



Annexure A

Survey of Land Levels



Annexure B

Development Plans

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NOTES:
 1. DO NOT SCALE THE DRAWING. READ ALL DIMENSIONS FROM THE DRAWING.
 2. BEFORE COMMENCING NEW WORK, AND SHALL ASK IF IN DOUBT.
 3. THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT AUSTRALIAN STANDARDS.
 4. THE CONTRACTOR SHALL COMPLY WITH THE BUILDING CODE OF AUSTRALIA/BCA.
 5. PLEASE NOTE THAT GROUND LEVELS MAY VARY DUE TO SITE CONDITIONS.

ISSUE	AMENDMENTS	DATE
A	DEVELOPMENT APPLICATION	Apr/2011
B	DESIGN REVISION	Apr/2011
C	DESIGN REVISION	Oct/2011
D	DESIGN REVISION AFTER MEETINGS WITH COUNCIL	Nov/2012
E	DESIGN REVISION AFTER MEETINGS WITH COUNCIL	Jan/2012

BASIC REQUIREMENTS

Water
 -all overheads to be 3 Star (56 l/hd, <= 7.5l/min)
 -all toilet flushing systems to be 3 Star
 -all kitchen & bathroom taps to be 3 Star
 -all clothes washers to be 2 Star
 -central water tank is connected to landscape & toilets, each tank minimum 4000L
 -all common area taps to be 3 Star

Energy
 -all hot water system to be solar (electric boosted) fewer than 15 RECs
 -all bathrooms to have individual fan, ducted to exterior
 -all kitchen & laundry to have individual fan, ducted to facade or roof, manual switch on/off
 -all kitchen, bathroom/toilets, laundry, hallways must have artificial lighting
 -all units to have refrigeration & cooling systems of 1-phase air conditioning 2.5 Star (new rating)
 -all units to have refrigerator 1 Star (new rating) with well ventilated fridge space
 -all units to have electric cooktop & electric oven
 -all units to have clothes washer 2.5 Star
 -all units to have clothes dryer 1.5 Star



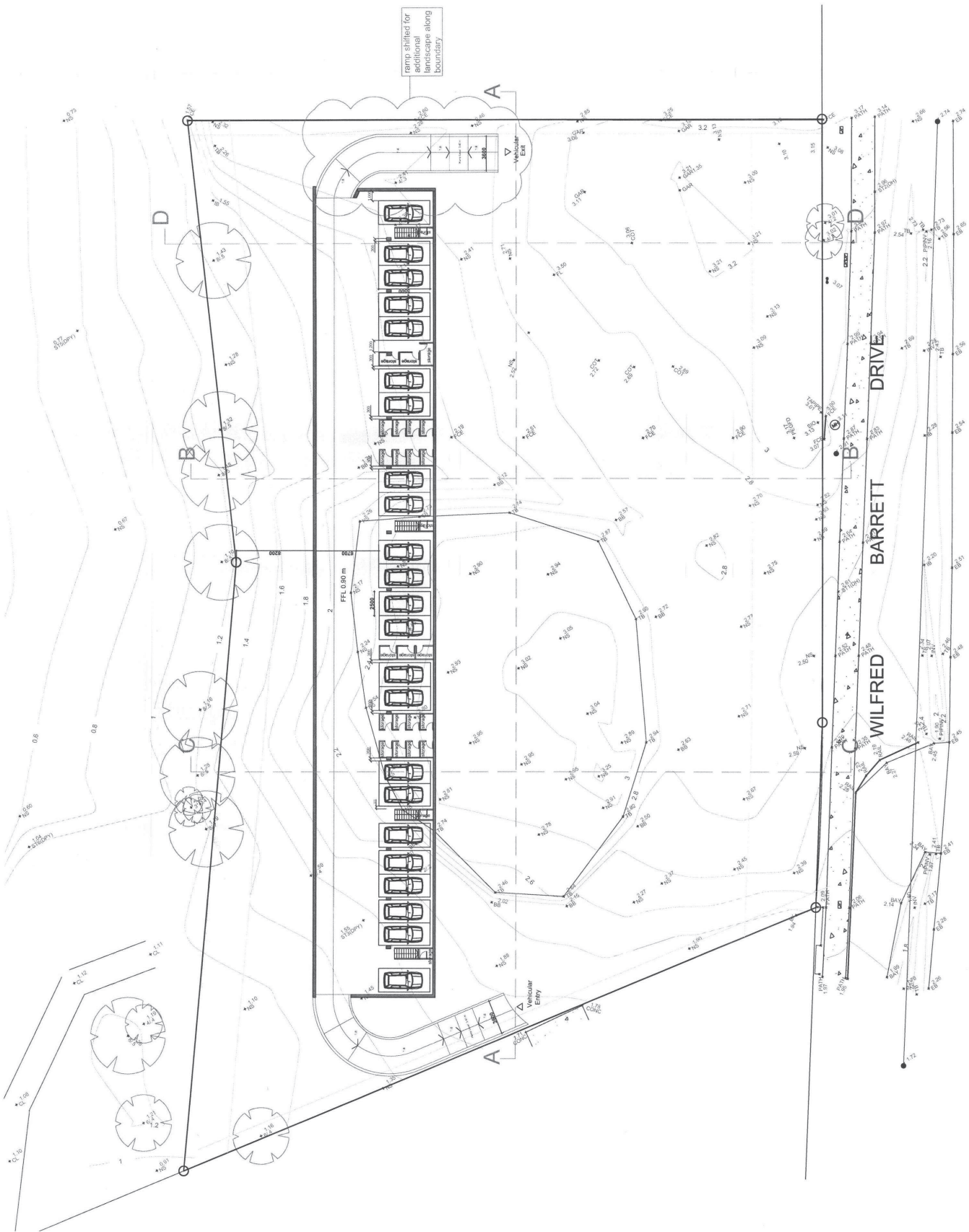
ISSUE E DESIGN REVISION AFTER MEETINGS WITH COUNCIL **Jan/2012**

