

Disability Access Report

118 Cary Street, Toronto

Report prepared for: Toronto Investments No 1 Pty Ltd

Introduction

Access Solutions has been asked to provide a report on the access for people with a disability to the proposed mixed-use development at 118 Cary St, Toronto. You have 108 units in the LGA of Lake Macquarie. Lake Macquarie DCP requires 10% of units to be adaptable in accordance with AS4299 'Adaptable Housing' and 12 adaptable units are provided which exceeds this requirement. Units A010, A011, A111, A112, A212, A213 C110, C111, C210, C211, C310 and C311 are adaptable. The building has class 7a basement car parking with 13 accessible parking spaces spread over 2 levels.

The BCA requires access from the property boundary, to any floor serviced by a lift or a ramp and containing sole occupancy units, to, but not through, the doorway of each unit and to at least one of each type of room or space used in common by the residents. An accessible path of travel is provided from the boundary, through the main entrances on Cary Street and Arnott Avenue. Four lifts provide access from basement parking to the apartments, allowing access to the doorway of all units on each floor and to communal space. One lift is provided from accessible parking on the basement level, to commercial areas on the ground floor. The BCA requires the commercial areas on the ground floor level to have access for people with disability "to and within all areas normally used by the occupants".

The bottom step of each flight of stairs, including fire stairs, should be set back one tread width to allow for the handrail to extend past the bottom riser, TGSI are required at the top and bottom of all stairs excluding fire stairs and handrails are required on both sides of all stairs, excluding fire stairs. These issues havenot been addressed on the Development Application Plans and should be included at the Construction Certificate stage without impacting the Development Application.

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Plans

This report is based on a review of the following plans and is in relation to those plans only.

Client	Project	Drawing	Issue	Date on plan
Toronto Investments No 1 Pty Ltd Toronto	118 Cary St, Toronto	1588 DD-1-01 to 1588 DD-1-07 1588 DD-1-11 1588 DD-2-01 1588 DD-2-02 1588 DD-3-01 1588 DD-3-02	J	12 March 2021

Benchmarks

- The Building Code of Australia 2016 (BCA).
- Disability (Access to Premises - Buildings) Standard (2010).
- Australian Standard AS 1428.1 (2009) 'Design for access and mobility, General requirements for access', New building work',
- AS4299 'Adaptable Housing'.
- AS2890.6 'Off-street parking for people with disabilities'.
- AS1428.4.1 - Design for access and mobility: 'Means to assist the orientation of people with vision impairment—Tactile ground surface indicators'.
- Lake Macquarie City Council DCP.

Compliance

In my opinion this development can comply with the requirements of the benchmarks cited.

Comments

Access from the Boundary

An accessible path of travel is provided from the boundary, through two entrances on Cary Street and two entrances on Arnott Avenue. The entrance path to the apartment foyer and lift at Cary Street has steps, which are overcome with a 1:14 gradient ramp. The south western entrance has a 1:20 gradient slope to the entry portico and commercial areas.

The south-eastern entrance path on Arnott Avenue provides level access to the apartment foyer and access to commercial areas.

1.0 Access from Boundary & Parking to Entrance <i>Building Code of Australia – D3.2</i>			
1	An accessible path of travel has been provided from the points of pedestrian entry at the property boundary	yes	BCA D3.2.1b
2	An accessible path of travel has been provided from another accessible building connected by a pedestrian link	na	BCA D3.2.1b (i)
3	An accessible path of travel has been provided from any required accessible parking	yes	BCA D3.2.1b (ii)

Ramp

There is a 1:14 gradient ramp at the entrance to the building from Cary Street that is compliant with the requirements of AS1428.1 clause 10 'Walkways, Ramps and Landings' and provides access from the boundary to the principal pedestrian entrance. Handrails complying with the requirements of AS1428.1, 12 and Tactile Ground Surface Indicators are not shown on the DA plans and should be included in CC plans.

