STEVE WATSON
& PARTNERS

Hills Marketplace - 287 Mona Vale Road, Terrey Hills, NSW 2084

BCA Assessment Report

Report 2021/1055 R3.0

Prepared for Hills Marketplace Pty Ltd
May 2023

Steve Watson and Partners Pty Ltd

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Revision History

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Author:	Oscar Lee
Verifier:	Mathew Kanaan

Disclaimer:

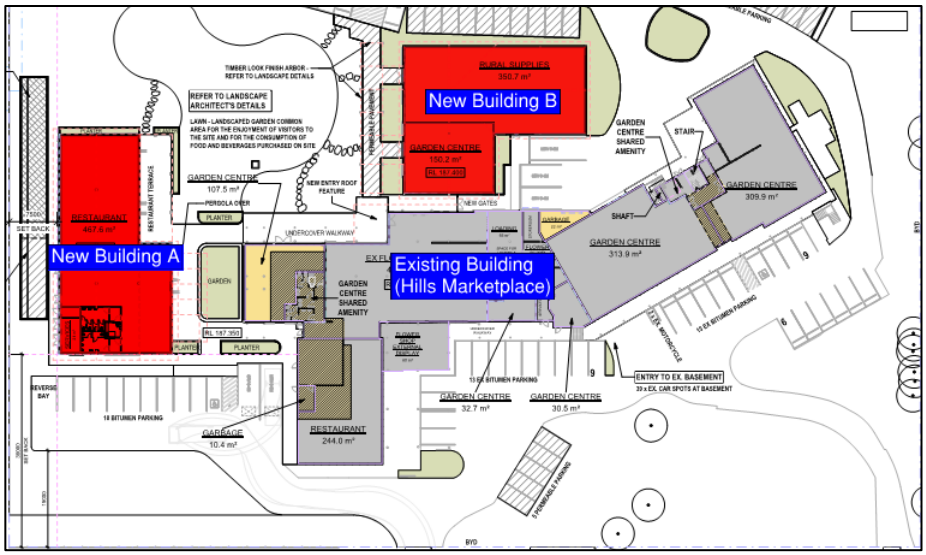
This report is based on a desktop audit of preliminary documentation only.
Details contained in the report address issues of significance to broad BCA compliance relevant to this stage of design resolution.

This report is based on a review of the design documentation only. It represents a compliance report for "documentation to this point in time" and will be subject to amendment and expansion as project documentation develops

Executive Summary

An assessment of the proposed design of the works at Hills Marketplace - 287 Mona Vale Road, Terrey Hills, NSW 2084 has been undertaken against the Deemed-to-Satisfy (DTS) provisions of the relevant sections of the Building Code of Australia and the applicable Building Regulations. This report details the non-compliances identified that require either amendments to plans or an Alternative Solution to satisfy the Performance Requirements of the BCA.

For the purposes of this report the proposed buildings will be referred to as New Building A & New Building B when discussing key compliance matters. The extract below identifies the locations of said buildings.



Summary of BCA Parameters:

New Building A

Building Use:	Food & Drink Premises
Class of Occupancy	Class 6
Type of Construction Required	Type C
Rise Storeys:	1
Number of Storeys:	1

New Building B

Building Use:	Retail Premises
Class of Occupancy	Class 6
Type of Construction Required	Type C
Rise Storeys:	1
Number of Storeys:	1

Please refer to section 10 of this report for details on areas where compliance matters remain unresolved or undetermined.

The design is capable of complying with the requirements of the relevant sections of the Environmental Planning Assessment Act 1979, the Environmental Planning and Assessment Regulations 2021 and the Building Code of Australia 2022. Compliance is subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report.

Further detailed regulatory reviews will need to be progressively undertaken as designs advance and become more resolved to ensure compliance is achieved.

