Carlton Connect

DDA / Accessibility Planning Report

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1. PROJECT SUMMARY:

Morris Access Consulting has reviewed the designs of the proposed Carlton Connect as it applies to AS 1428 Series, the National Construction Code (NCC) and principles of Universal Design (UD) and the Disability Discrimination Act. The new site at 700 Swanston Street which forms part of the former Royal Women's Hospital acquired by the University will be transformed into a major education and technology precinct as its aim is to strengthen the University of Melbourne's tie to the private sector in technology and research.

The comprehensive redevelopment has three feature buildings types. There are 3 shared basement levels, a ground floor with a central oculus linking the three buildings, a mezzanine and standard commercial floor plates on the Northern and Southern tower and student accommodation (528 beds) in the Eastern tower as well as small commercial strata and childcare building on the northern side.

The key public open space is the central Oculus that contains break out spaces and cafes / retail / commercial spaces, creating a village type atmosphere. The Oculus is connected to 4 laneways that provide access to Grattan, Swanston and Cardigan Street in Carlton. The site has a cross fall of 4 metres from the north east to south west corner.

In general, the designs highlight a degree of functional and technical compliance to the Access to Premises Standard, AS 1428 series and the Disability Discrimination Act (DDA). Across the site the following have been considered

- Accessible and intuitive ground floor pathways that link to the Oculus, lifts and different buildings
- Graded walkways that minimize the use of formal ramps
- All key entrances to the building are accessible from street as well from the Oculus
- Consideration of handcycle / recumbent cycles within and to the bike stores and end of trip facilities
- Complimentary lift access in all locations where stairs are provided
- Building lines that allow clear usage by people with vision impairments
- Distinctive use of colour and texture in lieu of tactile indicators
- Consideration of wayfinding technologies such as "iBeacon and Blind Square" that provide as auditory directions of key features contained within the development
- Consideration of hearing loops where audio visual systems are provided
- Inclusion of unisex accessible toilets adjacent to all gender facilities with the addition of baby change provision
- Light operating door mechanisms across all levels
- Consideration of accessible emergency evacuation refuges within stairwells

This planning report details how technical and functional accessibility has been provided to the development.

2. DOCUMENTATION

This correspondence is specific to the following key stage drawings:

Drawings	Revision	Drawing Title
TP-A1-012 TP-A1-013		Town Planning Set

3. LEGISLATION - ACCESS TO PREMISES STANDARD:

The Access to Premises Standard as detailed within the National Construction Code 2016 highlights the minimum level compliance requirements for Accessibility or Deemed to Satisfy provisions. The Standard references the technical requirements of the built environment through the Australian Standard 1428 series in particular. Achieving compliance to the Access to Premises Standard goes a significant way to achieving compliance with the requirements of the Disability Discrimination Act (DDA).

A registered Building Surveyor is required prior to issuing permits, to confirm compliance with the requirements. Where the Deemed to Satisfy provisions are unable to be met, the Registered Building Surveyor is able to seek a Performance solution from a relevant expert to detail Performance compliance solutions.

The key elements of the Access to Premises Standard include:

Part D3 – Access for People with a Disability

Part E3 – Passenger Lifts

Part F2 – Sanitary and other facilities

Other applicable legislation:

- Disability Discrimination Act (DDA) 1992.
- National Construction Code 2016
- AS1428.1 2009 Part 1: General Requirements for access – new building work.
- AS1428.2 1992 Part 2: Enhanced and additional requirements – Buildings and facilities.
- AS1428.4.1 2009 Part 4.1: Means to assist the orientation of people with vision impairment – TGSI.
- Disability (Access to Premises – Buildings) Standards 2010 (DAPS 2010).
- AS2890.1 2004 Part 1: Off-street car parking.
- AS2890.6 2009 Part 6: Off-street parking for people with disabilities.
- AS1735.12 1999 Lift facilities for people with disabilities.

4. UNIVERSAL DESIGN ELEMENTS

The following highlights the key considerations of Universal Design. Universal Design allows everyone, to the greatest extent possible, and regardless of age or disability, to use buildings, transport, products and services without the need for specialised or adapted features. It helps to provide more inclusive facilities than relying on minimum standards prescribed in building codes.

While this strategic document primarily focuses on physical accessibility to the built environment it is important to also consider other dimensions of accessibility such as the social, communication and information systems within the built environment.

The concept of universal design emerged primarily with people with disability in mind, universal design helps everyone with support and assistance needs including the elderly, parents with young children and people with a temporary illness or injury. Thus, the benefits of implementing universal design are wide.

The issues of access and accessibility have in the past been addressed by legislating for a set of measurable requirements set out in documents such as the National Construction Code (NCC) and other construction standards. The NCC represents the minimum standards set by legislation to provide accessible buildings. The Code actually falls short of requirements stated in the Disability Discrimination Act (DDA).

