

MODERN GREEN HOMES Sanctuary

INSIDE ISSUE 37 Tiny & tropical style; eco display homes; green facades; local materials; 8.6 Star apartments; SIPs solar extension; future-proofing; concrete floors guide; Passive House in Wanaka NZ + more

OFF-GRID COASTAL LIVING MODULAR & PREFAB



30+
storage &
shelving ideas

INSIDE

High comfort, low bill homes
Summer shade planting
Affordable & flexible floor plans

ISSUE 37 • SUMMER 2016/17
AUD\$11.95 • NZ\$12.95
SANCTUARYMAGAZINE.ORG.AU

ISSN 1833-1416



9 771833 141000

WIN

A home battery storage system from Enphase

Offer open to Australian and New Zealand residents only, details p40



Building for a lifetime: future-proof your house



WORDS

Melissa Wittig

When accessibility principles are applied to beautiful, thoughtful design, timeless infrastructure is created, writes Melissa Wittig.

LIFE IS UNCERTAIN, AND MANY HOUSES TODAY CAN'T cater for the changes and challenges occupants might face. But there are ways you can future-proof a house to be flexible enough to cater for an expanding – or contracting – number of residents and their inevitable changing requirements, and also ensure the house is accessible for all, regardless of age or ability.

Known as 'forever functionality' (and sometimes universal design or accessibility), making your house adaptable is not only common sense but a savvy financial investment.

DESIGN FOR THE UNFORESEEABLE

Good design begins with a comprehensive design brief that includes a definition of 'who' the client is and the needs of the occupants. This definition can greatly contribute to a property's appeal, functionality and value. However, by focusing solely on the 'who' and their current individual needs, we are, by default, creating buildings that have limitations.

What's needed from a home might change suddenly for someone who's had a life-altering illness or accident. And as the occupants age, their homes must often meet different criteria for safety, ease of use and access. When renovating or building, people generally make the mistake of creating their homes for the foreseeable future – and yet the integration of design elements in a home for the *unforeseeable* future can add considerable financial and personal value to a house, and make it a more sustainable project.

PROPERTY ENTRY LANDSCAPING

A family member or friend may require a walking aid or wheelchair at some stage, which requires level entry surfaces for safe access. Incorporating at least one accessible entry point increases a building's inclusive attributes.

Melissa is a design and property professional and health-focused interior designer. She is also co-author of *The Smart Living Handbook* and a licensed estate agent consulting in residential asset (property) management and design.

CONSISTENT-LEVEL LIVING IS ACCESSIBLE FOR ALL

Split-level housing can create safety problems for toddlers and anyone with mobility impairment or fragility: for example, stairs can be a tripping hazard for the elderly. From an investment perspective, a home with split-level design has limited appeal, possibly reducing rental appeal and resale value.

SAVVY STAIR DESIGN

Forward-thinking design incorporates space provisions for alterations such as residential lift systems or chair stair lifts, so that a multi-storey home remains useable with minimal structural changes in the event that an occupant's needs change. Another approach is to ensure a layout that can be adapted to ground floor-only living, perhaps with the upstairs reserved for visiting family.

EASE OF MOVEMENT SPACES

Consider for a moment that one family member requires a wheelchair or walking frame. Could that person enter the home, easily travel through common hallway spaces to use the bathroom, shower, kitchen, at least one bedroom and a living space? Incorporating simple design considerations such as wider doorways when building or renovating can make a home suitable for foreseeable and unforeseeable access needs.

Livable Housing Australia (LHA) guidelines provide technical space considerations for mobility design solutions, but as a guide, minimum clear doorway widths of 850-900mm and 1200mm for corridors are optimal for good access. Wider doors and corridors make it easier to manoeuvre when using the spaces with prams, walking frames and wheelchairs, and allow for functional longevity. This also contributes to a sense of spaciousness in the home.

BATHROOM BLISS

Bathrooms are a particularly expensive zone of the home to structurally adjust. If they are designed well in the first place, they can save a homeowner considerable cost, translating into a more effective investment. It goes without saying that the path to at least



An accessible entrance designed into landscaping avoids often awkward-looking and expensive retrofitting later. Image courtesy: Vital build + Healthy Interiors



one bathroom should be designed to be accessible; in a multi-storey house, at least one bathroom should be on the ground level. When renovating, the time to maximise future benefits from bathroom spaces is at the rough-in and framing stage when the walls and floors are open and layout changes are relatively easy.