Whilst not precluding the issue of a Construction Certificate, it is noted that many detailed design issues are not indicated on the drawings. These issues are designated “Compliance Readily Achievable” in the *“Status*” column of the assessment in section 14 of the report and should be resolved prior to construction.

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GLOSSARY

Building Code of Australia - BCA, National Construction Code - NCC

Deemed-to-Satisfy - Dts

Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 - EPAR (DCFS)

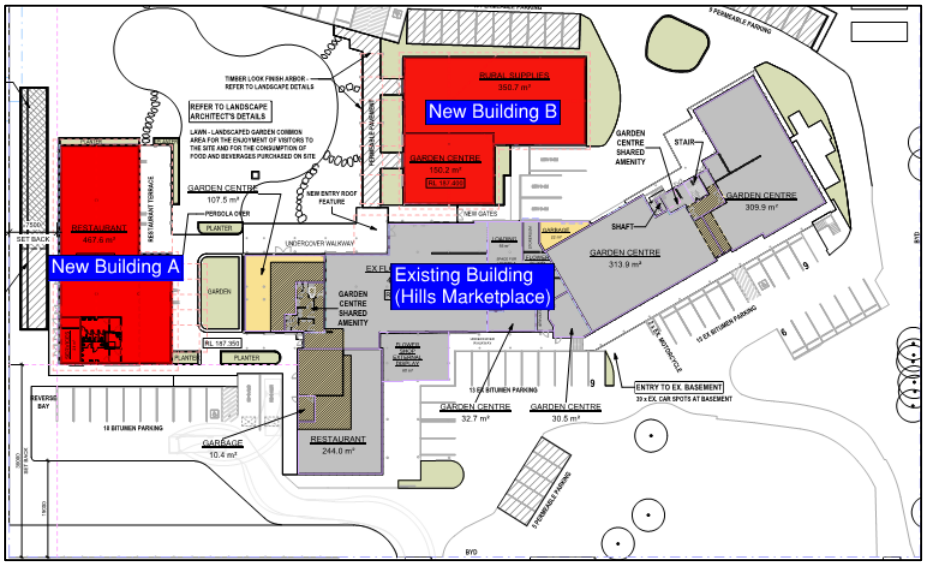
Environmental Planning and Assessment Act 1979 No 203 - EPAA

Environmental Planning and Assessment Regulation 2021 - EPAR

1. Introduction

An assessment of the proposed design of the works at Hills Marketplace - 287 Mona Vale Road, Terrey Hills, NSW 2084 has been undertaken against the Deemed-to-Satisfy (DTS) provisions of the relevant sections of the Building Code of Australia and the applicable Building Regulations. This report details the non-compliances identified that require either amendments to plans or an Alternative Solution to satisfy the Performance Requirements of the BCA.

For the purposes of this report the proposed buildings will be referred to as New Building A & New Building B when discussing key compliance matters. The extract below identifies the locations of said buildings.



It has been prepared by Steve Watson and Partners for Hills Marketplace Pty Ltd

2. Purpose

The purpose of this report is to provide an assessment of the design documentation against the current requirements of the BCA.

The assessment is undertaken for the purpose of, and to the extent necessary for, construction certification to be issued under Part 6 of the NSW Environmental Planning and Assessment Act 1979 No 203, Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 and Environmental Planning and Assessment Regulation 2021.

3. Scope and Limitations

3.1. Scope

The scope of this assessment is limited to the the design documentation referenced in Appendix A of this report.

