23-47 Villiers Street North Melbourne

Accessibility Design Report

Stage: Town Planning

Project No:	00769
Date:	28th August 2024
Prepared For:	Sentinel
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Revision History	*Date*	*Revision No*	*Developed by*	*Reviewed by*	*Date*
Town Planning	28.08.2024	0.1	BC		

1 Project Overview/Summary

Morris Goding Access Consulting (MGAC) has conducted an initial town planning design review of the 23-47 Villiers Street North Melbourne development in collaboration with Architectus.

The Villiers Street development is a new Built to Rent (BTR) property consisting of approximately 353 residential dwellings with a mix of studios, one, two and three-bedroom apartments across two buildings, Building A (Villiers St) and Building B (Harcourt St) as follows:

Building A:

- Studio apartments – ten (10)
- One (1) bedroom apartments – one hundred and seven (107)
- Two (2) bedroom apartments – forty-six (46)
- Three (3) bedroom apartments – eighteen (18)

Total – one hundred and eighty-one (181)

Building B:

- Sudio apartments – eleven (11)
- One (1) bedroom apartments – one hundred and three (103)
- Two (2) bedroom apartments – forty-nine (49)
- Three (3) bedroom apartments – nine (9)

Total – one hundred and seventy-two (172)

The Ground to 11 and 12 storeys residential living project is proposed to have:

- basement level car parking,
- residential and visitor bike parking,
- office space, and
- residential amenities including:
  - co-working spaces / business centre, community lounge and event space, fitness area / gym, pet-friendly amenities and relaxation deck with pool.

Additionally, the Villiers Street development is aiming to achieve livability by meeting the Better Apartment Design Standards (BADS) for Victoria and/or Silver Level standards of the Livable Housing Design Guidelines (LHA) to all of apartments within the development, with the provision of adaptable to Gold Level to a percentage of apartments to be investigated at a later stage.

1.1 Building Location Plan

1.2 Review Summary

A detailed review has been undertaken of the documentation listed within this report (refer below) against the following:

- Objects of the Disability Discrimination Act (DDA) 1992.
- *Disability (Access to Premises – Buildings) Standards 2010.*
- National Construction Code (BCA) - Building Code of Australia (BCA) 2022

The design review includes general areas of the proposed development including but not limited to items as noted below:

- Accessways (continuous accessible path of travel) from the allotment boundary and any accessible parking bay within the allotment associated with the building (where relevant).
- Building entrance/s.
- Provision of vertical transport.
- Doors (hinged/sliding) and doorway circulation space.
- Stairs, ramps, and walkway/pathway requirements.
- Car parking.
- Sanitary Facilities including Unisex accessible toilets and ambulant facilities.
- Landscaping.
- Emergency evacuation.
- BADS/LHA Apartment provision.

MGAC confirm that the project documentation provides accessibility capable of complying with the Disability (Access to Premises – Buildings) Standards 2010 (APS), Building Code of Australia (BCA).

2 Introduction

Sentinel have engaged the services of Morris Goding Access Consulting (MGAC) as access consultants to conduct a review of project documentation to ensure that functional and compliant accessibility has been applied to the design. Further, as members of the Access Consultants Association (ACA), MGAC use our experience and expertise in the provisions of access to ensure the project team considers the objects of the *Disability Discrimination Act* (DDA) which are far reaching, extending beyond the minimums of building legislation.

3 Legislative Requirements

The minimum legislative requirements for this project comprise both Federal and State legislation. These are outlined below.

Federal

The Federal *Disability Discrimination Act 1992* (DDA) was enacted in 1993. The objects of the DDA are to eliminate as far as possible, discrimination against persons on the basis of their disabilities, in particular access to premises (as defined under the DDA); work; accommodation; the provisions of facilities, services; and land; to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law as the rest of the community; and to promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community.

The DDA is complaints-based legislation administered by the Australian Human Rights Commission (AHRC).

The DDA utilises legislative instruments known as Disability Standards to specify how the objects of the DDA are to be achieved. These standards include:

- *Disability (Access to Premises – Buildings) Standards 2010*,
- *Disability Standards for Education 2005;* and
- *Disability Standards for Accessible Public Transport 2002.*

Where relevant, these Standards reference the Australian Standards for access and mobility (and others), including parts of the AS1428 series, primarily AS1428.1-2009, AS1428.4.1-2009 and others such as AS2890.6 2009.