australian consultant architects

Project: No. 35 Wilfred Street Drive North Entrance NSW
 Client:
 Name: Affordable Housing
 Drawn: AT 1/200
 Scale: 1:100
 Date: 2011/13
 Consultant: SA

Basement plan

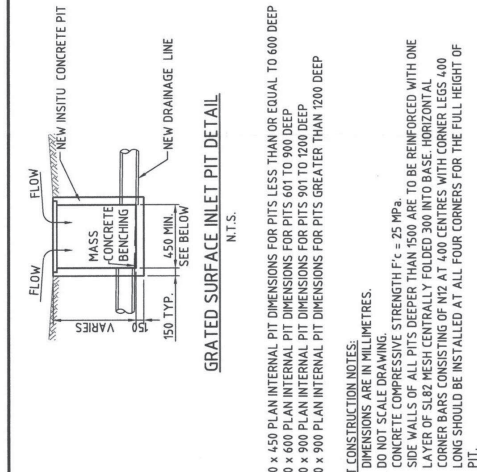
DA03



BASEMENT PLAN

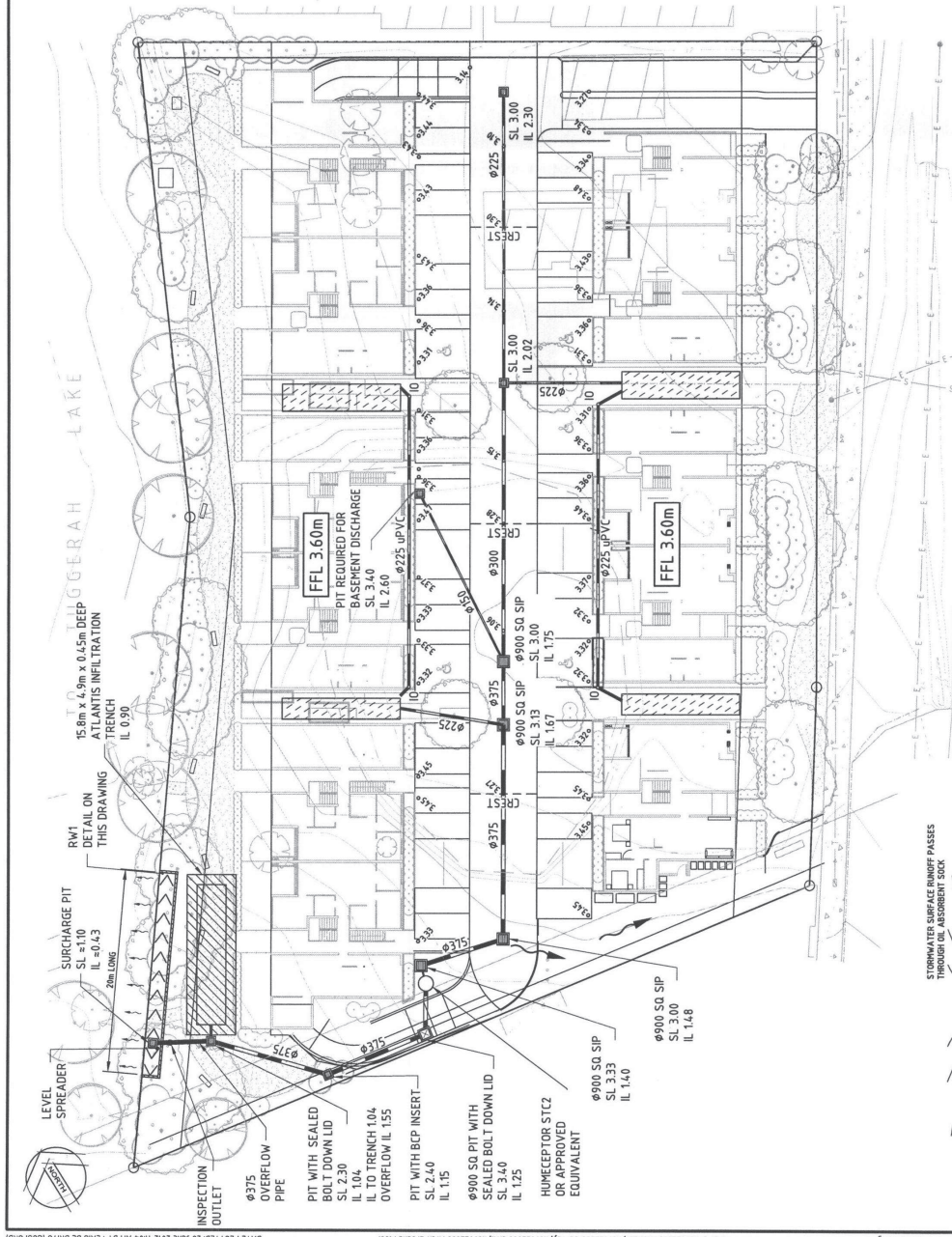
LEGEND

- PROPOSED STORMWATER PIT (600 SQ SURFACE INLET PIT UNO.)
- PROPOSED STORMWATER PIPE
- DIRECTION OF OVERLAND FLOW PATH
- PROPOSED FINISHED FLOOR LEVEL
- PROPOSED 4000L RAINWATER STORAGE TANK
- EXISTING SURFACE CONTOURS (INTERVAL = 0.2m)
- EXISTING SEWER LINE
- EXISTING ELECTRICITY OVERHEAD
- EXISTING TELSTRA

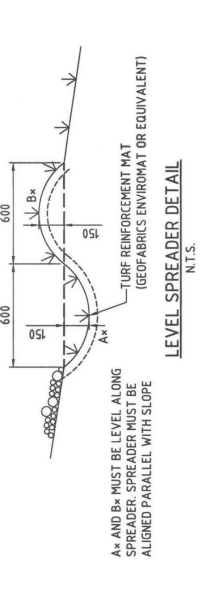


GRADED SURFACE INLET PIT DETAIL
N.T.S.