3.2. Limitations

The following limitations apply to the assessment:

- The report considers matters of a significant nature only and should not be considered exhaustive.
- The plans are assessed to the extent necessary to issue a construction certificate under Part 6 of The Act. This means the design has been assessed to be capable of complying with the BCA without necessarily having all the detailed design completed at this stage.
- Details in regard to access for people with disabilities have been assessed to the extent of the deemed-to-satisfy provisions of the BCA/Premises Standard only. A detailed assessment against AS 1428 series, AS/NZS 2890.6 - 2009 and AS 4299 - 1995 is outside the scope of this report
- Generally, the assessment does not incorporate a detailed assessment of the requirements of the Australian Standards.
- Structural and services documentation have not been reviewed.
- Appraisals are limited to the provisions of the BCA. Other legislative requirements have not been considered. It does not address additional or specific requirements stipulated under other areas such as Safety in Design, Construction Safety, Disability Discrimination, Planning and Environment, Occupational Health and Safety, Health, Dangerous Goods, etc, which may impact on the design and use of the building. It is recommended that appropriate advice from suitably qualified consultants should be obtained for further information on these areas
- The BCA report and associated compliance advice is not intended or permitted to be relied on by any other party with respect to their obligations to ensure compliance including but not limited to the making of a compliance declaration under the NSW Design and Building Professionals Act.

4. National Construction Code BCA 2022- Volume 1: Building Code of Australia Class 2 to Class 9 Buildings

The National Construction Code (NCC) is a uniform set of technical provisions for the design and construction of buildings, structures and plumbing/drainage systems which is separated into 3 volumes. Volume 1 of the NCC is the Building Code of Australia (BCA) for Class 2 to 9 buildings which is the document to which the assessment in this report has been undertaken against. The BCA is legislated under The Act and specifies the Performance Requirements for the design and construction of Class 2 to 9 buildings that must be satisfied to achieve compliance. The Performance Requirements can only be satisfied by a Performance Solution, Deemed-to-Satisfy (DTS) solution or a combination of both.

5. Performance Solutions

The BCA is written in a performance format which allows performance-based buildings. This has allowed for innovation and variation from the prescriptive deemed-to-satisfy requirements of the BCA, whilst maintaining the principal levels of health, safety and amenity of building occupants.

Performance solutions are generally adopted when a nominated deemed-to-satisfy provision appears inappropriate for the design, or when a proposed design varies from the prescriptive requirements of the

BCA. Subsequently, a performance solution supported by Fire Engineering analysis can determine whether a proposed design that varies from prescriptive requirements, will satisfactorily meet the performance provisions of the BCA. Ultimately, it is with the discretion of the relevant building surveyor whether to accept a deviation from the prescriptive code requirements.

Utilising the performance provisions may result in a more economical and somewhat safer building, however alternative solutions may require additional on-going maintenance. It is in this instance that all parties, such as the building owner, insurance companies, proposed tenants, etc., are aware of this decision-making process and are kept informed of any additional requirements needed to maintain the level of safety.

6. Statutory Framework

The following table summarises the key statutory issues relating to fire safety and the BCA in relation to the certification of new building works.

Issue	Legislative reference	Comment
Existing building fire safety	EPAR S64	Council may require upgrading in some circumstances
Alts and adds - no change in use	EPAR (DCFS) S14(3)	No reduction in the level of safety permitted
New Work	EPAR (DCFS) S19	All new works must comply
Access to premises	Disability (Access to Premises — Buildings) Standards 2010	Upgrade of the "Affected Part" to provide access for people with disabilities

6.1. New Work

Section 19 of the EPAR (DCFS) requires that all new work comply with the current requirements of the BCA.

This means that all works proposed in the plans are required to comply but that existing features of an existing building need not comply with the BCA unless required to under other clauses of the legislation.

6.2. Consent authority may require building to be upgraded

When determining a development application, a Consent Authority (Council) is required to assess fire safety in an existing building under Section 64 of the EPAR.

The assessment must consider whether the measures contained in a building are inadequate

(i) to protect persons using the building and facilitate their egress in the event of a fire or

(ii) to restrict the spread of fire between buildings.