This review has considered the requirements of the *Disability (Access to Premises – Buildings) Standards 2010.*

State

With the introduction of the *Disability (Access to Premises – Buildings) Standards 2010,* the Building Code of Australia 2011 was modified to align with the federal legislation. The aim of this alignment/inclusion was to ensure that where a building complies with the relevant sections of the BCA, it is deemed to comply with the 'premises' component of the DDA relevant to buildings. However, it is to be noted that compliance with the BCA alone does not necessarily mean compliance with the *Disability Discrimination Act*, provisions of which extend beyond the building itself.

3.1 Referenced Legislation and Standards

The design review has been undertaken against the following:

- Objects of the Disability Discrimination Act (DDA) 1992.
- *Disability (Access to Premises – Buildings) Standards 2010.*
- National Construction Code (BCA) - Building Code of Australia (BCA) 2022 and referenced Australian Standards including:
  - 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 – Tactile Ground Surface Indicators (TGSIs).
  - AS2890.6 2009 Part 6: Off-street parking for people with disabilities.
  - AS1735.12 1999 Lift facilities for people with disabilities.

4 Documentation reviewed

This report is specific to the following key stage drawings.

Drawings – Architect: Architectus
A0000 – Cover Page and Drawing List
A-1000 - FLOOR PLANS
A-1000 Floor Plan - Basement 01
A-1001 Floor Plan - Lower Ground 2
A-1002 Floor Plan - Lower Ground 1
A-1003 Floor Plan - Ground Level
A-1004 Floor Plan - Level 01
A-1005 Floor Plan - Level 02
A-1006 Floor Plan - Level 03
A-1007 Floor Plan - Level 04
A-1008 Floor Plan - Level 05
A-1009 Floor Plan - Level 06

A-1010 Floor Plan - Level 07
A-1011 Floor Plan - Level 08
A-1012 Floor Plan - Level 09
A-1013 Floor Plan - Level 10
A-1014 Floor Plan - Roof Level
A-1015 Floor Plan - Roof Plan

A-8000 - APARTMENT LAYOUT
A-8001 Apartment Schedule
A-8003 Apartment Studio
A-8011 Apartment 1 Bed
A-8012 Apartment 1 Bed
A-8013 Apartment 1 Bed
A-8014 Apartment 1 Bed
A-8015 Apartment 1 Bed
A-8021 Apartment 2 Bed
A-8022 Apartment 2 Bed
A-8023 Apartment 2 Bed
A-8024 Apartment 2 Bed
A-8025 Apartment 2 Bed
A-8026 Apartment 2 Bed
A-8027 Apartment 2 Bed
A-8028 Apartment 2 Bed
A-8029 Apartment 2 Bed
A-8030 Apartment 2 Bed
A-8041 Apartment 3 Bed
A-8042 Apartment 3 Bed
A-8043 Apartment 3 Bed
A-8044 Apartment 3 Bed
A-8051 Apartment Duplex

5 Exemptions and Performance Based Solutions

5.1 Exemptions

Based on the use of some areas within a building, it is reasonable to not provide access to some spaces where it is deemed inappropriate because of the required tasks which are to be performed in the space or if the area poses as a health or safety risk for people with a disability. These areas include:

- An area where access would be inappropriate because of the particular purpose for which the area is used.
- An area that would pose a health or safety risk for people with a disability.
- Any path of travel providing access only to an area exempted by (a) or (b).

Examples of these rooms/spaces as outlined within the Guideline on the Application of The Premises Standards, Version 2, February 2013, developed by the Australian Human Rights Commission could include: cleaners store rooms, commercial kitchens, staff serving areas behind bars, cool rooms, rigging lofts, waste-containment areas, foundry floors, abattoir animal process areas, railway shunting yards, electrical switch rooms, chemical and hazardous material store areas, loading docks, fire lookouts, plant and equipment rooms and other similar areas.

5.1.1 Subject site – exemptions from the requirements of access

It is expected that areas such as loading bays, switch and service rooms etc., would meet the parameters of exemption as outlined above, with a request for exemption sought by the design team in the future stages of design.

5.2 Performance Based Solutions

Where compliance via the current Deemed to Satisfy (DtS) building legislation cannot be met, these departures are to be addressed via the Performance Based Solution (PBS) Assessment process. This assessment when utilised, will be unique to each building and/or site, combining an understanding of the principles of access with alternative methods to assist the design team, building owners/operators and occupants to achieve an effective solution.