Equitable Use	• The design encapsulates the needs of the whole community without disadvantaging or stigmatising any one individual or group
Flexibility in Use	• The design accommodates a wide range of individual preferences and abilities
Simple and Intuitive Use	• Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level
Perceptible Information	• The design communicates necessary information effectively to the user, regardless of the ambient conditions or the user's sensory abilities
Tolerance for error	• The design minimises hazards and the adverse consequences due to accidental or unintended actions
Low physical effort	• The design can be used efficiently and comfortably with a minimum of fatigue
Size and Space for approach and use	• Appropriate size and space is provided for approach, reach, manipulation and use regardless of the user's body size, posture, or mobility. It also recognises a variation in hand and grip sizes

5. PRINCIPLES SUMMARY

5.1 Public Transport, Vehicle, Bicycle and Pedestrian access

The precinct is well serviced by public transport. It is a ten-minute tram ride from the city, and close to the proposed new City North and Parkville underground rail stations (Metro Rail Link). Accessible super tram stops will be provided along Swanston Street to the Carlton Connect Precinct.

Up to 10 low-floor trams will operate in the peak, providing frequent, reliable tram services for people in wheelchairs or scooters, and parents with prams.

A small number of parking spaces are provided within the basement including two accessible parking spaces.

Principles

- Clear distinct linkages from public transport stops to key precinct zones
- Provision of undercover waiting areas, close to transport links that include clustering of rest seating and garbage bins
- Bicycle pathways from surrounding street down to the end of trip facility via ramps which provide direct links, alternative lift access will provide an accessible link
- Location of accessible drop off zones with direct links to key administrative and larger auditorium type areas with the expansion of kerb ramps to provide clear paths of accessible travel
- Identification of accessible parking bays within parking areas with appropriate height clearances

NCC Clauses	AS 1428 references
D3.2	AS2890.6 Sections 2 & 3
D3.5	AS1428.1-2009 Section 10

5.2 Entrances - (reference AS 1428.1 2009)

The various buildings have a number of distinctive entrances. The Central Oculus proving a central pedestrian link between all of them via graded walkways.

Principles

- Individual building entrances from the street as well as from the central Oculus
- All key entrances to the building are accessible and automated / easy to operate entry doors,
- The use of distinctive decals and door operating signage are a strong consideration
- Although not detailed at this stage, signage including pictograms and plain English terminology will feature

NCC Clauses	AS 1428 references
D3.2	AS1428.1 Section 13

5.3 Access to and within the lifts

There is a main lift core within each of the building types across the precinct. Each lift core provides a lift to the basement and mezzanine levels.

The lift specification is yet to be detailed however there are now two options for the high rise lifts. The traditional call button type with internal level buttons or "destination control" which groups people depending on desired levels.

The enhancement of destination control is that an accessibility button is available to ensure lifts are provided as close as possible to minimise travel distance for the mobility impaired. Either option provides appropriate considerations of the functional.

Principles

- Lift locations are predictable and allow direct access from basements, ground and mezzanine levels.
- External control buttons / panels with Braille and raised symbols or numerals for a traditional panel or an accessibility specific button on a destination control panel

NCC Clauses	AS 1428 references
E3.6	AS1735.12 Sections 2 & 3

5.4 Walkways and Pathways

The ground floor highlights the key walkways and pathways from street level. There are four laneways that link the street to the central Oculus as graded walkways. The design of the walkways follows the principles of universal design to maximise widths, use of colour and texture and linear design for ease of orientation between the towers and building features

Principles

- Design of pathways that are linear and follow a clear building line to key entrances
- The use of distinctive colour and texture to define roadways and pathways
- Provision of seating and retail spaces within defined areas
- Clustering of bike parking, street furniture, and garbage bins to ensure clear and defined adjoining pathways

NCC Clauses	AS1428 references
D3.2	AS1428.1 Section 7
DP1	AS1428.4 Section 3
	AS1428.2 Section 27

5.5 Doorways

Each of the three buildings have a main entrance that are utilising a combination of revolving doors and swing doors with airlocks.. The provision of automated swing doors will compliment each entry to allow direct access for people who use wheelchairs, parents with strollers or simply people carrying luggage.

Principles

- All doorways in the public areas have sufficient clear opening widths, circulation spaces and latchside clearances.
- Where automated doors are provided door activation buttons will be located to ensure they are easy to use and operate
- All manual swing door within the public areas of the building will be provided with light operating door mechanism,
- Doors that could be mistaken as a thoroughfare, will be provided with distinctive decals.

NCC Clauses	AS1428 references
D3.3	AS1428.1 Section 13
D3.2	

5.6 Wayfinding

The design of the building incorporates features that are easy to navigate along laneways. Where possible tactile indicators will be minimised particular in 'service' areas, drop offs and emergency evacuation routes, in lieu of colour and textural contrasting floor surfaces / paving being provided to highlight the changes in level or to identify features.