Ramps (Gradient 1:14 to 1:20) <i>Building Code of Australia – D3.1 and AS1428.1 'Design for access and mobility – General requirements for access – New building work' section 10 'Walkways Ramps and Landings'</i>			
1	Ramps have a combined vertical rise including landings of not more than 3.6m	yes	BCA D3.11a
2	Ramps exceeding 1900mm in length have perpendicular transitions between grades	yes	1428.1.10.3d
3	Ramps have handrails on both sides	required	1428.1.10.3e

4	Ramps have at least 900mm setbacks at boundary lines	na	1428.1.10.3f
5	Ramps at least 400mm setbacks at internal corridors where there is a transverse path of travel	na	1428.1.10.3g
6	Ramps have at least 300mm handrail extensions at the top and bottom	required	1428.1.10.3h
7	Ramps have landings at least 1200mm long or 1500mm long at changes in direction	yes	1428.1F15b
8	Ramps have TGSI at the top and bottom	required	1428.1.10.3h

Main entrance

The main entrance doorway at Lobby C1 on Cary Street has two leaves with over 850mm clear opening. Entrance doorways are compliant with the requirements of AS1428.1 (2009) Figure 31 'Circulation space at swing doors'. No step, lip or other impediment at the entrances is indicated on the plans.

3.0 Principal Pedestrian Entrance

Building Code of Australia – D3.2 and D3.5

AS1428.1 cl 13 'Doorways, Doors and Circulation Space at Doorways.'

1	The principal pedestrian entrance has at least one door leaf with a clear opening of at least 850mm.	yes	AS1428.1 cl 13
2	The principal pedestrian entrance door has circulation space complying with AS1428.1	yes	AS1428.1 cl 13, fig 31
3	Doors have a minimum luminance contrast of 30% between two adjacent parts of the door.	required	AS1428.1 cl 13.1
4	An accessible path of travel has been provided though an entrance >50m from an inaccessible entrance in buildings with GFA >500m ²	yes	AS1428.1 cl 13
5	An accessible path of travel has been provided through at least 50% of pedestrian entrances including the principal entrance	yes	AS1428.1 cl 13
6	Door controls are a lever type, located 900mm to 1100mm from the finished floor, at the same height as light switches and with 35mm to 45mm clearance behind the handle.	required	AS1428.1 cl 13

Car Parking

15 accessible parking spaces are provided on basement levels 1 and 2 for adaptable units and commercial visitor parking, in compliance with AS4299 'Adaptable Housing' requirement for accessible parking and Lake Macquarie DCP 'Non Discriminatory Access Guideline' 1.2, requirement for 2%, of car parking spaces for commercial areas to be accessible spaces in accordance with AS2890.6 'Off Street Parking for People With Disabilities'.

2.0 Designated Accessible Parking Bays <i>AS2890.6 'Off-street parking for people with disabilities'</i>			
1	The building has an appropriate number of accessible parking bays provided	yes	BCA D3.5
2	Bays are at least 5400mm long and 2400mm wide	yes	AS2890.6.2.2.1a
3	Bays have a 5400mm x 2400mm shared space to one side.	yes	AS2890.6.2.2.1b
4	Bays have a bollard centrally placed, 800 - 850mm from the front of the shared space	yes	AS2890.6.2.2.1e
5	Bays are provided on a level surface with a cross-fall not steeper than 1:40	yes	AS2890.6.2.3
6	Accessible parking bays have overhead clearance of not less than 2500mm	required	AS2890.6 2.4
7	The vehicular path of travel from the car park entrance to the accessible space has an overhead clearance of at least 2200mm	required	AS2890.6 2.4
8	Bays are marked with the international symbol of access.	yes	AS2890.6.3.1

Continuous Accessible Path of Travel

The BCA requires an accessible path of travel from the property boundary, to any floor serviced by a lift or a ramp and containing sole occupancy units, to all common areas and to, but not through, the doorway of each unit. An accessible path of travel is provided from the boundary, through the principal building entrances on Cary Street and Arnott Street, from accessible parking on the basement levels to all units and to and within the commercial area and all communal spaces.

