Lot 303 Croatia Avenue, Edmondson Park

BCA & ACCESS CONSULTANT REPORT Rev.2

27 March 2025

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1 Introduction

This BCA & Access report has been prepared by Axis Building Certification to accompany an application for a State Significant Development (SSD-77211717) for infill Affordable Housing at Lot 303 Croatia Avenue, Edmondson Park.

1.1 Project Overview

As the NSW Government's land and property development organisation, Landcom has a mandate to take a lead role in improving the supply, diversity, and affordability of new housing in NSW.

Landcom aims to create innovative and productive places that demonstrate global standards of liveability, resilience, inclusion, affordability, and environmental quality, and uses its sites and close working relationships with the private sector to deliver quality, socially inclusive community places, where people can grow and thrive regardless of income levels and stages of life.

In response to the NSW Government's commitment to increasing the supply of Affordable Housing under the National Housing Accord, Landcom has committed to delivering 1,800 affordable rental housing dwellings by 2029. As part of this commitment, Lot 303 Croatia Avenue has been earmarked as a suitable site for infill affordable housing.

1.2 Project Objectives

Landcom's objectives for the project are:

- Delivery of sustainable high quality affordable accommodation.
- Provide a sense of place within the development to ensure good high-quality accommodation.
- The use of robust materials that allow for long service life of the building.
- A building that meets the need of the community and serves the requirements of the area.
- Seamless integration of cultural and sustainable objectives that align to Landcom's key principles.

1.3 Proposed Development

Landcom is seeking development consent to construct an infill affordable housing development. Development consent is sought for:

- Site preparation works
- Civil bulk earthworks
- Removal of trees and vegetation
- Construction of:
    - A nine (9) storey residential flat building, comprising 58 infill affordable dwellings, of which 100% will be designated affordable rental housing for key workers.

- Single level basement to accommodate 17 car parking spaces, 20 bicycle parking spaces and two (2) car share parking spaces.
- landscaping; and
- utilities and infrastructure services.

The proposed development has an estimated development cost that exceeds $30million and 100% of the gross floor area of the development will be used for the purposes of affordable housing. Accordingly, the proposal is SSD for the purposes of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP).

1.4 Report Purpose

This Report has been prepared to address the following 'Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning, Housing and Industry on 24 October 2024.

Table 1: Secretary's Environmental Assessment Requirements

SEARs Requirements	Report Section
1. Statutory Context	
• Address all relevant legislation, environmental planning instruments (EPIs) (including drafts), plans, policies, guidelines and planning circulars.	Section 1.2
• Identify compliance with applicable development standards and provide a detailed justification for any non-compliances.	Section 1.3
• Provide an explanation of how the development as described in the EIS is consistent with the development as was described in the request for SEARs (including any components that were not SSD) and provide a justification for any differences.	
• Address the requirements of any approvals applying to the site, including any concept approval or recommendation from any Gateway determination.	
• Provide documentation demonstrating that a registered community housing provider will manage the affordable housing component of the development for 15 years (after issue of Occupation Certificate).	
2. Estimated Development Cost and Employment	
• Provide the estimated development cost (EDC) of the development prepared in accordance with the relevant planning circular using the Standard Form of EDC Report.	
• The EDC Report must specify the EDC of the residential component of the development.	
• Provide an estimate of the retained and new jobs that would be created during the construction and operational phases of the development, including details of the methodology to determine the figures provided.	
3. Design Quality	
• Demonstrate how the development will achieve:	
○ design excellence in accordance with any applicable EPI provisions.	
○ good design in accordance with the seven objectives for good design in *Better Placed*.	
• Demonstrate that the development:	

- where required by an EPI or concept approval, or where proposed, has been subject to a competitive design process, carried out in accordance with an endorsed brief and Design Excellence Strategy; or
- in all other instances, has been reviewed by the State Design Review Panel (SDRP) where required under the *NSW SDRP: Guidelines for Project Teams*.

- Recommendations of the jury and Design Integrity Panel (where a competitive design process has been held) or the SDRP are to be addressed prior to lodgement.

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4. Built Form and Urban Design

- Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning, design approach and application of the height and floor space bonuses under the Housing SEPP.
- Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality.
- Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, activation, roof design, materials, finishes, colours, any signage and integration of services.
- Assess how the development complies with the relevant accessibility requirements.
- Provide a floorplan outlining the gross floor area and units that are dedicated as affordable housing.

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5. Environmental Amenity

- Address how good internal and external environmental amenity is achieved, including access to natural daylight and ventilation, pedestrian movement throughout the site, access to landscape and outdoor spaces.
- Assess amenity impacts on the surrounding locality, including lighting impacts, reflectivity, solar access, visual privacy, visual amenity, view loss and view sharing, overshadowing and wind impacts. A high level of environmental amenity for any surrounding residential or other sensitive land uses must be demonstrated.
- Provide a solar access analysis of the overshadowing impacts of the development within the site, on surrounding properties and public spaces (during summer and winter solstice and spring and autumn equinox) at hourly intervals between 9am and 3pm, comparing the proposed development, existing situation and a development with no bonuses applied.

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6. Visual Impact

- Provide a visual analysis of the development from key viewpoints, including photomontages or perspectives showing the proposed and likely future development.
- Where the visual analysis has identified potential for significant visual impact, provide a visual impact assessment that

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7. Public Space

- Demonstrate how the development maximises the amount, access to and quality of public spaces (including open space, public facilities and streets/plazas within and surrounding the site), reflecting relevant design guidelines and advice from the local council and the Department.
- Demonstrate how the development:
  - ensures that public space is welcoming, attractive and accessible for all.
  - maximises permeability and connectivity.

- maximises the amenity of public spaces in line with their intended use, such as through adequate facilities, solar access, shade and wind protection.
- maximises street activation.
- minimises potential vehicle, bicycle and pedestrian conflicts.

- Address how Crime Prevention through Environmental Design (CPTED) principles are to be integrated into the development, in accordance with *Crime Prevention and the Assessment of Development Applications Guidelines*.

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8. Trees and Landscaping

- Assess the number, location, condition and significance of trees to be removed and retained and note any existing canopy coverage to be retained on-site.
- Provide a detailed site-wide landscape plan, that:
  - details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage (as a percentage of the site area).
  - provides evidence that opportunities to retain significant trees have been explored and/or informs the plan.
  - demonstrates how the proposed development would:
    - contribute to long term landscape setting in respect of the site and streetscape.
    - mitigate the urban heat island effect and ensure appropriate comfort levels on-site.
    - contribute to the objective of increased urban tree canopy cover.
    - maximise opportunities for green infrastructure, consistent with *Greener Places* and having regard to any bush fire risk.

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9. Ecologically Sustainable Development (ESD)

- Identify how ESD principles (as defined in section 193 of the EP&A Regulation) are incorporated in the design and ongoing operation of the development.
- Demonstrate how the development will meet or exceed the relevant industry recognised building sustainability and environmental performance standards.
- Demonstrate how the development minimises greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources.

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10. Traffic, Transport and Accessibility

- Provide a transport and accessibility impact assessment, which includes:
  - an analysis of the existing transport network, including the road hierarchy and any pedestrian, bicycle or public transport infrastructure, current daily and peak hour vehicle movements, and existing performance levels of nearby intersections.
  - details of the proposed development, including pedestrian and vehicular access arrangements (including swept path analysis of the largest vehicle and height clearances), parking arrangements and rates (including bicycle and end-of-trip facilities), drop-off/pick-up-zone(s) and bus bays (if applicable), and provisions for servicing and loading/unloading.
  - analysis of the impacts of the proposed development during construction and operation (including justification for the methodology used), including predicted modal split, a forecast of additional daily and peak hour multimodal network flows as a result of the development (using industry standard modelling), identification of potential traffic impacts on road

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capacity, intersection performance and road safety (including pedestrian and cyclist conflict) and any cumulative impact from surrounding approved developments.

- measures to mitigate any traffic impacts, including details of any new or upgraded infrastructure to achieve acceptable performance and safety, and the timing, viability and mechanisms of delivery (including proposed arrangements with local councils or government agencies) of any infrastructure improvements in accordance with relevant standards.
- proposals to promote sustainable travel choices for employees, residents, guests and visitors, such as connections into existing walking and cycling networks, minimising car parking provision, encouraging car share and public transport, providing adequate bicycle parking and high-quality end-of-trip facilities, and implementing a Green Travel Plan.

- Provide a Construction Traffic Management Plan detailing predicted construction vehicle routes, access and parking arrangements, coordination with other construction occurring in the area, and how impacts on existing traffic, pedestrian and bicycle networks would be managed and mitigated.

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11. Biodiversity

- Assess any biodiversity impacts associated with the development in accordance with the *Biodiversity Conservation Act 2016* and the *Biodiversity Assessment Method 2020*, including the preparation of a Biodiversity Development Assessment Report (BDAR), unless a waiver is granted, or the site is on biodiversity certified land.
- If the development is on biodiversity certified land, provide information to identify the site (using associated mapping) and demonstrate the proposed development is consistent with the relevant biodiversity measure conferred by the biodiversity certification.

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12. Noise and Vibration

- Provide a noise and vibration assessment prepared in accordance with the relevant NSW Environment Protection Authority (EPA) guidelines. The assessment must detail construction and operational noise, and vibration impacts on nearby sensitive receivers and structures and outline the proposed management and mitigation measures that would be implemented.

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13. Ground and Water Conditions

- Assess potential impacts on soil resources and related infrastructure and riparian lands on and near the site, including soil erosion, salinity and acid sulfate soils.
- Provide a Surface and Groundwater Impact Assessment that assesses potential impacts on:
  - surface water resources (quality and quantity) including related infrastructure, hydrology, dependent ecosystems, drainage lines, downstream assets and watercourses.
  - groundwater resources in accordance with the relevant *Groundwater Guidelines*.

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14. Water Management

- Provide an Integrated Water Management Plan for the development that:
  - is prepared in consultation with the local council and any other relevant drainage or water authority.
  - outlines the water-related servicing infrastructure required by the development (informed by the anticipated annual and ultimate increase in servicing demand) and evaluates opportunities to reduce water demand (such as recycled water provision).

- details the proposed drainage design (stormwater and wastewater) for the site including any on-site treatment, reuse and detention facilities, water quality management measures and nominated discharge points.
- demonstrates compliance with the local council or other drainage or water authority requirements and avoids adverse downstream impacts.

- Where drainage infrastructure works are required that would be handed over to the local council, or other drainage or water authority, provide full hydraulic details and detailed plans and specification of proposed works that have been prepared in consultation with, and comply with the relevant standards of, the local council or other drainage or water authority.

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15. Flood Risk

- Identify any flood risk on-site having regard to adopted flood studies, the potential effects of climate change, and any relevant provisions of the *NSW Flood Risk Management Manual.*
- Where the development could alter flood behaviour, affect flood risk to the existing community or expose its users to flood risk, provide a flood impact and risk assessment (FIRA) prepared in accordance with the Flood Impact and Risk Assessment – Flood Risk Management Guide LU01.
- Detail design solutions and operational procedures to mitigate flood risk where required.

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16. Contamination and Remediation

- In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.

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17. Waste Management

- Identify, quantify and classify the likely waste streams to be generated during construction and operation.
- Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
- Identify appropriate servicing arrangements for the site.
- If buildings are proposed to be demolished or altered, provide a hazardous materials survey.

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18. Aboriginal Cultural Heritage

- Provide an Aboriginal Cultural Heritage Assessment Report (ACHAR) prepared in accordance with relevant guidelines, identifying, describing and assessing any impacts to any Aboriginal cultural heritage sites or values associated with the site.

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19. Environmental Heritage

- Where there is potential for direct or indirect impacts on the heritage significance of environmental heritage, provide a Statement of Heritage Impact and Archaeological Assessment (if potential impacts to archaeological resources are identified), prepared in accordance with the relevant guidelines, which assesses any impacts and outlines measures to ensure they are minimised and mitigated.

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20. Social Impact

- Provide a Social Impact Assessment prepared in accordance with the *Social Impact Assessment Guidelines for State Significant Projects*.

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21. Infrastructure Requirements and Utilities

- In consultation with relevant service providers:

- assess the impacts of the development on existing utility infrastructure and service provider assets surrounding the site.
- identify any infrastructure required on-site and off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained.
- provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development.

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22. Bush Fire Risk

- If the development is on mapped bush fire prone land, or a bush fire threat is identified on or adjoining the site, provide a bush fire assessment that details proposed bush fire protection measures and demonstrates compliance with *Planning for Bush Fire Protection*.

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23. Aviation

- If the development proposes a helicopter landing site (HLS), assess its potential impacts on the flight paths of any nearby airport, airfield or HLS.
- If the site contains or is adjacent to a HLS, assess the impacts of the development on that HLS.

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24. Construction, Operation and Staging

- If staging is proposed, provide details of how construction and operation would be managed and any impacts mitigated.

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25. Contributions and Public Benefit

- Address the requirements of any relevant contribution plan(s), planning agreement or EPI requiring a monetary contribution, dedication of land and/or works-in-kind and include details of any proposal for further material public benefit.
- Where the development proposes alternative public benefits or a departure from an existing contributions framework, the local council, the Department and relevant State agencies are to be consulted prior to lodgement and details, including how comments have been addressed, are to be provided.

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26. Engagement

- Detail engagement undertaken and demonstrate how it was consistent with the *Undertaking Engagement Guidelines for State Significant Projects*. Detail how issues raised, and feedback provided have been considered and responded to in the project. In particular, applicants must consult with:
  - the relevant Department assessment team.
  - any relevant local councils.
  - any relevant agencies (including the Western Parkland City Authority for development within the Western Parkland City).
  - the community.
  - if the development would have required an approval or authorisation under another Act but for the application of s 4.41 of the EP&A Act or requires an approval or authorisation under another Act to be applied consistently by s 4.42 of the EP&A Act, the agency relevant to that approval or authorisation.

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2 Site Information

The proposed development site is in the Liverpool Local Government Area within the Town Centre North precinct of Edmondson Park South. Edmondson Park South is identified in the Western City District Plan as a Local Centre in recognition of its proximity to the Southwest Rail Line and the Edmondson Park Railway Station. It borders the motorway intersection of the M31, M5 and M7 with Camden Valley Way, providing excellent road access to a large extent of the Greater Sydney Metropolitan Area.

The proposed development site is a 2,043m^2 parcel of land currently known as Block 24 and part of Lot 303 in DP 1259974, Croatia Avenue, Edmondson Park (Figure 1). A Site Plan is provided at Figure 2.

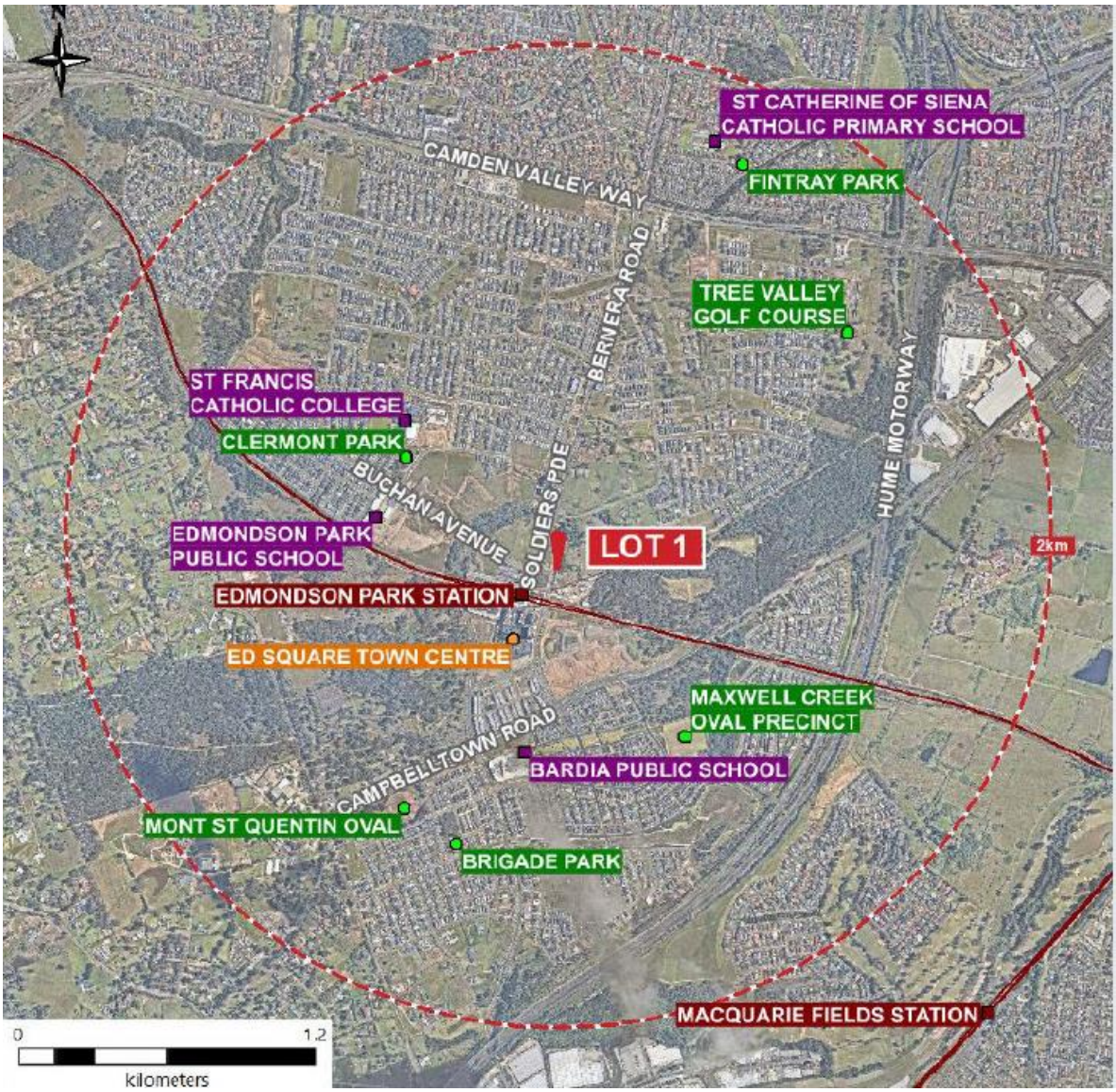


Figure 1: Site Location

Figure 2: Site Plan

1.5 Site Analysis

The topography and slope of the site is generally low to moderate and the interface to Soldiers Parade has a level difference of approximately 2m. This existing site topography has been considered in the proposed design with the proposed building being accessible from both lower ground and upper ground levels.