The design currently demonstrates requirement for the following performance-based solution.

Item	BCA Clause	Relevant Performance Requirement	Technical Requirement	Technical Departure
1.	F4D5	F3P1	Suitable sanitary facilities for personal hygiene must be provided in a convenient location within or assisted with a building to the degree necessary, appropriate to:	A unisex ambulant cubicle is available within Building A and B.

Item	BCA Clause	Relevant Performance Requirement	Technical Requirement	Technical Departure
			a) the function and use of the building; and b) the number and general of the occupants; and c) the disability or other particular needs of the occupants.	

6 Design Requirements

The following highlights the key accessibility features that are to be addressed as the design progresses. It should be noted that for technical specifications, relevant Australian Standards are to be utilised.

6.1 General Building Access Requirements

Buildings and parts of buildings must be accessible in accordance with D4D2 of the BCA. Unless subject to an exemption, access is required as follows:

Building Classification	Access Requirements
Class 2 – Residential	Access is required: From a pedestrian entrance required to be accessible to at least one floor containing sole-occupancy units (SOUs) and to the entrance of each SOU located on that level. To and within not less than one of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area of the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed: a) To the entrance doorway of each SOU, and b) To and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp.

6.1.1 BCA Clauses and Australian Standard references:

BCA Clauses – BCA 2022
D4D2 General building access requirements
D4D3 Access to buildings
D4D4 Parts of buildings to be accessible
D4D5 Exemptions
D4D6 Accessible car parking
D4D7 Signage
D4D8 Hearing augmentation
D4D9 Tactile indicators

D4D10 Wheelchair seating spaces in a Class 9b assembly building
D4D11 Swimming Pools
D4D12 Ramps
D4D13 Glazing on an accessway
E3D7 Passenger lift types and their limitations
F4D5 Accessible sanitary facilities
AS 1428 references
AS1428.1-2009
AS1428.4.1-2009
AS1428.2-1992
AS 2890.6-2009
AS1735.12-1999

6.2 External approaches to buildings – accessways, walkways, kerb ramps

6.2.1 Access requirements

An accessway (continuous accessible path) is required to the new buildings:

- from the main points of a pedestrian entry at the allotment boundary; and
- from another accessible building connected by a pedestrian link; and
- from any required accessible car parking space on the allotment.

Accessways are required to incorporate a minimum width of 1000mm, 1500mm x 1500mm at locations where a 90deg turn is required, and 1540mm (W) x 2070mm (L) where it is not possible to continue, within 2m of the end of the accessway. Passing spaces are also required at maximum 20m intervals, where a direct line of sight is not available within an accessway. Where the accessway incorporates a linear grade between 1:20 and 1:40, it is to meet the requirements of AS 1428.1-2009 relevant to walkways.

Crossfalls and gradients of the external pathways are to not exceed 1:40 and be constructed of a firm, hardstand surface in accordance with AS1428.1-2009 requirements.

Ground surfaces are required to incorporate finishes which are slip resistant, including the abutment of surfaces which don't limit the movement of a person with disability, with the orientation and placement of elements such as drains also important considerations.

Doorways and gates within accessways are to meet the provisions of AS1428.1-2009 including circulation space to both sides of the gate/door, luminance contrast, and the provision of appropriate door controls.

Where there is no environmental cue available for people with vision loss e.g., level transition at a road crossing point, the incorporation of tactile ground surface indicators (TGSIs) in accordance with the requirements of AS1428.4.1-2009 is necessary.

Where a kerb ramp is installed, it is to meet the provisions of AS1428.1-2009, including transitions, surface abutments and landing depth and width, according to the direction of travel and/or any required change of direction.

6.2.2 Subject site – access commentary

Accessways from the allotment boundary are available from Harcourt, Villiers, Mary and Little George Street.

The pedestrian interfaces around the development highlights a degree of accessibility through direct line of sight, and easy access pathways. Gradients within the site require in some locations the provision of ramped accessways, see landscape below. The use of rest seating and easy to identify entrances, are all key features of the development.

6.3 Vehicle and Bicycle access into the site

6.3.1 Access requirements

Carparking

There are no requirements for car parking relevant to this class of building (Class 2) under the BCA.