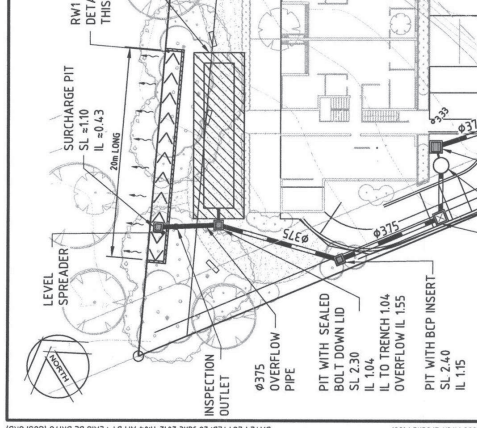
- 450 x 450 PLAN INTERNAL PIT DIMENSIONS FOR PITS LESS THAN OR EQUAL TO 600 DEEP
 600 x 600 PLAN INTERNAL PIT DIMENSIONS FOR PITS 601 TO 900 DEEP
 900 x 900 PLAN INTERNAL PIT DIMENSIONS FOR PITS 901 TO 1200 DEEP
 900 x 900 PLAN INTERNAL PIT DIMENSIONS FOR PITS GREATER THAN 1200 DEEP
- PIT CONSTRUCTION NOTES:**
1. DIMENSIONS ARE IN MILLIMETRES.
 2. DO NOT SCALE DRAWING.
 3. CONCRETE COMPRESSIVE STRENGTH $f_{c'} = 25 \text{ MPa}$.
 4. SIDE WALLS OF ALL PITS DEEPER THAN 1500 ARE TO BE REINFORCED WITH ONE LAYER OF S182 MESH CENTRALLY FOLDED 300 INTO BASE. HORIZONTAL CORNER BARS CONSISTING OF N12 AT 400 CENTRES WITH CORNER LEGS 400 LONG SHOULD BE INSTALLED AT ALL FOUR CORNERS FOR THE FULL HEIGHT OF PIT.
 5. DEPTH OF PIT NOT TO EXCEED 3500.
 6. PITS DEEPER THAN 1200 TO BE FITTED WITH GALVANISED STEP IRONS.
 7. PITS EXCEEDING 1200 TO BE FITTED WITH 200mm DIA. STEP IRONS.
 8. GRATE FRAME TO BE WELDED GALVANISED STEEL SUMP GRATE OR APPROVED EQUIVALENT GRATING TO BE AS FOLLOWS:
 - CARPARKWAYS HEAVY DUTY UNO.
 - LANDSCAPING MEDIUM DUTY UNO.
 - SHAPE ADJACENT SURFACE AREAS TO ASSIST WATER COLLECTION.
 9. PRECAST CONCRETE PITS MAY BE SUBSTITUTED SUBJECT TO APPROVAL.
 11. BUILD INTO UPSTREAM FACE OF ALL PITS A 3 METRE SUBSOIL LINE FALLING INTO PITS TO MATCH PIT INVERT.



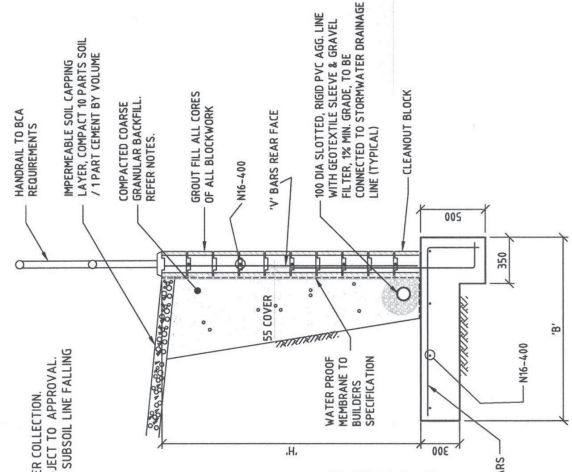
PLAN
SCALE 1:250



LEVEL SPREADER DETAIL
N.T.S.



GRADED SURFACE INLET PIT WITH 'BCP STREAMCLEAN' PIT INSERT OR EQUIVALENT
N.T.S.



RETAINING WALL 'RW1'

NOTE: PLACEMENT OF STARTERS AND MAIN VERTICAL WALL REINFORCEMENT IS CRITICAL. FAILURE TO ADHERE TO THE SPECIFICATIONS AND DIMENSIONS WILL LEAD TO RECTIFICATION BEING REQUIRED PRIOR TO CORE FILLING. SAID RECTIFICATION MAY REQUIRE THE PARTIAL OR COMPLETE DEMOLITION AND RECONSTRUCTION OF THE WALL.