In determining a development application, the consent authority is to take into consideration whether it would be appropriate for the building to be brought into total or partial conformity with the BCA. Normally this discretionary power would only be enacted in the following circumstances:

- the proposed scope of works encompasses a large portion of the building so that a total building upgrade would not be considered an onerous requirement (i.e. ½ the total volume of the building including other works undertaken in the last 3 years);
- the upgrading measure(s) significantly increase the level of safety and are able to be cost-effectively incorporated into the proposed works so that they would not be considered an onerous requirement.
- the existing level of safety is so deficient that the council consider an upgrade is necessary irrespective of the scope of works proposed.

Note: ***The majority of the proposed works have been deemed the construction of two new buildings which are proposed to be independent of the existing structures. Only minor alterations and reconfigurations have been proposed to the existing centre, as such it would not be SWP's recommendation that the existing buildings be subjected to statutory upgrades.***

It remains at the discretion of the consent authority as to whether the works to the existing building will constitute the requirement for building upgrades under Section 64 of the EPAR.

6.3. No change of building use - structural strength and fire safety

Section 14(3) of the EPAR (DCFS) prevents a certifying authority from issuing a construction certificate if the proposed new work will result in a reduction to the fire protection and structural capacity of the building.

6.4. Access to premises

The Disability (Access to Premises - Buildings) Standards came into force via BCA2011 throughout Australia on 01 May 2011, and with it introduced a higher standard of access to that required by previous versions of the BCA. In prescribed circumstances, the legislation requires upgrade of access and facilities for persons with disabilities when building work is proposed. In particular, unless works are undertaken by a lessee who does not lease the entire building, proposed building work anywhere in the building could trigger a need for enhanced access at the main building pedestrian entry and from that entry to all areas of the building that are subject to the building work.

7. Methodology

7.1. Process adopted

The following method of assessment has been used in the preparation of this report:

1) Determine the basic assessment data for the building.
2) Assess the design of the building against the current Deemed-to-Satisfy requirements of Sections B, C, D, E, F, G, H and J of the BCA. Establish the status of each clause into the following categories:
    1. Clause is administrative information only **(Noted)**;
    2. Clause is or is not relevant to the proposed work **(Applicable or N/A)**
    3. The proposed work complies with the requirements of the clause **(Complies)**;
    4. Compliance with the requirements of the clause is unable to be determined from the documentation provided **(Compliance Readily Achievable)**. A recommendation in the "Comments" column will indicate what is required to achieve compliance. The design and construction teams are responsible to ensure compliance is achieved;
    5. Compliance with the requirements of the clause is unable to be determined from the documentation provided. Additional details or relevant information required to verify compliance (**Additional Details Required**);
    6. Proposed work does not comply with the requirements of the clause **(Does Not Comply)**. An indication will be given in the Comments field as to the nature of the issue and whether an alternative solution has been proposed to address the issue;
    7. Proposed work is to be addressed on a performance basis via an Alternative Solution satisfying the relevant Performance Requirements. (**Performance Solution**);
3) Nominate the status of the design against each BCA requirement;
4) Provide comments against each BCA requirement as appropriate.

8. Description of Proposed Development

The proposed development involves the construction of two new buildings (Building A and Building B) and alterations to parts of the existing centre. Building A is a single-storey building being utilised as a class 6 restaurant area. Building B is a single-storey building being consisting of a class 6 rural supplies area and class 6 garden centre.

It is located on 287 Mona Vale Road, Terrey Hills, NSW 2084.

9. Assessment Data Summary

The following basic assessment data has been drawn from the provisions of the BCA 2022.

9.1. Assumptions

The sanitary facility calculation assessment has been undertaken with a reliance on the estimated population count provided by Hills Marketplace for both the existing and proposed buildings. The population numbers provided include a total of 36 employees and 336 customers/patrons throughout the development consisting of the existing and proposed buildings.

9.2. Interpretations

A number of issues within the BCA are recognised to be interpretive in nature. Where these issues are encountered, interpretations are made that are consistent with Standard Industry Practise and/or Steve Watson & Partners policy formulated in regard of each issue.

