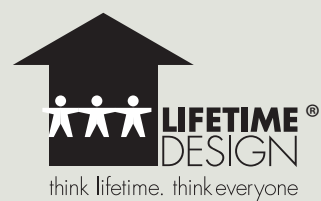




think lifetime. think everyone



A Lifetime Design home is one that's been carefully and cleverly designed to be comfortable, safe and accessible. Over the years, it can adapt to the changing needs of you and your family.

■ **Lifetime Design** has been successful in the United Kingdom, Europe, the United States and Australia. In these countries it's known by many names including: Housing for Life, Adaptable Homes, Visit-ability and Aging in Place. All these versions share the same basic principles as Lifetime Design.

Based on this international experience and New Zealand research, CCS has developed the Lifetime Design concept for the New Zealand housing environment.



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□ The Principles of Lifetime Design

“ **Everything’s just so easy.** I drive in, open the door, bring in the shopping – I just walk straight through. There are no steps, there are no obstacles.

“ Whenever we’ve been away and we come home it’s just... oh, phew! We’ve both got so used to the wide open spaces. I’ve adapted to not tripping over things or having to walk around things. It’s hugely more relaxed.

“ We have a friend in a wheelchair and ours is the only house he’ll visit. Other places just aren’t safe enough. We also both have elderly parents – mine are in their 80s – and it’s totally not a problem for them to come and visit us.”

Helen Blundell

□ The Principles of Lifetime Design



Lifetime Design is an approach to building houses that puts the emphasis on flow, comfort and flexibility for your family and your future.

- easy to live in – comfort and flexibility come first
- more approachable and accessible
- safer – good design means fewer accidents
- adapts easily to meet changing needs over time
- fits within your budget

‘ **Alterations** to a Lifetime Design home would cost 55% to 80% less than for a non-Lifetime Design home.’

CCS Pricing Exercise, 2006

COST-EFFECTIVENESS

Research overseas shows Lifetime Design homes will cost just 0.5% to 1.0% more to build than non-Lifetime Design homes.¹ They provide a far more cost-effective solution than renovating a home when changing needs arise, and their resale value may be considerably enhanced.

If a house is originally built to Lifetime Design standards any further alterations needed to meet changing family needs, including disability from ageing or injury, will cost significantly less than with other homes. Some Lifetime Design features also can be economically incorporated into refurbishments on existing homes.

In the UK, the Joseph Rowntree Foundation found 55% savings on home alterations.² CCS investigated two high-cost areas when it comes to alterations: the bathroom and entrance-way. We found that alterations to these areas in a Lifetime Design home would cost 55% to 80% less than for a non-Lifetime Design home.

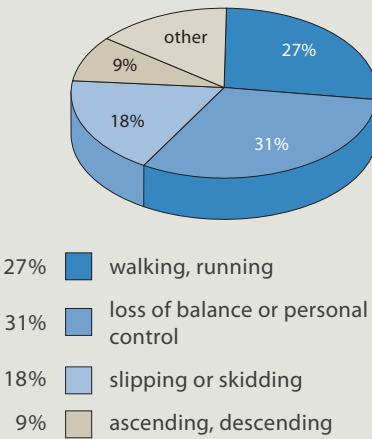
LIFETIME DESIGN STANDARDS

Lifetime Design standards have evolved after extensive research in New Zealand and overseas (see Appendices). These standards are straightforward and inexpensive to implement – especially when considering the benefits they deliver.

Lifetime Design homes are effortless to enter and move around in. They have large carparks, gently sloping or flat pathways, well-lit entrances and wide doorways. There’s no need to travel long distances from car to home.

Once inside, householders move through wide hallways, free-flowing dining and cooking areas and spacious bedrooms. Slip-resistant floor finishes ensure safety; handrails on both sides of any stairwell mean security. These and other Lifetime Design features are common-sense solutions that make home life easier and safer for all.