From a BCA assessment viewpoint, the site topography has resulted in a building with an effective height over 25m and a rise in storeys of 10 with the requirements of such a building considered in the design.

Figure 3: Site Image

Table 2 summarises the key features of the site which have the potential to impact or be impacted by the proposed development.

Table 2 – Key Features of the Site and Surrounds

Attribute	Site details
Land ownership	• The site is owned by Landcom.
Land configuration	• The site has an approximate area of 2,043m^2 in a single lot (Lot 303 DP 1259974). • The site is triangular in shape and has frontages of: • 41 metres to Croatia Avenue • 215 metres to Soldiers Parade
Topography and geology	• The topography and slope of the site is generally low to moderate. While the site itself is fairly flat, the interface to Soldiers Parade has a level difference of about 2m. • The site is characterised by Wianamatta Shale, claystone, laminates and fine to medium grained sandstone.
Existing features	• The site is currently vacant with the exception of a stand of trees on the eastern boundary.
Easements and covenants	• The site is unencumbered of easements and covenants.
Local context	• The site and its surrounds are generally made up of large super lots comprising remnant vegetation, cleared areas, grassed paddocks and scattered, which are undergoing progressive development.
Regional context	• The site is strategically positioned between the Western Sydney Aerotropolis and the regional centres of Liverpool and Campbelltown/Macarthur. • The site is approximately 10km from Liverpool CBD, 14km from Campbelltown CBD and 25km the future Western Sydney International Airport (WSI) and Aerotropolis, which is earmarked to become Sydney's third CBD (Figure 6). • The site is accordingly well placed to leverage off the growth and job opportunities from these strategic centres and the WSI and Aerotropolis. The Region Plan and District Plan show that these strategic centres will play a critical role in attracting investment, business activity and jobs across Greater Sydney. • The site and broader Edmondson Park Town Centre are anchored by the Edmondson Park Train Station and Southwest Railway Line. These public transport corridors will act as a gateway which will integrate the site with the broader Western Parkland City, the WSI and Aerotropolis.
Infrastructure	• Civil works for future Macdonald Road is underway and will be complete early 2025.
Site access	• Vehicular access to the site is proposed from future Macdonald Road.
Services	• Services will be provided through DA1098/2021 including sewer, potable water, recycles water, electrical and communications. The site will be independently serviced with appropriate metering to the apartments. • Service will enter the site from the North East.

Attribute	Site details
Contamination	• A Site Audit Statement issued for the site confirms it is suitable for the purposes of 'residential with gardens and accessible soil'. • No further potential sources of contamination have been identified to date.
Stormwater and flooding	• The Edmondson Park South site is located at the top of three catchments, and is traversed by Maxwells Creek, Bunbury Curran Creek and Cabramatta Creek. The upper catchment of the Maxwells Creek flows through the Town Centre North, with water flowing to the north-east. • The site is situated on the banks of Maxwell Creek - a tributary of Cabramatta Creek and Georges River. • Liverpool City Council's online flood mapping tool indicates the site is not flood prone.
Bushfire risk	• The site is mapped as Category 3 - Medium Risk bushfire prone land. • The adjoining land has been identified as a future Asset Protection Zone from nearby riparian land. Bushfire impact assessments prepared to support previous DAs have concluded that the site is considered a reduced bushfire threat due to the surrounding and future residential development.
Biodiversity	• Edmondson Park South has been Biodiversity Certified under the now repealed Threatened Species Conservation Act 1995. It is also covered by a Conservation Agreement under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). • Edmondson Park South site also includes a Regional Park to be managed for biodiversity conservation objectives.
Aboriginal heritage	• No Aboriginal heritage items, Aboriginal objects, or areas of archaeological potential are considered likely to be present within the site. • Previously identified sites within Edmondson Park South have already been removed as part of previous consents. This has been confirmed during subsequent site visits.
European heritage	• The site does not contain any mapped items of non-Aboriginal heritage (Figure 7). The nearest mapped non-Aboriginal heritage items to the site are: • Ingleburn Military Heritage Precinct, including the Bardia Barracks which contains three Riley-Newman prefabricated cottages (moveable items) around 750m south of the site and Mont St Quentin Oval including entry gates and former hospital gates around 910m south of the site • Hurlstone Agricultural High School around 2.5km east of the site • Macquarie Field House, homestead group ruins and rural landscape setting around 1.4km south-east of the site • Leppington House Park around 3km south-west of the site • Sydney Water Supply Upper Canal around 2.6km west of the site • Dwelling and Rural Lot around 1.9km north-west of the site • Horningsea Park Group, including site, main house and archaeological features around 2.2km north-west of the site • Remnants of former sandstone cottage "Bernera" around 3.3km north of the site • The above listed items are locally listed under the Liverpool Local Environmental Plan 2008 (LLEP 2008) and the Campbelltown Local Environmental Plan 2015 (CLEP 2015). The Ingleburn Military Heritage Precinct which includes the Bardia Barracks and Mont St Quentin Oval, including entry gates, are also listed on the NSW State Heritage Register.

3 Project Background

Within the Edmondson Park Concept Plan, the town centre comprises two precincts - Town Centre North and Town Centre South. Landcom owns the Town Centre North site situated within the northern portion of Edmondson Park South to the north of the Southwest Railway Line, which is being developed for local centre and residential purposes.

The Edmondson Park Concept Plan was most recently modified on 14 February 2025 by MP 10_0118 MOD 5. MOD 5 modified the Edmondson Park Concept Plan as it applies to Town Centre North including:

- reducing the size of land allocated to a school site from 8ha to 6ha;
- allowing residential use on the 2ha of land formerly identified as school land;
- introducing a maximum gross floor area limit of 140,389m2 for the Station Precinct;
- increasing the anticipated number of dwellings from 440 to 3,030;
- increasing maximum building heights to between 12m and 50m in nominated locations and up to 67m for one landmark building;
- amending the Town Centre North road layouts, bushfire asset protection zones and dwelling typology;
- introducing car, motorcycle and bicycle parking rates;
- introducing a Design Excellence Strategy, Design Guidelines and a Public Domain and Landscaping Plan;
- adjusting and increasing the Concept Plan site boundary; and
- amending conditions and Statement of Commitments.

As Block 24 is located within Town Centre North, the Edmondson park Concept Plan as approved under MOD 5 applies to the proposed development.

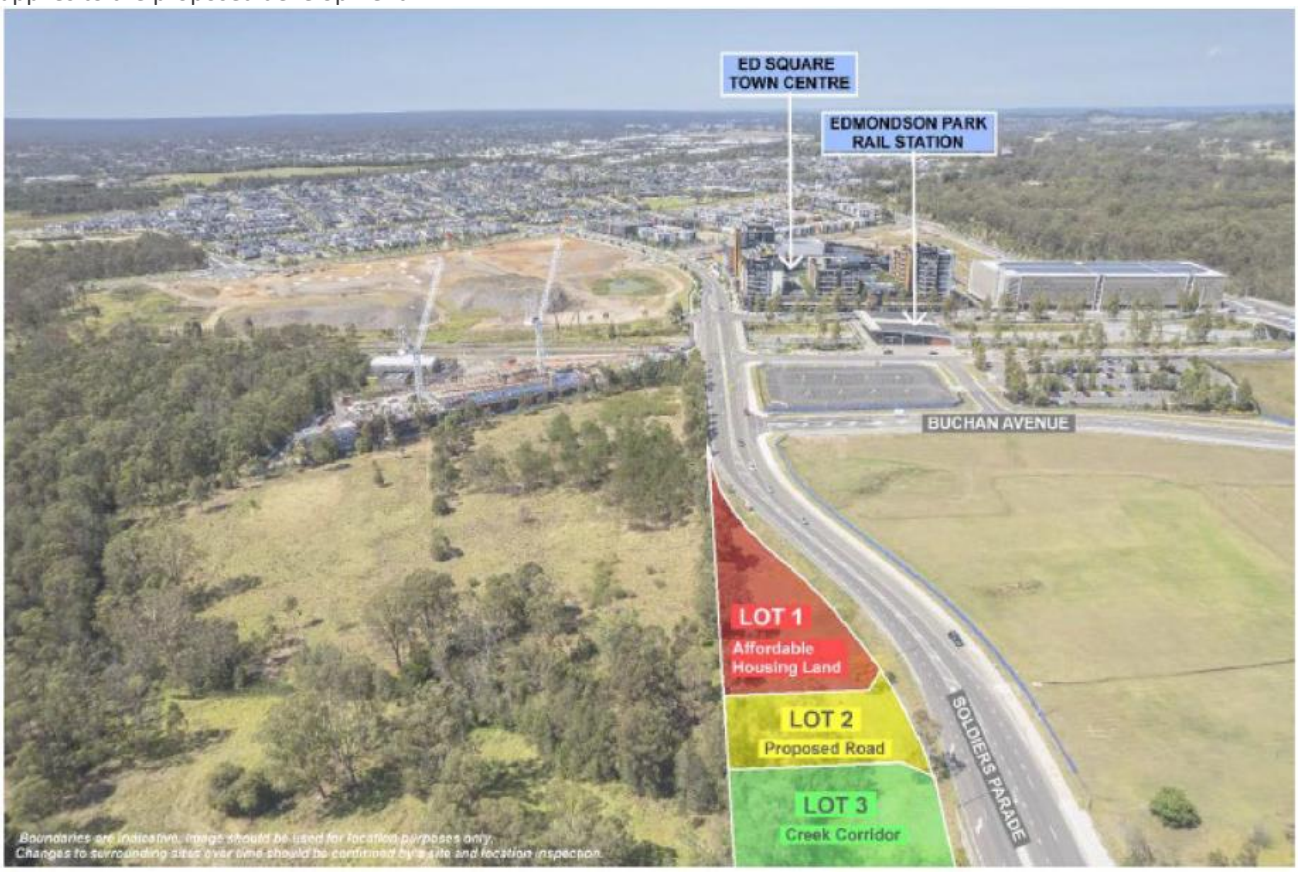


Figure 2: Layout plan showing Affordable Housing Land in context of the Landcom wider precinct

4 Methodology

4.1 BCA Advice

Axis Building Certification's advice relates to the National Construction Code Volume 1 (NCC). Where an Australian Standard is referenced, this is a reference to the year of the standard as Detailed in the NCC 2022.

This report:

a) identifies the overarching compliance strategy for the proposed project;
b) provides advice regarding compliance with specific technical provisions;
c) identifies performance opportunities where proposed design may be outside the Deemed to Satisfy parameters of the current National Construction Code requirements.

The NCC is a performance-based document, supporting flexibility and innovation in design solutions. The Performance Requirements are the mandatory level of compliance with the NCC. Compliance with the mandatory Performance Requirements may be achieved through the use of Performance Solutions, Deemed to Satisfy (DtS) Solutions, or a combination of the two approaches. For complex and unique buildings, a compliance assessment under the NCC will be conducted partially against the Performance Requirements of the code as the prescriptive DtS provisions do not adequately cover all features and circumstances arising in these buildings.

For the purposes of the National Construction Code - Volume 1, the building works have been assessed as noted in table 1:

Table 1 | BCA Assessment Criteria

Building Description	Residential
Classification	Class 2 Class 7a car parking
Rise-in-Storeys	Rise of 10 storeys
Type of Construction	**Type A** construction throughout. (floor area max. 8000m^2 – Volume 48 000m^3)
Effective Height	28.65m.
Fire Compartment Area and Volume	Lower Ground level - 1,270m^2 area and 3,620m^3 volume

Required Key Fire Services	• Fire Hydrants - Hydrant coverage plans, and flow pressure test is required
	• Fire Hose Reel system to class 7a carparking levels
	• Fire extinguishers;
	• Emergency an emergency warning and intercom system in accordance with AS1670.4.
	• Emergency lighting and exit signage.
	• Shutdown of any air handling system serving multiple fire compartments
	• Stair pressurisation is required to the fire isolated stairs,
	• Emergency Lift facility to lift - i.e. 2m car depth, with fire service controls and a lift car service drive control etc.
	• A sprinkler system is required due to:
	  ○ Building has effective height greater than 25m,
	  ○ Class 2 building has a rise in storeys of 4 or more &
	• Smoke alarm and detection system complying with Specification E2.2a,
	• Fire Control centre facility is required where the building has an effective height greater than 25m.

Other Key Building Descriptions	Structure – Importance Level IL2 (subject to confirmation, number of beds available will result in less than 300 people congregating on one area)

4.2 Accessibility Advice

This report also includes separate advice relating to accessibility for persons with a disability where Axis Building Certification aims to provide achievable recommendations related to the provision of access to premises based on current legislation and best practice options, enabling independent, equitable and functional access for all.

Accessibility is paramount in providing an inclusive environment for all users. Axis Building Consultancy looks beyond basic compliance issues to ensure that all users are offered the opportunity to participate in society. We incorporate the principles of Universal Design into all of our work, taking a holistic approach in the provision of access for people with disabilities.

This report documents a review of the architectural plans prepared by DKO documents received on 19th February 2025, with consideration to aspects of accessibility to and throughout the proposed development located at Croatia Avenue / Soldiers Parade Edmonson Park NSW, with reference to the BCA, Premises Standards, and relevant Australian Standards as they relate to access.

4.3 LEGISLATION

The BCA 2022 Volume 1 is applicable for assessment by the Building Certifier for this building. Volume 1 contains requirements for Class 2 to 9 (multi-residential, commercial, industrial and public) buildings and structures.

The classification for the proposed structures pursuant to the BCA is Class 2 & 7a, as detailed in the Development Application.

Level	Proposed Use	Building Classification
Ground level Carpark	New car park serving buildings	7a
Upper Ground Level	Residential accommodation	2
Levels 1 - 3	Residential accommodation	2
Level 4	Residential accommodation	2
Levels 5 - 7	Residential accommodation	2
Level 8	Residential accommodation	2

Part D4 of the BCA and Premises Standards prescribes the minimum requirement for access to a building. Access for people with disabilities is required through the principal pedestrian entrance and throughout the building in accordance with D4D2(4). The following table outlines the general building access requirements for this project:

Class of building	Access requirements
Class 2	
Residential accommodation	• From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level. • To and within not less than 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— • to the entrance doorway of each sole-occupancy unit; and • to and within rooms or spaces for use in common by the residents.
Class 7a	
Car parking building	To and within any level containing accessible car parking

4.3.1 BCA 2022 D4D5 Exemptions

Where full access is unachievable due to the functions of the space, there may be an opportunity to assess the area under the permitted exemptions of the D4D5 which states:

The following areas are not required to be accessible:

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

In determining application of D4D5 exemption the following main categories of disability should be considered:

- Wheelchair users
- Ambulant
- Vision impaired
- Hearing impaired

An area where it may be determined design for category is not suitable, design for another category may be required, e.g. design may not be suitable for wheelchair users however design for ambulant or vision impaired persons may be required.

The status of the endorsement of the Exemptions is discussed in table item 3.4 in Section 3 below.

4.3.2 BCA 2022 Part G7 Livable Housing Design

Part G7 does not apply in NSW as livable housing design requirements do not apply to sole-occupancy units in a Class 2 building in NSW.

This DDA review has assumed the requirements of AS4299 are applicable to selected units at each level, as shown on latest Architectural plans issued for review.

4.3.3 Disability Discrimination Act 1992 (Cth) (DDA)

The accessibility assessment process covers all aspects of the infrastructure (premises), to the extent required to meet the objectives of the Disability Discrimination Act 1992 (Cth), including, however not limited to, Section 23 which relates to access to premises and facilities which the public may enter or use.

The Act is enforced primarily through a complaints mechanism, which allows individuals who have directly or indirectly experienced unlawful discrimination to seek a conciliated outcome through the Australian Human Rights Commission and, in the instance of unsuccessful conciliation, to bring an action in the Federal Magistrates Court or the Federal Court of Australia.

The DDA requires reasonable adjustments to accommodate the needs of people with disabilities. This allows for adequate Action Plan of access and enables implementation of future modifications to ensure that a person with a disability does not experience discrimination. Adjustments may include:

a) Modifications to premises and/or equipment;
b) Changes to job design and work practices;
c) Providing additional training or other assistance as appropriate.

Consequently, AXIS Building Consultancy has carried out an assessment against compliance parameters and Client requirements and subsequently provided a performance solution which will form part of the building Action Plan which will ensure access for all is not compromised.

Any performance solution proposed in this report is subject to approval from the relevant Building Certifier and is to be based on the comparison with deemed to satisfy provisions based on clause A2G2(2d) of the BCA.