4.0 Continuous Accessible Path of Travel <i>Building Code of Australia – D3.1 and D3.2</i>			
1	An accessible path of travel has been provided to a building required to be accessible	yes	BCA D3.2.1a
2	An accessible path of travel has been provided from a points of pedestrian entry at the boundary	yes	BCA D3.2.1b
3	An accessible path of travel has been provided from another accessible building connected by a pedestrian link	na	BCA D3.2.1b(i)
4	An accessible path of travel has been provided from any required accessible parking	yes	BCA D3.2.1b(ii)
5	An accessible path of travel has been provided with passing spaces 1800mm x 2000mm with 400mm chamfers every 20m where there is a change of direction in the path of travel	na	BCA D3.3c(i)
6	Accessible paths of travel have been provided with turning spaces of at least 1800 x 2000mm where it is not possible to continue along the accessway	yes	BCA D3.3c(ii)a
7	Accessible paths of travel have been provided with turning spaces of at least 1540 x 2070mm at 20m intervals	yes	BCA D3.3c(ii)b
8	An accessible path of travel has been provided to, but not through, the entrance of each dwelling on any level served by a lift or a ramp	yes	BCA D3.1
9	Access has been provided to and within the garbage holding room	yes	BCA D3.1
10	An accessible path of travel has been provided to and within one of each type of common space.	yes	BCA D3.1

Common Areas

Access for people with a disability is provided throughout the common areas of the building in compliance with the BCA table D3.1. This includes access from the boundary and from accessible car parking, to the doorway of each residential unit, to communal areas and common open space. The residential communal roof garden is accessible with a lift.

Doors in common areas comply with the minimum door width allowed by AS1428.1 7.2 'Clear opening of doorways', which is 850mm. Circulation space at doorways on accessible paths of travel comply with the requirements of AS 1428.1 (2009) 'Design for access and mobility, General requirements for access-New building work', figure 31. Door controls should be a lever type, located 900mm to 1100mm from the finished floor, at the same height as light switches and with 35mm to 45mm clearance behind the handle.

Corridors are wide enough at 1800mm to allow turning and passing space for a wheelchair user.

5.0 Doorways in common areas <i>Building Code of Australia – D3.2 and AS1428.1 13</i>			
1	Doors on accessible paths of travel have circulation space complying with AS1428.1, Figure 31	yes	D3.2 (e) AS1428.1 fig 31`
2	Doors on accessible paths of travel have at least one leaf with clear openings of at least 850mm	yes	AS1428.1 13.5

Commercial Areas

Class 6 commercial space is proposed on the ground floor and access for people with a disability is provided to and within these spaces in compliance with BCA table D3.1. This includes access from the boundary through the principal entrance doorways from the street, from accessible car parking into the commercial spaces, in compliance with BCA table D3.1. Sanitary facilities are not provided within the commercial space and will be a matter for fit out by the lessee. Common public sanitary facilities, including an accessible unisex toilet and cubicles in male and female areas that can be converted to ambulant accessible toilets are indicated.

BCA Table 3.1 requires access "to and within all areas normally used by the occupants" and access to and within the service area is provided.

Lifts

Four lifts provide access from basement parking to the Ground Floor level and all levels above, allowing access to the doorway of all units on each floor and to communal space. One lift is provided from accessible parking on the basement level, to commercial areas on the ground floor.

The lifts have a floor area of 2400mm x 2400mm and this complies with the requirements of the BCA (2019) E3.6b. With regard to fit out, lifts should comply with the requirements of AS1735.12 as specified in BCA E3.6.

8.0 Lifts

Building Code of Australia – E3.6 and AS1735.12 – 'Lifts, escalators and moving walks'

1	Lifts should have min dimensions appropriate to accommodate a lift car. Travel < 12m 1100mm x 1400mm or > 12m at least 1400mm x 1600mm in size	yes	BCA E3.6b
2	Audio announcements are used to identify each floor level	required	BCA E3.6
3	Lifts should have doorway circulation space in accordance with AS1428.1 fig 31.	yes	AS1428.1 fig 31
	Control panels have low reflected glare	required	AS1735.12
	Control buttons 900mm to 1200mm from FFL	required	AS1735.12
	Handrail circular for 270 deg and 30mm to 50mm diameter	required	AS1735.12
	Lifts should have space beside the lift doors that is at least 550mm from an internal corner to accommodate lift controls	yes	BCA E3.6b

Ground Floor Sanitary Facilities

Accessible unisex sanitary facilities are provided on the ground floor for commercial area patrons in accordance with AS1428.1 clause 15 'Sanitary Facilities'.