Accidents In The Home



SAFETY BY DESIGN

Lifetime Design contributes to a safer home environment. According to studies undertaken by the Auckland University Injury Prevention Research Centre falls are the most common event leading to injury in and around the home. Falls at home are also among the leading causes of visits to emergency departments. Factors that contribute to falls include stairs, steps, floors and flooring materials.³

The Centre’s research concluded: ‘If homes were required to incorporate safety features at little or no extra cost, the potential for reduction in home injury would be high and long lasting.’⁴

- A third of older people living in private homes ... will fall each year.⁵
Health of Older People Strategy, 2002
- In 2002/03 ACC contributed \$160 million to fund acute care for non-earners (mainly older people). An estimated \$64 million of the funding for acute care was for fall-related treatment.⁶
Guideline for Specialist Health Services for Older People, 2004
- The average cost of a ‘fall’-related new entitlement claim for a person aged 65 and over is \$3,684, with an additional \$5,285 in ongoing entitlement claims.⁶
Guideline for Specialist Health Services for Older People, 2004

‘**Design features** built into a home to allow easy access and provide living areas that are easy to move around in would definitely add re-sale value.’

Howard Morley, President, Real Estate Institute of New Zealand

HIGHER RESALE VALUE

One important benefit for the owner of a Lifetime Design home occurs at the point of resale. Lifetime Design features are an added selling point.

☐
The Benefits of Lifetime Design



ENTRANCE

- At least one parking space is wide enough so that getting in or out of a car is easy with shopping, small children, a stroller or wheelchair.
- Pathways to the house are flat or gently sloping, firm and clear of obstruction. This makes entry or easier for anyone carrying a child, heavy bags or furniture.
- The space outside the entry door is under cover to protect from weather and has sensor lighting that illuminates the entrance area on approach.
- Doorways are wide enough to allow free movement into and out of rooms and hallways.

☐
The Benefits of Lifetime Design



KITCHEN

- The kitchen is not a main thoroughfare in the home.
- The kitchen spaces are designed to allow easy access.
- Appliances such as ovens and dishwashers are situated away from internal corners to facilitate ready access.
- Kitchen and dining areas are located next to each other for convenience and safety.

❑ **The Benefits** of Lifetime Design



BATHROOMS

- In a multi-level home there is a bathroom on entry level.
- The toilet is roomy enough to easily manoeuvre a wheelchair or walking frame, or for parents to assist younger children.
- The bathroom is roomy for easy access.
- Bathroom walls are strengthened to enable the later installation of weight-supporting handrails.

❑ **The Benefits** of Lifetime Design



EASE OF LIVING

- All living areas and hallways allow people to move easily through the home. This could be someone with a sprained ankle or broken leg, a wheelchair user, a person requiring support or people moving furniture.
- Power and TV sockets are positioned 600mm from the floor to be easily reached by all users without unnecessary bending. Power sockets are fitted with approved guards to ensure safety.
- Switches are of the 'rocker' type, which are easier to operate.
- Light switches and door handles are installed at the same height to facilitate better orientation and accessibility.

☐
The Benefits of Lifetime Design



**ROOM LAYOUT AND
FITTINGS**

- Taps are fitted with lever handles for ease of use. Mixer taps are fitted with anti-scald devices for the safety of small children and older people.
- Floor finishes are slip-resistant to substantially reduce the risk of falls.
- All door handles are lever-type handles. They can easily be operated with the hand or elbow, making entry simple for anyone with arthritis, carrying armloads of groceries or carrying a child.
- Windows are positioned to enable a clear view and ease of opening for people of all heights and physical abilities.
- High windows are operated with automatic controls.

☐
The Benefits of Lifetime Design



BEDROOMS

- Adequate clear space around at least one bed to enable easy access should assistance be required.
- A bedroom or sleeping area is available at entry level for the convenience and safety of anyone who cannot manage stairs.

TWO-STOREY HOUSES

- Stairways have handrails fitted on both sides, offering enhanced support and safety.
- Stairs have consistent tread depth and riser height with no open risers.
- Stairway walls are strengthened to allow the later addition of a stair-lift if required.