Bicycle

Bicycle parking where provided should consider the approach, entry, and circulation space available within any secure bicycle parking area e.g., space for a 180deg turn if necessary, and the layout of any bike racks to ensure that bicycles when in-situ, don't impact the use of any associated/adjacent accessways. For example, a recumbent bike which extends over an accessway when parked.

6.3.2 Subject site – access commentary

Car parking is available within the basement, lower ground 1 and 2 and ground levels, with

two hundred and sixty-four (264) car parks proposed for the development including five (5) accessible car parking spaces. Additionally three hundred and fifty-three (353) resident, eighty-eight (88) visitor and four (4) staff bicycle parking spaces proposed for the development. In addition, it is noted that the site is well served by public transport, with tram and train services provided within walking distance.

Common use storage areas are also situated within basement, lower ground 1 and 2 and ground levels co-located with the resident car parking.

6.4 Entrances

6.4.1 Access requirements

Doors/gates within paths of travel common to building users, require the following to meet the provision of AS1428.1-2009 Clause 13:

- Unobstructed clear opening widths to be a minimum of 850mm (a 920mm door leaf is required for a hinge swing door; 1020mm required for a swing door.
- Controls including after-hours swipe cards, key locks, auto door controls etc. located on a level landing, in an accessible location.
- Circulation spaces which consider the angle of approach and direction of swing/slide at both sides of the entrance door.
- Light operational forces (less than 20 N).
- Appropriately procured and installed door/gate controls and hardware.
- Luminance contrast which is measured at not less than 30%.

6.4.2 Subject site – access commentary

Residents, staff and visitors will enter through the surrounding street and public pathways, leading to the two main residential lobbies or via the secure carparking area.

Primary entry lobbies are from Villiers and Little George Street and Harcourt and Little George Street, with a third entry lobby provided from the Communal Heart/Green Spine accessed via Mary Street.

All entries and lobbies are to be well located, easily identifiable and benefit from weather protection supporting all year use. We note the development will ensure the building entrances are accessible, with step less / threshold free and the use of automated doors.

The NCC classifies the apartments as class 2, which requires accessibility to the front door, which in this instance has been provided internally to all apartments and is accessible via the primary entry lobbies. The gate entrances to the private residential apartments facing Mary, Harcourt and Villiers Street are secondary entrances.

6.5 Stairs and Ramps

6.5.1 Access requirements

Stairs within the site are to incorporate (excluding fire isolated stairs):

- Handrails to both sides which are continuous, consistent, and incorporate a diameter of 30-50mm, extensions and terminations at the top and base, a clear unobstructed width of no less than 1000mm between them.
- Opaque risers.
- Nosing strips which provide a luminance contrast of no less than 30%.
- Tactile ground surface indicators (TGSIs) at the top and base which incorporate a luminance contrast of 30-60% dependent upon the installation type.

Ramps within the site are to incorporate (excluding fire isolated ramps):

- A gradient of not more than 1:14.
- Landings which are incorporated at the intervals required based upon the gradient of the ramp and which do not exceed 1:40, taking into consideration the direction of travel, and adjusting the landing depth/width, as necessary.
- Handrails to both sides which are continuous, consistent, and incorporate a diameter of 30-50mm, extensions and terminations at the top and base, a clear unobstructed width of no less than 1000mm between them.
- Kerb rails installed to both sides of the ramp.
- Tactile ground surface indicators (TGSIs) at the top and base which incorporate a luminance contrast of 30-60% dependent upon the installation type.

A set back is required from transverse paths of travel, typically 700mm from an internal corner and 900mm from the allotment boundary.

Fire-isolated Stairs (FIS)

All fire isolated stairs are to incorporate:

- Nosing strips which provide a luminance contrast of no less than 30%.
- Handrails which meet the provisions of AS1428.1-2009 Clause 12.

6.5.2 Subject site – access commentary

Common use general circulation, and fire stairs within the buildings are to incorporate either a mid-landing extension or off set tread at any mid landing, to ensure the handrail is of a consistent height throughout the stairway. Further reviews will be undertaken as the design progresses to ensure they meet the provision of AS 1428.1-2009 and AS 1428.4.1-2009.

Ramps within the site are to meet the provision of AS 1428.1, 2009 including gradient, dual handrails with extensions & TGSIs. Where possible 1 in 20 ramps are recommended.

