

Date: Monday 17 March 2014
Time: 11.00am
Meeting Room: Boardroom, Ground Floor
Venue: Auckland Town Hall
301-305 Queen Street
Auckland

Disability Strategic Advisory Panel

OPEN MINUTE ITEM ATTACHMENTS

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14 March 2014

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Attention:

Andrew Crisp
Sacha O'Dea

Dear Andrew and Sacha,

Regulatory review of access and facilities

Please find attached Auckland Councils response to the joint review about consenting issues in respect to access and facilities for people with disabilities.

Introduction

MBIE have requested that Auckland Councils Building Control department provide them with an overview of our experiences with access and facilities from a consenting perspective. This request comes about as a result of a joint venture between MBIE and the Office for Disability issues.

The purpose of the review is to gain a better understanding of how the requirements for people with disabilities contained within the Building Act and the Building Code are being implemented in new and existing buildings, and the extent to which these requirements do in fact provide an accessible built environment for people with disabilities. If not, to identify whether this is due to:

- The regulatory requirements being unknown
- The regulatory requirements being known but misunderstood
- The regulatory requirements being known but not complied with (and if so, why not); or
- The regulatory requirements being complied with but are too low or not fit for purpose

The review also asks stakeholders their understanding of the availability, content and adequacy of documents, such as:

- NZS4121:2001 Design for access and mobility – buildings and associated facilities
- Acceptable solutions and guidance issued by MBIE
- Other documents and resources relevant to achieving compliance with the Building Code

Regulatory requirements

In terms of the four options relating to regulatory requirements, Council does not believe it is an issue of the requirements being unknown, nor do they believe that they are misunderstood. Council believes it is a combination of the latter two options being:

- The regulatory requirements being known but not complied with; and

- The regulatory requirements being complied with but too low and not fit for purpose

Regulatory requirements being known but not complied with

In terms of “*the regulatory requirements being known but not complied with*”, we believe this option best suits an existing building being altered. Existing buildings are difficult to process and accessibility is often rigorously debated. The reason for this is that the Building Act states that alterations to existing buildings must comply with the Building Code as near as is reasonably practicable. Unfortunately there is very little guidance as to what this term means and building owners are often reluctant to spend money upgrading their buildings for accessibility spending the least amount possible on this work.

Other factors that complicate alterations to existing buildings are when the building is a heritage or earthquake prone building. Building owners will contend that heritage buildings will be spoilt if they are made to comply with the Code; for example increasing the height of a barrier or handrail from 750mm to 1.0m. However, having to go around to the back of a building and push a buzzer to get access into a building, in this day and age, is unacceptable yet we have a building in Auckland that does this.

In terms of earthquake prone buildings, owners are spending huge amounts of money upgrading buildings to meet the seismic performance requirements and argue that they simply can not afford to upgrade accessible features. Do we risk a building being demolished or not going ahead with repairs to make it structurally sound and forego accessibility requirements?

Guidance is required on how to

- address heritage and earthquake prone buildings; and
- what as near as is reasonably practicable actually means

Regulatory requirements being complied with but too low or not fit for purpose

In terms of “*the regulatory requirements being complied with but too low or not fit for purpose*”, we believe this option best suits new buildings.

A building consent applicant can choose to design a building to the

- Acceptable Solution D1/AS1,
- Acceptable Solution NZS4121:2001; or
- Alternative Solutions (i.e. other standards and guidance from MBIE)

The Building Code clause D1 and the two acceptable solutions have not been updated to keep up with changes in building design and technology.

- Although D1 has had one or two amendments, it has not been updated for 22 years
- NZS4121 was last reviewed 12 years ago and contains some anomalies

D1/AS1 is limited compared to the more comprehensive NZS4121 but can still be used to satisfy the requirements of the Building Code. D1/AS1 paragraph 11.0.1 states in part that “*the provisions of NZS4121 are an acceptable solution for accessible routes, but may exceed the requirements of NZBC D1.*”

Because there are two acceptable solutions, designers can use a combination of both documents or use the less onerous D1/AS1. A good example of this is in respect to lifts; the requirements for lifts in NZS4121 are based on floor areas and public use reception areas. D1 is based on occupancy numbers and public use reception areas. The occupancy level criteria for the requirement to establish whether a lift is required can be misused to the developer’s advantage. If occupancy numbers exceed those prescribed in D1/AS1, the developer will use the floor area in NZS4121 in order not to install a lift. Occupancy numbers can later be exceeded with a change of use; however, it is often argued that it is not reasonably practicable to install a lift.

If we think about how Auckland city has evolved in the last 22 years; the growth has been phenomenal. There is far more density in terms of housing with apartment and office blocks going up everywhere but car parking requirements have not increased or changed to suit the requirements of those requiring accessible car parks. Basement car parks are often too low for mobility vans which are quite common these days.

We also have a huge problem with obesity; these people are often wheelchair bound with significant health issues. Wheel chairs have changed in size and shape and some are motorised, but door way widths are unchanged.

We have an aging population, who will increasingly require handrails and ramps for easy access into, within and out of a building. With these things in mind, the Building Control department have carried out a review of NZS4121 against the Building Code and identified anomalies and made recommendations, which are attached for your review.

We have issues with Schedule 1 of the Building Regulations 1992, performance clause D1.3.2 which reads "At least one access route shall have features to enable people with disabilities to:

- a. approach the building from the street boundary; or
- b. where required to be provided, the building car park

Our emphasis is on the word "or". Access must be provided to the principal entrance of the building to ensure that people approaching it can do so from the property boundary.

Often designers will only provide an accessible route from a car park; however, it is our view that an accessible route must also be installed from the property boundary to the principal entrance of the building. An example of this situation could be where a multi-storey building has a basement car park installed with accessible parking positions allocated; the access to the principal entrance could be via a lift from the basement. However, if a person arrives at the front boundary by foot and only steps are available at the principal entrance; the person does not have access to the principal entrance.