All signage and wayfinding will ensure viewing ranges are accessible and use of pictograms assists the accessible wayfinding in particular

It should also be noted that new technologies such as "iBeacons" that are utilised by navigation aids such as BlindSquare allow people with vision impairments along with non English speak people to be directed to key features and areas of the site.

Principles

- Where possible tactile indicators are to be minimised in lieu of distinctive colour and textural contrast and linear building lines to define movement between buildings and rooms
- Consideration should be given to "iBeacon" technology that is used by "Blind Square" as a method of wayfinding
- Signage utilising plain English and pictograms ensure direct wayfinding

NCC Clauses	AS1428 references
D3.8	AS1428.4 Section 2

5.7 Emergency evacuation – (reference Equity provisions of the DDA)

In general most standard emergency evacuation plans generally do not detail an accessibility specific emergency evacuation. The University of Melbourne's Policies and Procedures on Emergency Evacuation will be taken into consideration during the design development and where possible the design with support any necessary requirements. It is highly recommended an accessible version of an evacuation plan is developed. Depending on whether or not the building is a retail or commercial building will determine the process of evacuation.

The key consideration of commercial tenancies is establishing a buddy system, where a staff member will accompany any person who cannot use stairs and notify the fire warden on each floor, that there is an issue of evacuation. Once the emergency type or location has been identified then appropriate action can be directed by the warden, which may include

- Stay in place near the fire stair and lift and wait for instruction as there is no imminent danger
- Wait for the fire brigade to validate if the lift is safe to use to evacuate the building and then move down through building through their guidance

- Move into the stair well as there is an imminent threat and wait for the fire brigade to evacuate

Within residential properties, generally all rooms are rated to 1 hour or more fire resistant, so unless the room you are in is on fire or the source of the emergency, staying in the room and dialling 000, to highlight you are unable to use the lifts is a critical element of accessible emergency evacuation.

It is also essential that the accommodation managers (Urbanest) , commercial managers and CIt/Childcare managers are aware of any person who is in the accommodation that may have a disability.

The use of evacuation chairs should be avoided as a last resort as this takes away the mobility of someone who uses their own mobility aid. In general evacuation via lift is the preferred method by the Fire Brigade once the emergency issue has been highlighted.

NCC Clauses	AS1428 references
E3.6	AS1735.12 Sections 2 & 3

5.8 Hearing augmentation

Although not highlighted at this stage of design, there is likely to be audio visual systems installed in key locations of the ground floor Science Gallery and Fab lab areas. A key requirement is the provision of a hearing augmentation. There are two appropriate systems either an FM system or a hearing loop system. The use of the loop system maybe provided as a portable system for added flexibility. This will be benchmarked against the University of Melbourne's guidelines on Hearing Augmentation and will be checked during the design development phase.

There may be a requirement for meeting rooms for the building fitout.

Principles

- The provision of a hearing augmentation system is a requirement where an audio visual system is also provided
- FM systems utilise a FM transmitter of the audio visual equipment i.e. microphone that is then use by a person with a FM receiver who can then either plug a neck look or head phones
- A loop system is hard wired and transmits a frequency that is picked up by people utilising a T switch within a hearing aid.
- A loop system is less flexible than an FM system as it only assists people with a hearing aid where as an FM system also assist people who maybe hard of hearing

NCC Clauses	AS1428 references
D3.7	AS1428.5 Sections 2 & 3

D3.6	

5.9 Accessible and Ambulant Accessible toilets

Accessible sanitary facilities including unisex accessible and ambulant accessible toilets are a requirement under the NCC. The key facilities and central cores of each of the buildings highlight appropriate provision.

Principles

- AS 1428.1 2009 compliant Unisex accessible toilets to be provided in public areas and may be enhanced to include showers, lockers, first aid kits, sharps disposal bin or baby change tables
- Ambulant accessible toilets to be provided in all gender facilities
- It should be noted that the BCA provides a base level of accessible toilets and may not reflect the needs of a specific population such as a community and educational precinct
- Consideration may also be given to a 'Changing Places' toilet facility in the long term that also services the entire medical and educational precinct

NCC Clauses	AS1428 references
F2.4	AS1428.1 Sections 15 & 16
D3.6	

6. SUMMARY

The Carlton Connect development planning designs highlight a high consideration of accessibility as the key features of the building including pathways, transport linkages, entrances, amenities and vertical transport, have been provided.

The highlighted principles are by no means an exhaustive list, rather a start of the options and opportunities to create seamless, accessible yet universal environments.

As the design progresses further reviews will be undertaken to ensure not only compliance is achieved but innovate design and technology is considered to enhance the design and encompass Universal Design principles.

REVIEW PROVIDED BY:

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ACAA Accredited Access Consultant