6.6 Access to and within lifts

6.6.1 Access requirements

An accessway is required to any passenger lift where available within a building. Where a passenger lift travels greater than 12m a minimum car size of 1400mm wide x 2000mm depth is required, if travelling less than 12m a minimum car size of 1100mm wide x 1400mm depth is accepted. Where stretcher use is indicated on a lift travelling greater than 12m, a 2000mm depth is necessary. The clear opening width of the door of the lift car must be no less than 900mm.

Internal fit out of the lift is required to comply with AS1735.12 including:

- Handrails which incorporate a minimum length of 600mm, installed 850mm – 950mm above the finished floor within the lift car.
- Control buttons and panels which correctly located within the car – from internal corner and floor) which incorporate tactile and Braille.
- An audible announcement where the lift travels more than 2 floor levels.

6.6.2 Subject site – access commentary

Two core passenger lifts are proposed for each building, servicing all levels of the development, with a Goods lift proposed for Building A. Wayfinding signage highlighting the lift location for each building from the main lobby is recommended.

The lifts indicate to be of appropriate size to allow a 180-degree turn by a large wheelchair that maybe operated by a carer or companion. The lift specifications have yet to be detailed.

6.7 Doors and Doorways

6.7.1 Access requirements

Doors and doorways within paths of travel required to be accessible, require the following to meet the provision of AS1428.1-2009 Clause 13:

- Unobstructed clear opening widths to be a minimum of 850mm (a 920mm door leaf is required for a hinge swing door; 1020mm required for a swing door.
- Controls including after-hours swipe cards, key locks, auto door controls etc. located on a level landing, in an accessible location.
- Circulation spaces which consider the angle of approach and direction of swing/slide at both sides of the door.
- Light operational forces (less than 20 N).
- Appropriately procured and installed door controls and hardware.

- Fully glazed doors or sidelights to incorporate a visual contrast strip no less than 75mm wide for the full width of the glazing, with the lowest edge at 900-1000mm above the finished floor.
- Luminance contrast which is measured at not less than 30%.
- A level transition shall be provided to all entrances and external areas via provision of threshold ramps where required in accordance with AS1428.1-2009 requirements.

6.7.2 Subject site – access commentary

All doorways in the public areas are to have sufficient clear opening widths, circulation spaces including latchside clearances and decals where a doorway could be mistaken as a thoroughfare.

A key consideration for the doors to the primary entry lobbies is that they are automated to allow direct access for people who use wheelchairs, parents with strollers or simply people carrying luggage.

It is noted that smoke compartment doors where available within the corridors utilise a hold open device, allowing ease of access within the corridor.

6.8 Internal accessways – corridors, rooms

6.8.1 Access requirements

An accessway is required within all areas of a building normally used by occupants, unless subject to the exemption provisions of the BCA. This, in this instance, is relevant to common use areas within the building.

Where provided and relevant, internal accessways are required to ensure:

- a minimum clear width of 1000mm is available, adjusting as necessary to address door circulation space.
- Doors/doorways are provided with appropriate controls, circulation spaces and contrasts, with visual glazing strips installed, as necessary.
- Ground surfaces and abutments meet the provisions of AS1428.1-2009.
- Ramps i.e. step and threshold meet the provisions of AS1428.1-2009.
- Passing and turning spaces where provided meet the provisions of access as prescribed by AS1428.1-2009.

6.8.2 Subject site – access commentary

General circulation corridors are typically 1600mm wide allowing for door circulation, passing and turning spaces where necessary.

6.9 Sanitary facilities

6.9.1 Access requirements

Unisex accessible sanitary facilities are required on each floor level where sanitary facilities are available within common areas. An equal distribution of right hand (RH) and left hand (LH) configured unisex accessible sanitary facilities are to be provided, where there is more than one available within a building.

The pan circulation space and fit out of these facilities are to meet the provisions of AS1428.1-2009 Clause 15. Where one or more toilets are provided in addition to a unisex accessible sanitary facility, an ambulant cubicle for male and female use is required within each bank.

Raised tactile and Braille signage is required to identify each of the sanitary facilities and provide direction where a bank of sanitary facilities does not incorporate an accessible facility, directing the user to the location of the nearest accessible facility. Where gendered shower facilities are available, an accessible shower facility is required.

6.9.2 Subject site – access commentary

Combined unisex accessible sanitary/shower facilities are outlined across the development within the common areas on Lower Ground 1, Ground Floor, Level 01 and Level 02. Additional cubicles are also available adjacent to the unisex accessible toilets on Lower Ground 1, Ground Floor and Level 01.