Determinations are made at the request of the Client and will not absolve the Client or owner of the requirements pursuant of the Disability Discrimination Act 1992 (*Cth*).

5 Report limitations

5.1 Scope of Report

This report has been prepared where all reasonable attempts have been made to highlight all non-compliance matters pursuant to the National Construction Code 2022 (NCC) and Disability (Access to Premises – Buildings) Standards 2010 (Premises Standards). Any additional issues which may be deemed an impediment to access provision and may increase Client risk of attracting a complaint under the Disability Discrimination Act 1992 (*Cth*) (DDA) are outside the scope of this report.

5.2 Report for Addressee Only

The report shall be for the benefit of the addressee only. The writer accepts no liability to any other party who may seek to rely upon the whole, or any part, of this report.

The information provided within this report is relevant to this project and the documentation referenced. As such the information provided may not be transferred to other projects. This report must not be issued for public comment or be used for any other purpose without prior permission from Axis Building Certification.

Axis Building Certification accepts no responsibility for any loss suffered because of any reliance upon such assessment or report, other than providing guidance to alleviate access barriers in the built environment and reduce Client risk of attracting a complaint under the DDA.

5.3 Stakeholders

The following stakeholders have been identified as having a role with respect to the accessibility review and any proposed performance-based design and the performance solutions identified at this stage of the design process.

Organisation	Role	Representative
Landcom	Client	Janelle Goulding - Director Mark Robins - Director Sherron Agrawaal - Assistant Manager
DKO Architecture	Architect	Nicola Traise David Randerson Sonny Oh Daniel Kim Xiaoran Ding
Xavier Knight Consulting Engineers	Structural Engineer	Nathaniel Ko - Project Director Mehair Yacoubianr - Struc Project Lead Feris Chehade - Founder/Tech Advisor Jefry Halim - Structural Engineer Mehdi Toumari - BIM Leader/Assoc Morez Modares - Struc Drafter Ali Akel - Snr Civil Engineer Evan Legg - Civil Engineer Melvin Baeha - Stuctural Site Eng Duncan Marshall - Principal Civil Engineer
Meinhardt Australia	Mechanical Engineer Hydraulic Engineer & Fire Services Electrical Engineer Façade Engineer ESD & BASIX	James Kral Assad Shuhauber Khatereh Beihaghi Carmelo Bonfiglio Ben Shojaei
Inview Design	Landscape Designer	Isabel Lester Melissa McGeorge
Axis Building Certification	BCA & Access	Stephen Grimmond Feargal Ó Catháin

Table 2 | Drawings used for assessment

Drawing Number	Revision	Prepared By	Date
DA103	B	DKO Architecture	26/03/2025
DA200	B	DKO Architecture	26/03/2025
DA201	B	DKO Architecture	26/03/2025
DA202	B	DKO Architecture	26/03/2025
DA203	A	DKO Architecture	19/02/2025
DA204	A	DKO Architecture	19/02/2025
DA205	A	DKO Architecture	19/02/2025
DA206	A	DKO Architecture	19/02/2025
DA207	A	DKO Architecture	19/02/2025
DA208	A	DKO Architecture	19/02/2025
DA300	B	DKO Architecture	26/03/2025
DA303	B	DKO Architecture	19/02/2025
DA306	B	DKO Architecture	26/03/2025
DA307	B	DKO Architecture	26/03/2025
DA308	B	DKO Architecture	26/03/2025

6 BCA Assessment

The table below provides a detailed assessment of the proposed development against the NCC. Each row provides a description of the Deemed-to-Satisfy Provisions relevant to the proposed work and comments provided on its application to the building.

The Status column detailed items required to ensure compliance with the NCC and to enable the Development Application to proceed and the subsequent issue of the Construction Certificate. For example the statement "*Capable of compliance subject to further review prior to issue of Construction Certificate*" would indicate the necessary documentation is in place to enable the Development Application to Proceed and further construction detailing will be provided for the benefit of the relevant Building Certifier prior to issue of Construction Certificate and commencement of works on site.

Section A – General Provisions

SECTION A GENERAL PROVISIONS			
Clause	Clause Title	Requirements | Assessment Comments	Status
A6	Building Classification	Type A construction applies The lower ground level Lobby area is less than 10% of the total lower ground floor area and may be classified as 7a in lieu of class 2 in accordance with Exemption (1) to A6G1.	Note

Section B - Structure

SECTION B STRUCTURE			
Clause	Clause Title	Requirements | Assessment Comments	Status
B1D2	Resistance to actions	The building or structure must be structurally sound and be capable of withstanding most critical action effects and combinations of actions as determined by B1D2, B1D3 and B1D4 Structural Engineer to consider in design and certification. Note: AS1170.4 – Designing and building to accommodate earthquake loads is to be stated on all design documentation for structural and non-structural components.	Structural Design Declaration Statement Required prior to issue of Construction Certificate
B1D3	Determination of individual actions	Structural Engineer to consider in design and certification. A building must be assigned an Importance Level in accordance with Table B1D3a. The Importance Level is used to determine the annual probability of exceedance for design events for wind, snow and earthquake loading. Building importance level is: 2	Structural Design Declaration Statement Required prior to issue of Construction Certificate
B1D4	Determination of structural resistance of materials and forms of construction	Structural Engineer to consider in design and certification. **Termites**: Primary building elements that are susceptible to termite attack must have a Termite Risk Management system provided in accordance with AS3660.1. A durable notice must be fixed in a prominent location, indicating the type of system, maintenance, life expectancy and installation date. **Glazing**: Glazing must be designed to meet the requirements of AS1288 and AS2047.	Structural Design Declaration Statement Required prior to issue of Construction Certificate

SECTION B STRUCTURE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		AS1288 includes requirements for Grade A safety glazing in areas subject to human impact, and for manifestation (safety markings) where glazing may be mistaken for a door or opening. Where manifestation is required in an area accessible for persons with a disability, the markings must also comply with AS1428.1. **Barriers**: all balustrades must be designed to meet the loading requirements of the AS/NZS1170 suite of standards, including impact loading requirements. AS/NZS1170.1 provides for differing loading criteria for barriers, determined by the use and classification of the adjacent area.	

Section C – Fire Resistance

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
	PART C2	FIRE RESISTANCE AND STABILITY	
C2D2	Types of Construction Required	Type A construction applies	Note
C2D3	Rise in Storeys	The rise in storeys is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space above the finished ground adjacent to that part. The uppermost storey is not counted if it contains only heating, ventilating or lift equipment, water tanks and similar plant. A basement storey is not counted if the underside of the ceiling is not more than 1m above finished ground level, or the average of the 12m part where the external ground level is lowest.	Note

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		One or more mezzanines are regarded as a storey if the floor area is greater than 200m² or 1/3 of the floor area of the room (whichever is smaller). **Comments:** A rise in storeys of 10 applies.	
C2D9	Lightweight construction	Lightweight construction must comply with Specification C2D9 in: a) A wall system that requires an FRL; b) A shaft or the wall of a public corridor in certain assembly buildings. **Comments:** All bounding walls are assumed to be of masonry construction with no apparent lightweight fire rated construction evident on the latest design, with passive fire plans to be prepared prior to issue of construction certificate.	Capable of compliance
C2D10	Non-Combustible Building Elements	Type A & B buildings must have non-combustible building elements as listed under C2D10. External walls and common walls must have non-combustible building elements. Materials must be deemed non-combustible by testing against AS1530.1. External wall elements include façade covering (cladding), framing, insulation, sarking, spandrels, ancillary elements and attachments. **Comments:** Fire test reports to be provided for all external wall elements such as cladding, insulation, sarking etc. tested and deemed non-combustible to AS1530.1 or demonstrating compliance with C2D10(5) or (6) will be required prior to issue of Construction Certificate.	Capable of compliance Fire Test reports required prior to issue of Construction Certificate

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
C2D11	Fire Hazard Properties	Fire hazard properties of any material or assembly within the building must comply with Spec 7 as required by this clause. Test certificates indicating compliance are not available at this stage of design. It is recommended that test reports for the following products be obtained to enable compliance checking prior to purchase: • Internal wall linings & attachments • Internal floor linings or coverings (carpet, vinyl and rubber floor and floor finishes) • Acoustic / fabric finishes • Feature paneling • Sarking • Insulation • Duct work • Lift cars • Other attachments **Comments:** It is currently assumed that materials test reports will be provided as necessary prior to issue of certificate of construction to ensure compliance with BCA 2022 specification 7 -Fire Hazard Properties- is achieved.	Capable of compliance Materials Test reports required prior to issue of Construction Certificate
C2D14	Ancillary elements	An ancillary element must not be fixed, installed or attached to internal parts or external face of an external wall this is required to be non-combustible unless it is one of the following: • An ancillary element that is non-combustible. • A gutter, downpipe or other plumbing fixture or fitting. • A flashing. • A grate or grille not more than $2m^2$ in area associated with a building service.	Capable of compliance Fire Test reports required prior to issue of Construction Certificate

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		• An electrical switch, socket-outlet, cover plate or the like. • A light fitting. • A required sign. • A sign other than one under (a) or (g) that achieves group number 1 or 2; does not extend beyond 1 storey; does not extend beyond 1 fire compartment; and is separated vertically from other signs under (h) by 2 storeys. • An awning, sunshade, canopy, blind or shading hood other than one under (a) meeting requirements of Table 4 of Spec C2D11 as for an internal element; and serves a storey at ground level; or immediately above; and does not serve an exit, where it would render unusable in a fire. • A part of a security, intercom or announcement system. • Wiring. • A paint, lacquer or a similar finish. • A gasket, caulking, sealant or adhesive directly associated with (a) to (k). **Comments:** It is assumed fire test reports on all external ancillary elements confirming materials are tested to AS1530.1 and deemed non-combustible will be provided for review prior to issue of construction certificate. This will include (but not limited to) the following elements: • Privacy Screens • Sliding Shutters • Sun louvres • External facade signage.	
	PART C3	COMPARTMENTATION AND SEPARATION	
C3D3	General floor area and volume limitations	The maximum size of a fire compartment for each type of construction is as follows:	Complies

SECTION C FIRE RESISTANCE

Clause	Clause Title	Requirements | Assessment Comments	Status
		<table><tr><th>Classification</th><th>Type A construction</th><th>Type B construction</th><th>Type C construction</th></tr><tr><td rowspan="2">5, 9b or 9c</td><td>Max *floor area*—8000 m^2</td><td>Max *floor area*—5500 m^2</td><td>Max *floor area*—3000 m^2</td></tr><tr><td>Max *volume*—48000 m^3</td><td>Max *volume*—33000 m^3</td><td>max *volume*—18000 m^3</td></tr><tr><td rowspan="2">6, 7, 8 or 9a (except for *patient care areas*)</td><td>Max *floor area*—5000 m^2</td><td>Max *floor area*—3500 m^2</td><td>Max *floor area*—2000 m^2</td></tr><tr><td>Max *volume*—30000 m^3</td><td>Max *volume*—21000 m^3</td><td>Max *volume*—12000 m^3</td></tr></table> **Comments:** 7a Carpark compartment size is within the parameters for type A construction. No compartment limitations for class 2 units.	
C3D7	Vertical Separation of openings in external walls	For buildings of Type A construction, vertical separation of openings in external walls is required by: a) Non-combustible spandrels with FRL 60/60/60 at least 900mm high with at least 600mm above the slab, or b) A non-combustible horizontal projection of at least 1100mm with FRL 60/60/60. Applies to buildings of Type A Construction not fitted with a sprinkler system (AS2118.1 & AS2118.4 only) – note concessions **Comments:** Where an AS2118.1 sprinkler system is required, then vertical separation between openings does not apply.	Complies
C34D9	Separation of classification in same Storeys	If a building has parts of different classifications located alongside one another in the same storey— (a) each building element in that storey must have the higher FRL prescribed in Specification 5 for that element for the classifications concerned; or (b) the parts must be separated in that storey by a fire wall. **Comments:**	Complies

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		The lower ground level Lobby area is less than 10% of the total lower ground floor area and may be classified as 7a in lieu of class 2. Therefore an FRL 120/120/120 is applicable throughout without the need for formal fire wall separation between the car park area and the lobby area. It is assumed the Structural engineer will confirm FRLS same prior to issue of Construction Certificate.	
C3D10	Separation of classification in Different Storeys	Type A construction: the floor between adjoining parts must meet C2D2 relevant to the classification of the lower storey. **Comments:** Floor separating carpark from residential apartments requires an FRL 120/120/120. Structural engineer to confirm same prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate
C3D11	Separation of Lift Shafts	A lift shaft that connects more than 2 storeys, or more than 3 (if sprinklered) must be separated from the remainder of the building by an enclosure in a shaft in accordance with C3D11. **Comments:** Lift shaft requires the following FRL's: • -/120/120 carpark • -/90/90 apartment floors Structural engineer to confirm prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate
C3D12	Stairways and Lifts in one shaft	A stairway and lift must not be in the same shaft if the stair or lift is required to be in a fire resisting shaft. **Comments:** Stair and lift are currently not detailed within the same shaft achieving compliance.	Complies
C3D13	Separation of Equipment	The following equipment when provided must be separated from the remainder of the building with FRL not less than 120/120/120 and self-closing -120/30 fire doors: (i) Lift motors and lift control panels; or	Capable of compliance subject to further review

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		(ii) Emergency generators used to sustain emergency equipment operating in the emergency mode: or (iii) Central smoke control plant: or (iv) Boilers; or (v) A battery system installed in the building that has a voltage of 12 volts or more and storage capacity of 200 kWh or more. **Comments:** The above equipment is proposed and prior to to the issue of Construction Certificate the FRL construction will be detailed accordingly.	prior to issue of Construction Certificate
C3D14	Electricity Supply System	The Electrical substations and switchboards sustaining emergency equipment are to be separated from the building by 120/120/120 FRL construction with -/120/30 fire door. **Comments:** The electrical substation is located externally with the Main Switch Room located at lower ground level and prior to issue of the Construction Certificate architectural passive fire plans will detail the FRL construction accordingly.	Capable of compliance subject to further review prior to issue of Construction Certificate
	PART C4	PROTECTION OF OPENINGS	
C4D3	Protection of Openings in external walls	Openings in an external wall required to have an FRL must be protected if the distance between the opening and the fire source feature it is exposed to is less than: • 3m from a side or rear boundary; or • 6m from the far boundary of a road, river, lake or the like; or • 6m from another building on the allotment that is not Class 10. **Comments:**	Performance solution required

<table>
<tr><th colspan="4">SECTION C FIRE RESISTANCE</th></tr>
<tr><th>Clause</th><th>Clause Title</th><th>Requirements | Assessment Comments</th><th>Status</th></tr>
<tr><td></td><td></td><td>Openings within the lower ground floor level appear to be located less than 3m from boundary and are subject to protection in accordance with C4D4 or alternately be addressed with a fire engineered performance solution.
Please refer to mark-ups.</td><td></td></tr>
<tr><td>C4D4</td><td>Separation of external walls and associated openings in different fire compartments</td><td>The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must not be less than that set out in table C4D4, unless-
(a) Those parts of each wall have an FRL not less than 60/60/60 and
(b) Any openings protected in accordance with C4D5.