We are currently debating over an application for building consent, which involves the construction of two swimming pools to be used for competition and training as well as being available to the public. Council has requested that a ramp be installed in the warm-up / learn to swim pool as a minimum; however, the applicant has proposed a hoist be installed instead. There is vigorous debate over whether this meets the intent of the Code. Council believes that a hoist would only assist people who are wheelchair bound and be discriminatory to those with other disabilities. The Code and Acceptable Solutions give no guidance as to advantages and disadvantages of ramp versus hoist provision.

We have many other examples, which you will find in the attached spreadsheet.

Council recommends that

- guidance is produced on
 - how to address heritage and earthquake prone buildings; and
 - what as near as is reasonably practicable actually means

Council also recommends that

- one Acceptable Solution be adopted;
- all requirements needed for accessibility are incorporated into this Acceptable Solution; and
- MBIE update this Acceptable Solution more frequently

Yours faithfully

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Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
Definition of accessible routes	1.5 Accessible Route means a route that is usable by people with disabilities. It shall be a continuous route that can be negotiated unaided by a wheelchair user, walking device or by a person with a guide dog. The route shall extend from the street boundary and car parking area to those spaces within the building required to be accessible to enable people with disabilities to carry out normal activities and processes within the building.	A2 An Access Route usable by people with disabilities. It shall be a continuous route that can be negotiated unaided by a wheelchair user. The route shall extend from street boundary or car parking area to those spaces within the building required to be accessible to enable people with disabilities to carry out normal activities and processes within the building.	NZS4121 definition states "from street boundary and car parking area...". A2 of the NZBC states "from street boundary or car parking area..." Clause 1.3.2 of NZBC states "from street boundary or car parking area..."	The use of "or" is restrictive; change to align with NZS4121 by including "and".
		D1.3.2 At least one access route shall have features to enable people with disabilities to: <ul style="list-style-type: none"> (a) Approach the building from the street boundary or, where required to be provided, the building car park. (b) Have access to the internal space served by the principal access, and (c) Have access to and within those spaces where they be expected to work, or visit, or which contain facilities for personal hygiene as required by Clause G1 "Personal Hygiene" 	The NZS4121 definition allows for more than one accessible route to a building. If car parking is in the basement an accessible route can be via a lift to the main entrance foyer. This is not acceptable when a person with disability is not driving and arrives at the road frontage wanting to get to the front entrance.	
Definitions and Interpretation	1.5.1 - Definitions - People with Disabilities means people whose ability to be freely mobile or to access and use buildings is affected by mental, physical, hearing or sight impairment, such as: <ul style="list-style-type: none"> (a) An inability to walk; (b) Walking difficulties; (c) Reliance on walking aids; (d) Partial sightedness or total blindness; (e) Hearing disabilities; (f) Lack of co-ordination; (g) Reaching disabilities; (h) Manipulation disabilities; (i) Lack of stamina; (j) Difficulties in interpreting and reacting to sensory information; (k) Extremes of physical size; (l) Learning difficulties 	Building Act 2004 - Section 7 - Interpretation - Person with a disability means a person who has an impairment or a combination of impairments that limits the extent to which the person can engage in the activities, pursuits, and processes of everyday life, including, without limitation, any of the following: <ul style="list-style-type: none"> (a) a physical sensory, neurological, or intellectual impairment; (b) a mental illness. 	There is variations to the definition about people that have disabilities - the definition needs to be the same throughout legislation and Standards, and Acceptable Solutions	The Building Act 2004 definition be adopted "Person with a Disability" but have it extended to include vision impairment (means changing the Act)
Definitions and Interpretation	1.5.1 - Definitions - People with Visual Impairment includes: people who are totally blind (around 5%), those who are blind but have some light perception, and people who have low vision whose sight may be affected in one or more of a wide variety of ways.	Building Regulations 1992 - Clause A2 - Interpretation - People with Disabilities - People whose ability to use buildings is affected by mental, physical, hearing or sight impairment.		

Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
Objective - Building Regulations 1992	Under the First Schedule of the Building Regulations 1992 Objectives are written in Clauses D1, D2, F8, G1, G2, G3, G5, G9, G12 states "ensure that people with disabilities are able to carry out normal activities and processes with buildings". This needs to extend to Clauses C - Protection from Fire, F6 - Visibility in Escape Routes, F7 - Warning Systems, G8 - Artificial Light		The Objective is also relevant to the Clauses C, F6, F7 and G8.	
Fire Safety & Evacuation of Building Regulations 2006	Clause 18 - Matters to be included in evacuation scheme in relation to persons with disability - An evacuation scheme for a building must: (a) designate 1 or more places in the building where persons with a disability are to gather if, in a fire emergency requiring evacuation, they are unable to evacuate the building using its means of escape from fire; and (b) specify how, in a fire emergency, the building's occupants and the attending firefighters are notified of the place or places; and (c) specify how, in a fire emergency, the attending firefighters are notified of whether there are any people at the place or places; and (d) include details of any equipment available for assisting occupants who are persons with a disability to evacuate the building in a fire emergency and how people are trained in its use.		People with a disability need a refuge safe area that enables safety in evacuation situations.	Include refuge areas for people with a disability in the Building Code Clauses in the Fire Safety 'C' documents.
Car parks - number required	5.4 - Number Required - Where car parking is provided, spaces for people with a disability shall be provided in accordance with the following table: 1-20 number of car parks Not less than 1 21-50 number of car parks Not less than 2 For every additional 50 car parks or part of a car park Not less than 1	D1/AS1 10.2 - Modifications to AS 2890 Part 1 Accessible car parking spaces shall be provided on the scale of: 1 for up to 10 total spaces provided 2 for up to 100 total spaces provided plus 1 for every additional 50 spaces when car parks are provided in or associated with a building which is accessible	The number of car parks in NZS4121 per 100 vehicle is 3, but in D1/AS1 only 2 are required.	Provide 1 for up to 10 car park spaces; 2 for up to 25 spaces plus 1 for every additional 40 spaces

Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
<p>Moving walkways</p>	<p>6.3.1 - General - Accessible moving walkways shall comply with the requirements of NZBC D2/AS3. The principal design factors are shown below. 6.3.2 - Gradient - The accessible moving walkway shall have a maximum gradient of 1:10 (5.7°). Where an accessible moving walkway is provided an alternative means shall also be available (e.g. lifts and steps) 6.3.3 - Speed - The rated speed of the moving walkway shall not exceed 0.75m/s 6.3.4 - Width - The pallet or tread width shall be not less than 900mm or greater than 1200mm. 6.3.5 - Handrails - A moving walkway shall be provided with handrails on both sides, which must move at the same speed as the walkway. 6.3.6 - Encroachment - The moving walkway shall be extended into lower and upper landings by at least 1200mm, with the handrails being extended a further 300mm minimum. 6.3.7 - Rest areas and landings - Rest areas or landings are not required on moving walkways.</p>	<p>D2/AS3 3.0 - EN 115 is modified by the following Clauses. Clause 17 - Requirements for moving walks on accessible routes. (Note: Escalators are not suitable for use by people with disabilities) Clause 17.1 - The maximum slope of a moving walk shall be 1:10 (5.70) Clause 17.2 - The width of the pallet or tread shall be no less than 800mm and no greater than 1000mm Clause 17.3 - The moving walkway shall extend into the landings by at least 800mm</p>	<p>Width of pallet or tread in 4121 is 900 - 1200mm Width of pallet or tread in D2/AS3 is 800 - 1000mm Encroachment in 4121 6.3.6 states at least 1200mm Encroachment in D2/AS3 17.3 states at least 800mm</p>	<p>Subject to manufacturer's designs available on the market the pallet or tread size of 800-1200mm should be prescribed The encroachment distance be 1200mm similar to landings minimum size to provide adequate turning circles.</p>

<p>Lifts</p>	<p>9.1.1 - General - All accessible lifts shall comply with 9.2 of this Standard, with NZBC D2.3.5 and NZD 4332. Platform lifts and stair lifts shall not be used as alternative to this requirement. 9.1.2 - Signs - Accessible lifts shall be clearly sign-posted 9.1.3 Provision of lifts - 9.1.3.1 - General - An accessible route shall include a lift to upper floors where: (a) Buildings are four or more storeys high; (b) The upper floor(s) of any building are to be used as the public reception areas of: (i) Banks (ii) Central government offices or government agencies (iii) Regional government offices (iv) Local government offices and facilities (c) The upper floor(s) are designed or intended to be used as: (i) Public areas of hospitals, medical consulting rooms, dental surgeries, and other primary health care centres (ii) Places of public assembly for 250 or more people (iii) Public libraries 9.1.3.2 Two and three storey buildings - Where 9.1.3.1 is not applicable a lift is not required when: (a) Buildings are two storeys high and have a gross floor area of the upper floor of less than 400m²; (b) Buildings are three storeys high and have a gross floor area of the upper floors of less than 500m² provided that the ground floor complies with the requirements of this Standard and the upper floors have access for ambulant people with disabilities. 9.1.4 - Lift cars and lift installation - The NZBC requirements for mechanical installations on accessible routes are defined in NZBC Clause D2, D2.3.5</p>	<p>D1.3.4(c) - An accessible route, in addition to the requirement of Clause D1.3.3, shall include a lift complying with Clause D2 "Mechanical Installations for Access" to upper floors where: (i) buildings are four or more storeys high; (ii) buildings are three storey high and have a total design occupancy of 50 or more person on the two upper floors; (iii) buildings are two storeys high and have a total design occupancy of 40 or more persons on the upper floor, or (iv) an upper floor, irrespective of design occupancy, is to be used for the purposes of public reception areas of banks, central, regional and local government offices and facilities, hospitals, medical and dental surgeries and medical, paramedical and other primary health care centres.</p>	<p>The requirement for lifts in NZS4121 is based on floor areas and public use reception areas. D1/AS1 1.3.4 (c) is based on occupancy numbers and public use reception areas. The occupancy level criteria for the requirement to establish if a lift is required can be misused to the developers advantage. If an occupancy exceeds to number criteria as prescribed in D1/AS1, the developer will use the floor area criteria to get away from installing a lift. What is the rationale behind this criteria?</p>	<p>NZS4121 should be the same as the D1/AS1 version.</p>
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Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
Lift Controls	9.2.4 - Lift controls, whether in the lift lobby or in the lift car, shall be situated between 900-1350mm maximum above floor level. (see Figure 26).	NZS 4332 - Figure 70.4.1 - All controls including landing controls, shall be located within a height of 900mm and 1500mm (optimum 1000mm) from the floor level. An acceptable layout for control panel inside the lift car is shown in Figure 70.4.1.	A standard height needs to be defined.	Adopt NZS 4121 version
Lifts - Floor Level Indicators	9.2.5(d) - Floor indicators. In all cases where audible signals, e.g. voice announcements, of floor level are not used, raised tactile numbers shall be provided on the leading edge of landing doors, or on the entrance architrave as close as practical to the landing doors, to indicate the floor level position of the lift. These tactile numbers shall be sited 1350mm above the finishing floor level.	NZS 4332 70.5.4 - Raised, tactile numbers shall be provided on the leading edge of the landing doors, or if this is not possible, on the entrance architrave as close as practicable to the landing doors, to advise of floor level. These numbers shall be positioned between 900 mm and 1500 mm above floor level and be at least 20mm high.	The lift control panel height inside lifts are 900-1350mm maximum, therefore the height of the tactile numbers should be the same.	Adopt the same height of 900-1350mm of the lift control panel inside lifts.
Wall hung WC pans - False wall	10.5.6.3 - Wall-hung pans - Wall-hung pans shall be fixed on a false wall (see figure 29) and comply with 10.5.6.1. If there is no false wall, a seat bracket is required.	G1/AS1 Figure 7 - G1/AS1 4.2.8 - Where there is a wall hung pan or a concealed cistern, full access is required each side of the WC pan, as detailed in Figure 7, to allow for wheel-over access. The wall in front of a concealed cistern shall extend no less than 1.0m above floor level to provide back support, and fold-up lid shall be provided.	Figure 7 in G1/AS1 - shows a false wall height of 900-1000mm but the text states 1m.	Adopt the G1/AS1 text version be shown on Figure 7 as 1m only.
WC pan lid backrest	0.5.6.1(f) - The toilet lid is supported between 100-150 beyond the vertical to provide a backrest for the user.	G1/AS1 4.2.8 - Where there is a wall hung pan or a concealed cistern, full access is required each side of the WC pan, as detailed in Figure 7, to allow for wheel-over access. The wall in front of a concealed cistern shall extend no less than 1.0m above floor level to provide back support, and fold-up lid shall be provided.	G1/AS1 does not specify an angle for the WC pan lid or show a pan lid raised in any figures. The backrest is important for users.	The 4121 version to be adopted to provide support for the WC pan lid between 100-150 beyond the vertical.
WC pan height to top of seat	10.5.6.2 - Height - The height of the top surface of the toilet pan seat shall be 460mm.	G1/AS1 - Figures 6 and 7 - No text - Figures give dimension 460mm	The availability of WC pans on the market with a lid meeting this exact dimension is difficult with seat thicknesses varying therefore unable to meet compliance.	Adopt a flexible height of 460-480mm
WC pan height to top of seat	10.5.6.2 - Height - The height of the top surface of the toilet pan seat shall be 460mm.	G1/AS1 - Figures 6 and 7 - No text - Figures give dimension 460mm	The availability of WC pans on the market with a lid meeting this exact dimension is difficult with seat thicknesses varying therefore unable to meet compliance.	Adopt a flexible height of 460-480mm
Accessible Toilet - Grab rail position	10.5.10.2 - Position - The provision of fixed grab rails, toilet paper holders etc. shall be in accordance with Figure 31.	G1/AS1 - Figures 6 and 7 - No text - Figures give dimension 230mm to the centre of grab rail from the front of the WC pan	There are differences between Figure 31 in 4121 and G1/AS1 Figures 6 & 7. Figure 31 4121 shows the grab being 150-250mm to the outside of the grab rail from the front of the WC pan. G1/AS1 give dimension 230mm to the centre of grab rail from the front of the WC pan	Adopt the 4121 version giving a flexibility in distance