6.10 Wayfinding (Signage Component) – Common Use Areas

6.10.1 Access requirements

Where a pedestrian entrance is not accessible, raised tactile and Braille directional signage incorporating the international symbol of access is required to direct a person to the location of the nearest accessible pedestrian entrance.

Further raised tactile and Braille signage is required to be installed at accessible sanitary facilities, identifying the configuration of the facility, ambulant sanitary facilities (where available), spaces which incorporate hearing augmentation, including information about the type of system in use and the availability/location of receivers. Signage is also required at exit doors identifying the location.

A signage and wayfinding strategy should be created to ensure key accessible transition points are identified and captured around a building and/or site e.g., highlighting the location of accessible sanitary facilities, parking bays etc.

6.10.2 Subject site – access commentary

A review of signage will be undertaken when the signage package becomes available.

6.11 Hearing Augmentation

6.11.1 Access requirements

Hearing augmentation is to be provided where an inbuilt amplification system is installed (Other than one used only for emergency warning):

- In a room in a Class 9b building.
- In an auditorium, conference room, meeting room or room for judicatory purposes; or
- At any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider.

The area covered within the room/area that the system is provided must extend across 80-95% of the floor area, dependent upon the type of system utilised. Receivers where required must accommodate the number of anticipated users, based upon the number of people the room or space accommodates.

Screens or scoreboards associated with a Class 9b building, capable of displaying public announcements must be capable of supplementing any public address system, other than a public address system used for emergency warning purposes only.

6.11.2 Subject site – access commentary

Areas such as the Business Hub may require hearing augmentation.

6.12 Class 2 Accommodation

6.12.1 Accessibility Requirement

In accordance with the BCA, a Class 2 building has no minimum requirement for the provision of accessible units.

However, the Villiers Street development is aiming to achieve livability by meeting the BADS accessibility objective (Clause 58.05-1) and/or Silver Level standard of the Livable Housing Design Guideline (LHA) to all apartments within the development, with the provision of adaptable to Gold Level to a percentage of apartments being investigated.

6.12.2 Subject site – access commentary

The site as currently documented demonstrates an understanding and outlines application of the BADS and Silver Level LHA provisions.

6.13 Emergency egress and evacuation

6.13.1 Access considerations

Any emergency evacuation strategy should address the operational considerations relevant to the evacuation of people with disabilities and should detail the following:

- Stair refuges, or
- Fire-isolated lift lobbies and use of lifts in emergency.

Fire evacuation plans should include provision of management plans to assist known occupants with disability. Individuals with mobility limitations should be provided with a “fire buddy” to escort them to pre-determined areas of refuge.

AS 3745 - 2010 Planning for emergencies in facilities can be utilised as a guideline to assist in the implementation of any Emergency Plan.

6.13.2 Subject site – access commentary

Note for consideration.

6.14 Landscaping, Streetscapes and Terraces

6.14.1 Access considerations

The following are some design considerations for providing equitable access to the external public space:

- Lighting installations which minimise glare.
- Luminance contrast of features such as bike racks, bollards, bins etc.

6.14.2 Subject site – access commentary

The proposed landscape for the development is designed to enhance the public realm and provide connectivity through the precinct from Harcourt to Mary Street via the Green Spine connection and Communal Heart. In some location the provision of 1 in 17 gradient ramped accessways is proposed. Gentler gradients across these ramps is an enhancement on the basic 1 in 14 gradient and therefore has the characteristics of a graded walkway, providing a continuous accessible path of travel so that people with a range of accessibility needs are able to use it without encountering barriers.

The provision of gentler grades enables the removal of handrails and TGSIs, providing a less obtrusive design, whilst still providing a functional and safe path of travel for pedestrians, without jeopardising safety.

The design accommodates the integration of seating which is set back across the site and at key transition areas along the pathways, providing the opportunity to rest out of the way of pedestrians, useful for people of all abilities and mobility levels.

6.15 Lighting

6.15.1 Access considerations

The inclusion of quality light assists people in navigating their way through an environment and assist in the effective use of a building, potentially affecting working satisfaction and productivity.

Consideration should be given to lighting as follows:

Location	**Lux level**
Entrances, passageways, and walkways	150lx
Stairs	150lx
Ramps	150lx
Toilets and locker rooms	200lx
Counter tops	200lx
General displays	200lx

6.15.2 Subject site – access commentary

Note for consideration.