Table C4D4: Distance between external walls and associated openings in different fire compartments<table><tr><th>Angle between walls</th><th>Minimum distance (m)</th></tr><tr><td>0° (walls opposite)</td><td>6</td></tr><tr><td>more than 0° to 45°</td><td>5</td></tr><tr><td>more than 45° to 90°</td><td>4</td></tr><tr><td>more than 90° to 135°</td><td>3</td></tr><tr><td>more than 135° to less than 180°</td><td>2</td></tr><tr><td>180° or more</td><td>Nil</td></tr></table>Comments:
Class 2 units are not considered separate fire compartments under C4D4, therefore this does not apply.</td><td>Not applicable</td></tr>
<tr><td>C4D5</td><td>Acceptable methods of protection</td><td>Openings required to be protected – as outlined above in C4D3- must be fitted with either of the following:
Fire rated glazing, or
Fire rated shutters, or
Self-closing fire doors, or
Wall wetting sprinklers</td><td>Performance solution required</td></tr>
</table>

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Note: The above options must comply with Specification C4D5 and if a tested system is used test reports must be provided. **Comments:** Class 2 units are not considered separate fire compartments under C4D4, therefore this does not apply to the SOUS. The lack of protection to openings along the eastern elevation at lower ground level will be required to achieve compliance with this clause or a fire engineered performance solution will be prepared to justify same.	
C4D9	Openings in fire-isolated exits	Doorways opening to fire isolated exits must be -/60/30 self-closing or automatic closing fire doors. Where automatic closing doors are used, activation must be by AS1670.1 detectors located within 1.5m on the approach side and any other fire alarm / sprinkler system installed in the building. Windows must be protected as per C4D5 if exposed to and within 6m of another external wall of the building. **Comments:** Door schedules to be provided prior to issue of Construction Certificate	Capable of compliance subject to further review prior to issue of Construction Certificate
C4D10	Service penetrations in fire-isolated exits	Services are not permitted to penetrate fire isolated exits except for: • Water supply and test drainpipes for fire services; • Stair pressurisation ducting protected to -/120/60 through the remainder of the building; and • Wiring permitted by D3D8(6).	Capable of compliance subject to further review prior to issue of Construction Certificate

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Comments: The current architectural plans indicate compliance can be achieved and a further review of service design plans will be required prior to issue of Construction Certificate.	
C4D11	Openings in fire-isolated lift shafts	Lift entrance doors to have -/60/- fire doors complying with AS1735.11 and remain closed except when discharging or receiving passengers Lift indicator panels must be backed by construction having and FRL of not less than -/60/60 if it exceeds 35,000mm^2 in area **Comments:** Lift design to be provided including specification for lift doors etc. subject to further review required prior to issue of Construction Certificate	Capable of compliance subject to further review prior to issue of Construction Certificate
C4D12	Bounding Construction – Class 2, 3 & 4 Buildings	Sole occupancy unit doors and doors from other rooms opening into public corridors and landings of a non-fire-isolated stairway are required to have: (i) Type A construction – self-closing -/60/30 fire doors Where travel in different directions to alternative exits is not provided: a) External walls must be concrete, masonry or have a fire protective covering internally b) External doors must be protected, and c) Windows or other openings must be 1.5m above the outside floor level, or protected to C4D5. **Comments:** Door schedules to be provided prior to issue of Construction Certificate	Capable of compliance subject to further review prior to issue of Construction Certificate

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
C4D13	Openings in Floors & Ceilings for Services	Penetrations through floor/ceilings to be a tested product achieving the required FRL of floor/ceiling system. Service penetrations must be adequately protected either by a shaft or in accordance with C4D15. **Comments:** The intended methods of compliance for penetrations of fire rated elements will be detailed with penetration registers to be provided within architectural plans highlighting penetrations and suitable tested systems, all prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate
C4D14	Openings in shafts – Type A Construction	Openings to a ventilating, garbage or service shaft must be protected by a door or hopper that: • In a sanitary compartment – is non-combustible or has an FRL of -/30/30 • Is self-closing with an FRL of -/60/30 • Is an access panel having FRL -/60/30 • In a garbage shaft – is non-combustible. **Note:** Where a garbage chute discharges to a bin room on the lowest level, that room must be separated from the remainder of the storey with FRL applicable to classification. **Comments:** It is assumed that door schedules will include bin enclosure doors within carpark and bin chute hopper/ doors with appropriate FRL construction detailed. *Refer to* **Specification 5 cl S5C8:** Fire Engineering performance solution to justify bottom of shaft opening into waste room	Capable of compliance subject to further review prior to issue of Construction Certificate
C4D15	Openings for service installations	Penetrations through fire rated elements for services must be appropriately fire sealed to maintain the integrity and insulation requirements of the fire rated element.	Capable of compliance subject to further review

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		The method of protection is to be a tested system and may be include, as appropriate: a) Tested systems to AS1530.4 and AS4072.1 b) For metal pipes, not within an exit and with protection against combustibles within 2m – tested systems with the insulation criterion waived c) For ventilation systems – to AS 1668.1 d) Compliance with Specification 13 – in limited circumstances **Comments:** Please confirm intended methods of compliance for penetrations of fire rated elements. Penetration registers to be provided within architectural plans highlighting penetrations and suitable tested systems.	prior to issue of Construction Certificate
C4D16	Construction joints	Control joints in between building elements required to be fire resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL. **Comments:** This will be detailed on plans as design progresses to construction stage and confirmed prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate
SPECIFICATION 5 - FIRE RESISTING CONSTRUCTION			
S5C2	Exposure to fire-source features	A fire source feature includes the far boundary of a road, river or lake; a side or rear property boundary; or the external wall of another building within the allotment that is not Class 10. The proximity of fire source features is used in determining the required fire resistance of building elements.	Performance solution required

SECTION C FIRE RESISTANCE			
Clause	Clause Title	Requirements | Assessment Comments	Status
		• Eastern Allotment boundary is located less than 3m from proposed building with openings evident to lower ground floor level to be protected in accordance with clause C4D3, alternatively ; justified via a fire engineered performance solution report.	
S5C3	Fire protection for a support of another part	Where part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must have an equivalent FRL to the part it supports.	Note
S5C4	Lintels	Lintels generally require the FRL of the building part.	Note
S5C5	Methods of attachments not to reduce the fire-resistance of building elements	The method of attaching or installing a finish, lining, *ancillary element* or service installation to a building element must not reduce the fire-resistance of that element to below that *required*.	Note
S5C8	Enclosure of shafts	*Shafts required* to have an FRL must be enclosed at the top and bottom by construction having an FRL not less than that *required* for the walls of a non-*loadbearing shaft* in the same building, except that these provisions need not apply to— (a) the top of a *shaft* extending beyond the roof covering, other than one enclosing a *fire-isolated stairway* or *ramp*; or (b) the bottom of a *shaft* if it is *non-combustible* and laid directly on the ground. **Comments:** It is understood a Fire Engineering performance solution will be provided to justify bottom of shaft opening into waste room	Performance solution required

Type A Construction			
Clause	**Clause Title**	**Requirements | Assessment Comments**	**Status**
S5C11	TYPE A Fire resistance of building elements	**Type A construction applies.** Refer to this clause and Tables S5C11 for specific requirements. **Type A – Specific Requirements** a) All elements must achieve the FRL specified in Table S5C11. b) Internal walls requiring an FRL must extend to the underside of the floor above, to the roof, or to the underside of a ceiling with resistance to the incipient spread of fire of not less than 60 minutes. c) Loadbearing internal walls (including shafts) and fire walls must be constructed from masonry or concrete. **Comments:** Refer table SFC11 for the prescribed highlighted FRL's for building elements. Architectural plans and Structural engineering design will consider FRLS as part of the respective architectural and structural design and certification prior to issue of construction certification.	Capable of compliance subject to further review FRL requirements will be formally detailed as part of architectural and structural design and certification prior to construction certificate.
S5C15	Roof: Concession	Roofs do not require an FRL if they are non-combustible and: a) Installed above a concrete slab roof with an FRL b) In a building protected throughout with sprinklers c) The building has a rise in storeys of 3 or less d) In a Class 2 or 3 building e) In a building with effective height not more than 25m and a ceiling with RISF60 installed below the roof. **Comments:** Roof is understood will be detailed as non-combustible, therefore no FRL's to roof applies.	Capable of compliance

Type A FRL Table **Building Elements**	**Class of Building – FRL (in minutes)** **Structural adequacy | Integrity | Insulation**			
	Class 2, 3 or 4 part	**Class 5, 7a or 9**	**Class 6**	**Class 7b or 8**
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it s exposed is -				
For loadbearing parts -				
Less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3m	90/60/60	120/90/90	180/180/120	240/240/180
3m or more	90/60/30	120/60/30	180/120/90	240/180/90
For non-loadbearing parts -				
Less than 1.5m	-/90/90	-/120/120	-/180/180	–/240/240
1.5 to less than 3m	-/60/60	-/90/90	-/180/120	-/240/180
3m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an external wall -				
For loadbearing columns -	90/-/-	120/-/-	180/-/-	240/-/-
For non-loadbearing columns -	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS and FIRE WALLS -	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS -				
Fire-resisting lift and stair shafts -				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/120/120	-/120/120	-/120/120
Bounding public corridors, public lobbies, and the like				
Loadbearing	90/90/90	120/-/-	180/-/-	240/-/-
Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units -				
Loadbearing	90/90/90	120/-/-	180/-/-	240/-/-

Non-loadbearing	-/60/60	-/-/-	-/-/-	-/-/-
Ventilating, pipe, garbage, and the like shafts not used for the discharge of hot products				
Loadbearing	90/90/90	120/90/90	180/120/120	240/120/120
Non-loadbearing	-/90/90	-/90/90	-/120/120	-/120/120
OTHER LOADBEARING ITERNAL WALLS, INTERNAL BEAMS, TRUSSES				
AND COLUMNS	90/-/-	120/-/-	180/-/-	240/-/-
FLOORS	90/90/90	120/120/120	180/180/180	240/240/240
ROOFS	90/60/30	120/60/30	180/60/30	240/90/60

Section D – Access and Egress

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
	PART D1	PROVISIONS FOR ESCAPE	
D2D2	Application of part	This part does not apply to the internal parts of a sole occupancy unit in Class 2, 3 and 4 buildings	Note
D2D3	Number of Exits Required	Generally - At least one exit is to be available from each storey of the building. **Comments:** Each storey is required to be provided with not less than 2 exits as the building has an effective height of more than 25m. This is currently provided via a scissor stair arrangement.	Capable of compliance
D2D4	When Fire-Isolated Stairs and Ramps are required	Class 2 buildings: Fire isolated exits are required where a stairway connects more than 3 consecutive storeys. An additional storey may be connected if: a) the storey is only for parking and similar uses; or b) the building is sprinklered (other than a FPAA101D system) complying with Spec 17 ; or c) the exit does not provide access/egress for the extra storey and is separated by fire rated construction. **Comments:** Stairs are currently documented as fire isolated as required.	Capable of compliance
D2D5	Exit Travel Distances	Exit distances must meet the following requirements: Class 2 & 3 buildings: 6m to a single exit or a point of choice, or 20m to a single exit at the level of road or open space.	Performance solution required

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Class 5 to 9 buildings: 20m to a single exit or a point of choice to 2 exits, with total travel to one of those exits being no more than 40m. Note – This clause must be read in conjunction with D2D6 below. **Comments:** Travel distance from eastern side of carpark exceeds 20m to a point of choice to 2 exits or 20m to a single exit. It is understood that the including of an additional fire door serving the lower ground fire isolated passageway (*associated with the fire isolated stairs*), will improve the travel distance and compliance can be achieved at this location. Please refer to mark-ups attached. The travel distance from all plant rooms (Fire Pump Room etc.) and the like within the lower ground Flor to be reviewed and travel distance of 20m to single exit or pint of choice to alternative exits to be confirmed prior to issue of Construction Certificate. Travel distances from residential levels do not achieve compliance with an exit exceeding 6m of SOU's. BCA 2022 Specification 18 sets out requirements for the design and installation of fire sprinkler systems, and concessions for Class 2 buildings not more than 25 m in effective height with a rise in storeys of 4 or more. The permitted concessions are **not available** as the proposed building has an effective height of 28.65m. These extended travel distances may be addressed as part of a fire engineered performance solution.	
D2D6	Distance Between Alternative Exits	Distances between required alternative exits must be: Class 2 & 3 buildings: not less than 9m and not more than 45m apart.	Complies

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Generally: not less than 9m and not more than 60m apart. Alternative exit paths must not converge to less than 6m apart. Note – Distances are measured through the point where alternate travel is available as per D2D20. This clause must be read in conjunction with D2D5 above. **Comments:** • The latest architectural plans indicate distance between alternative exits in the lower ground car park complies. • Similarly the Class 2 Sous scissor stairs alternative exits are located more than 9m apart and achieve compliance.	
D2D7	Height of exists, paths of travel to exits and doorways	In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm.	Capable of compliance subject to further review prior to issue of Construction Certificate
D2D8	Width of exits and paths of travel to exits	1.0m clear path of travel required Dimensions of exits must meet the minimum requirements of this clause based on the number of occupants for the building or part. • Up to 100 persons – 1m clear egress width required. • 100 to 200 persons – 1m plus 250mm for each 25 persons over 100. • Over 200 persons – 2m plus 500mm for each 60 persons.	Capable of compliance

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
D2D9	Width of doorways in exits or paths of travel to exits	Required egress widths can be reduced by 250mm at doorways. The unobstructed height must not be less than 2m, except at doorways where 1980mm is acceptable to allow standard door installation –	Capable of compliance
D2D10	Exit width not to diminish in direction of travel	The unobstructed width or a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8 (1) (b) or D2D9(a)(i).	Capable of compliance
D2D12	Travel via Fire-isolated Exits	Doorways to fire isolated exits are permitted to open only from: a) Public corridors, public lobbies or the like; b) An SOU occupying the entire storey; c) A sanitary compartment, airlock or the like. A fire isolated exit must discharge: a) Direct to a road or open space, or b) To a space used only for pedestrian movement/car parking that is open for 2/3 of the perimeter and provides travel not more than 20m to open space, or c) To a covered area that is open for 1/3 of its perimeter, at least 3m unobstructed height including openings and provides travel not more than 6m to open space. Where travel from the exit requires passing within 6m of an external wall of the building, the wall is to be fire protected for 3m above/below the path of travel. **Comments:** Where discharge from fire stairs necessitates passing by walls and openings, walls require FRL construction 60/60/60 and openings are to be protected in accordance with C4D5.	Performance solution required

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
		The current design contains fire isolated stairs running into a proposed fire isolated passageway leading out to open space that necessitates passing within 6m of external walls to be fire protected for 3m above/below the path of travel, which cannot be achieved where walls currently contain openings to communal bike shed. • The bike shed may be design with walls to achieve FRL 60/60/60 and openings protected in accordance with clause C4D5 e.g. wall wetting sprinklers. Alternatively this may be justified via a fire engineered performance solution.	
D2D15	Discharge from Exits	Discharge from a non-fire isolated stairway must be within: Generally, a path of travel from the exit to the road must be: a) Not less than 1.0m wide; and b) Via a ramp not steeper than 1 in 8, or a stairway. **Comments:** Discharge from Lower Ground Level requires traversing a non-fire-isolated stairs with details to comply with part D4 – ambulant stairs. Refer to Accessibility Assessment	Capable of compliance subject to further review prior to issue of Construction Certificate.
D2D21	Plant rooms, lift machine rooms and electricity network substations	Access to certain plant and equipment rooms may be provided with an AS1657 compliant ladder in lieu of stairs where the floor area of the plant room is less than 100m². Where the floor area is between 100m² and 200m², a ladder may be used for all except one point of egress. Particular requirements apply for calculation of travel distances via ladders. **Comments:** Roof ladders and the like to access roof plant will be detailed prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate.

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
D2D22	Access to lift pits	Access to lift pits must- (a) Where the depth is not more than 3m, be through the lowest landing doors or (b) Where the pit depth is more than 3m be provided through an access doorway complying with D1.17	Note
	PART D3	CONSTRUCTON OF EXITS	
D3D2	Application of part	Lists clauses under this part that do not apply to the internal parts of sole occupancy units in Class 2, 3 and 4 buildings	Note
D3D3	Fire-isolated Stairways and Ramps	Fire-isolated stairways and ramps are to be constructed – (i) Of non-combustible material; and (ii) So that if there is local failure it will not cause structural damage to, or impair the fire resistance of the shaft	Capable of compliance
D3D5	Separation of Rising and Descending Stair Flights	There must be no direct connection between rising and descending stairs where the stair is required to be fire isolated. Construction that separates the flights must be non-combustible and smoke proof in accordance with clause 2 of Spec 11. **Comments:** • It is understood there will be adequate way finding signage and the like to prevent occupants descending fire isolated stairs and travelling back into lower ground car park. • It is also understood there will be adequate way finding signage and the like to prevent occupants ascending fire isolated stairs back up into building from car park level back up into the Class 2 portion of the building.	Capable of compliance subject to further review prior to issue of Construction Certificate.

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
D3D8	Installations in Exits and Paths of Travel	Access to service *shafts* and services other than to firefighting or detection equipment as permitted in the *Deemed-to-Satisfy Provisions* of **Section E**, must not be provided from a *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*. Any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to a required exit. Gas or fuel services must not be installed in a required exit. Services or equipment comprising of electricity meters, disruption boards, central telecommunications, electrical motors or the like may be installed in a required exit, expect for fire isolated exits. The services must be enclosed by non-combustible construction or a fire protective covering with doorways or openings smoke sealed. **Comments:** As part of the final post DA design process it is assumed there will be adequate detail provided for comms, DP boards, services etc. and where in path of travel to an exit to ensure protected in accordance with D3D8.	Capable of compliance subject to further review prior to issue of Construction Certificate.
D3D9	Enclosure of Space under Stairs and Ramps	No enclosures are permitted under fire-isolated stairways **Comments:** No enclosures are documented under fire isolated stairs.	Complies
D3D10	Width of required stairways and ramps	1.0m clear of handrails is required	Capable of compliance subject

SECTION D ACCESS AND EGRESS

<table>
<tr><th>Clause</th><th>Clause Title</th><th>Requirements | Assessment Comments</th><th>Status</th></tr>
<tr><td></td><td></td><td>A stairway exceeding 2m in width is counted as having a width of only 2m unless divided with a handrail or barrier continuous between landings and each division has a width of not more than 2m

Comments:
Handrail details to stairs will be provided prior to issue of Construction Certificate.</td><td>to review prior to issue of Construction Certificate</td></tr>
<tr><td>D3D14</td><td>Goings & Risers</td><td>A stair must have not more than 18 risers and not less than 2 risers in each flight.
The maximum and minimum dimensions for going and risers are as per below. Constant dimensions throughout each flight, riser/going quantity (2R+G), and slip resistance to meet Table D3D14.

Table D3D14: Riser and going dimensions
<table>
<tr><th rowspan="2">Stairway location</th><th colspan="2">Riser (R)</th><th colspan="2">Going (G)[Note 3]</th><th colspan="2">Quantity (2R + G)</th></tr>
<tr><th>Max</th><th>Min</th><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr>
<tr><td>Public</td><td>190</td><td>115</td><td>355</td><td>250</td><td>700</td><td>550</td></tr>
<tr><td>Private [Note 1]</td><td>190</td><td>115</td><td>355</td><td>240</td><td>700</td><td>550</td></tr>
</table>
Comments:
Please provide stair details as design progresses.
Riser dimensions provide – going dimensions to be clarified.</td><td>Capable of compliance subject to review prior to issue of Construction Certificate</td></tr>
<tr><td>D3D15</td><td>Landings</td><td>Landings with a maximum gradient of 1:50 may be provided for stairways, and must be a minimum of 750mm in length. Slip resistance must be provided as per Table D3D15</td><td>Capable of compliance subject to review prior to issue of Construction Certificate</td></tr>
</table>

SECTION D ACCESS AND EGRESS

<table>
<tr><th>Clause</th><th>Clause Title</th><th>Requirements | Assessment Comments</th><th>Status</th></tr>
<tr><td></td><td></td><td>
Table D3D15: Slip-resistance classification
<table>
<tr><th>Application</th><th>Dry Surface conditions</th><th>Wet surface conditions</th></tr>
<tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr>
<tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr>
<tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr>
<tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr>
</table>
</td><td></td></tr>
<tr><td>D3D16</td><td>Thresholds</td><td>
Thresholds to comply with AS1428.1 (no step)

In accessible areas, the threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless:
• the door opens to road or open space, and
• a threshold ramp complying with AS1428.1-2009 is provided.

