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3 Bridges
Home Modification & Maintenance Scheme

The House That Chris Built



Chris Nicholls

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Our personal brief

- * To make *ALL* rooms accessible.
- * To make house & pool wheelchair (paraplegia) friendly throughout - without the %hospital+look.
- * To allow Chris to be able to do as many of the %male role+chores as possible. (Jen's idea!)
- * To make upkeep as low maintenance as possible.
- * Indoor / outdoor living experience.

Meeting the needs of the whole family

- * Who undertakes what roles around the home?
 - * Why totally adapt the kitchen if Jen does most of the cooking? i.e. what percentage of benches should be lowered.
- * Carpet in areas where hard surfaces are not necessary.
- * Is Chris going to be able to reach everything.
 - * Practicality versus accessibility of storage spaces.
 - * Power points . what heights?

Overview of building

- * Two storey building with a lift to maximise on floor space and still conform to the council's required building to land ratios.
- * No steps or lips within the building or at the front door or rear Bi-folds.
- * In case of major lift malfunction, playroom can be used as bedroom and there is a fully accessible bathroom (with shower) downstairs.

Common throughout home

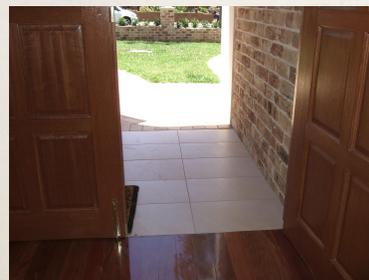
- * Multi-zoned, ducted, reverse cycle air conditioning throughout.
- * Ceiling fans in all bedrooms, playroom and rear patio.
- * Timber flooring throughout all high traffic areas (except kids playroom, for safety).
- * Where carpets used, commercial installation was employed i.e. carpet glued to commercial grade underlay, which is glued to floor.
- * Light switches, video intercoms and alarm systems at a height suitable to both Chris and Jen.
- * Smart wiring throughout.

The Floor Plans



Front Entrance

- * Tiled foyer flush with internal timber floor.
- * Tiles have sufficient fall to allow water run off.
- * Front porch undercover for maximum rain protection.



Rear Entrance

Bi-fold door tracks recessed to ensure no step at rear entrance.



Provides indoor/outdoor living, whilst also providing level access.





Under cover rear verandah provides weather protection to bi-fold doors.

Hallway

Wide hallway (1.8m)



Double doors.
(each door leaf = 820mm)

All Bathrooms - Toilets

- * Wall mounted toilet pan - allows front on access by wheelchair with out footplate causing damage.
- * Adequate space around toilet.
- * Toilet Pan height = 410mm
- * Mainsflush system (No cisterns) . allow Touch Sensitive flush buttons to be side wall mounted.



Example of damage caused by wheelchair footplate.



Technical drawing of a toilet chair with dimensions:

- Side wall: 450 to 460
- Backrest: 350 to 400
- Top of backrest: 850 to 860
- Top of seat: 460 to 480
- Top of pan: 430 to 440
- 600 min. (overall height)
- 150 to 200 (backrest depth)
- 120 to 150 (seat depth)
- 400 max. (seat width)
- 600 max. (overall width)
- AS1428.1 - 2009

Photographs showing the toilet chair in use and a close-up of the seat height measurement (41-46 cm).

All Bathrooms - Shelving



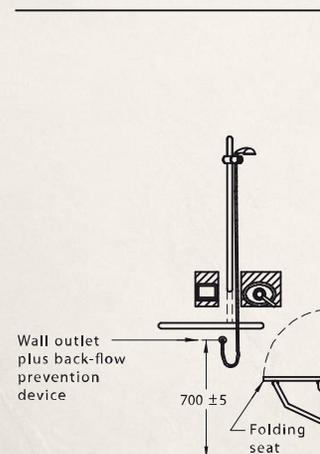
Recessed shelving . to allow for improved circulation space in the showers and less obstruction next to the toilet.

All Bathrooms – Showers

- * Overhead *and* hose style showers.
- * Taps mounted a distance from shower roses so that can be turned on without getting wet.
- * Hose shower head selected as wide but slim to allow easy access through side opening commode chair.
- * Shower hose mounted low on wall to maximise reach of hose. (now in AS1428.1)



- * Shower hose mounted low on wall to maximise reach of hose . Educate plumbers.
- * Folding seats . Wheelchair users are not a fan!



AS1428.1 . 2009*

*Diagram modified for presentation

- * Showers have stainless steel strip drains to allow minimum & single direction fall.
- * Additional %invisible+ drains in each bathroom floor to cope with excess water from floor cleaning or possible dripping from wet commode chair.
- * Positioning of drains . very important due to fall. Consider rolling wheelchair.



All Bathrooms – Basins etc

- * Access under all basins for user in commode chair.
- * Shallow basins.
- * Hob mounted taps.
- * Drain pipes return to highest possible point on rear wall.
- * Mirror mounted low (behind spouts) to allow maximum viewing by wheelchair user.



Powder Room (downstairs)



Main/Guest Bathroom



Frameless shower screen has widest possible door. (800mm)

Wide bath surround to aid with transfer from wheelchair.



En Suite



- * Extended wall hung toilet pan.
- * Aligns with commode chair.
- * Retractable shower hose.



- * Hinged heated towel rail to allow towels to be hung over bath by wheelchair user. Towel rail by *Skope*.