RETAINING WALL 'RW1'		V BARS	
H	B	190 BLOCK	800
800	700	800	N12-400
1000	800	1000	N12-400
1200	900	1200	N12-400

NOT CONSTRUCTION ISSUE

Client: **FRESCO P/L**

Proposed: **AFFORDABLE HOUSING AT LOT 1 DP 862588 AND LOT 76 DP 227174**

Site: **WILFRED BARRETT DRIVE THE ENTRANCE NORTH CONCEPT STORMWATER GROUND FLOOR PLAN & DETAILS**

Drawn: **LDG** Date: **17/03/11**

Designed: **LDG** Date: **17/03/11**

Checked: **LDG** Date: **17/03/11**

Verified: **LDG** Date: **17/03/11**

Approved: **LDG** Date: **17/03/11**

Status: **D.A. APPROVAL**

Date: **17/03/11** Drawn: **AHD** Scale: **AS SHOWN** Size: **A1**

Revision: **89022886-001** 4

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5 2.5 0 5 10 15 20 25m
A1 1:250
(A3 1:500)

DATE PLOTTED: 28 Jun 2012 11:41 AM BY: J.LAS DE BRITO (6050F80)

XREF: 89922886 A1Sheet1; 89922886 Sump; 89922886 CIVL; 89922886 Arch Ground Floor

CD P.E. P.9927.28 08/09/2008 27 Wilfred_barrett - 11th - antkrcak\kch\civl\89922886-001 (A) SW GP PLAN & DETAILS.dwg

ACCESS REPORT
DEVELOPMENT APPLICATION

35 WILFRED BARRETT DRIVE
ENTRANCE NORTH

MULTI-UNIT RESIDENTIAL DEVELOPMENT

Prepared By Mark Relf

7TH April 2011
(Amended 26th June 2012)



Accessibility Solutions (NSW) PTY LTD
ABN 20 105 200 128 | 20 Begonia Street PAGEWOOD 2035
Tel: 9695-1940 | Fax: 9695-1906 | Mob: 0417-467-007 | Email: markrelf@bigpond.com

Introduction

The purpose of this report is to provide an accessibility review of a Development Application for a multi-unit "affordable housing" development on a site at 35 Wilfred Barrett Drive, North Entrance.

In particular, the report considers the accessibility of common areas within the development and the provision of 10% of units as Adaptable Housing within the meaning of AS4299.

Assessment Criteria

This assessment considers the following legislation, planning instruments and standards pertaining to access for people with disabilities:

- (1) Building Code of Australia (2012) and DDA Premises Standards
- (2) Australian Standard AS1428.1 (2009) – Design for Access & Mobility & referenced standards.
- (3) Australian Standard AS4299 – Adaptable Housing.

Development Application Plans

The plans relied upon for this accessibility assessment include:

Dwg No.	Drawing Title	Revision
2011-13 DA 03	Basement Plan	E
2011-13 DA 04	Ground Floor Plan	E
2011-13 DA 05	First Floor Plan	E
2011-13 DA 06	Roof Plan	E
2011-13 DA 07	Unit Types	E
2011-13 DA 08	Shadow Analysis	E
2011-13 DA 09	Elevations	E
2011-13 DA 10	Elevations & Driveway Profile	E
2011-13 DA 11	Sections	E

Development Summary

The development proposes a residential development consisting of the following elements:

- Forty-two (42) affordable housing units with wheelchair accessible paths of travel to enter the site and access all twenty-one (21) ground floor units to satisfy BCA 2012 and the DDA Premises Standards. Details of ramps, walkways, stairs and doorway thresholds shall be confirmed at a later construction certificate stage in accordance with AS1428.1.
- On-site parking for 57 vehicles including 22 basement carparking spaces and 35 ground floor car spaces, which incorporates 5 X 4800mm width accessible parking bays for the adaptable units in accordance with AS4299/AS2890.6.
- The development proposes five (5) ground floor units will be adaptable with designs complying with AS4299 – Adaptable Housing.