In areas not required to be accessible (e.g. plantrooms and final discharge doors from fire isolated stairs), the threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless:
• the door opens to road or open space, and
• the door sill is not more than 190mm above the external surface.

Comments:
Where the requirements of AS4299 are applicable to units at each level it is understood that door thresholds will achieve compliance with AS1428.1-2009 .
</td><td>Capable of compliance</td></tr>
<tr><td>D3D17</td><td>Barriers to prevent falls</td><td>
A barrier must be provided to a trafficable surface that is 1m or more to the surface beneath. It must be provided to:
• a roof to which general access is provided
</td><td>Capable of compliance subject to review prior to issue of</td></tr>
</table>

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
		• a stairway or ramp • a floor, corridor, hallway, balcony, deck, verandah, *mezzanine*, access bridge or the like where any delineated path of access to a building, **Comments:** It is understood that site specific barrier construction details to stairs and balconies will be provided prior to issue of construction certificate.	Construction Certificate
D3D18	Height of barriers	The height of a barrier required by D3D17 must be not less than the following: (a) 865mm -for stairways or ramps with gradient 1:20 or steeper. (b) 865mm -for barriers on stair/ramp landings provided inside edge of landing does not exceed 500mm. (c) 1m – for all other locations	Capable of compliance subject to review prior to issue of Construction Certificate
D3D19	Openings in barriers	(1) Openings in barriers must not permit a 125mm sphere to pass through. (2) In a fire isolated stairway openings in a required barrier must not allow a 300mm sphere to pass through or where rails are used a 150mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the landing, balcony or the like. The openings between rails must not be more than 460mm. (3) Face fixed barriers fixed to a face forming an edge of a landing, balcony, deck, stairway or the like requires openings formed between the barrier and the face to not exceed 40mm	Capable of compliance subject to review prior to issue of Construction Certificate
D3D20	Barrier climbability	Where a balustrade protects a level difference greater than 4m, there must be no horizontal elements or near horizontal elements that could facilitate climbing between 150mm and 760mm above floor level.	Capable of compliance subject to review prior to issue of

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Comments: The following details will be provided prior to issue of Certificate of Construction: • Barrier heights to be not less than 1m- balustrade height to all fire isolated and non-fire isolated stairs landings to be clarified. • Fire Isolated Stairs openings in the required barrier must not allow a 300mm sphere to pass through or where rails are used a 150mm sphere must not be able to pass through the opening between the nosing line of the stair treads and the rail or between the rail and the floor of the landing, balcony or the like. The openings between rails must not be more than 460mm. • Openings in barriers to unit balconies must not permit a 125mm sphere to pass through. . • Where a balustrade protects a level difference greater than 4m, there must be no horizontal elements or near horizontal elements that could facilitate climbing between 150mm and 760mm above floor level. • Where glazed balustrades are specified, AS1288 generally requires a structural or interlinking handrail. Provide details to indicate how the glass balustrades will achieve compliance with AS1288. • A design certificate will be provided for glass balustrading together with construction details demonstrating compliance with BCA clauses D3D19 & D3D20.	Construction Certificate
D3D22	Handrails	Handrails must be continuous between flights with no obstruction on or above that would break a hand-hold and be fixed at a height of 865mm. **Comments:** All handrails to ambulant stairs must have 300mm extensions and 180degree turndowns etc. in accordance with clause 12 of AS1428.1-2009, will be shown on architectural plans prior to issue pf Construction Certificate.	Capable of compliance subject to review prior to issue of Construction Certificate
D3D23	Fixed platforms, walkways and ladders	The construction of stairs, walkways or ladders giving access to plant rooms and the like must comply with the requirements of AS 1657.	Note

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
D3D24	Doorways and Doors	A doorway serving as a required exit or forming part of a required exit must not be fitted with a sliding door unless- (a) it leads directly to road or open space and (b) the door is able to be opened manually under a force of not more than 110N and If fitted with a door that is power operated – (a) it must be able to open manually under a force of not more than 110N if there is a malfunction or failure to the power supply and (b) If it leads directly to road or open space it must open automatically in the event of power failure to the door or on activation of a fire alarm or smoke alarm anywhere in the fire compartment served by the door. **Comments:** No power operated or sliding doors are noted.	Capable of compliance
D3D25	Swinging Doors	Swinging doors in a required exit or forming part of a required exit must swing in the direction of travel, unless they are: • the only required exit serving a building part (tenancy) less than 200m² and are fitted with a hold open device. • from an airlock, sanitary compartment or the like. Swinging doors must not encroach on the width of a required exit by more than 500mm at any part of the swing, or by more than 100mm when fully open. **Comments:** Ground floor lobby exit door is currently documented swinging outwards, achieving compliance.	Complies

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
D3D26	Operation of Latch	Required exit doors to have single hand downward action lever and readily openable without a key from the side that faces a person seeking egress All door hardware is to be located between 900mm and 1100mm above floor level. Door hardware included on door schedule	Capable of compliance subject to further review prior to issue of Construction Certificate.
D3D27	Re-entry from fire -isolated exits	(1) Doors of a fire-isolated exit must not be locked from the inside as follows: (a) In a Class 9a health-care building. (b) In a Class 9b early childhood centre. (c) In a Class 9c building. (d) In a fire-isolated exit serving any storey above an effective height of 25 m, throughout the exit. (2) The requirements of (1)(a), (c) and (d) do not apply to a door fitted with a fail-safe device that automatically unlocks the door upon the activation of a fire alarm and— (a) on at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or (b) an intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation.	Capable of compliance subject to further review prior to issue of Construction Certificate.

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Comments: The scissor stairs will serve a storey over effective height of 25m and must not be locked from the inside.	
D3D28	Signs on Doors	All fire doors to fire-isolated exits and smoke doors must be appropriately signed in capital letters not less than 20mm high in colour contrasting with the background and state: (i) For an automatic door held open by an automatic hold-open device: "**FIRE SAFETY DOOR—DO NOT OBSTRUCT**"; (ii) For self-closing door: "**FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN**"; (iii) For a door discharging from fire-isolated exit: "**FIRE SAFETY DOOR—DO NOT OBSTRUCT**" **Comments:** Architectural design will detail appropriate door signage of door schedule prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate.
D3D29	Protection of openable windows	Bedroom windows in Class 2 buildings floors are 2m or more above ground level and with a sill height less than 1.7m are required to be protected with childproof screens or restrictors preventing passage of a 125mm sphere.	Capable of compliance subject to further review prior to issue of

SECTION D ACCESS AND EGRESS			
Clause	Clause Title	Requirements | Assessment Comments	Status
		In addition where a child resistant release mechanism is provided and the floor is 4m above ground level, an 865mm high barrier is also required. The barrier must not have any elements that facilitate climbing between 150mm and 760mm above floor level. **Comments:** It is understood there has been considerable consideration given to the need for window protection throughout and a detailed window schedule that shows compliance with window opening restrictors to bedroom windows and at least 865mm barrier below windows located on levels 4m above ground level will be provided prior to issue of Construction Certificate.	Construction Certificate.
	PART D4	ACCESS FOR PEOPLE WITH A DISABILITY	
D4D2	General building access requirements	For this building, D4D2 requires parts of the building and sole-occupancy units (SOUs) to be accessible as follows: **Class 2** • To at least 1 floor containing SOUs and to the entrance doorway of each SOU on that level. • To and within not less than 1 of each type of common space the building provides (eating areas, gym, sauna etc) • To all common areas and entrance doors to SOUs on a floor provided with ramp or lift access. **Class 7a** • To and within any level containing accessible car parking spaces. **Comments:** Refer to separate Accessibility Assessment attached within this report.	Please refer to separate Accessibility Assessment attached with this report

Section E – Services and Equipment

SECTION E SERVICES AND EQUIPMENT			
Clause	Clause Title	Requirements | Assessment Comments	Status
	PART E1	FIRE FIGHTING EQUIPMENT	
E1D2	Fire Hydrants	Fire hydrant system to comply with AS2419.1 as the floor area exceeds 500m². The system must cover the entire building in accordance with AS2419.1-2021. Where internal hydrants are installed they must only serve the storey on which they are located. Note: This is a special fire service and requires referral to FRNSW. **Comments:** Hydrant plans and flow pressure test to be provided for review and submission to FRNSW. AS2419.1-2021 clause 6.11.2.(d) can be achieved where the exhaust flue from the diesel pump was intended to be discharged at the car park entrance to the street. The proposed louvres on the fire pump room are for air intake and relief of heat build-up and not for diesel exhaust fumes. Compliance with AS2419.1-2021 Clause 6.11.2 (c) Internal pump rooms is **not currently achieved**. Pump rooms located within a building shall have a door leading directly to opening to a road or open space, or an air lock or smoke lobby that leads to - - fire-isolated passageway or stair; leading to road or open space or - fire-isolated passageway or stair pressurised in accordance with AS1668.1, leading to road or open space.	Hydrant coverage plans and flow pressure test is required prior to issue of Construction Certificate . Performance Solution is required as an alternative to introduction of new localised fire isolated passageway

		The current arrangement may be justified via a fire engineered performance solution alternatively there may be a design review with the inclusion of a fire isolated passageway - please refer to mark-ups.	

E1D3	Fire Hose Reels	This building requires a fire hose reel system as internal fire hydrants are installed / the largest fire compartment exceeds 500m².
		
		The hose reel system must provide coverage to the entire building in accordance with AS2441-2005, including but not limited to:
		• Cover from hose reels being achieved with a 36m hose extending at least 1m into the space served and a 4m spray
		• Hose reels located to avoid travel through fire or smoke doors
		• Hose reels located
		  ○ externally
		  ○ internally next to hydrants (not in fire isolated stairs), or
		  ○ within 4m of an exit
		• External hose reels protected from the weather
		
		Fire hose reels are not required for the Class 2 parts.
		
		Comments:
		Hose reel coverage is only required to serve the carpark. Please provide plans for assessment prior to issue of Construction Certificate.
			Hose reel coverage plans to be provided for assessment prior to issue of Construction Certificate.

E1D6	Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings	In a Class 2 or 3 building and any other class of building containing a Class 2 or 3 part, sprinklers are required throughout the building if any part of the building has — (a) a rise in storeys of 4 or more; and (b) an effective height of not more than 25 m. This Class 2 building requires a sprinkler system complying with one of the following: • AS2118.1; or • AS2118.4; or • FPAA 101D; or	Capable of compliance subject to further review prior to issue of Construction Certificate.

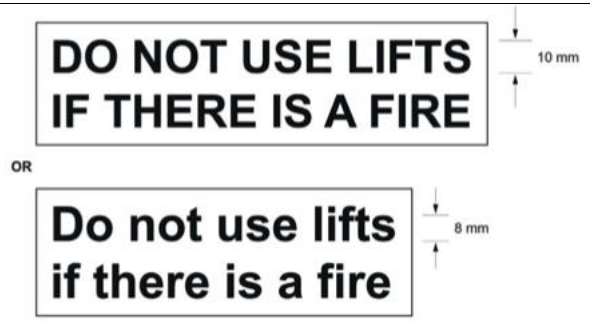
		• FPAA 101H. Refer specification 17 & 18 for detailed requirements. **Comments:** Sprinkler system is required with details of the intended type of sprinkler system to be provided for further review prior to issue of Construction Certificate. • Please note a required sprinkler system must be connected to and activate a building occupant warning system complying with S20C7.	
E1D14	Portable Fire Extinguisher	Portable fire extinguishers are to be provided as per Clause E1D14 of the BCA and installed in accordance with AS2444. Extinguishers are required to serve the whole of this Class 2 building, as fire hose reels are not required by E1D3. Portable fire extinguishers are to serve the Class 2 or 3 unit levels as follows: ABE Type Extinguishers min 2.5kg distributed outside a sole-occupancy unit to serve only the storey at which they are located and so that the travel distance from the entrance doorway of any sole-occupancy unit to the nearest fire extinguisher is not more than 10m. **Comments:** Fire extinguishers plans to be provided for assessment prior to issue Certificate of Construction.	Fire extinguisher locations to be provided on plans to assess prior to issue Certificate of Construction.
E1D15	Fire Control Centres	A fire control centre facility in accordance with Specification 19 must be provided for— (a) a building with an effective height of more than 25 m; and (b) a Class 6, 7, 8 or 9 building with a total floor area of more than 18 000 m2. **Comments:** It is understood the Fire control centre will achieve compliance with specification 19 utilising the Lobby area subject to site management to ensure that the space is not used to store items or chairs/furniture do not block the space in front of the panels, with details of same to be provided for assessment prior to issue Certificate of Construction.	Fire control centre details to be provided on plans to assess prior to issue Certificate of Construction.

E1D16	Fire Precautions during construction	During building construction, fire precautions are to be undertaken in compliance with E1D16 for fire extinguishers, fire hydrants, fire hose reels and for booster connections. After the building has reached an effective height of 12m, required booster connections must be installed and hydrants and hose reels must be operational in all but the two uppermost storeys. **Comments:** Confirmation will be provided that when the building has reached an effective height of 12m, required booster connections will be installed and hydrants and hose reels will be operational in all but the two uppermost storeys- prior to issue Certificate of Construction.	Capable of compliance subject to further review prior to issue of Construction Certificate.
E1D17	Provisions for Special Hazards	Suitable additional provision must be made if special problems of fighting fire could arise because of— (a) the nature or quantity of materials stored, displayed or used in a building or on the allotment; or (b) the location of the building in relation to a water supply for fire-fighting purposes. **Comments:** Please provide confirmation electrical vehicles are to be stored and charged in the proposed carpark as this may result in an additional Fire Engineering performance solution – refer to mark-ups.	Performance Solution Required where EV chargers are to be installed.
	PART E2	SMOKE HAZARD MANAGEMENT	
E2D3	General Requirements	Air-handling systems which do not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must, subject to (2), be designed and installed: (a) to operate as a smoke control system in accordance with AS 1668.1; or (b) such that it—	Capable of compliance subject to further review prior to issue of Construction Certificate.

		(i) incorporates smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and (ii) is arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1. (2) For the purposes of (1), each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment. (3) Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with these Sections of the Standard. (4) A smoke detection system must be installed in accordance with S20C6 to operate AS 1668.1 systems that are provided for zone pressurisation and automatic air pressurisation for fire-isolated exits. **Comments:** Mechanical design will confirm how openings in building elements required to have an FRL shall be protected with fire dampers prior to issue of Construction Certificate .	
E2D4	Fire Isolated Exits	(1) A part of a building listed in (2) must be provided with— (a) an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1; or (b) open access ramps or balconies in accordance with D3D6. (2) The requirements of (1) apply to— (a) a required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving— any storey above an effective height of 25 m. (3) An automatic air pressurisation system for a fire-isolated exit must serve the entire exit. **Comments:**	Capable of compliance subject to further review prior to issue of Construction Certificate.