Kitchen



Our initial thoughts

- * Chris does NOT cook!
- * We will only make minor modifications to the kitchen for Chris as Jen does the majority (ok, all) the cooking etc.
- * We will have one lower bench area for Chris with a power point.
- * We will select appliances on their suitability for the wheelchair.
- * We will ensure there is a shelf beneath the microwave (based on previous experience, Chris needs this).
- * We will only have drawers below the bench top.
- * We will not have any corner units.
- * Power Points will be accessible (not at the back of bench tops).
- * Timber floor to be laid under kitchen cupboards in case we decide we require more under-bench access.

Breakfast bar at normal table height with wheelchair access below.



Power point at breakfast bar.



Primarily drawers
beneath bench tops.

- * Kickboards higher than normal to offer protect from sharp parts of wheelchair.
- * Aluminium kickboards (more scratch resistant).



No Corner Unit.



Cupboard installed on
other side of island
instead which is still
accessible from
wheelchair.



Pull out shelf under microwave



Don't mount microwave under bench top



Telescopic arms on oven shelves





We tested both drawer type and standard dishwashers and found that a standard dishwasher was better, providing there was good circulation space surrounding it when the door was open.



Tap with pull out hose spout, allows easy filling of kettle etc.



Flush mounted or low profile stove top allows wheelchair user to see into a wok and taller pots & pans.



Power points and range hood controls relocated to side of work bench.

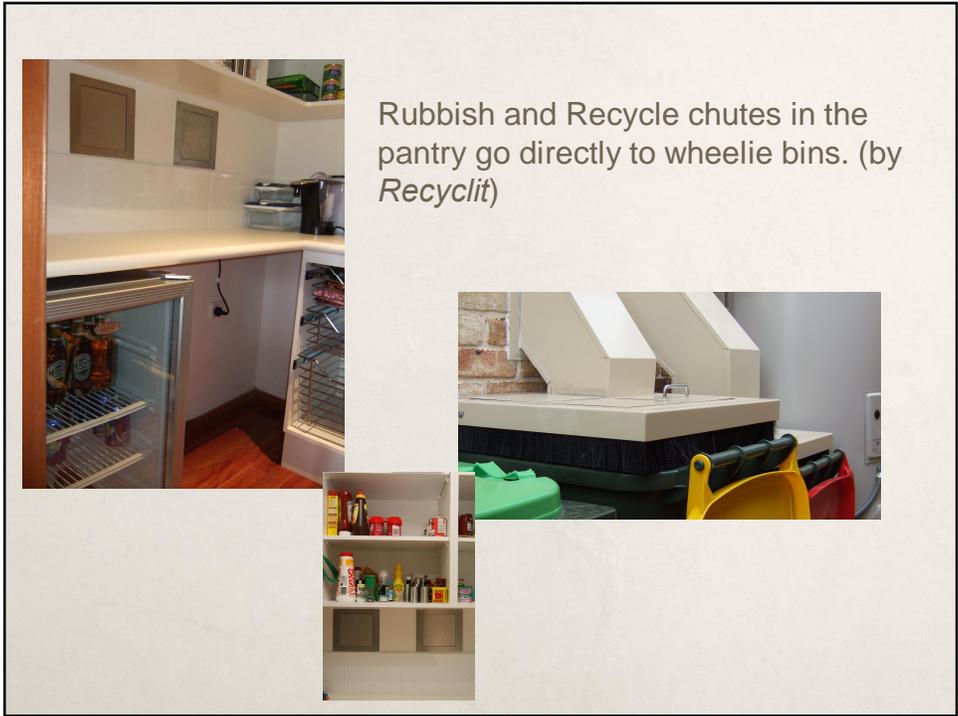
Some power points were left at the rear of bench top where known, semi-permanently placed, equipment was to go.



Walk in Pantry with wire shelves for easy viewing and access.

Access under bench for *Recyclit* rubbish chutes.





Lift

- * Sliding doors - do not impinge on high traffic areas.
- * Faster lift speed permitted with sliding doors (due to having internal lift car doors).
- * Faster door opening speeds (compared to swing doors).



Large circulation area in lift.
1400mm x 1250mm

- * Room to turn wheelchair around in lift.
- * Interior with handrails to aid in resting heavy-ish items.



Master Bedroom



- * Wooden floors (only in this bedroom) for ease of wheelchair and commode chair use.
- * Large circulation space between bed and bathroom (on Chris's side of bed) to enable rotation of wheel/commode chairs.

Master Bedroom - WIR



Shoe rack height allows good wheelchair circulation space.

* Pull out hanging space and drawers etc for ease of access.



* Modular wardrobe allows many set up combinations (ours by IKEA).

* IKEA “hanger reacher” preferable to descending clothes rail.



Media Cabinet

Easy wheelchair access to wiring at rear of units



Garage

- * Floor covered with epoxy resin which sealed and waterproofed floor . ease of cleaning.
- * Concrete slopes (under resin) at doorway into workshop area and main hallway to eliminate steps.
- * Remote control garage doors.



Pool

Glass pool fence to allow wheelchair user to see through it without feeling like they are in jail!



- * Ledges with in pool as rest areas.
- * Shallow beach area allows easy monitoring of toddlers.



- * 1:14 ramp along side of pool to create above ground area at rear of pool for transfers.
- * Accessible skimmer box.

- * Wall at same height as wheelchair for easy transfer.
- * 3 Steps in pool for ease of getting out.



Pool filter was sunk into the ground to allow wheelchair user to reach the controls.

- * Pumps were positioned to allow wheelchair access.
- * Pool box (pump house) was built around the pumps.





You are now leaving the house that Chris builtō

Thanks for coming!