REINFORCE AND SAVE

Reinforcing walls at the framing stage to a standard suitable for fastenings and grab rails is relatively inexpensive and is a form of insurance, layered behind a typical bathroom facade. The LHA guidelines recommend reinforcing timber-framed bathroom and toilet walls to withstand force applied from any direction. Add some extra noggins (the bracing between wall studs) in the shower in case a wall-mounted seat is ever needed. A reinforced and prepared structure gives plenty of options for adapting the space without the very costly need to strip back and replace all fittings, tiles, sheeting, insulation and possibly plumbing and wiring to make the space useable for someone with a mobility challenge.

SPACIOUS THRONE

The style of toilet can easily be changed in a bathroom, but space allowances are costly to retrofit. Locating a toilet in a position that caters for accessibility requirements involves a minimum of

1200mm (excluding any door swing) clear space in front of the toilet, and a minimum clear width of 900mm between walls or bathroom furniture. Providing for a wall to be 450 to 460mm from the pan (measured from the centre line of the toilet) allows a grab rail to be affixed to the wall in the future if needed.

WALK OR ROLL

Walk in (or roll in), step-free showers should be a minimum of 900mm x 900mm with 1200mm clear space in front of the shower recess entry. However, showers that are larger than 900mm do offer greater ease for those with a mobility challenge.

KITCHEN

Like bathrooms, kitchens are also expensive zones to retrofit. Some basic, relatively inexpensive steps at the design and build stages will again save dollars should accessibility adjustments be needed to the kitchen.

Where possible, floor finishes should be installed wall to wall, not just up to the cabinetry. This allows for cabinetry to be changed at any stage without expensive flooring works.

Designing the kitchen to have at least 1200mm clearance in front of benches and appliances caters for manoeuvrability by all ages and mobility levels. →

LITTLE BUT COSTLY

Too often in construction, tradespeople are left to make decisions on the finer details such as where to mount light switches, power points and door handles. Instead, specify a suitable height for these items and it can add significant convenience for people in a wheelchair or those needing to stay steady with a walking device. According to LHA, light switches should be positioned between 900mm and 1100mm above floor level, horizontally aligned with the door handle at the entrance to a room. Power points should be installed not lower than 300mm above finished floor level and door hardware should be installed 900mm to 1100mm above the finished floor.

INTEGRATING TECHNOLOGY

Twenty years ago, few could have foreseen the changes wifi and computing would make to our lifestyles and the way we socialise or work from home. We can now recognise the benefits of designing and integrating technology into buildings, or at least allowing for its easy retrofitting. Ensuring that adequate cavities are provided for easy changes to cabling or device storage will allow dwellings to be upgraded as required.

DESIGN FLEXIBILITY

Outgrowing your home can have consequences that impact on individuals and families, both financially and emotionally, especially if a move is required. From the small apartment to a sprawling home, flexible housing design incorporating accessible design principles and flexibility of spaces can allow homes to adapt to the changing needs of their occupants and avoid the need to move away from familiar communities. Other initiatives, such as large homes designed with the capacity to be easily divided into two dwellings, provide exciting design possibilities for those in a position to build or renovate.

LONGEVITY

A well-worn phrase is 'design with the end in mind'; perhaps it should instead be 'design for the unforeseeable future'. As most buildings do not account for change or flexibility, there is an opportunity for people to build or renovate houses so that they can cater for all who may need to reside in them, saving the homeowner money, time, resources, heartache and waste. This equates to innovative, sustainable, profitable, inclusive design – and importantly, happy households. 📍



Open living spaces, level flooring and recessed door frames prevent tripping hazards. Image courtesy: Vital build + Healthy Interiors

FACTORS DRIVING INTEREST IN FOREVER DESIGN

AGEING IN PLACE

The Baby Boomer generation, turning 65 between 2011 and 2030, have watched their parents transition (in many cases with difficulty) into retirement homes and aged care facilities. This experience is leading many of this generation to actively seek alternative journeys. Life expectancy is nearly double what it was a hundred years ago, and almost one in four Australians will be aged 65 years or over by 2055. According to a Productivity Commission research paper, ageing in place – remaining in one's own home – is evolving as the preferred living arrangement for this new generation of older people. The Commonwealth Home Support Programme was established in 2015 to uncover the challenges ageing in place would bring, especially as Australia's existing housing stock is largely inappropriate for older people without modifications being made.

NATIONAL DISABILITY INSURANCE SCHEME

For those with disabilities, the National Disability Insurance Scheme (NDIS) is assisting with independence and community integration, and this includes addressing disability-friendly housing. A specific type of home is fast becoming appealing in the marketplace – one that has been designed to be easily adjustable for the needs of an occupant without excessive financial, personal and environmental cost.