In summary the access and adaptability review of the development demonstrates compliance with the relevant objectives and design code requirements of BCA 2012/DDA Premises Standard pertaining to accessible common domain areas and access to the ground floor level apartments and the Adaptable Housing standard AS4299 in terms of five (5) adaptable units for people with disabilities.



Mark Relf, Access Consultant (ACAA)

Residential Access & Adaptability Assessment

Accessibility of Common Domain Areas

In accordance with Table D3.1 of the BCA a development is required;

- To provide a pedestrian entrance to be accessible to at least one (1) floor containing sole occupancy units and to the entrance doorway of each sole occupancy unit located on that level, and
- To and within not less than one (1) 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, or the like.
- Where a ramp complying with AS 1428.1 or a passenger lift is installed —
 - a) to the entrance doorway of each sole-occupancy unit; 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.

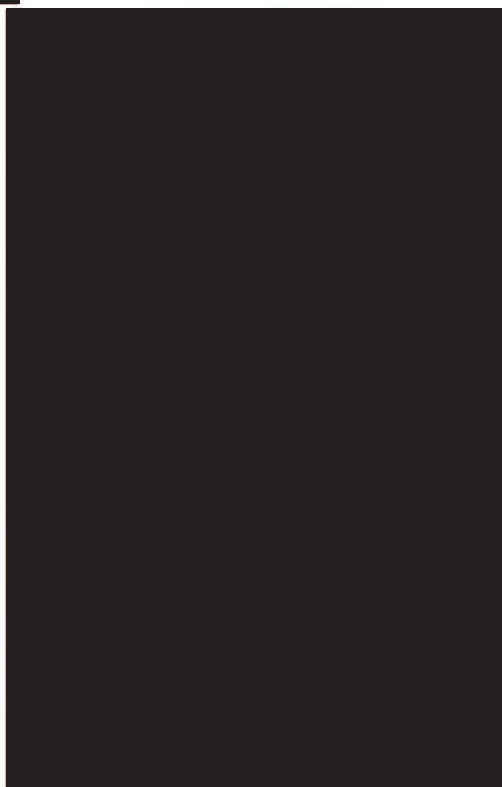
Adaptability Assessment

The following provides an assessment of the designated “adaptable” units in accordance with Category C of the Adaptable Housing Standard – AS4299.

Adaptable – To provide wheelchair accessible entry to a single level apartment or a level of a residential unit that provides a “living/dining area”, “kitchen”, “main bedroom” and a “bathroom” that can be accessible from the outset or modified at minimal expense to satisfy the performance objectives of AS4299 – Adaptable Housing to Category C.



Area Calculation - Issue E	
2 Storeys Multi-Unit Affordable Housing	
Site Area = 6266.5 sq m	
Ground Floor Gross Area = 1668 sq m	
First Floor Gross Area = 1698 sq m	
Total Gross Area = 3366 sq m	
FSR = 0.5 : 1	
Landscaped area = 1959sqm = 32%	
Deep Soil area = 1111.5sqm = 18%	
Common Open Space = 424.4sqm	
No. One bedroom Units = 2	
No. One bedroom-disabled Units = 5	
No. Two bedroom Units = 35	
Total = 42 Units	
No. of basement car parking = 22	
No. of ground floor car parking = 35 (includes 5 for disabled)	
Total = 57 car space	

Clause	Accessibility Assessment – Common Domain	Compliance	
BCA Table D3.1	<p>Site Access Paths - The plans show an entrance that provides on-grade access with 1:20 gradient walkways, 1:14 gradient ramp and 1:10 step ramp access from the public domain footpath to the front entry door of all twenty-one (21) ground floor units to satisfy Table D3.1 of the BCA.</p>	YES	
	<p>Details of ramp handrails and tactile indicators shall be confirmed at construction certificate stage in accordance with ASI428.1 and ASI428.4.1.</p>		
	<p>The Common Landscaped areas between the buildings propose on-grade transition access from the paved ramp landings which enables satisfactory access to this soft landscaped area and communal facility.</p>		YES
BCA D3.3(a)(ii) D3.8	<p>Stairways In accordance with part D3.3(a)(ii) of the BCA the stairways will be detailed at construction certificate stage with handrails on both sides to the requirements of ASI428.1, step nosings, closed risers and tactile ground surface indicators.</p>	YES	
BCA Table D3.1	<p>Letterboxes The letter boxes shall be adjacent the site entrance driveway and will provide at least 1550mm X 1550mm circulation area and access to comply with ASI428.1 to satisfy Table D3.1 of the BCA.</p>	YES	