Accessible Toilet - Grab rail position	10.5.10.2 - Position - The provision of fixed grab rails, toilet paper holders etc. shall be in accordance with Figure 31.	G1/AS1 - Figures 6 and 7 - No text - Figures give dimension 230mm to the centre of grab rail from the front of the WC pan	There are differences between Figure 31 in 4121 and G1/AS1 Figures 6 & 7. Figure 31 4121 shows the grab being 150-250mm to the outside of the grab rail from the front of the WC pan. G1/AS1 give dimension 230mm to the centre of grab rail from the front of the WC pan	Adopt the 4121 version giving a flexibility in distance
Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
Mirror in accessible toilet unit	10.5.10.2 - Position - The provision of fixed grab rails, toilet paper holders etc. shall be in accordance with Figure 31. In addition: (c) If a mirror is provided, the lower edge shall be not more than 1000mm above the finished floor level.	G1/AS1 - Figures 6 and 7 - No text - Figures give dimension 1000mm maximum above floor level with a mirror maximum height of 650mm minimum.	NZS 4121 does not give a mirror height - and G1/AS1 fixed maximum height is too small	Adopt a flexible height of 700-900mm above the floor level and a mirror height of 800-900mm.
Accessible Toilet - Transfer space	No dimension	G1/AS1 - Figures 6 and 7 - No text - Figures give dimension 850mm minimum between the side wall and the WC pan	NZS 4121 does not give a dimension. G1/AS1 states 850mm minimum distance. This space allows for a person to transfer from a wheelchair to the WC pan seat.	Maintain this distance of 850mm in the final version of the document review to clearly define requirement.
Wash basin position in WC unit	Figure 27 - No text - Figure 27 shows 400mm minimum to centre of wash basin from end wall	G1/AS1 - Figures 6 and 7 - No text - Figures gives no dimension between end wall and centre of wash basin	Putting a dimension of 400mm minimum to centre of wash basin from the end wall will have an impact on another dimension of the wash basin away from the front of the WC pan of 300mm minimum.	Adopt the G1/AS1 version with no dimension from end wall. Dimension of pan to centre of wash basin (450mm-500mm).
Top of wash basin height in accessible toilet unit	No dimension	G1/AS1 - Figures 6 and 7 - No text - Figures gives a dimension between of 800-850mm minimum above the floor level	A minimum and maximum height is required to enable a person in a wheelchair reach into the wash basin for use.	Adopt the a 800-850mm maximum height for the wash basin
Space under wash basin in accessible toilet unit - toe space	10.5.8.1(b) - Standard washbasins, having a maximum depth of 400mm, shall comply with AS/NZS 1730 and installed so that: (b) Washbasins shall provide a minimum clearance of 675mm on the underside as shown in Figure 30.	G1/AS1 - Figures 9 - No text - Figure 9 gives a dimension between of 200-300mm above the floor level	NZS 4121 does not give a toe space dimension. G1/AS1 states 200-300mm minimum distance. This space allows for a person approach the wash basin in a wheelchair and allow wheelchair get as close as possible to the washbasin.	Adopt the a 200-300mm above the floor level for a toe space under the wash basin

Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
Privacy bolt height in accessible toilet unit	10.5.5 - Toilet doors - All doors serving toilet facilities shall: (a) Be provided with a suitable indicator bolt of suitable size and simplicity of operation usable by those with limited hand movement.	G1/AS1 4.2.6 -The WC flushing control shall be easily operable, positioned on the centre line or approach side of the WC pan, and no higher than 1200mm above the finished floor level. Similarly, easily operable privacy bolts (to indicate whether the toilet is occupied) shall be located no more than 1200mm above floor level.	NZS 4121 does not give a dimension. G1/AS1 states 1200mm maximum distance. To bring this in line with door handles and hardware, the height should be similar.	Adopt a 900-1200mm maximum above the floor level for the privacy bolts to be installed.
Flush Controls in accessible toilet unit	10.5.6.4 - Flushing control - The flushing control shall be easily operable, and positioned as in Figure 32.	G1/AS1 4.2.6 -The WC flushing control shall be easily operable, positioned on the centre line or approach side of the WC pan, and no higher than 1200mm above the finished floor level. Similarly, easily operable privacy bolts (to indicate whether the toilet is occupied) shall be located no more than 1200mm above floor level.	NZS 4121 gives a zone dimension of 600mm above floor level and a minimum of 300mm in front of the front edge of the WC pan and 300mm back from the front of the WC pan on a side wall. 4121 position on the back wall is 600mm above the floor level and 500mm maximum from the centre of the WC pan. An alternative position is shown in Figure 32. Maximum height in both configurations is 1100mm maximum. G1/AS1 states 1200mm maximum distance. 1100mm is too high. Putting a flush control on the back wall is difficult for those people who have a difficulty reaching behind whilst sitting on the pan.	Adopt the a 600-1000mm above the floor level for the flushing control zone to be installed on the side wall only.
Shower Control	Figure 33 - No text. Figure 33 shows shower control is located 450mm minimum from side wall	G1/AS1 - Figure 8 - No text - Figure 8 gives a dimension 450-550mm from side wall	Having a fixed dimension is very restrictive	Adopt the G1/AS1 version with 450-550mm from side wall
Shower unit width	Figure 33 - No text. Figure 33 show shower unit width is 1200mm minimum (Dimensions don't add up to 1200mm as indicated - 600 + 450 = 1050)	G1/AS1 Figure 8 - No text - Figure 8 gives a total width dimension 1050-1150mm	Having a fixed dimension is very restrictive	Adopt the G1/AS1 version with 1050-1150mm
Shower seat width	10.5.11.4(f) - A self-draining, slip resistant seat, 800mm x 450mm minimum, provided inside the shower cubicle at a height between 450mm and 550mm above the finished floor level. This seat shall	G1/AS1 Figure 8 - No text. Figure 8 gives a dimension for the seat width as 450-550mm	Having a fixed dimension is very restrictive	Adopt the G1/AS1 version with 450-550mm width

	be securely fixed to the wall and shall be hinged so that it swings or folds out of the way.			
Showers	3.3.1 Minimum provisions - 3.3.1 (b) (iii) - Showers - Where showers are provided, at least one shower for each gender (or one all gender shower) shall be accessible.	G1/AS1 4.2 - Number of facilities - 4.2.1 - Sanitary facilities for people with disabilities shall be provided in accordance with Tables 1 and 2.	G1/AS1 specifies number of showers based on occupancy levels and building use. NZS 4121 does not specify any numbers	Adopt the G1/AS1 version
Taps and other fittings	10.5.8 - Washbasins - 10.5.8.2 (d) - If taps are provided: (i) They shall have lever or capstan handles easily operated by a person with limited hand function; (ii) The hot water taps shall be placed to the left of the cold water tap.	G12/AS1 8.0 - Usable Facilities for People with Disabilities - 8.0.1 - Where taps are likely to be used for personal hygiene or the washing of utensils by people with disabilities, they shall have: (a) Lever or capstan handles; (b) The hot tap located to the left of the cold tap. G12/AS1 - Figure 18 provides clearance dimensions of 50mm minimum from a wall.	G12/AS1 Figure 18 provides a clearance dimension from a wall surface of 50mm minimum which is not identified in NZS 4121.	Include this dimension in final version of review
	10.5.10 - Toilet facility fittings - 10.5.10.1 - Design - Fittings shall be simple and operable with one hand.			
Clothes hanging device in shower	A clothes hanging device shall be fitted, positioned between 1200mm and 1350mm above the finished floor level in drying spaces	G1/AS1 - Figure 8 - Figure 8 has a note stating "Drying space to be fitted with a clothes hanging device positioned between 1400mm and 1500mm above finished floor level".	This fitting is very practical for the user to hang clothes/towel up while having a shower.	Adopt the NZS 4121 version at a height between 1200-1350mm above floor level.
NZS 4121 cited in G1/AS1		G1/AS1 - 4.2.7 - NZS 4121 Section 10 is also an acceptable solution for people with disabilities	Citing another document provides another option for the developer, but it also presents the opportunity to mix and match specifications. This creates as to which document is the building consent approval granted upon.	Not citing other documents - details should be itemised in the NZBC acceptable solutions. Remove reference to other documents.
	10.4 - Number of toilets and showers - The number of accessible toilets and showers to be provided shall comply with NZBC G1/AS1.			

Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
<p style="text-align: center;">Projections</p>	<p>4.5.6 - Minor, major and dangerous projections are covered by the requirements of Approved Document D1/AS1 of the NZBC</p>	<p>D1/AS1 1.5 Obstructions - 1.5.1 A minor projection is permitted within the required clear width of an access route if it is designed to minimise the risk of injury or impact, and the projection is located:</p> <p>(a) More than 1600mm above floor level and projects less than 200mm into the access route (Figure 4);</p> <p>(b) Within the height 800mm to 1600mm above floor level and projects less than 60mm into the access route, (Figure 4);</p> <p>(c) Less than 800mm above floor level and projects less than 100mm into the access route, (Figure 4).</p> <p>1.5.2 Handrails may be considered a minor projection if they project no more than:</p> <p>(a) 100mm into the access route, (See Figure 4) or (b) In the case of a centre handrail, 300mm into a landing (see Figure 25).</p> <p>1.5.3 Major projections (see Figure 5) are permitted if: (a) The clear width of the access route is provided between the faces of the projections, and (b) The transition between the face of the wall and the face of the projection is designed to minimise the risk of injury by impact.</p> <p>1.5.4 Dangerous projections - Windows, fittings or other dangerous obstructions may project into the space adjacent to an access route (see Figure 6) if users are protected from the projection by:</p> <p>(a) A kerb provided at floor level which defines the extent of the projection, or (b) A handrail, guard rail, or other protection at sill level.</p> <p>1.5.5 Isolated columns are permitted in an access route (see Figure 7) provided that:</p>	<p>Citing another document provides another option for the developer, but it also presents the opportunity to mix and match specifications. This creates as to which document is the building consent approval granted upon.</p>	<p>Adopt D1/AS1 version</p>

Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
		<p>(a) The column can be readily seen during normal use of the building, and (b) A clear passage of no less than 900mm is available on both sides; and, on an accessible route, a clear passage of no less than 1200mm is available on at least one side.</p>		
<p>Handrails - Graspable Round</p>	<p>8.6.2.1 - Size and shape - The design of the handrail shall meet the requirements of Appendix F.</p>	<p>D1/AS1 6.0.8 - A graspable handrail profile shall have: (a) A flat or convex upper surface; (b) A raised or radiused edges; (c) A minimum cross section of 20mm, and (d) A "relevant width" (as illustrated in Figure 26 (a) across the top surface of no greater than 80mm. Figure 26 (a) and (b) indicates some acceptable profiles but others may also be acceptable.</p>	<p>The profile in NZS 4121 of round handrail with bracket to wall underneath (first drawing) states 32-45mm round and 50-60mm away from the wall. The D1/AS1 round handrail with bracket underneath (first drawing) states 32-50mm round and 45-60mm away from the wall. Profile of NZS 4121 round supported underneath (third drawing) states 32-45mm round. D1/AS1 round is support on the side but round is 32-50mm. Profile of NZS 4121 flat top rail second drawing) states 40-50mm wide and 50-60mm away from the wall. D1/AS1 flat top rail (third drawing) states 45-50mm wide and 45-60mm away from the wall. Different sizes enables either compliance with NZS 4121 or D1/AS1, not mixing.</p>	<p>Need to adopt one or the other as the standard profile design or a range of profiles.</p>
<p>Handrail - dome</p>	<p>8.6.2.1 - Dome buttons shall be provided as shown in Figure 23.</p>	<p>No reference</p>	<p>The placing of a dome at the top and bottom of a handrail assists people with a vision impairment an indicator that the end of the handrail is close (300mm away).</p>	<p>Adopt the detail of 4121</p>

<p>Handrail - Height - Stairs</p>	<p>8.6.4.3 and Figure 23 - Height - The height of a handrail above the nosing of the tread shall be between 900 - 1000mm (see Figure 23)</p> <p>6.4.2.6 and Figures 12 and 13 - Handrails - Ramps (excluding kerb and step ramps) shall have handrails at a height of 840-900mm on both sides of the ramp and as shown in Figure 13.</p>	<p>D1/AS1 6.0.6 and Figure 25 - Height of handrails - Handrails shall be positioned between 900mm and 1m above the pitch line (See Figure 25)</p>	<p>Having different heights for ramp or stairs is confusing.</p>	<p>Adopt a standard height of 900mm - 1000mm</p>
Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
<p>Tactile</p>	<p>4.10.5.2. and Figure 6 - Stair visibility - The top and bottom of stairs shall be indicated by visual contrast supported by tactile and auditory warning cues.</p>	<p>No reference</p>	<p>People with a visual impairment need a visual or auditory cue to indicate an approaching stair, change in level, change in direct of travel, or an obstruct ahead impeding travel. From carpet to tile, carpet to tactile pad are examples.</p>	<p>Adopt NZS 4121 version</p>
<p>Landing length</p>	<p>8.3.6.1 - Landing for stairs - Landings of at least 1200mm (including mid-flight landings, whether on a straight or zigzag set of stairs) are required to ensure that wheelchair users may be safely carried down (up) stairs in their own wheelchairs in an emergency, (generally the preferred evacuation method). This length ensures both a safe resting-place for the wheelchair user and enables other people to pass safely.</p>	<p>D1/AS1 4.3.4 - Landing length shall be no less than 900mm.</p>	<p>Having different lengths for landings is confusing.</p>	<p>Adopt a standard landing length of 1200mm which aligns with ramp rest areas, top and bottom or ramps and stairs areas.</p>
<p>Kerb ramps - footpath clearance</p>	<p>13.4.3.1 (g) and Figure 46 - A minimum of 800mm of space between the top of the ramp and any obstruction.</p>	<p>D1/AS1 3.4.1 - Kerb ramps (see Figure 10) shall have: (a) A slope of no greater than 1:8, and; (b) Colour and texture contrast with the adjacent footpath.</p>	<p>The D1/AS1 Figure 10 is stating a 900mm minimum distance width of footpath remaining. NZS 4121 distance of 800mm is tight. The wider is better for passing the kerb ramp and the edge of the footpath.</p>	<p>Adopt the wider dimension of 900mm minimum width.</p>
<p>Turnstiles and trolley traps</p>	<p>4.5.4.1 - Access - Whenever the accessible route into a building passes through turnstiles or trolley traps these shall allow unimpeded passage to a person with mobility aids including guide dogs. 4.5.4.2 - Egress - The nominated "means of escape" route shall</p>	<p>D1/AS1 7.0.6 - Revolving doors and turnstiles - Where revolving doors or turnstiles are used within an accessible route, an alternative hinged or sliding door shall be provided (see Figure 29)</p>	<p>D1/AS1 states an alternative door when these are used. How does a wheelchair user get access as trolley traps are not wide enough. (Revolving doors can have a</p>	<p>More clearer detail on the acceptability of revolving doors and trolleys traps can be accepted to meet Building Code requirements -</p>