□ The Benefits of Lifetime Design

“ I use a **wheelchair** as the result of an accident. We engaged an architect to design a home that would meet my unique needs, allow me to live at home as I aged, give me full access to inside and outside, and be equally comfortable and functional for my family.

“ The kitchen is designed so I can use it easily with drawers instead of shelves and a pull-out storage unit. While most benches are at the best height for Helen, a work bench for my use is incorporated. The height and design of appliances allows me full access while others are using the space.

“ The hallways at the exit doors are wide, allowing an easy 360-degree turn with the wheelchair. All around the house decks are at the same level as the concrete driveway entrance. There is a ramp to lower level built-in garden boxes. This home doesn't say 'disability'. Anyone could move in and live here – they'd love it.”

Phillip Blundell

□ The Benefits of Lifetime Design

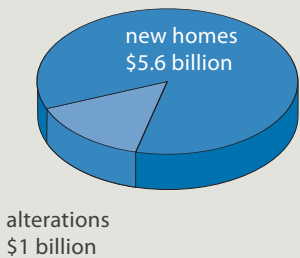


The Need for Lifetime Design

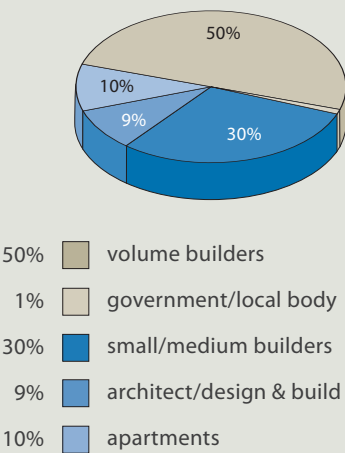
“ We need to be smarter about what and how we build; look beyond today’s needs and design and build for the future. We see Lifetime Design as part of the broader suite of options home-owners and the building industry should consider.”

Pieter Burghout, Chief Executive, The Registered Master Builders Federation

New Zealand Housing Spend



Who Builds New Homes?



LIFETIME DESIGN HOME MARKET

The primary market for Lifetime Design is people building new homes and those making alterations to existing homes. New Zealanders are expected to build 25,000 new homes in 2007, to a value of around \$5.6 billion, and to spend around \$1 billion on home alterations.⁷

NEW ZEALAND HOUSING STRATEGY

‘Building the Future: The New Zealand Housing Strategy’ (2005) signals the pivotal role of housing in wellbeing and outlines the Government’s intention to ‘encourage the use of universal design principles in State and private housing’ over the coming 10 years.⁸ A core activity of Housing New Zealand is to provide ‘assistance for people with long-term disabilities who need access to modified housing’.⁹

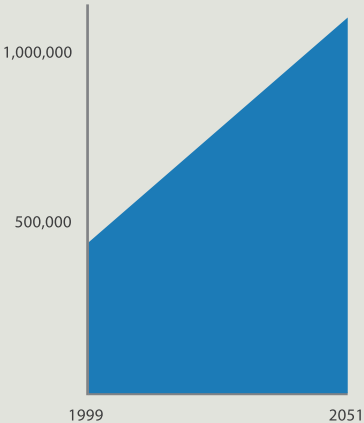
If new homes were built to Lifetime Design principles, future need for alterations would be greatly lessened.

The Need for Lifetime Design

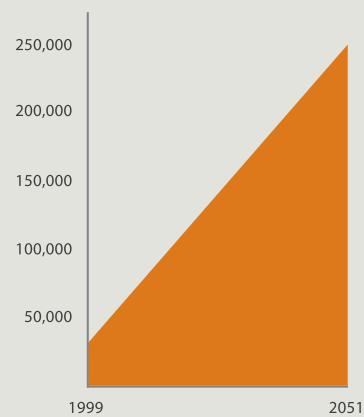
“ Between us we have three parents in their late 80s and 90s and we’re acutely aware that we may need to care for at least one of them in the home we’re building. Having a 92 year old negotiating the stairs in our current house is certainly not ideal.”