Clause	Adaptability Assessment	Compliance
AS4299 Clause 3.7	<p>Resident Car Parking</p> <p>The carpark provides five (5) X 4800mm width resident parking spaces to satisfy AS4299, including extra transfer space for people with mobility restrictions.</p> <p>The car spaces will be graded at a 1:40 maximum slope and crossfall in accordance with AS2890.</p> <p>The outdoor parking provides unrestricted height clearance over the designated accessible parking space in accordance with AS4299.</p>	YES
AS4299 Clauses 4.3.1, 4.3.2 and 4.3.3	<p>Accessible entries – The front entrances to the adaptable units provide at least 1550mm X 1550mm externally and internally with 530mm minimum latch side clearance, which complies with the spatial requirements of AS4299.</p>	YES
AS4299 CIs 4.3.7	<p>Interior of ground floor: general – With regard to the internal corridor and doorway approach to a <u>main bedroom</u>, adaptable bathroom and storage facilities the development complies with the doorway circulation space requirements of AS1428/4299.</p>	YES
	<p>Doors and Door Hardware</p> <p>The plans will confirm 920mm external door widths, 870mm internal door widths and lever handles at construction drawing stage to confirm compliance.</p>	YES
AS4299 Clause 4.7	<p>Living and Dining rooms – The plans show combined living and dining areas on a single level with sufficient area to provide a 2250mm diameter turning area to comply with this clause.</p>	YES
AS4299 Clause 4.5	<p>Kitchen – with regard to kitchen design the L-shaped kitchen inherently provides 1550mm clearance between benches to comply with AS4299.</p> <p>With regard to the “adaptability” of the kitchen the construction drawings shall provide details of an appropriate layout of sink, fridge, wall oven, cooktop and height adjustable workbench that readily satisfies the “ease of adaptation” guidelines outlined in section 2 –</p>	YES
		YES

Clause	Adaptability Assessment	Compliance
	<p>Performance Objectives of AS4299.</p> <p>Therefore, subject to confirmation of the installation of kitchen cupboards, appliances and the like at the construction documentation stage it is evident that the kitchens will comply with AS4299.</p>	
AS4299 Clause 4.6	<p>Main bedroom – The plans show a main bedroom for the adaptable units that are at least 3500mm X 3600m which allows a circulation area of 1540mm X 2070mm clear of a queen sized bed and in front of the wardrobe while maintaining 1000mm clearance on both sides of the bed to satisfy AS4299.</p>	YES
AS4299 Clause 4.7	<p>Bathroom – The plans show that the bathroom will be at least 2000mm X 3000mm which enables compliance with AS1428 in terms of spatial area.</p> <p>To facilitate adaptation to an accessible unit the toilet pan, washbasin and shower are in pre and post adaptation to satisfy the performance requirements of AS4299.</p>	YES
AS4299 Cls 4.4.3	<p>Toilet – The toilet within the bathroom shall comply with AS4299 by providing 1250mm X 900mm in front of the WC pan.</p>	YES
AS4299 Clause 4.8	<p>Laundry – The laundry facilities are provided in a closet, which enables 1550mm X 1550mm clear circulation space in front of the appliances to comply with AS4299.</p>	YES
AS4299 Cls 3.5(b)	<p>Outdoor Private Open Space – The plans show outdoor terrace area adjacent living area with sliding doors.</p> <p>The areas provide adequate space to perform a 180 degree wheelchair manoeuvre.</p> <p>While the plans do not indicate thresholds the construction drawings will confirm a 35mm maximum change in level with the capability for threshold ramps to comply with AS1428/4299.</p>	YES

In summary, I conclude that these units and associated common domain facilities will comply with fundamental spatial design criteria of Adaptable Housing AS4299.