	be clearly indicated at the turnstile or trolley trap so that people with disabilities do not attempt to use the turnstile or trolley trap in an emergency."		button to press to slow revolution speed that enables a wheelchair user to negotiate a revolving door access and in an emergency the revolving door can be programmed to stop rotating and lock open allowing maximum width for egress).	Safeguard people from injury during movement into, within and out of buildings (D1.1 (a)) Information about emergency egress needed.
Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
Accessible Accommodation - Number of Units	14.5.2 - Number of accessible accommodation units - The minimum number of accessible accommodation units shall comply with Table 2 . Table 2: - Total of accommodation units/cabins/tents/caravan sites - 1-10 - Number of accessible accommodation units - 1 - Total of accommodation units/cabins/tents/caravan sites - 11-25 - Number of accessible accommodation units - 2 For every 25 units thereafter - add 1 unit	D1/AS1 9.1.1 - Number of units to be provided - The number of accessible accommodation units to be provided in hotels, motels and other Communal Residential buildings providing accommodation for the public shall be no less than that given in Table 9. Table 9: Total number of guest units - 0-9 - Number of accessible units to be provided - 1 Total number of guest units - 10-25 - Number of accessible units to be provided - 2 Plus 1 for every additional 25 guest units provided	The difference between the two versions is only the number of accommodation units at the complex before the first accessible accommodation unit is required.	The NZS 4121 version to be adopted as the number required to provide balance of people and usage.
Electrical switches and socket outlets	4.11.4 - Electrical switches and socket outlets - Switches for electric light and power shall comply with the following requirements: (a) All light switches shall be horizontally aligned with door handles at 900-1200mm optimum above finished floor level; (b) The toggle, rocker, push pad, or push button control of light switched shall project clear of the switch plate; (c) Socket outlets shall be fixed between 500mm and 1200mm above the finished floor level and at least 500mm from corners and within a 500mm horizontal dimension from the front of any bench or fixed unit.	G9/AS1 2.0 - Light switches and plug sockets for use by a Person with a Disability - 2.0.1 - In buildings intended for use by persons with disabilities, light switches and socket outlets shall comply with the following requirements: (a) All light switches shall be horizontally aligned with door handles; (b) The toggle, rocker, push pad, or push button control of light switched shall project clear of the switch plate; (c) Socket outlets in accessible accommodation units shall be fixed between 500mm and 1200mm above the finished floor level and at least 500mm from corners. At least one room light shall have a bedside switch."	NZS 4121 provides a dimension for the height of the switches and sockets, G9/AS1 does not. G9/AS1 requires at least one room light has a bedside switch. No reference to this in NZS 4121. The bedside switch allows the person with a disability to operate the switch without having to travel to the room wall switch.	Combine all the information into one section.
Street furniture	13.5.1. - General - Street furniture, which includes objects such as seats, tables, drinking fountains, planter boxes, rubbish bins and the like, shall comply with the following: (a) Objects shall not protrude into an accessible path of travel.	No reference in D1/AS1	D1/AS1 has no information relating to street furniture.	Adopt NZS 4121 version

	<p>Seats shall be a minimum of 500mm away from the path of travel;</p> <p>(b) Objects shall be of a colour that provides a contrast with their background and have a luminance factor of not less than 0.3 (300).</p> <p>13.5.2 - Seating in pedestrian areas - The design and installation of seating shall be as follows:</p> <p>(a) The front of the seat shall have a clear space between any legs at ground level to within 150mm of the front edge of the seat, and to within 100mm of the seat height to allow rearward adjustment of feet when using (see Figure 50);</p> <p>(b) Where armrests are provided, the top surface of the armrests shall be a height of 260mm plus or minus 40mm above the seat.</p> <p>13.5.3 - Car parks - 13.5.3.1 - Signs - Figure 4 shows the preferred wording for signs in public parking buildings and public streets monitored by parking wardens.</p> <p>13.5.3.2 - Car park size - The provisions of 5.5 of this Standard apply.</p> <p>13.5.3.3 - Surface - The provisions of 5.6 of this Standard apply.</p>			
Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
Counters	<p>11.1.1 - General - Reception counters and desks for public use on an accessible route shall have at least one space for use by people in wheelchairs as visitors and staff working in the reception area. Such a space shall be at least 900mm wide.</p> <p>11.1.2 - Other forms of counters and desks - Additional examples of public counters such as in public bars, shops, supermarket checkouts shall comply with 11.1.1.</p>	No reference in D1/AS1	Providing facilities for people with a disability to write, fill in forms etc at a reception or counter location requires a lower height, especially if the person is in a wheelchair. A publication issued by Department of Building and Housing in January 2007 provides guidelines for accessible reception and service counters.	Adopt NZS 4121 version and the DBH publication providing more details on counters
Swimming pools - accessibility	<p>12.3.1.1 - Accessibility of facilities - Accessible toilets , showers and changing rooms designed using the principles of this Standard shall be provided on an accessible route.</p> <p>13.3.1.2 - Access to the pool - The swimming pool shall be available from the accessible route and unaided access to the water shall be possible from the poolside.</p>	No reference in D1/AS1	D1/AS1 has no information relating to swimming pools.	Adopt NZS 4121 version

Item	NZS4121 text and reference	NZBC text and reference	Comments	Recommendations
<p>Sports track and field activities - access</p>	<p>12.3.2.1 - Accessible facilities - Accessible toilets , showers and changing rooms designed using the principles of this Standard shall be provided on an accessible route. 12.3.2.2 - Access to the sports track or field - Sports tracks and fields shall be accessible via an accessible route.</p>	<p>No reference in D1/AS1</p>	<p>D1/AS1 has no information relating to sports facilities.</p>	<p>Adopt NZS 4121 version</p>
<p>Food preparation</p>	<p>NZS 4121 - Section 14 - Accessible Accommodation - This whole section itemises specifics for:</p> <p>14.7.1 - General</p> <p>14.7.2 - Car parks</p> <p>14.7.3 - Doors</p> <p>14.7.4 - Kitchens and laundries</p> <p>14.7.4.1 - Space dimensions</p> <p>14.7.4.2 - Work surfaces</p> <p>14.7.4.3 - Sinks</p> <p>14.7.4.4 - Taps</p> <p>14.7.4.5 - Ovens</p> <p>14.7.4.6 - Cooktops</p> <p>14.7.4.7 - Range hood</p> <p>14.7.4.8 - Storage</p> <p>14.7.4.9 - Benches</p> <p>14.7.4.10 - Refrigerator</p> <p>14.7.4.11 - Dishwasher</p> <p>14.7.4.12 - Laundry tubs</p> <p>14.7.4.13 - Washing machine and dryer</p> <p>14.7.4.14 - Shelves</p> <p>14.7.4.15 - Ironing board</p> <p>14.7.4.16 - Clothes-line</p>	<p>G3.1(c) The objective of this provision is to: (c) Ensure that people with disabilities are able to carry out normal activities and processes within buildings. Limits on application - Objective G3. (c) shall only apply to those buildings to which section 25 of the Disabled Persons Community Welfare Act 1974 applies. (Now Schedule 2 - Buildings in respect of which requirement for provision of access and facilities for persons with disabilities applies).</p>	<p>G3/AS1 has very little information about facilities for food preparation areas, only referring to a 1500mm turning circle in front of a kitchen facility after the doors in the units are opened.</p>	<p>Adopt NZS 4121 content into final version of reviewed documents</p>