Sanitary facilities in the Service area are not required to be accessible. BCA F2.4 requires at least 1 accessible sanitary compartment "At each bank of sanitary compartments containing male and female sanitary compartments provided in common areas" and, in a class 6 part of a building, "Where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks."

Unisex Accessible Public Toilet

AS1428.1 'Design for access and mobility – General requirements for access – New building work'
BCA F2.4

1	Accessible sanitary facilities can be accessed without entering an area reserved for one sex only	yes	BCA F2.4 AS1428.1.15
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2	Accessible sanitary facilities have floor dimensions at least 2630mm x 1900mm	yes	AS1428.1.15
3	Accessible sanitary facilities have circulation space at least 1900mm wide and 2300mm long around the pan	yes	BCA F43 AS1428.1
4	Accessible sanitary facilities have compliant grab rails around the pan	yes	AS1428.1.15.2.7
5	Accessible sanitary facilities have a hand basin that is least 425mm clear from any obstruction	yes	AS1428.1(F46)
6	Accessible sanitary facilities have a hand basin that has at least 1500mm clear space in front	yes	AS1428.1(F46)
7	Accessible sanitary facilities have a hand basin that is at least 300mm clear of a door swing	yes	AS1428.1(F46)
8	Accessible sanitary facilities have a hand basin that intrudes no more than 100mm into the pan circulation space	yes	AS1428.1(F46)
9	Accessible sanitary facilities have a shelf beside the hand basin that at least 120-150mm wide	yes	AS1428.1(F46)

Stairs

Stairs must have compliant handrails on both sides with 1000mm clear with between handrails. TGSi must be provided at the top and bottom of all stairs other than fire stairs, and contrasting nonslip surface must be provided on the nosing of each tread, including fire stairs.

Stairs <i>AS1428.1 'Design for access and mobility – General requirements for access – New building work'</i>			
1	Stairs have setbacks of at least 900mm at property boundaries	na	1428.1.11.1a
2	Stairs have setbacks of at least 400mm at transverse paths of travel at internal corridors	yes	1428.1.11.1b
3	Stairs have TGSi at the top and bottom	required	1428.1.11.1h
4	Stairs have handrails on both sides	required	1428.1.11.2b
5	Stairs have 300mm handrail extensions at the top of the stairs	required	1428.1.11.2e

6	Stairs have handrail extensions at the bottom of the stairs of one tread width plus 300mm	required	
7	Stairs have at least 1000mm clear width between handrails.	yes	

Fire Stairs

Contrasting nosing strips are required across stair treads in fire stairs, D shaped handles are required on exit doors, Braille and tactile signage with the word 'exit' and the floor level are required on all exits and a handrail is required on at least one side of dedicated fire stairs. The bottom step of each flight should be set back one tread width to allow for the handrail to extend past the bottom riser.

Fire Stairs <i>BCA D2.17 and D3.3</i> <i>AS1428.1 'Design for access and mobility – General requirements for access – New building work' 11.1 (f) & (g) and 12 'Handrails'.</i>			
	Fire stairs handrails are 865mm to 1000mm high measured from the step nosing	required	AS1428.1 cl 12 (d)
	The height of handrails is consistent	required	AS1428.1 cl 12 (e)
	Fire stairs allow a clear passage with at least 1000mm clear width	yes	BCA cl D1.6
	Fire stairs have the bottom step of each flight setback so handrails meet at the landing without a vertical section	required	AS1428.1 cl 12 (e)
1	Fire stairs have handrails on at least one side	required	AS1428.1 cl 12
4	Fire stairs have 1 tread width plus 300mm horizontal handrail extension at the top of the stairs where the handrails terminate	required	AS1428.1.11.2b
4	Fire stairs have 300mm horizontal handrail extensions at the bottom of the stairs where the handrail terminates	required	AS1428.1.11.2b
5	Steps have compliant stair nosing	required	AS1428.1. 11.1 (f) & (g)

Adaptable Units

Lake Macquarie City Council DCP has a requirement for 10% of the total number of units to be adaptable and compliant with AS4299 'Adaptable Housing' and 13 adaptable units are provided. AS4299 'Adaptable Housing' requires that minimal work and expense should be needed and that electrical and plumbing shouldn't have to be moved in making an adaptable unit accessible. You have provided capped plumbing and electrics in the required post-adaptation location for the sanitary facilities and the kitchen and laundry.