Jon and Judy Clark, Home Builders

NZ Population Aged 65+



NZ Population Aged 85+



AN AGEING POPULATION

Disability increases with age - and ours is a rapidly ageing population. Statistics New Zealand projections indicate that by the year 2051, 25% of New Zealand’s population will be aged over 65 years.¹⁰ Moreover, those older than 85 year olds, the group most vulnerable to accidents, will be more numerous.¹¹ In future more people will be living with sensory impairments and mobility issues and there will be an ever-increasing need for flexible, adaptable and accessible housing.

NEW ZEALAND POSITIVE AGEING STRATEGY

The New Zealand Positive Ageing Strategy (2001) proposes that “positive ageing is closely aligned with the ability to ‘age in place’... It is in everyone’s interest that older people are encouraged and supported to remain self-reliant.”¹²

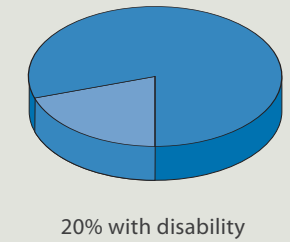
This will be far more possible if older people are able to live in homes built to Lifetime Design standards.

□
The Need for Lifetime Design

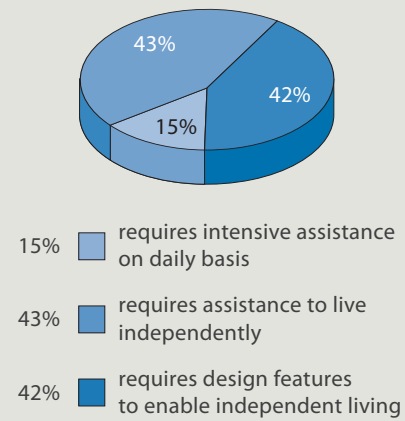
“ **We need to become more aware** of the one in five people in New Zealand who describe themselves as living with a disability: we’re talking about issues around strength, balance, reach, sight, stamina, agility, mobility and flexibility. They all impact on a person’s housing needs, particularly for older people. We need to enable people to stay in their houses and be active for as long as they possibly can.”

Ron Pynenberg, Registered Architect

New Zealand Population



Population With Disability



COMFORT, SAFETY AND ACCESSIBILITY

The 2001 Census shows over 431,000 people in New Zealand live with moderate to severe disabilities - that is they need regular, sometimes daily, assistance to live independently. Most of these people live in households.

Lifetime Design homes enable disabled people to live in homes with comfort, safety and accessibility.

NEW ZEALAND DISABILITY STRATEGY

The New Zealand Disability Strategy (2001) guides government action to promote a more inclusive society. It recommends that all New Zealanders need to consider issues for disabled people and their aspirations as individuals. One of the visions of this strategy is for ‘disabled people to be integrated into community life on their own terms. This means that equal opportunities are assured but individual choices are available and respected’.¹³

□
The Need for Lifetime Design

“ **We owe it to our children** to provide the best possible environment in which to grow and develop. A child’s home should be a place of safety, comfort and nurture. The planning and construction of a Lifetime Design home will ensure that a home continues to meet the ever-changing needs of a child as they develop into adolescence and adulthood.”

Murray Edridge, Chief Executive, Barnardos New Zealand



Lifetime Design Ltd has a vision: In New Zealand, within five years, over half of all new homes will be built to the Lifetime Design standards.

Lifetime Design Ltd will provide a vehicle for the community sector, the building industry and government to collaborate on realising this vision.

Lifetime Design Ltd is a company owned by CCS.