	<p>14.7.4.17 - Power outlets</p> <p>14.7.4.18 - Lighting</p> <p>14.7.4.19 - Dining and lounge space dimensions</p>			
		<p>G3.3.5 - Where facilities are provided for people with disabilities they shall be accessible. Limits on application - Performance G3.3.5 shall apply only to camping grounds and accessible accommodation units in Communal Residential buildings.</p>		
<p>Interior environment</p>	<p>No specific reference to activity space in NZS 4121.</p>	<p>G5/AS1 3.0 People with Disabilities - 3.0.1 - Acceptable activity space shall comply with NZS 4121.</p>	<p>Referring to another document is not always clear as to what is required.</p>	<p>Clear definition into final reviewed version in Acceptable Solutions</p>

Disability access review: a user perspective. Item 7 DSAP, March 2014.

The Building Act 2004: s.118 of the 2004 Building Act and the Building Code require all buildings to which the public are admitted, whether for free or by charge, to have reasonable and adequate facilities for persons with disabilities to visit, work, and carry out normal activities in those buildings. While the Department of Building and Housing (DBH) administer the Act and regulations, enforcement of the Act and regulations is carried out by territorial authorities, which issue building consents and code compliance certification.

However, s. 119 of the Building Act specifically references NZ Standard 4121 "code of practice for design for access and use of buildings by persons with disabilities", as the compliance document for requirements of persons with disabilities.

It would seem that over the years the original purpose of s.118 of the Building Act has been watered down by the introduction of various compliance codes, and operationalised without persons with disabilities having the opportunity to comment on the reasonableness of changes to standard specifications. Free access to the built environment is critical to the independence, quality of life and equal opportunity for everyone; particularly for persons with disabilities.

Delegated responsibility under the Building Act: The Office for Disability Issues (ODI), www.odi.govt.nz is, under s.170 of the Building Act, required to be consulted by the DBH on all determinations related to access and facilities for persons with disabilities. The Act also requires consultation on legislative amendments related to buildings and housing. The DBH also has statutory powers to convene expert advisory panels on access issues.

2.1 Challenges remain for persons with disabilities moving around independently:

Despite the above provisions, several issues affecting accessibility to the built environment persist. They are as follows:

- Lack of awareness, knowledge and professional understanding among building owners, developers, designers, building trade practitioners, and building control practitioners of the needs of persons with disabilities and their interaction with the built environment. Many buildings receive code compliance certification when they do not comply with accessibility requirements. Further, current housing stock is not meeting the housing needs of persons with disabilities. Expensive housing modifications, often partly borne by grant applicants, would be more cost effective if they were designed into the original designs of some housing stock.
- Lack of a robust, representative and genuine disability perspective incorporated into work planning and operational practices of institutions charged with administering and enforcing statutory requirements relating to accessibility and housing. Building code determinations of disputes between building owners and consent authorities on accessibility and building health and safety systems, seldom find in favour of accessible solutions for persons with disabilities where costs are cited by owners as a barrier to compliance.
- Failure to recognise and capture 'accessibility' and 'usability' as basic public benefit concepts alongside 'affordability', 'health and safety' and 'durability', in the mix of factors that make up the 'liveability' matrix. The problems of affordability and accessibility collide with vested interests and the latter invariably dominate. Greater documentation and visibility of the benefits of 'accessible environments', 'universal design', and research that demonstrates the cost-effectiveness of 'universal accessibility' should restore more rationale decision-making for the benefit of the community overall. The 'whole of life' value to the community of any project is part of the equation. Factoring in accessibility

from the beginning of the building design process is recognised as best practice internationally.

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2.2 Other Place and Space considerations:

The Building Act and Codes do not account for the many other elements that go to make up a truly accessible environment. There is a need for agreed design and engineering standards for most streetscapes, and places and spaces intended for public use. For example, pedestrian road, vehicle and pram crossings, footpaths, positioning of lamp posts and street furniture, all need to take account of universal design access considerations.

2.3 Disability Access Review 2014:

The Ministry of Business Innovation and Enterprise and the Office for Disability Issues are to undertake a joint review of disability access regulations.

www.dbh.govt.nz/disability-access-review

The Purpose: to gain a better understanding of how the requirements for persons with disabilities contained in the Building Act and the Building Code are being implemented in new buildings, as well as buildings being altered, and the extent to which these requirements do in fact provide an accessible built environment for persons with disabilities. If not, then to identify whether this is due to:

- The regulatory requirements being unknown.
- The regulatory requirements being known but misunderstood.
- The building requirements being known but not complied with and (if so, why not).
- The regulatory requirements are being complied with but are too low or not fit-for-purpose.

It is our firm view that there is strong evidence for regulations not being complied with, or being circumvented, owing to multiple interpretations of compliance codes by territorial authorities and others. Multiple compliance standards detract from Parliament's meaning in S.118 of the Building Act and warrant legislative review. Regulations appear dated and unfit for purpose. There may be a case for Parliament to strengthen S.118 in the light of experience, or for policies to be developed to better clarify the intent of S.118.

In summary.

- the regulations are dated and are not the complete answer to a more accessible built environment that can flexibly adapt to Auckland's future development and a rapidly changing demographic.
- It is our view that the building regulations are by and large known but not complied with or are readily circumvented. Further the regulations are not fit for today's purpose, given the ethos of inclusion and participation by all citizens in everyday life.

We urge that these views are put before the Building Control Department prior to the formulation of their submission on the Disability Access Review, and even included with it.

Attachment C