		It is understood stair pressurisation system will be served by relief air shafts in accordance with AS1668.1 clause 10.4 with details of system provided prior to issue of Construction Certificate. Please note; the building will have an automatic smoke detection and alarm system complying with Specification 20 including Specification S20C6 of BCA 2022 including smoke detectors required to activate air pressurisation systems for fire-isolated exits must be installed in accordance with AS 1670.1; and have additional smoke detectors installed adjacent to each bank of lift landing doors set back horizontally from the door openings by a distance of not more than 3 m.	
E2D5	Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building	In a Class 2 building or part of a building, if the building is more than 25 m in effective height— An automatic smoke detection and alarm system complying with Specification 20 must be provided to the following: (a) A Class 2 or 3 building which is more than 25 m in effective height. (b) A Class 2 or 3 part of a building, or a Class 4 part of a building, in a building which is more than 25 m in effective height. **Comments:** A smoke detection and alarm system complying with AS1670.1 is required to serve the building. However, in a Class 2 building protected with a sprinkler system complying with Specification 17 (other than a FPAA101D or FPAA101H system), smoke detectors are not required in public corridors and other internal public spaces. • Detection & alarms plans will be provided for review prior to issue of Construction Certificate .	Capable of compliance subject to further review prior to issue of Construction Certificate
E2D12	Class 7a buildings	Where mechanical ventilation is provided to the Class 7a carpark, the fans must comply with Clause 5.5 of AS1668.1 (except for rating at normal temperature and provision of fire rated cabling). This includes provisions for the carpark exhaust system to run in fire mode and controls to be provided to enable manual operation by firefighters. **Comments:** Mechanical ventilation design to serve carpark is currently assumed to be provided in accordance with AS1668.1 clause 5.5 & AS1668.2.	Capable of compliance subject to further review prior to issue of Construction Certificate

	PART E3	LIFT INSTALLATIONS	
E3D2	Lift installations	Electric passenger lifts and electrohydraulic lifts must comply with Specification 24, including but not limited to: • Mechanical ventilation/cooling if exposed to solar radiation; • Emergency lighting within the lift car; • Cooling provisions for the lift shaft • Unlocking provisions for secure foyers • Emergency access doors to lift shafts. **Comments:** Lift design and design declaration statement from vertical transport design practitioner required prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate
E3D3	Stretcher facility in lift	A stretcher facility to accommodate a 600x2000mm stretcher must be provided in at least one lift to serve each floor, as lifts serve a storey over 12m effective height. **Comments:** It is understood the lift design will be adequate for Ensure lift design considers requirements for a stretcher facility . Lift design and design declaration statement from vertical transport design practitioner required prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate
E3D4	Warning against the use of lifts in fire	A warning sign must be displayed in a readily seen location near every call button and comply with Figure E3D4.	Capable of compliance subject to further review prior to issue of Construction Certificate

			
E3D5	Emergency Lifts	At least one emergency lift is required to serve this building, as the effective height is greater than 25m. Emergency lifts must be contained in a fire-resisting shaft (refer to C2.10). Where two or more lifts are provided, at least two emergency lifts must be provided, and where passenger lifts are located in different shafts at least one emergency lift must be provided in each shaft. **Comments:** There must be emergency lifts serving all levels of the building including the Lower Ground car park level. Where two or more lifts are provided, at least two emergency lifts must be provided. Each lift provided will be required to have fire service controls and lift car fire service drive control switches and meet the requirements of AS1735.12 persons with a disability to utilize each lift as a continuous accessible path of travel.	Capable of compliance subject to further review prior to issue of Construction Certificate
E3D6	Landings	Access and egress to liftwell landings must comply with Section D Lift control buttons shall be located adjacent the lift entrances and shall not be closer than 500mm from any internal corner of fixed obstruction in accordance with AS1735.12 (1999). **Comments:** Lift design and design declaration statement from vertical transport design practitioner required prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate

E3D7	Passenger lifts types and their limitations	Table E3D7 indicates the permissible types of lift that may be installed in each application. As this building requires vertical travel in excess of 12m, either an electric passenger lift or an electrohydraulic passenger lift must be installed, with internal car dimensions at least 1400mm wide All passenger lifts must be fitted with accessible features where identified in Table E3D7, including lift car dimensions, clear door openings, passenger protection systems, handrail and accessible features and location for lift car and landing call buttons. **Comments:** Lift design and design declaration statement from vertical transport design practitioner required prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate
E3D8	Accessible features required for passenger lifts	In an accessible building, every passenger lift must have the following features where applicable: A handrail complying with the provisions for a mandatory handrail in AS 1735.12 for all lifts except— (i) a stairway platform lift; and (ii) a low-rise platform lift. • Lift floor dimensions of not less than 1400 mm wide x 1600 mm deep for all lifts which travel more than 12 m. • Lift floor dimensions of not less than 1100 mm wide x 1400 mm deep for all lifts which travel not more than 12m, except a stairway platform lift. • Lift floor dimensions of not less than 810 mm wide x 1200 mm deep for a stairway platform lift. • Minimum clear door opening complying with AS 1735.12 for all lifts except a stairway platform lift. • Passenger protection system complying with AS 1735.12 for all lifts with power-operated doors. • Lift landing doors at the upper landing for all lifts except a stairway platform lift. • Lift car and landing control buttons complying with AS 1735.12 for all lifts except— a stairway platform lift; and a low-rise platform lift. • Lighting in accordance with AS 1735.12 for all enclosed lift cars. • For all lifts serving more than 2 levels— i. automatic audible information within the lift car to identify the level each time the car stops; and ii. audible and visual indication at each lift landing to indicate the arrival of the lift car; and iii. audible information and audible indication required by (i) and (ii) is to be provided in a range of between 20 - 80 dB(A) at a maximum frequency of 1500 Hz.	Capable of compliance subject to further review prior to issue of Construction Certificate

		• Emergency hands-free communication, including a button that alerts a call centre of a problem and a light to signal that the call has been received, for all lifts except a stairway platform lift. **Comments:** Lift design and design declaration statement from vertical transport design practitioner required prior to issue of Construction Certificate.	
E3D9, E3D11, E3D12	Fire service controls	Any lift that serves a storey above 12m effective height must be provided with: • Fire service recall switch in accordance with E3D11, located at the landing level nominated by FRNSW; • Lift car fire service drive control switches in accordance with E3D12. It is recommended that the landing selected for lift recall be confirmed with FRNSW as soon as practical. **Comments:** Lift design and design declaration statement from vertical transport design practitioner required prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate
	PART E4	VISIBILITY IN AN EMERGENCY EXIT SIGNS AND WARNING SYSTEMS	
E4D2 / E4D8	Emergency Lighting Requirements	Emergency Lighting and Exit Signage is required within building in accordance with AS2293.1. Refer also to Specification 25 for photoluminescent exit signs **Comments:** Electrical plans to be provided for assessment of emergency exit lighting and signage in accordance with AS2293.1 prior to issue of Construction Certificate.	Designers declaration required prior to issue of Construction Certificate
E4D9	Emergency Warning and Intercom Systems	Emergency warning and intercom (EWIS) is required to be provided within the building in accordance with this clause and AS1670.4, as the building is: • Over 25m in effective height	Capable of compliance subject to further review prior to issue of

		Comments: Electrical design will be provided to include for EWIS installed to AS1670.4 prior to issue of Construction Certificate.	Construction Certificate

Section F – Health and Amenity

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
	PART F1	DAMP AND WEATHERPROOFING	
F1D3	Stormwater drainage	Stormwater to comply with AS/NZS 3500.3 **Comments:** Hydraulic plans to be provided with stormwater system design in accordance with AS3500.3 with site specific gradients to be provided to all stormwater outlets.	Note
F1D4	Exposed joints	Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must— (a) be protected in accordance with Section 2.9 of AS 4654.2; and (b) not be located beneath or run through a planter box, water feature or similar part of the building.	Note
F1D5	External Waterproofing Membranes	A roof, balcony, podium or similar horizontal surface part of a building must be provided with a waterproofing membrane— (a) consisting of materials complying with AS 4654.1; and (b) designed and installed in accordance with AS 4654.2. Please detail balcony step downs with termination heights in accordance with AS4654.2 **Comments:** Please detail on plans balcony terminate heights and external waterproofing details in accordance with AS4654 1 & 2 prior to issue of Construction Certificate .	Capable of compliance subject to further review prior to issue of Construction Certificate

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
F1D6	Damp-proofing	Damp-proof course material where provided to comply with AS/NZS 2904 or impervious sheet material to AS3660.1.	Note
F1D7	Damp-proofing of floors on the ground	Where floors of a room are laid on ground or on fill a vapour barrier must be provided in accordance with AS 2870.	Note
	PART F2	WET AREAS AND OVERFLOW PROTECTION	
F2D2	Wet Area Construction	Building elements in wet areas must be waterproofed or water resistant in accordance with specification 26 and AS3740-2021. **Comments:** Please detail wet areas in accordance with AS3740-2021 prior to issue of Construction Certificate. This will require a set of plans indicating wet areas with site specific gradients to floor wastes together with site specific construction detailing obtained fo9rm As3740	Capable of compliance subject to further review prior to issue of Construction Certificate.
F2D4	Floor Wastes	In a Class 2 or 3 building or Class 4 part of a building, a bathroom or laundry located at any level above a sole-occupancy unit or public space must have a floor waste. Where a floor waste is installed— (a) the minimum continuous fall of a floor plane to the waste must be 1:80; and (b) the maximum continuous fall of a floor plane to the waste must be 1:50. **Comments:** Ensure falls to floor wastes in wet areas are detailed accordance with F2D4, specification 26 and AS3740. This will include Waterproofing details and site-specific falls to floor waste for each wet area t be detailed on architectural set prior to issue of Construction Certificate.	Capable of compliance subject to further review prior to issue of Construction Certificate.
	PART F3	ROOF AND WALL CLADDING	

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
F3P1	Weatherproofing of External Walls	The NCC has limited DtS provisions for weatherproofing of external walls. Accordingly, compliance must be verified directly with the Performance Requirement F3P1. FP1.4 states that a roof or external wall, including openings around windows and doors, must prevent the penetration of water that could cause; a) Unhealthy or dangerous conditions, or loss of amenity for occupants; and b) Undue dampness or deterioration of building elements. Limitation: F3P1 does not apply to— (a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or (b) a garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes; or (c) an open spectator stand or open-deck carpark **Comments:** Façade report issued by a facade consultant is required to address F3P1 weatherproofing requirements as a performance solution.	Performance solution required
F3D2	Roof Coverings	Roof must comply with the following: (a) roof tiles in accordance with AS2049, fixed in accordance with AS2050 or (b) metal sheeting in accordance with AS1562.1 or (c) plastic sheet roofing designed and installed to AS1562.3 or (d) terracotta, fibre cement, timber slates, shingles designed and installed in accordance to AS4597 (except in cyclonic areas) or (e) an external waterproofing membrane complying with F1D5 (i.e concrete slab roofs)	Note
F3D3	Sarking	Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1 and AS 4200.2	Note

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
F3D4	Glazed assemblies	Glazed assemblies in external walls must comply with AS2047 requirements for resistance of water penetration.	Note
F3D5	Wall Cladding	External wall cladding must comply with one or a combination of the following: (a) masonry AS3700 (b) autoclaved air rated concrete AS5146.3 (c) Metal cladding AS1562.1	Note
	PART F4	SANITARY AND OTHER FACILITIES	
F4D2	Facilities in residential buildings	**Facilities in residential buildings – Class 2** For each sole-occupancy unit, provide— (a) a kitchen sink and facilities for the preparation and cooking of food; and (b) a bath or shower; and (c) a closet pan; and (d) a washbasin; and (e) clothes washing facilities, comprising a washtub and space in the same room for a washing machine; and (f) a clothes line or hoist, or space for a heat-operated drying cabinet or similar appliance for the exclusive use of the occupants. Note: A kitchen sink or washbasin must not be counted as a laundry washtub.	Capable of compliance subject to further review prior to issue of Construction Certificate.
F4D5	Accessible sanitary facilities	**Accessible Facilities:** For this **Class 2** building, where sanitary compartments are provided in common areas, the following facilities are required: • 1 x Accessible unisex Sanitary compartment. • 1 x Accessible unisex shower (if showers are provided).	Refer to Accessibility Assessment attached with this report.

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Accessible unisex facilities must: • Be located so that they can be entered without using an area reserved for only one sex; • Be provided as evenly as possible in RH and LH mirror configurations. Accessible unisex facilities need not be provided on storeys that is not required by D4D4(f) to be provided with a passenger lift or ramp. **Ambulant facilities:** At each bank of toilets where one or more toilets are provided in addition to an accessible unisex facility, at least one ambulant accessible facility must be provided for males and females. Note that the NCC deemed to satisfy provisions do not generally permit unisex facilities to be provided for ambulant cubicles and one must be provided for each sex. Ambulant facilities must comply with AS1428.1 Note: Where individual toilets are distributed across the floor plate, the 'bank' of toilets may be considered to be the total provision across the floor. The determination of a bank or toilets is made on a case by case basis. **Comments:** Each post adapted accessible unit will achieve the spatial requirements to comply with AS4299 and AS1428.1 clause 15.6 circulation space in accessible sanitary facilities. Please refer to Accessibility Assessment contained within this report.	
F4D8	Construction of sanitary compartments	Sanitary compartments must be divided into separate adjacent compartments in accordance with F4D8. When the door to a fully enclosed compartment is within 1.2m of the pan, the door must: • Open outwards; or • Slide; or	Note

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
		• Be readily removable from the outside	
F4D10	Microbial (legionella) control	Hot water, warm water and cooling water systems in a building other than a system serving only a single sole-occupancy unit in a Class 2 building must be installed in accordance with AS/NZS 3666.1	Note
	PART F5	ROOM HEIGHTS	
F5D2	Height of rooms and other spaced	Class 2 buildings require ceiling heights as follows: • Habitable rooms – 2.4m; and • Bathrooms, kitchens and the like – 2.1m; and • Corridors – 2.1m; and • Within stairways and landings – 2.0m; and • In a room with a sloping ceiling, as determined by calculation in accordance with this clause. Class 7 buildings require ceiling heights as follows: • carparks and the like – 2.1m; **Comments:** Structural requirements to beam and slabs in localised areas will result in beam depths of approx. 500mm with services 100mm in depth, reducing the floor to headroom to approx. 2.2m in lower-level car park. This will still achieve compliance unless the structural beams etc. are located within, the PWD accessible car parking spaces.	Capable of compliance subject to further review prior to issue of Construction Certificate.
	PART F6	LIGHT AND VENTILATION	

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status

F6D2	Provision of natural light	Class 2 buildings: All habitable rooms must have natural lighting provided by:
		• Windows
		  ○ That have aggregate light of not less than 10% of floor area of the room and
		  ○ Are open to the sky or face a verandah or the like; or
		• Roof lights that
		  ○ Have aggregate light of not less than 3% of floor area of room and
		  ○ Are open to sky.
		Comments:
		A review of the latest architectural design indicates compliance will be achieved.
			Capable of compliance

F6D5	Artificial lighting	Artificial lighting complying with AS/NZS1680.0 must be provided to all rooms and areas frequently used by the occupants such as (but not limited to): • Sanitary areas; • Laundries; • Stairways; • Corridors; • Workstations;	Note
F6D6	Ventilation of rooms	Ventilation of all occupiable spaces must be achieved through either: • Natural ventilation – 5% of floor area of room, or • Mechanical ventilation in accordance with AS1668.2 and AS3666.1.	Capable of compliance subject to further desgin development
F6D7	Natural ventilation	Class 2 spaces: Natural ventilation of habitable rooms must be achieved through either: • Direct ventilation – 5% of floor area of room, or • Borrowed ventilation through an adjacent space – 5% of the floor area plus 5% of the floor area of the space providing borrowed ventilation.	Performance solution required

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Ventilation may not be borrowed through a sanitary compartment and the space borrowed from must be within the same SOU or in common area. **Comments:** A review of the latest architectural design indicates the current arrangement will work the bedroom & living room accommodation is considered as 1 room and the required ventilation is borrowed from the adjoining verandah with the "hallway" areas of each unit deemed to be excluded as they are argued to be non-habitable. This is therefore technically a performance solution that justifies the current arrangement in lieu of making GFA alterations and increase in air intakes from alternative locations. To summarise, the proposed method of obtaining natural ventilation is achievable via a performance solution using comparable analysis and deeming habitable areas to be "one room" adjoining the verandah space.	
F6D9 & F6D19	Restriction on location of sanitary compartments	A room containing a closet pan or urinal must not open directly into; • A kitchen or pantry; or • A public dining room or restaurant; or • A dormitory in a class 3 building; or • A room used for public assembly (which is not an early childhood centre, primary school or open spectator stand); or • A workplace normally occupied by more than one person Access to such rooms must be provided through: • An airlock/hallway/other room with a floor area of not less than 1.1m²; or • The room containing the close pan or urinal must be provided with mechanical exhaust ventilation and the doorway to the room adequately screed from view.	Capable of compliance

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
F6D11	Carparks	Carpark must have: (a) a system of mechanical ventilation complying with AS1668.2 or (b) a system of natural ventilation complying with Section 4 of AS1668.1 Note that open-deck carparks are exempt from this provision as ventilation is deemed to be provided through compliance with the definition. **Comments:** Mechanical ventilation design to serve carpark is currently assumed to be provided in accordance with AS1668.1 clause 5.5 & AS1668.2.	Capable of compliance subject to further review prior to issue of Construction Certificate
PART F7	SOUND TRANSMISSION AND INSULATION		
F7D3	Determination of airborne sound insulation ratings	Sound insulation ratings must be determined as follows: Airborne insulation ratings (R_w, R_w + C_{tr}) – testing to AS/NZS1276.1 or ISO 717.1, or compliance with Specification 28 **Comments:** Architectural plans will detail method of acoustic treatment and tested systems prior to issue of Construction Certificate	Capable of compliance subject to further review prior to issue of Construction Certificate
F7D4	Determination of impact sound insulation ratings	Impact sound ratings: Floors – ($L_{n,r}$) Testing to AS ISO 717.2 or compliance with Specification 28. Walls – In Class 2 buildings, discontinuous construction is required where impact sound resistance is required by F7D6 (refer below).	Capable of compliance subject to further review prior to issue of Construction Certificate

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Comments: Architectural plans will detail method of acoustic treatment and tested systems prior to issue of Construction Certificate	
F7D5	Sound insulation rating of floors	Class 2 buildings: Floors must have an Rw + Ctr (airborne) not less than 50 and an Ln,w + Ci (impact) not more than 62 if it separates an SOU from another SOU or a plant room, lift shaft, stair, public corridor, public lobby or the like, or parts of a different classification. **Comments:** Architectural plans will detail method of acoustic treatment and tested systems prior to issue of Construction Certificate	Capable of compliance subject to further review prior to issue of Construction Certificate
F7D6	Sound insulation rating of walls	Class 2 building: Walls require an $R_W + C_{tr}$ (airborne) at least 50 if separating: • SOUs; or • An SOU from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. Walls separating a bathroom, toilet, laundry or kitchen in one unit from living spaces in an adjacent unit or separating an SOU from a plant room or lift shaft, must comply with F7D4 requirements for discontinuous construction. Doors where permitted by F7D6 must have an R_W not less than 30. **Comments:** Architectural plans will detail method of acoustic treatment and tested systems prior to issue of Construction Certificate including Architectural wall type schedule to be provided	Capable of compliance subject to further review prior to issue of Construction Certificate
F7D7	Sound insulation rating of internal services	Ducts, soil or waste pipes that serve or pass through more than one SOU, and all stormwater pipes, must be separated by construction having: • $R_W + C_{tr}$ not less than 40 if adjacent room is a habitable room; or	Capable of compliance subject to further review

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
		• $R_W + C_{tr}$ not less than 25 if adjacent room is kitchen or the like. Access doors to the pipe must not be provided from within a habitable room. A flexible coupling must be used at the connection of building service pipes to any circulating or other pump. **Comments:** Architectural plans will detail method of acoustic treatment and tested systems prior to issue of Construction Certificate	prior to issue of Construction Certificate
F7D8	Sound isolation of pumps	A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.	Capable of compliance subject to further review prior to issue of Construction Certificate
	PART F8	CONDENSATION MANAGEMENT	
F8D3	External wall construction	Where a pliable building membrane is installed in an external wall, it must – (i) Comply with AS/NZS 4200.1 and (ii) Be installed in accordance with 4200.2 and (iii) Be a vapour permeable membrane for climate zones 6,7 and 8 and Be located on the exterior side of the primary insulation layer or wall assemblies form the external envelope of the building.	Note
F8D4	Exhaust systems	In a sole occupancy unit of a class 2 building. • An exhaust system installed in a kitchen, bathroom, sanitary compartment, or laundry must have minimum flow rate of- (i) 25 L/s for a bathroom or sanitary compartment and	Capable of compliance subject to further review

SECTION F HEALTH AND AMENITY			
Clause	Clause Title	Requirements | Assessment Comments	Status
		(ii) 40 L/s for a kitchen or laundry • Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. • Exhaust from a bathroom, sanitary compartment or laundry must be discharged- Directly or via a shaft or duct to outdoor air, or to a roof space that is ventilated in accordance with F6.4 **Comments:** • Mechanical design will ensure minimum flow rates are provided as follows- (iii) 25 L/s for a bathroom or sanitary compartment and (iv) 40 L/s for a kitchen or laundry	prior to issue of Construction Certificate

Section G – Ancillary Provisions

SECTION G ANCILLARY PROVISIONS			
Clause	Clause Title	Requirements | Assessment Comments	Status
	PART G5	CONSTRUCTION IN BUSHFIRE PRONE AREAS	
G5D1-D5D4	Construction in bushfire prone areas	Class 2 (and associated Class 10a) in a bushfire prone area must comply with AS3959. except where they are located in an area of vegetation classified in accordance with AS3959 as: • Group F rainforest (other than wet sclerophyll) • Mangrove communities, or • Grasslands under 300mm high	Capable of compliance subject to further review prior to issue of Construction Certificate.