10. Issues Requiring Resolution

10.1. Issues requiring amendments to plans, additional details or documentation.

The following issues either need to be resolved or require further details and/or documentation to be provided to ensure compliance before issuing the Construction Certificate.

Item	DTS Clause	Description	Requirement to Satisfy BCA
1.	**C4D3**	**Protection of openings in external walls**	The plans provided do not indicate that openings within parts of new Building A and B external walls are within 6m of another building on the same allotment. Where this detail is developed further the design team will be required to identify how compliance with C4D5 will be achieved.
2.	**C4D5**	**Acceptable method of protection**	The plans provided do not indicate that openings within parts of new Building A and B external walls are within 6m of another building on the same allotment. Where this detail is developed further the design team will be required to identify how compliance with C4D5 will be achieved.
3.	**D2D9**	**Width of doorways in exits or paths of travel to exits**	The plans provided indicate some of the doors with non-compliant widths of doorways. Compliant widths of doorways will need to be evidenced on the CC architectural package.
4.	**D2D15**	**Discharge from exits**	The proposed discharge from New Buildings will need to be addressed on a performance basis where open space is not available once an occupant has left the building – open space requires the point of discharge to be open to the sky. Current arrangements would see the discharge from building A requiring occupants to discharge and travel under a covered walkway for an extended duration until reaching the road within the allotment.
5.	**D3D26**	**Operation of latch**	Compliance with the operation of latch will need to be documented on the CC architectural package.

Item	DTS Clause	Description	Requirement to Satisfy BCA
6.	**E1D2**	**Fire hydrants**	The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building from the available hydrants and must provide design certification to accompany the drawings certifying the design complies with Clause E1D2 of the BCA and AS2419.1 – 2021.
7.	**E1D3**	**Fire hose reels**	The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building and must provide design certification to accompany the drawings certifying the design complies with Clause E1D3 of the BCA and AS2441 – 2005.
8.	**F5D2**	**Height of rooms and other spaces**	Additional detailed sections and elevations will be required to form part of the CC package.
9.	**Section J**	**Energy efficiency measures**	A suitably qualified ESD / Section J consultant would need to be engaged to undertake a complete assessment of the provisions found within Section J.

10.2. Performance solutions required.

It is proposed to satisfy the following non-compliances via performance solutions:

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	***Discharge from exits***	**D2D15**	The proposed discharge from New Buildings will need to be addressed on a performance basis where open space is not available once an occupant has left the building – open space requires the point of discharge to be open to the sky. Current arrangements would see the discharge from building A and altered areas of the existing building requiring occupants to discharge and travel under a covered walkway for an extended duration until reaching the road within the allotment.	**D1P4**

11. Relevant Authorities

Where an alternative solution is proposed to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions referral to Fire and Rescue NSW under Section 26 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 is required in either of the following types of buildings:

(a) a class 9a building that is proposed to have a total floor area of 2,000 square metres or more, or

(b) a building (other than a class 9a building) that is proposed to have:

(i) a fire compartment with a total floor area of more than 2,000 square metres, or

(ii) a total floor area of more than 6,000 square metres,

12. Statutory Fire Safety Measures

All fire/essential safety measures installed within the building are required required to be certified upon completion of the project and prior to occupation of the building by the owner of the building, by issuing a Final Fire Safety Certificate under the Act.

The owner is also required under the Act to certify each of the Fire Safety Measures annually by issuing a Fire Safety Statement.

With performance solutions, additional or more frequent maintenance may result.

13. Conclusion

The design is capable of complying with the requirements of the relevant sections of the of the Act and EPAR (DCFS) 2021, EPAR 2021 and the BCA 2022 subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report.

Further detailed regulatory reviews will need to be progressively undertaken as designs advance and become more resolved to ensure compliance is achieved.

