complementary care and social support, helping them to remain active and independent for longer and to enhance their quality of life.

The project website includes interesting [application scenarios](#) and [videos](#), showcasing whether and how a service robot could improve the quality of life of older people suffering from Mild Cognitive Impairment, as well as the efficiency of health care settings. Some of the robots' abilities are to remind people of important things, like taking their medication, enabling them to make video calls, provide environmental measurements (temperature, interior air quality, etc.), help them to perform their daily physical or intellectual exercise, find objects in the house, etc.

Enrichme project receives funding from the European Union H2020 Programme.

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## **Events**

### **Conference**

#### **Shaping the Future of Disability Housing**

The housing sector for individuals living with a disability is undergoing sweeping changes with fundamental implications for the business model of those involved. The introduction of SDA funding has the potential to link the private sector and begin the process of delivering choice and control to the most marginalised members of our society.

Specialisation is the key to risk mitigation and successful navigation of this amorphous market. Join key industry experts at the Shaping the Future of Disability Housing conference, who will unpack the systemic

and policy opportunities and hear from early adopters as they break down the nitty gritty of finance, design, legal and service provision.

Hear insights on key issues including:

- Understanding the opportunities and pitfalls of SDA
- Navigating systemic and demand-based risk
- Financing, designing and constructing compliant SDA dwellings
- Opportunities across the wider spectrum of NDIS housing

[link](#)

## **Workshop**

### **‘Living the life I want’: a guide for planning**

ASID NSW/ACT is presenting a workshop: ‘Living the life I want’: a guide for planning

This workshop will introduce participants to key concepts in supporting a person with intellectual disability and complex support needs to set goals and make a person-centred plan. This practical workshop is built around the use of the ‘Living the life I want’: A guide to planning resource. Participants will receive a copy of the resource to use in their work.

ASID NSW/ACT in partnership with Intellectual Disability & Behaviour Support Program (IDBS, UNSW), Intellectual Disability Rights Service (IDRS) and Centre for Disability Studies (CDS) is hosting a practical workshop based on the guide authored and published by the IDBS team. [link](#)

## **Symposium**

### **Successful Strategies for Sustainable Business**

Occupational Therapy Australia invites you to participate in the inaugural National Private Practice Symposium 2018, taking place from the 25-26 May 2018 at the Stamford Grand Adelaide, South Australia.

[link](#)

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## **Publications by HMinfo Team**

### **HMinfo research**

#### **Summary Bulletin: Slip resistant Floor Surfaces**

Slipping on a floor and falling is a major cause of injury in the home. Older people are among the most susceptible to slip and fall injuries and risk a greater degree of injury when falls occur.

Recent building regulations have specified requirements for the slip resistance of stairs and ramps in all dwellings, as well as floor surfaces in some common areas of higher-density residential dwelling buildings and some specialised dwellings for people with disability. However, these regulations are applicable to new construction only. There is building regulation for slip resistance of existing floors in residential dwellings. Having slip resistant floor surfaces in homes is reliant on home designers, purchasers, owners and residents, either selecting appropriate floors at the time of construction, or modifying inappropriate floors in the existing home. The floor surfaces then need to be maintained so that slip resistance is retained.

For the residential stairs and ramps that are required to be slip resistant, the Australian Building Code provides an acceptable minimum slip resistance classification for the floor surface. However, there is limited guidance available on achieving slip resistant floor surfaces in other areas of the home. Australian Standards handbooks’ recommended slip resistance classification for floor surfaces are focused on public environments; quite different to the residential environment. Slip resistance classifications and their corresponding test methods need to be understood when selecting a floor product, to ensure that the classification of a particular floor product is applicable to residential environments. Many floor products do not come with a slip resistance classification rating at all.

This Summary Bulletin responds to recent Australian regulatory changes for slip resistance of floor surfaces within dwellings and on accessways in common areas of dwelling buildings. The current regulations and

Australian Standards for slip resistance classification and testing are detailed, and their applicability to residential dwellings discussed. Methods for selecting appropriate slip resistant floor surfaces in new homes, and methods of modifying existing floor surfaces to make them more slip resistant, are then examined.

You can download the publication [here](#).

## Reports, journal articles and conference papers

Bridge, C. *Participatory Design Resulting in a 'Do-It-Yourself Home Modification' Smartphone App* (2018). Chapter in the peer-review book "Breaking Down Barriers: Usability, Accessibility and Inclusive Design". Springer-Verlag. [link](#)

Bridge, C. *Assisting consumers to make their homes more functional: the 'DIYmodify' case study* (2018). From Room to Region: Age-Friendly Environmental Design and Planning in the Western Asia-Pacific, Kyushu University (Ohashi Campus), Fukuoka, 12th to 16th March 2018. [link](#)

Bridge, C. *Understanding how space design, access point provision, and services enable or disable from a frail user perspective* (2018). From Room to Region: Age-Friendly Environmental Design and Planning in the Western Asia-Pacific, Kyushu University (Ohashi Campus), Fukuoka, 12th to 16th March 2018. [link](#)

Bridge, C. *Participatory Design Resulting in a 'Do-It-Yourself Home Modification' Smartphone App* (2018). 9th Cambridge Workshop on Universal Access and Assistive technology (CWUAAT), 9th to the 11th April 2018. [link](#)

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Any suggestions or feedback you may have on our newsletter would be greatly appreciated, so please feel free to contact us at [hminfo@unsw.edu.au](mailto:hminfo@unsw.edu.au). To unsubscribe from future HMinfo newsletters, please click [unsubscribe](#).

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