7 Better Apartment Design (BADS) and Livable Housing (LHA) Specifications

The 2022 National Construction Code (NCC) includes new requirements for livable housing design. These new provisions will improve the suitability of new Australian homes for people with mobility constraints.

The Livable Housing Standard aims to provide more housing options for people with some physical disabilities and older Australians and will apply to new houses and apartments. The main objective is to ensure the design of dwellings meets the needs of people with limited mobility, with further review undertaken during the design phases against the benchmarked requirements to maximize and improve the livability of all the apartments.

It should be noted that the Villiers development is also aiming to provide compliance to BADS accessibility objective (Clause 58.05-1) and/or LHA Silver Level requirements of the Livable Housing Design Guidelines (LHA) to all dwellings within the development, which should therefore satisfy the requirements of the NCC. The provision of LHA Gold Level certification to a number of apartments within the development is to be considered.

7.1.1 Access considerations

Highlighted below are the key BADS and LHA requirements to comply to LHA Silver and LHA Gold.

Area/s	**BADS**	**Livable Housing Design Guidelines (LHA)**	
		LHA Silver	**LHA Gold**
Entry door clear opening width	850 mm	820mm	850mm
Internal door clear opening width	850mm - Main Bedroom, Option A Bathroom (820mm Option B)	820mm to living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment	850mm to living, dining, bedroom, bathroom, kitchen, laundry and sanitary compartment
Corridor/Passage Width	1200 mm	1000mm	1200mm

Bedroom Dimensions	Main – 3.0 x 3.4 m Other – 3.0 x 3.0 m	*No requirements*	Min. 10m2 clear of robes, skirting and wall lining Min. 1000 mm on at least one side of bed
Bathroom	One adaptable bathroom to meet Option A or B: **Option A** • Slide door, outward opening door, or inwards opening door clear of circulation and with removable hinges. 850mm clear opening through door required. • 1.2x1.2m circulation space in front of shower and toilet, clear of toilet, basin and door leaf swing. • The circulation area for the toilet and shower can overlap. • A clear 900mm path from the door to the circulation area. • Hobless shower • Toilet in corner of room **Option B** • Slide door, outward opening door, or inwards opening door with removable hinges. 820mm clear opening through door required and door to be opposite shower. • Min. 1m wide clear circulation the full length of the	• Toilet must be provided on entry level. • Min. 900mm wide x 1200mm long circulation required forward of pan. • Toilet to be in corner of room. • Hobless shower required. • Screen allowable if easily removeable. • Shower to be in corner.	• Toilet must be provided on entry level. • Min. 1200mm wide x 1200mm long circulation required forward of pan. • Toilet to be in corner of room. • Hobless min. 900x900mm shower required. Screen allowable if easily removeable. • Shower to be in corner. Shower to be on entry level. • Provide 1.2x1.2m clear space forward of shower

	bathroom and minimum 2.7m length, clear of the toilet and basin. • The circulation area can include a shower area. • Hobless shower with removeable screen and is located on furthest wall from door opening. • Toilet located closest to door opening and clear of circulation space.		
Shower (hobless)	Hobless shower recess No min. shower size See above design Option A or B for circulation area A step free shower should have a maximum 5mm height level change between adjacent surfaces with a bevelled or rounded edge with falls to the waste outlet.	Hobless shower recess No min. shower size No front circulation specified	Hobless shower recess Min. 0.9 x 0.9m shower size Clear 1.2 x 1.2m front circulation
Toilet - corner location	1.2m W x 1.2m L front circulation When applying bathroom design option A if toilet cannot be located in the corner of the room include a nib wall	0.9m W x 1.2m L front circulation exclusive of the swing of the door	1.2m W x 1.2m L front circulation exclusive of the swing of the door

	adjacent to the toilet – min. 700 mm long to enable future fitting of grab rail		
Shower & Toilet wall reinforcement	*No requirements*	Walls other than masonry or concrete walls to be reinforced around the shower, bath and toilet where grabrails would be installed. Reinforcement to be either 25mm noggings or 12mm sheeting	Walls other than masonry or concrete walls to be reinforced around the shower, bath and toilet where grabrails would be installed. Reinforcement to be either 25mm noggings or 12mm sheeting
Living	1 Bed and Studio - 3.3m W / 10sqm 2+ Bed - 3.6m W / 12sqm	*No requirements*	*No requirements*
Storage	Total & (located within dwelling) – cubic m Studio – 8 cubic mtr (5m internal noted within dwelling) 1 Bed - 10 cubic mtr (6m internal noted within dwelling) 2 Bed – 14 cubic mtr (9m internal noted within dwelling)	*No requirements*	*No requirements*