References and Appendices

24	References
25	Appendix 1 Lifetime Design Standards
32	Appendix 2 Lifetime Design Resources
40	Documents on Accompanying CD-ROM

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Lifetime Design Standards
category one

	BUILDING APPROACH
○	At least one car-parking space is 3.6 m wide. It is close in distance to the main entry, with a 1 in 20 maximum slope to the entry.
○	Paths to the house are easily usable by wheeled traffic such as prams or chairs, with a 1 in 20 maximum slope.
○	Paths to the house are at least 1200 wide, are lit and have a non-slip surface.
	ENTRANCE
○	The threshold to the main entry door is level, with no step higher than 20mm. As a minimum there is a 1200mm square level platform immediately before the entry door.
○	The main entry threshold platform is under cover.
○	There is sensor lighting at the main entry.
	INTERNAL CIRCULATION
○	Dining and cooking areas are located adjacent to each other.
○	At least one bedroom is designed with a 800mm clear space available around the bed or beds.
○	At least one bathroom is easily accessible from this bedroom.
○	Hallways are 1200mm wide, with a minimum unobstructed clear width of 1000mm.
○	Doors are 860mm, with a 810mm clear opening.
○	Doorways are at least 300mm from an internal corner.

INTERNAL PLANNING AND SERVICES

- Light switches, door furniture and other switches (such as security systems, distribution board and water heaters) are installed at the same height, 1000mm above the floor.
- Window catches are lower than 1200mm, unless they are on automatic controls that can be operated from 1200mm. Window catches are substantial levers.
- Power plugs, TV, phone and computer outlets are installed at 600mm above the floor and fitted with approved plug guards.
- Switches are rocker types and are at least 300mm from internal corners.
- Lever handles are used on all doors and taps, with all mixer taps having anti scald devices.
- Floor finishes are slip resistant and capable of taking wheelchair traffic easily and safely, eg. low pile carpet.
- Approved smoke alarms that have provision for both audible and visual warnings are installed.

BATHROOM AND PLUMBING

- There is a toilet and bathroom on the entry level, designed for easy access, ie. a minimum compartment size of 2500mm x 2500mm.
- The bathroom is built with provision for a flat floor shower to be installed in the future, with walls strengthened to accommodate future handrails and shower seat and plumbing in place.

KITCHEN

- The kitchen is not a main circulation route in the home.
- The kitchen has a minimum floor dimension of 1500mm between benches and fittings.
- All appliances are at least 300mm from an internal corner, with controls located at the front of the appliance.
- Benches are designed so that their height can be easily changed at a later date, with removable and movable under-sink or under-bench cupboards incorporated.
- Flexible plumbing and waste pipes are included.

MULTI STOREY DWELLINGS

- A toilet and bathroom are on the entry level.
- A bedroom or sleeping space is available on the entry level.
- House design included the possibility of installing a lift without major structural changes.

STAIRS

- Stairwells contain weight-bearing handrails on both sides, with the walls strengthened to take a future stair-lift.
- A 1200mm unobstructed platform exists at the top and bottom of the stairs.
- Stairs have consistent tread depth and riser height, with no open risers.
- Stairs do not have winder treads or a spiral design.

Appendix 1

Lifetime Design Standards

category two

-
- All features of category 1 are provided for in the house design. To reach category 2 the following additional features are required:

A second entry/egress point that has a level threshold as detailed in level 1.

Doors are 910mm, with a 860mm clear opening.

The bathroom on entry level has a flat floor shower installed.

There is ceiling reinforcement between a bedroom and this flat floor bathroom for mounting a hoist track on in the future, with provision made for a future floor to ceiling door.

All areas of the house allow wheelchair movement, including between levels via a lift.

Appendix 2

Lifetime Design Resources

These resources have been compiled by the CCS Information Service.

They are the result of research undertaken by CCS on Lifetime Design housing. You will also find resources on housing in New Zealand, safety and injuries in the home and building issues.

Many of the resources can be downloaded from the Internet – resources that do not have an URL are available from the CCS Information Service.

As of July 2006 all of these resources were available from the listed URL. If you find a broken link please let us know.

There is an accompanying CD of documents – a list of these documents is at the end of the bibliography. For a copy of this CD, please contact the CCS Information Service.

If you have other resources that you think should be added to this bibliography, please let us know.

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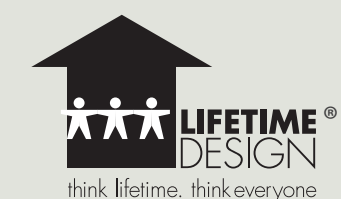
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