SECTION G ANCILLARY PROVISIONS			
Clause	Clause Title	Requirements | Assessment Comments	Status
		Comments: The subject-land is situated on Bush Fire Prone Land (BFPL) mapped by Liverpool City Council. The development is assessed under Section 4.13 of the Environmental Protection and Assessment Act 1979 (EP&A Act). The proposal must comply with the provisions of Planning for Bush Fire Protection 2019 (PBP) as part of the Planning Secretary's Environmental Assessment Requirements (SEARs) for SSD-77211717. A Bushfire Protection Assessment prepared by Travers Bushfire & Ecology dated 23rd December 2024 Ref: LAND6.11BPA stated the building design needs to ensure adequate protection of vulnerable building elements. Construction standards are outlined in AS 3959 Standard to provide various levels of protection for different building elements. The building is to meet BAL 12.5 requirements and it is understood this can be readily achieved with construction details as required to be provided prior to issue of Construction Certificate.	
	PART G6	OCCUPIABLE OUTDOOR AREAS	
G6D2-G6D10	Occupiable Outdoor Areas	This Part clarifies requirements for occupiable outdoor areas, being any area in the building that is open to the sky and where access is provided other than only for maintenance. Key features include, but are not limited to: • Limited concessions from C2D11 for finishes; • Fire separation under C3D8, C3D9 and C3D10; • Clarification that egress provisions in D2 & D3 are to be applied; • Fire fighting equipment is to be provided per Part E1; • For Part E3, the space is regarded as a storey; • Emergency warning, lighting and exit signs are to be provided as per Part E4. While specific requirements apply to *occupiable outdoor areas*, they are not generally defined as a *storey* and do not affect the rise in storeys calculated under C2.D3.	Note

SECTION G ANCILLARY PROVISIONS			
Clause	Clause Title	Requirements | Assessment Comments	Status
	PART G7	LIVABLE HOUSING DESIGN	
G7D2	Liveable housing design	Each sole-occupancy unit in a Class 2 building must comply with the ABCB Standard for Livable Housing Design, except for Part 1. The following requirements apply: • Step free entry • Minimum corridor dimensions • WC circulation • Plywood walls in WC's and showers for adaptability Ensure the design complies with ABCB Livable Housing Design requirements. **Comments:** Part G7 does not apply in NSW as livable housing design requirements do not apply to sole-occupancy units in a Class 2 building in NSW. Dependant on New South Wales Local Council planning requirements to achieve compliance with the requirements of accessible and adaptable housing. This DDA review has assumed the requirements of AS4299 are applicable to selected units at each level, as shown on latest Architectural plans issued for review.	The latest architectural plans indicate post adapted accessible unit living areas are provided with compliant spatial layouts. Please refer to Section 7 of this Report Further comment is provide in Table AS 1428.1 Design for Accessibility & AS4299 – Adaptable Housing

Section J – Energy Efficiency

SECTION J ENERGY EFFICIENCY			
Clause	Clause Title	Requirements | Assessment Comments	Status
Part J1-J9	Energy Efficiency	Energy Efficiency Report demonstrating compliance with section J via the DTS provisions or a performance solution with modelling to be provided. **Comments:** The energy efficiency report and Design Declaration will be provided prior to issue of Construction Certificate	Capable of compliance

State & Territory Appendices

STATE & TERRITORY APPENDICES			
	NSW	Refer as required	Note

Easements

EASEMENTS			
	Easements if located anywhere on the subject property	Written permission from the owners of the easement that they have no objection to the proposed work being undertaken on the site. The letter of permission should reference the site and elevation plans of the proposed work to ensure that there is no confusion on what is to be constructed.	Note

7 Accessibility Assessment

The table below is an assessment of the proposed building against the relevant applicable DTS Provisions of the BCA and Premises Standard Access Code. Each line item provides a summary description of the DTS provision and comments on the status of compliance. A summary of key issues is included on drawings in Appendix B. This table must be read in conjunction with BCA and Premises Standard Access Code.

No	BCA Requirements	Status of Compliance	Review and Discussion
	Access and Facilities for People with Disabilities – Sections D, E, and F		
1.	**General building access requirements - Introduction** Section D4 requires suitable access be provided to and within all areas of the building normally used by the occupants. Note accessibility requirements within the BCA that apply to this building include: • D4 for general access for people with a disability. • F4D5 for accessibility design to sanitary facilities. In addition to the BCA the owner of a building, project manager or user of a building may wish to consider requirements of the DDA.	Performance Solutions will be required to justify lack of full compliance with BCA requirements	Note: The Disability (Access to Premises – Buildings) Standards 2010 (Premises Standards) need to be considered. These are generally in keeping with BCA requirements unless otherwise stated.

No	BCA Requirements	Status of Compliance	Review and Discussion
D4D3 Access to Buildings			
1.	**Access from the Allotment Boundary** The BCA requires that a continuous accessible path of travel be provided from the allotment boundary at the main points of pedestrian entry to the main entrance.	Capable of compliance **Refer to marked plans for comment.**	The current design indicates compliance is achievable. As the design progresses site specific gradients and levels may be confirmed ensuring all new accessways providing continuous accessible path of travel from allotment boundary to the building are required to be provided with falls in accordance with AS1428.1-2009 clause 10.2 with: • For walkway gradients not steeper than 1in20 and corresponding landing spaces at 1in40 at 15m intervals, and • For walkway gradients not steeper than 1in33 to have corresponding landing spaces at 1in40 at 25m intervals. • For walkway gradients between 1 in 20 to 1 in 33, at intervals that shall be obtained by linear interpolation. • For walkways shallower than 1 in 33, no landings are required. ❖ Where the new carpark entrance intersects the public footpath, it is recommended to introduce suitable kerb ramp detailing aligned in the direction of travel to both sides of the car park cross over onto the public road.

No	BCA Requirements	Status of Compliance	Review and Discussion
2.	**Access from the Accessible Carparking** The BCA requires a continuous accessible path of travel be provided from the accessible carparking areas to the main entrance. Design of access to building should comply with requirements of AS 1428.1. This should include, but be not limited to • Site levels/Gradients/Crossfalls • Widths • Materials including slip resistance properties • Location of drainage points along accessways • Threshold ramps at pedestrian entrances, kerb ramps, ramps, handrails etc. as applicable.	Capable of compliance	The ground level car park gradients and spatial arrangement indicates an accessible path of travel appears to be provided from the accessible car parking.

No	BCA Requirements	Status of Compliance	Review and Discussion
3.	**Building Entrances** The BCA requires a continuous, accessible path of travel to be provided through the principal pedestrian entrance and not less than 50% of all pedestrian entrances, except for pedestrian entrances serving only areas exempted by D4D4.	Capable of compliance **Refer to marked plans for comment.**	A minimum 1in40 landing gradient will be required to both sides of each principal entrance to both the principal pedestrian entrance to the building at Lower Ground Level and at Upper Ground Level, with a difference in external & internal levels not greater than 35mm to facilitate a compliant threshold in accordance with clause 10.5 of AS1428.1-2009. Please note general to all entrances and accessible pathways containing strip drains; please ensure grated strip drains have circular openings not greater that 13mm in diameter; or where slotted openings are in use are they not greater than 13mm width, oriented so that the long dimension is at a right angle to the direction of travel. (NOTE: if slotted opening is less than 8mm, the slot length may continue across the width of the path of travel).

No	BCA Requirements	Status of Compliance	Review and Discussion
D4D4 & Parts of Buildings to be Accessible & AS 1428.1 Design for Accessibility & AS4299 – Adaptable Housing			
1.	**Doors – Circulation Spaces** All doors required to be accessible must fully comply with Section 13 of AS 1428.1 (2009) and clause 4.3.6 and 4.3.7 of AS4299. Doorways must be provided with circulation spaces in accordance with Clause 13.3 and relevant approach in Figures 31 and 32. Note: circulation spaces at doorways must have a gradient and crossfall not steeper than 1 in 40.	Capable of compliance.	Doors throughout are provided with adequate door circulation dimensions to satisfy the requirements of this Clause - including clauses 4.3.6 and 4.3.7 of AS4299. • All SOU entrance doors must have a level gradient no stepper than 1:40.
2.	**Door Clear Opening Width** Doorways located within a required accessible path of travel must have a clear door opening width of not less than 850mm in accordance with Clause 13.2 of AS 1428.1. Where a door required to be accessible has more than one door leaf, one of the leaves (the active leaf) must have a clear opening of 850mm.	Plant rooms and the like may be addressed under Clause D4D5.	Doors are generally provided with adequate circulation to satisfy the requirements of this Clause. As the design progress a further review of the door schedule identifying clear widths can be undertaken to ensure compliance is achieved, the exception being doors to cleaners' store, Main Switch & Comms Rooms and similar areas the Client may request to be exempt under clause D4D5.

No	BCA Requirements	Status of Compliance	Review and Discussion
3.	**Door Controls** All doors required to be accessible must be provided with controls and related hardware that fully comply with Clause 13.5 of AS 1428.1 (2009). Door controls must be capable of being unlocked/ opened by one hand and prevent the hand of a person who cannot grip from slipping whilst operating the latch. Door handle design should take into consideration the following requirements, including but not limited to: • Clearance of 35mm to 45mm between handle and back plate. • Height between 900mm – 1100mm. • Touch controls (security) located 500mm from internal corners.	Capable of compliance **Refer to marked plans for comment.**	Specification of door controls – hardware, to be confirmed.
4.	**Door Controls – Power operated** Manual controls to power-operated doors shall be located on the continuous accessible path of travel no closer than 500mm from an internal corner and between 1000 to 2000mm from the hinged door leaf in any position or clear of a surface-mounted sliding door in the open position.	Capable of compliance – . **Refer to marked plans for comment.**	Please ensure manual controls to operate automatic doors comply. • Power operated doors will have door controls at least 500mm from an internal corner and between 1000 – 2000mm from the hinged swing door leaf (in any position) / or doorway of sliding door with push button controls a min. of 25mm dia., proud of the surface (activating door before the button becomes level with surrounding surface).

No	BCA Requirements	Status of Compliance	Review and Discussion
5.	**Door Operating Forces** For doors other than fire doors and smoke doors where a door closer is fitted, the force required at the door handle to operate the door shall not exceed the following: i. To initially open the door – 20 Newtons (N) ii. (ii) To swing or slide the door – 20N **iii.** (iii) To hold the door open between 60° and 90° - 20N	Capable of compliance – **Refer to marked plans for comment.**	As part of the next design stage, please provide door schedule to indicate door closing devise to all doors and gates throughout. Ensure doors fitted with closers comply such as fire doors to Main Switch room and Comms room. • All doors other than fire doors and smoke doors where a door closer is fitted, the force required at the door handle to operate the door shall not exceed limitations set out in AS1428.1
6.	**Luminance Contrast for Doors** Clause 13.1 of AS 1428.1 requires all accessible doorways to have a minimum luminance contrast of 30% equivalent to a 50mm band between the door and the door frame or adjacent walls.	Capable of compliance –	As part of the next design stage, a colour selection of luminance contrast is required for assessment where required. Architectural design documents indicating luminance contrast at doors to be confirmed.
7.	**Door Thresholds** The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf.	Capable of compliance –	Details of door thresholds will be required to confirm compliance.

No	BCA Requirements	Status of Compliance	Review and Discussion
8.	**Internal Paths of Travel** Accessways complying with AS 1428.1 (2009) must be provided to and throughout areas of buildings required to be made accessible, including: • Minimum corridor widths of not less than 1000mm; • Passing spaces with a minimum width of 1800mm and minimum length of 2000mm to be provided in corridors at maximum 20m intervals where a direct line of sight is not available; and • Turning spaces of minimum 1540mm width and minimum 2070mm length to be provided within 2m of the end of corridors and at maximum 20m intervals. Note: a passing space may serve as a turning space. Increased landings are required at changes of direction, including 1500x1500mm turning spaces to facilitate a 60–90-degree turn.	Capable of compliance **Refer to marked plans for comment.**	The building has generally been provided with adequate corridor widths, passing spaces and turning spaces with internal corridors and circulation spaces found to comply with AS4299 clause 4.3.6 & 4.3.7. Please note: **External:** All walkways within or partly within a shared area will be marked with yellow slip resistant lines (unbroken longitudinal lines on both sides – excepting any side delineated by a kerb, barrier, wall)

No	BCA Requirements	Status of Compliance	Review and Discussion
9.	**Floor Finishes** The following applies to interior finished and surface materials: • D4D4 of the BCA requires where carpet or any soft flexible materials are used as flooring, the pile height or pile thickness is to be no greater than 11mm and the carpet backing to be not more than 4mm thick. • Clause 7 requires matting recessed within a continuous accessible path of travel to have a surface level difference to surrounding materials not more than 3mm for vertical and 5mm for rounded or bevelled edges. • Clause 7 specifies grates to have openings no greater than 13mm in diameter. Any slotted openings to be no more than 13mm wide and orientated perpendicular to the dominant direction of travel.	Capable of compliance **Refer to marked plans for comment.**	Ensure designated accessible SOU floor finishes and communal area floor finishes are designed to comply. • Proposed internal finishes abutting tiled balcony finishes throughout to have not more than 3mm for vertical and 5mm for rounded or bevelled edges. • Proposed vinyl finishes abutting concrete balcony finish to have not more than 3mm for vertical and 5mm for rounded or bevelled edges. • Matting is required to be confirmed. • Proposed carpet or external artificial turf to have pile height or pile thickness is to be no greater than 11mm and the carpet backing to be not more than 4mm thick. ❖ Architectural drawings indicating surfaces finishes on paths of travel will need to be incorporated in future design stages.
10.	**Switches and General-Purpose Outlets** Clause 14 of AS1428.1 requires all switches and controls on an accessible path of travel, excluding general purpose outlets to be located • Between 900mm and 1100mm above the plane of the finished floor • Not less than 500mm from internal corners except where installed on the latch side architrave.	Capable of compliance	Typically switches and controls on accessways are required to comply Clause 14 of AS1428.1.

No	BCA Requirements	Status of Compliance	Review and Discussion
11.	**Stairs - Non-Fire Isolated Stairs** All stairways, excluding fire-isolated stairs, must be designed and constructed in accordance with AS 1428.1, in particular: • Setback requirements at intersections at internal corridors. • Risers of opaque construction. • Design of stair nosings including profile and identification strip. • Tactile ground surface indicators (also AS1428.4.1). • Handrails to both sides of stair. • Handrail to have no vertical sections. • Extension of handrails at top and bottom of flight. • Design and construction of handrails.	Possible Performance solution may be required subject to further design review prior to Construction Certificate. **Refer to marked plans for comment.**	Non-fire isolated stairs throughout to achieve compliance with AS1428.1. However, proposed stairs serving lower ground level located near grid line A/4 is not currently shown to achieve compliance with AS1428.1 clause 11 & 12 requirements. It is understood this stair between the lower ground car park and upper ground external common area will not achieve full compliance with AS1428.1 requirements yet is to remain open (i.e. not fire isolated) and may be justified via an accessibility performance solution on a comparable basis, where this stairs may be compared and contrasted to the requirements for a fire isolated stairs and primarily used for egress purpose only.
12.	**Ramps** All ramps, excluding fire-isolated ramps used for emergency egress purposes only, must be designed and constructed in accordance with Clause 10.3 of AS 1428.1 (2009). The landing of a step ramp must not overlap the landing for any other step ramp or other ramp.	Capable of compliance	Current design indicates walkways will be utilised to serve as continuous accessible paths travel with the site topography eliminating the need for ramp construction. Refer to marked plans for further discussions on walkway requirements etc.