Accessible Entry

I note that the entrances to the adaptable units have 850mm clear opening with sufficient circulation space to comply with AS 4299 'Adaptable Housing'.

Doorways

Internal doorways have a clear opening of 820mm in accordance with the requirements of AS4299 'Adaptable Housing'.

Door controls should be a D shaped lever type, located 900mm to 1100mm from the finished floor, at the same height as light switches and with 35mm to 45mm clearance behind the handle.

Bedrooms

The main bedroom in adaptable units is able to be adapted to accommodate a double bed with circulation space, clear of wardrobes, with 2070mm in the direction of travel and 1540mm wide at the foot of the bed as required by AS4299, 4.6.1 Bedroom areas.

Sanitary Facilities

Combined shower and sanitary facilities are adaptable to comply with the requirements of AS1428.1 clause 15 'Sanitary Facilities'.

Rocker action and toggle switches with a minimum dimension of 30mm x 30mm should be used in accessible sanitary facilities. In the absence of a vanity unit a shelf at a height of 900mm to 1000mm 120mm to 150mm deep and 300mm to 400 mm long should be provided. A clothes hook should also be provided.

Kitchen

Kitchens in adaptable units are able to comply with AS4299 clause 4.5 'Kitchen Areas'. Benches will include an adjustable work surface at least 800mm in length, that complies with AS4299.1 clause 4.5.5 (a). This work surface is adjustable or replaceable as a unit between 750mm and 850mm height from

the finished floor. The sink and surrounding bench area are adjustable or replaceable as a unit within the range 750mm to 850mm.

Clear floor space 850mm wide and 1500mm long in front of benches is not shown as required at item 42 and will be included in plans at CC stage.

Taps should be of a lever type, reachable within 300mm from the front of the sink with a clearance of 50mm from the nearest obstacle. A wall oven should be provided adjacent to a work area in each unit with at least 1500mm deep and 820mm width circulation space in front. Cupboards should be fitted with "D" pull handles that are located towards the top of below-bench cupboards and towards the bottom of overhead cupboards. At least one GPO should be a double general power outlet and be within 300mm of the front of a work surface. A GPO should be provided for a refrigerator in such a position as to be easily accessible after the refrigerator is installed.

Living Area

In the adaptable unit there is sufficient room in the living area for a wheelchair user to make a 180-degree turn. This requires a space 2070mm long and 1540mm wide, which would be achievable, depending on the placement of furniture, in accordance with AS4299 'Adaptable Housing'.

Laundry

There is sufficient circulation space in front of laundry appliances to comply with the requirements AS4299 'Adaptable Housing'.

Checklist AS 4299 - Adaptable Housing Class C

Units A010, A011, A111, A112, A212, A213 C110, C111, C210, C211, C310 and C311 are adaptable in accordance with Lake Macquarie DCP and in compliance with AS4299 'Adaptable Housing' level C.

Class 2 Adaptable Sole Occupancy Units – Level C AS4299 'Adaptable Housing'			
Cl	Drawing		AS4299
1	Provision of drawings showing the housing unit in its pre-adaptation and post-adaptation stages	yes	2.3
	Siting		
3	A continuous accessible path of travel from street frontage and vehicle parking to entry complying with AS1428.1	yes	3.3.2