	3+ Bed – 18 cubic mtr (12m internal noted within dwelling)		
Kitchen	*No requirements*	*No requirements*	Min. 1200mm in front of benches and appliances
Laundry	*No requirements*	*No requirements*	Min.1200mm front of benches and appliances Min. 600mm depth (appliances)
POS/Balconies	Ground level - min. 25 sqm (3m wide) accessed from a living room Podium or other similar base - min. 15sqm (3m wide) accessed from a living room Roof – min. 10sqm (2m wide) accessed from a living space A balcony with at least the area and dimension specified in Table D5 accessed from a living room: Orientation of dwelling: • North (between north 20 degrees west to north 30 degrees east) min. 8sqm, min dimension 1.7m	*No requirements*	*No requirements*

	• South (between south 30 degrees west to south 20 degrees east) min. 8sqm, min dimension 1.2m
	• Any other orientation:
	  • 1 Bed, Studio – min. area 8sqm, min dimension 1.8m
	  • 2 Bed – min area 8sqm, min. dimension 2m
	  • 3+ Bed – min area 12sqm, min. dimension 2.4m		

Windows	*No requirements*	*No requirements*	*No requirements*
Light switches / GPOs	*No requirements*	*No requirements*	Light switches between 900 – 1100 mm AFFL and horizontally aligned with door handle at the entrance to a room GPOs – no lower than 300 AFFL

7.1.2 Subject site – access commentary

The layouts for the Studio, one (1) bed apartments, two (2) bed apartments, three (3) bed apartments and apartment duplex, within the following preliminary documentation indicate that spatially they are capable of meeting the requirements of BADS and/or LHA Silver level:

- A-8003 Apartment Studio
- A-8011 Apartment 1 Bed
- A-8012 Apartment 1 Bed
- A-8013 Apartment 1 Bed
- A-8014 Apartment 1 Bed
- A-8015 Apartment 1 Bed
- A-8021 Apartment 2 Bed
- A-8022 Apartment 2 Bed
- A-8023 Apartment 2 Bed
- A-8024 Apartment 2 Bed
- A-8025 Apartment 2 Bed
- A-8026 Apartment 2 Bed
- A-8027 Apartment 2 Bed
- A-8028 Apartment 2 Bed
- A-8029 Apartment 2 Bed
- A-8030 Apartment 2 Bed
- A-8041 Apartment 3 Bed
- A-8042 Apartment 3 Bed
- A-8043 Apartment 3 Bed
- A-8044 Apartment 3 Bed
- A-8051 Apartment Duplex

Generally as a standard at least 50% of dwelling should meet the following BADS accessibility objectives, however it should be noted the Villiers development is currently achieving this for 76.5% of dwellings:

- A clear opening width of at least 850mm at the entrance to the dwelling and main bedroom.
- A clear path with a minimum width of 1.2 metres that connects the dwelling entrance to the main bedroom, an adaptable bathroom and the living area.
- A main bedroom with access to an adaptable bathroom.
- At least one adaptable bathroom that meets all of the requirements of either Design A or Design B specified in Table D4.

8 Summary

Base level accessibility is encompassed by applying the NCC which references AS 1428.1 2009, however there are many components or features which should be considered to create “best practice or Universal Design”. The provision of consistent, functional, equitable, dignified, safe and independently accessibility are key principles in achieving compliance to the “reasonable adjustment” provisions of the DDA.

The delivery of Universal Design principles will ensure that 23-47 Villiers Street North Melbourne is a building whereby the whole community will be able to participate, work, or visit regardless of their abilities. The 23-47 Villiers Street North Melbourne highlights a unique opportunity to ensure the planning, design, construction and operation of the precinct create equitable and seamless movement for all people including those with accessibility needs.

Morris Goding Accessibility Consultants are satisfied that at planning stage, sufficient consideration has been given to DDA Accessibility, to ensure not only compliance is achieved but an inclusive and functional design will also be delivered.

REVIEW PROVIDED BY:

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