No	BCA Requirements	Status of Compliance	Review and Discussion
13.	**Handrails** In a required exit serving an area required to be accessible a handrail must be designed and be constructed to comply with clause 12 of AS 1428.1 (does not apply to lower handrail in primary school stair) Refer to Clause 12 of AS1428.1 for design requirements including but not limited to • Handrails and balustrades shall not encroach into required circulation spaces. • Cross-section of handrails shall be circular or elliptical. • not less than 30 mm or greater than 50 mm in height or width for not less than 270° around the uppermost surface • Exposed edges at ends and corners of handrails shall have a radius of not less than 5 mm. • Height not less than 865 mm nor more than 1000 mm • Securely fixed and rigid, and their ends shall be turned. • Clearance between a handrail and an adjacent wall surface or other obstruction shall be not less than 50 mm. This clearance shall extend above. • No obstruction to the passage of a hand along the rail, • Inside handrail at landings shall always be continuous	Possible Performance solution may be required subject to further design review prior to Construction Certificate as noted in item 11 above. **Refer to marked plans for comment.**	Current design indicates handrails serving accessible ambulant stairs will not achieve compliance where ambulant stairs serving lower ground level car park does not have handrails to both sides of stair. Additional to the NCC and the relevant Standards, it is highly recommended that the following be considered: • the tops of handrails are set no higher than **950mm** above the finished floor plane; • handrails be not more than **45mm** in diameter; handrails have a minimum **55mm** clearance between the adjacent wall surface or any other obstruction.

No	BCA Requirements	Status of Compliance	Review and Discussion
D4D5 Exemptions			
1.	The following areas are not required to be accessible: d) An area where access would be inappropriate because of the particular purpose for which the area is used. e) An area that would pose a health or safety risk for people with a disability. f) Any path of travel providing access only area exempt by (a) or (b).	Capable of Compliance	An area where design for accessibility is not intended to be provided is to be agreed with the access consultant and building certifier – these are to be confirmed by the design team. • Areas such as Lower Ground Level Main Switch Room, Fire Pump Room, Fire Tank Rom, OSD tank etc may be deemed as areas that would pose a health or safety risk for people with a disability.

No	BCA Requirements	Status of Compliance	Review and Discussion
4.4	**D4D6 Carparking**		
1.	**D4D6 – Accessible carparking** Accessible carparking spaces are to be provided on the allotment as per clause D4D6. Space need not be designated where there is a total of not more than 5 carparking spaces, so as to restrict the use of the carparking space only for people with a disability. Accessible Carparking spaces to comply with AS/NZS2890.6. This includes but is not limited to: • Designated parking space with minimum dimensions of 5400mm (l) X 2400mm (w); • Shared space with minimum dimensions of 5400mm (l) X 2400mm (w); and • Bollards to be provided • Minimum head clearances • Bollards	Possible Performance solution may be required subject to further design and prior to issue of Construction Certificate. **Refer to marked plans for comment.**	Landscape and Civil drawings indicating surfaces, levels, gradients etc. of spaces will be included in finalised tender stages prior to issue of Construction Certificate. • Architectural plans to clearly show overhead clearance of 2500mm to disabled accessible parking bays and shared area. The Lower Ground floor plan indicates an accessible car parking space contains structural column infringing on the shared area. If, after further design consideration, the column cannot be relocated, then a performance solution will be required to justify the arrangement.

No	BCA Requirements	Status of Compliance	Review and Discussion
D4D7 Signage			
1.	Braille and tactile signage is required to be provided throughout any building required to be made accessible in accordance with BCA specification D4D7 and AS1428.1 (2009) and must identify: • Each sanitary facility • Accessible unisex facilities and indicate whether the facility is suitable for left or right-handed use • Ambulant accessible sanitary facilities on the door of the cubicle • Where an entrance is not accessible, directional signage to identify nearest accessible entrance • Where a bank of sanitary facilities is not provided with an accessible sanitary facility, directional signage to identify nearest accessible sanitary facility. • Each door required by Part E4D5 to be provided with an exit sign and state “Exit” and “Level” followed by either the floor level number, the floor descriptor or combination of these.	Capable of compliance	Prior to issue of Construction Certificate drawings will be provided to demonstrate that signage has been specifically designed for people with disabilities in locations required by D4D7and E4D5 comply.

No	BCA Requirements	Status of Compliance	Review and Discussion
2.	**Specification 15 – Braille and tactile signs** The design and installation of Braille and tactile signage must satisfy the requirements of Spec D3.6. It is recommended designer review all aspects of Spec D3.6 however the following key issues are identified: • Braille and tactile components must be located not less than 1200mm and not higher than 1600mm above the floor/ground surface. • Lines of tactile characters must be not less than 1250mm nor more than 1350mm above the floor/ground surface. • Signs identifying sanitary facilities or hearing augmentation must be located on the wall on the latch side of the door and where this is not possible may be placed on the door (never on hinge side of door). • Braille and tactile specification is detailed in Specification D3.6	Capable of compliance	Prior to issue of Construction, the architectural drawings/specification detailing signage will be designed to comply.

No	BCA Requirements	Status of Compliance	Review and Discussion
D4D12 Tactile Indicators			
1.	Tactile ground surface indicators (TGSI's) are required to warn people who have a vision impairment they are approaching a hazardous location, such as stairways (other than fire isolated stairways and in the absence of a suitable barrier: • An overhead obstruction less than 2m above the floor level, other than a doorway; and • An accessway meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving and area referred to in D3.4, if there is no kerb or kerb ramp at that point. Refer to AS1428.4.1 for further clarification of the design for colour, luminance contrast, dimensions and locations of the tactile ground surface indicators. Note: tactile ground surface indicators are not required in to areas exempted under Clause D3.4.	Capable of compliance – **Refer to marked plans for comment.**	Prior to issue of Construction, the locations of tactile indicators will be shown to satisfy the requirements of this Clause. • Where the new carpark entrance intersects the public footpath, it is recommended to introduce TGSIs are provided at existing a clearly defined pedestrian crossing point with a level transition over a vehicular traffic way on the pathway(width x 600 – 800mm setback 300mm ± 10mm). • Documentation providing information on the type, luminance contrast and slip resistance of proposed tactile indicators is required.
D3.11 Ramps			
1.	On an accessway, a series of connected ramps must not have a combined vertical rise of more than 3.6m. • The landing of a step ramp must not overlap the landing for any other step ramp or other ramp.	Capable of compliance	For information.

No	BCA Requirements	Status of Compliance	Review and Discussion
	D4D13 Glazing on an Accessway		
1.	On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS1428.1. A **solid** contrasting line is required. Clause 6.6 of AS1428.1 details: • Location • Height • Format and • Luminance contrast	Capable of compliance –	Prior to issue of Construction it is assumed architectural drawings will identify areas of glazing and the location of the glazing strips to be capable of compliance as part of further design stages. Please ensure that a minimum of 30% luminance contrast is provided when viewed against surfaces within 2m of the glazing on the opposite side. **Note: In many instances, frosted applications may not achieve the required luminance contrast.**

No	BCA Requirements	Status of Compliance	Review and Discussion
E3D7 Passenger Lifts			
1.	E3D7 has specific requirements for type of lift that can be used. Passenger lifts suitable for people with a disability are provided in Table E3.6a, but each type of lift has some limitations for its use. Each type of lift also requires the provision of accessible features listed in Table E3.6b. Note this includes but is not limited to: • Handrails • Lift car size • Door opening width • Control buttons Note: Where a wheelchair is required to complete a 90 degree turn within a lift, the lift car must possess internal dimensions of not less than 1500x1500mm, to maintain a continuous accessible path of travel. Refer to Clause 6.5 of AS 1428.1 (2009).	Capable of compliance – **Refer to marked plans for comment.**	The building effective height exceeds 25m - at 28.65m - and will be served by two emergency lifts serving all levels of the building including the Lower Ground car park level. Prior to issue of Construction it is assumed accessible details will achieve compliance in accordance with AS1735.12.

No	BCA Requirements	Status of Compliance	Review and Discussion
	AS 1428.1 Design for Accessibility & AS4299 – Adaptable Housing		
1.	**AS 1428.1 - Accessible sanitary facilities** For this Class 2 building the following accessible facilities are required: • All accessible unit sanitary facilities and components shall be adaptable to potentially comply with AS1428.1 and preferably AS 1428.2. ○ 1 x Accessible unisex sanitary compartment with accessible shower to every accessible SOU	Capable of compliance	Each post adapted accessible unit provided at each level of the Class 2 building has allowed for accessible sanitary and shower facilities achieving the intent of AS4299-1995.
2.	**AS1428.1 – Design of Unisex Accessible Sanitary Facilities** All unisex accessible sanitary facilities to fully comply with AS 1428.1 (2009) Clause 15 and 16, including but not limited to: • Location of sanitary fixtures and fittings • Location, profile and dimension of grab rails • Clear width of the door opening • Circulation spaces to doorways, fixtures and fittings • Requirement for a shelf • Lever taps • Toilet seat 30% luminance contrast • WC back rest details Door lock. In use indicator and bolt or catch. Any snib catch handle to have minimum length of 45mm from the centre of the spindle.	Capable of compliance – **Refer to marked plans for comment.**	Each post adapted accessible unit will achieve the spatial requirements to comply with AS4299 and AS1428.1 clause 15.6 circulation space in accessible sanitary facilities. Please ensure location of fixtures and fittings demonstrate compliance with the requirements set out in this Clause at subsequent design stages.

No	BCA Requirements	Status of Compliance	Review and Discussion
3.	**AS4299 – Kitchen Areas** • A minimum clearance of 1550mm between all opposing base cabinets and walls to be provided at the outset, to allow for a 180 degree turn, in accordance with AS1428.1; • Benches to include 800mm work surface adjacent to the sink and cooktop; • Provide a workspace adjacent to the refrigerator; • Kitchen sink to be adjustable from 750mm-850mm in height, or replaceable; • Kitchen sink bowl shall be max 150mm deep or be replaceable; • The tap set shall have levers or sensor plate controls located no greater than 300mm from the front of the bench • The cooktop shall be provided with an isolation switch and controls which do not require reaching over hotplates and controls shall have raised cross-bars for ease of grip; • Elevation drawings to indicate location of oven to be located adjacent to a work surface (oven to be located underneath cooktop); • At least one double power point outlet within 300mm of the front of a work surface, and one provided for a refrigerator in such a position as to be easily accessible after the refrigerator is installed; • Hot water systems to be installed to deliver hot water at a maximum of 50°C at the hot water outlet; and • The floor surface shall be slip-resistant.	Capable of compliance – Refer to marked plans for comment	The latest architectural plans indicate post adapted accessible unit kitchen areas are provided with compliant spatial layouts. Please ensure location of fixtures and fittings demonstrate compliance with the requirements set out in this Clause at subsequent design stages.

No	BCA Requirements	Status of Compliance	Review and Discussion
4.	**AS4299 – Bedroom Areas** • The main bedroom shall be capable of accommodating a queen size bed (1530 x 2030mm), a wardrobe and the circulation space requirements of AS1428.2, clear of wardrobe fixtures; and • A minimum of two double socket general purpose outlets shall be provided on the wall of the bedroom where the bedhead is likely to be located.	Capable of compliance – **Refer to marked plans for comment**	The latest architectural plans indicate post adapted accessible unit bedrooms areas are provided with compliant spatial layouts. Please ensure location of fixtures and fittings demonstrate compliance with the requirements set out in this Clause at subsequent design stages.
5.	**AS4299 – Living Areas** • Indicate provision for a telephone adjacent a power point; and • Full height glazed panels or door units where provided shall have a transom at 600-730mm above floor level. Glazing shall be of a safety glazing material; • (iii) Accommodate a 2250mm diameter circulation space after furniture has been place.	Possible Performance solution may be required subject to further design **Refer to marked plans for comment**	The latest architectural plans indicate post adapted accessible unit living areas are provided with compliant spatial layouts. However, the current window design will not achieve compliance with the requirements of clause 4.6 of AS4299, where BCA design considerations will take precedence over the requirements of the adaptable housing standard. This technical discrepancy cab be justified via an accessibility performance solution carried out by a Qualified Access Consultant accordingly.

8 RECOMMENDATIONS

8.1 BCA ASSESSMENT

Lot 303 Croatia Avenue, Edmondson Park Residential development has been designed to comply with the National Construction Code (NCC) through a Deemed to Satisfy approach / combination of Performance Solutions and Deemed to Satisfy Solutions. Axis Building Certification have reviewed the design documentation associated with the Development Application and consider that compliance with the NCC is able to be achieved (*subject to further design details and progression of the performance solutions identified in this document prior to issue of Construction Certificate)*.

Where compliance is intended to be demonstrated with the Performance Requirements directly rather than via the prescriptive DtS requirements, these items are identified and summarised below. We understand Holmes Australia LP have been engaged to complete a fire engineered assessment of the above potential Performance Solutions to demonstrate that the proposed design meets the relevant Performance Requirements of the NCC. The proposed Performance Solutions and methods of assessment related to fire safety are to be discussed and agreed between all relevant stakeholders prior to issue of Certificate of Construction.

Fire Engineering Solutions

Item	Description	DTS Clause	Performance Requirements
1.	Openings in external walls are located within 3m of the boundary along the eastern allotment boundary.	C4D5 S5C2	C1P2, C1P8
2.	Enclosure of Shafts- Shafts required to have an FRL must be enclosed at the top and bottom by construction having an FRL not less than that required for the walls of a non-loadbearing shaft in the same building.; This will not be achieved to bottom of shaft opening into waste room at lower ground level.	S5C8	C1P1, C1P2
3.	Distance of travel is exceeded in following areas: Travel distance from an exit exceeding 6m of SOU's at Levels 1 to 8.	D2D5	D1P4, E2P2
4.	The current design contains fire isolated stairs running into a proposed fire isolated passageway leading out to open space that necessitates passing within 6m of external walls to be fire protected for 3m above/below the path of travel, which cannot be achieved where walls currently contain openings to communal bike shed	D2D12	D1P5, D1P6
5.	The proposed pump room located at lower ground level does not have a door leading directly to opening to a road or open space, or an air lock or smoke lobby that leads to - - fire-isolated passageway or stair; leading to road or open space or	E1D2	E1P3

	- fire-isolated passageway or stair pressurised in accordance with AS1668.1, leading to road or open space.		
6.	Where dedicated EV chargers are installed anywhere in the building, a risk assessment must be carried out by a suitably qualified and experienced fire engineer and subsequently justified in a fire engineered performance soljution to ensure protection to occupants and the building is provided to the degree necessary. Please be aware the FRNSW have published a position statement on the inclusion of EV chargers in the building. See link; https://www.fire.nsw.gov.au/page.php?id=9447&position=8	E1D17	C1P9 E1P3, E1P4

Additionally, the table below identifies those performance solutions applicable to the project that will be developed by disciplines other than fire engineering.

General Performance Solutions

Item	Description	DTS Clause	Performance Requirements
1.	As there are no deemed-to-satisfy provisions for the weatherproofing of external walls, compliance for external weatherproofing of external walls must be demonstrated directly against the relevant performance criterion. This applies to all commercial buildings.	N/A	F3P1
2.	The methodology to obtain natural ventilation to residential units requires the bedroom & living room accommodation to be considered as 1 room and the required ventilation is borrowed from the adjoining verandah with the “hallway” areas of each unit deemed to be excluded as they are argued to be non-habitable. This is therefore technically a performance solution that justifies the current arrangement in lieu of making GFA alterations and increase in air intakes from alternative locations.	F6D7	F6F3

8.2 ACCESSIBILITY

The table below highlights key issues that are to be addressed by the Design Team to ensure access for people with disabilities is achieved by the proposed design, post development application and prior to issue of Construction Certificate to be issued by the relevant Building Certifier.

This may include revised design and / or performance solution reports to demonstrate compliance with the performance requirements of the BCA.

No.	Description of BCA Performance Solution	DTS Provision	Performance Requirement
1.	Accessible car parking space contains structural column infringing on the shared area	D4D6	D1P1 & D1P2
2.	Stair serving the lower ground car park will not achieve full compliance with AS1428.1 requirements for ambulant stairs.	D4D4	D1P1 & D1P2
3.	Post adapted unit window design will not achieve compliance with the requirements of clause 4.6 of AS4299, where BCA design considerations will take precedence over the requirements of the adaptable housing standard	AS4299 (NSW - in lieu of BCA G7 Livable Housing)	D1P1 & D1P2

9 CONCLUSION

The developed design documents reviewed are considered capable of achieving compliance with the assessment provisions of the Building Act, suitable for Development Application. Similarly, the proposed development will satisfy the DDA and BCA requirements for persons with disability to have accessibility to and within the proposed development.

Prior to Construction Certificate there will be further detailed design and attention to technical matters contained in the body of this report prior to construction commencing , with performance solution reports required where critical design dimensions cannot be altered to achieve deemed to satisfy requirements of the BCA.