11	Letterboxes to be on hard standing area connected to an accessible pathway	yes	3.8
	Parking		
14	Car parking space or garage min. area 6.0m x 3.8m	yes	3.7.2
	Accessible entry		
20	Accessible entry	yes	4.3.1
22	Accessible entry to be level (ie max. 1:40 slope)	yes	4.3.2
23	Threshold to be low level	yes	4.3.2
24	Landing to enable wheelchair maneuverability	yes	4.3.23
25	Accessible entry door to have 850mm min. clearance (920mm leaf)	yes	4.3.1
27	Door lever handles and hardware to AS1428.1	yes	4.3.4
	Interior		
32	Internal doors to have 820mm min. clearance (850mm recommended)	yes	4.3.3
33	Internal corridors min. width of 1000mm	yes	4.3.7
34	Provision for compliance with AS1428.1 for door approaches	yes	4.3.7
	Living/Dining area		
36	Provision for circulation space of min. 2250mm diameter	yes	4.7.1
38	Telephone adjacent to GPO	required	4.7.4
41	Potential illumination level min. 300 lux (4.10)	required	4.10
	Kitchen		
42	Minimum width 2.7m (1550mm clear between benches)	no	4.5.2
43	Provision for circulation at doors to comply with AS1428.1	na	4.5.1
44	Provision for benches planned to include at least one work surface of 800mm length, adjustable in height	yes	

	from 750mm to 850mm or replaceable		4.5.5
45	Refrigerator adjacent to work surface	yes	4.5.5
46	Kitchen sink adjustable to heights from 750mm to 850mm or replaceable	yes	4.5.6
47	Kitchen sink bowl max. 150mm deep	required	4.5.6
48	Tap set capstan or lever handles or lever mixer	required	4.5.6 (e)
49	Tap set located within 300mm of front of sink	required	4.5.6 (e)
51	Cooktops to include either front or side controls with raised cross bars	required	4.5.7
52	Cooktops to include isolating switch	required	4.5.7
53	Work surface min. 800mm length adjacent to cooktop at same height	yes	4.5.7
54	Oven located adjacent to an adjustable height or replaceable work surface	yes	4.5.8
59	GPOs to comply with AS1428.1. At least one double GPO within 300mm of front of work surface	required	4.5.11
60	GPOs for refrigerator to be easily reachable when refrigerator is in its operating position	required	4.5.11
61	Slip-resistant floor surface (4.5.4)	required	4.5.4
	Main Bedroom		
62	At least one bedroom with area sufficient to accommodate queen size bed and wardrobe and circulation space requirements of AS 1428.2	yes	4.6.1
	Bathroom		
75	Provision for bathroom area to comply with AS1428.1	yes	4.4.1
76	Slip-resistant floor surface	required	4.4.2
77	Shower recess – no hob. Minimum size 1160 x 1100mm	yes	4.4.4 (f)
78	Shower area waterproofed to AS3740 with floor to fall to waste	required	4.4.4 (f)

79	Recessed soap holder	required	4.4.4 (f)
80	Shower taps positioned for easy reach to access side of shower sliding track	required	4.4.4 (f)
82	Provision for adjustable, detachable hand held shower rose mounted on a slider grabrail or fixed hook (plumbing and wall-strengthening provision)	yes	4.4.4 (f)
83	Provision for grabrail in shower (fig 4.7) to AS1428.1	required	4.4.4 (h)
86	Tap sets to be capstan or lever handles with single outlet	required	4.4.4 (c)
88	Provision for washbasin with clearances to comply with AS1428.1	required	4.4.4 (g)
90	Double GPO beside mirror	required	4.4.4 (d)
	Toilet		
92	Provision of either 'visitable toilet' or accessible toilet on entrance level	yes	4.4.3
93	Provision to comply with AS1428.1	no	4.4.1
94	Location of WC pan at correct distance from fixed walls	required	4.4.3
95	Provision for grabrail zone (refer figure 4.6)	required	4.4.4 (h)
96	Slip resistant floor surface (vitreous tiles or similar)	required	4.4.2
	Laundry		
98	Circulation at doors to comply with AS1428.1	yes	4.8
99	Provision for adequate circulation space in front of or beside appliances (min. 1550mm depth)	yes	4.8
100	Provision for automatic washing machine (4.8 e)	required	4.8 (e)
102	Where a clothes line is provided there is an accessible path of travel to this (4.8 a)	na	4.8 (a)
105	A double GPO is provided	required	4.8 (g)

108	Slip resistant floor surface	required	4.9.1
	Door Locks		
110	Door hardware operable with one hand, located 900-1100mm above floor	required	4.3.4

End