14. BCA 2022 - Clause by Clause Assessment

<table>
<tr><th>Clause</th><th>Description</th><th>Comment</th><th>Status</th></tr>
<tr><td colspan="3">BCA Version</td><td></td></tr>
<tr><td>BCA 2022</td><td>BCA version
The BCA is generally updated every 3 years with amendments influencing health, safety and amenity features required within the building. Legislation typically allows future BCA changes to be ignored provided substantial progress on the design of the development has previously occurred.</td><td>This report assumes that the applicable BCA version is BCA 2022. In addition, requirements of the Premises Standards (PS) are covered as relevant.
NCC 2022 uses a new structure and clause referencing system. This system is called Section-Part-Type-Clause (SPTC).
An example of the (SPTC) referencing system is expanded upon below:
<table>
<tr><th>Ref</th><th>Description</th></tr>
<tr><td>Section</td><td>Refers to the applicable section of the NCC.

e.g., Section D - Access and egress

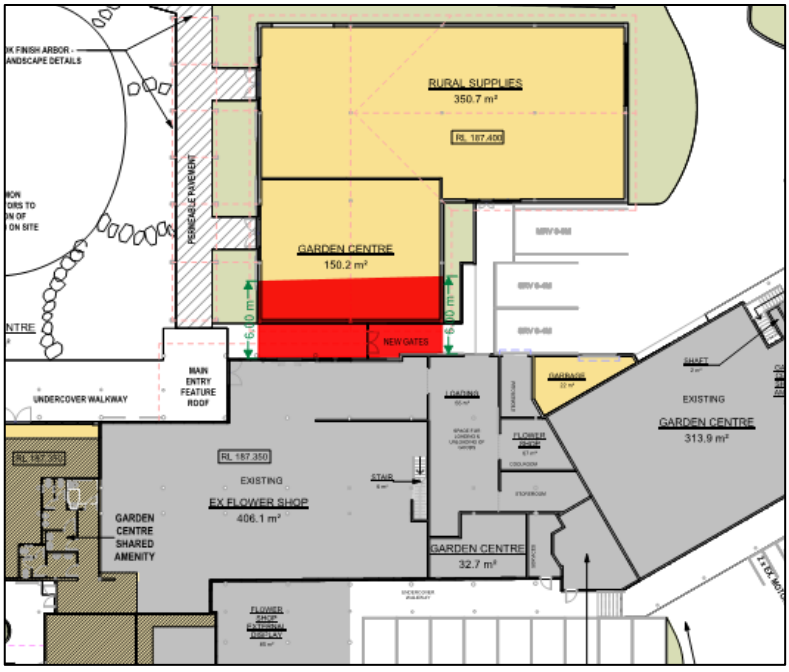
Section lettering will mostly stay as per previous editions of the National Construction Code.</td></tr>
<tr><td>Part</td><td>Part identifies the part of the applicable section.

e.g., Part D2 - Provisions for escape.</td></tr>
<tr><td>Type</td><td>Type refers to the type of Clause:

O - Objective
F - Functional Statement
P - Performance Requirement
V - Verification Method
D - Deemed-to-Satisfy
C - Specification
G - Governing Requirements</td></tr>
<tr><td>Clause</td><td>Clause refers to the number within the Type group.</td></tr>
</table></td><td>Noted</td></tr>
<tr><td colspan="3">Section A: General Provisions</td><td></td></tr>
<tr><td>A5G3</td><td>Suitability of materials
Every part of a building must be constructed in an appropriate manner to achieve the requirements of the BCA, using materials that are fit for the purpose for which they are intended.</td><td>The builder is responsible to adopt and install appropriate proprietary accredited building products and is to ensure that those products/assemblies are fit for the purpose they are intended and are installed in accordance with the manufacturer’s specifications/ requirements for that system.</td><td>Applicable</td></tr>
<tr><td>Part A6</td><td colspan="2">Classification and usage</td><td>Noted</td></tr>
</table>

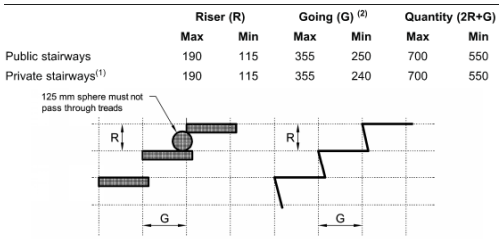
Clause	Description	Comment	Status
	Usage of each building is as follows: **Building** **USE** **CLASS** Building A Food & Drink Premises 6 Building B Retail 6		
Section B: Structure			
B1D2	**Resistance to actions** The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage.	Noted
B1D3	**Determination of individual actions** The magnitude of individual actions must be determined in accordance with Clause B1D3 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage.	Noted
B1D4	**Determination of structural resistance of materials and forms of construction** The structural resistance of materials and forms of construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1D4 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Noted
B1D5	**Structural software** Structural software used in computer aided design of a building or structure that uses design criteria based on DTS provisions of the BCA must comply with the ABCB Protocol for Structural Software.		Noted
Section C: Fire Resistance			
Part C2 - Fire Resistance and Stability			
C2D2	**Type of construction required** **Type C Construction** BCA Type C fire resisting construction is required. Refer to Appendix C2D2 for the required FRLs for each building element.	Details of the proposed construction and how it will achieve the required FRL is to be provided. Certification from a structural engineer will be required for FRL's of all structural elements.	Applicable
Specification 5	**Fire resisting construction** *Support of another part* Where a 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 FRL not less than that required for the part if supports and be non-combustible. *Attachments* The method of attaching or installing a finish, lining, ancillary element or service to a building element must not reduce the fire resistance of that element. *Enclosure of shafts* Shafts required to have an FRL must be enclosed at the top and bottom by construction have an FRL not less than that required for the walls of the shaft. Shafts, other than one enclosing a fire isolated stairway or ramp, do not require an FRL at the top if the shaft extends beyond the roof covering.		Applicable
C2D3	**Calculation of rise in storeys** **Effective Height / Calculation of rise in storeys**.		Noted

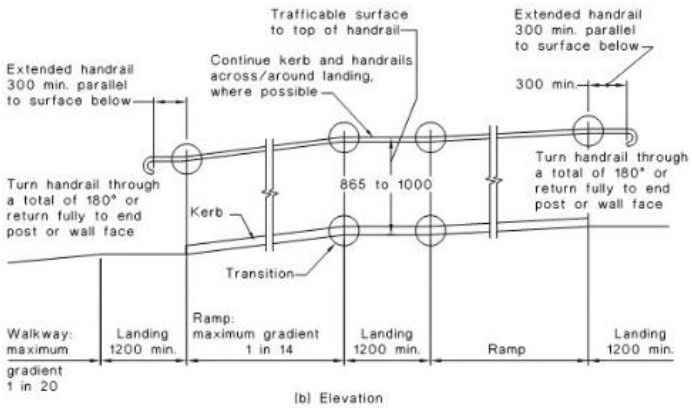
Clause	Description	Comment	Status
	Rise in storeys is a defined BCA term addressing the number of main building levels excluding basements. Effective height is defined under the BCA as vertical distance between the floor of the lowest storey included in the calculation of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units). ***The proposed buildings (A & B) have no effective height.***		
C2D4	**Buildings of multiple classification**	The proposed buildings only consist of one classification.	Noted
C2D9	**Lightweight construction** Lightweight construction used in a wall system must comply with Specification 6 - Structural tests for lightweight construction. Lightweight construction used as a fire-resisting covering of a steel column or the like, and where the covering is not in continuous contact with the column must have the voids filled to a height of not less than 1.2m above the floor and where the column is liable to be damaged must be protected by steel or other suitable material.	Where required by the design, fire rated wall types must match a tested protype. Product codes should be noted on the wall type schedule and corresponding test reports provided for review.	Applicable
C2D11	**Fire hazard properties** *(NSW variation for Entertainment Venues)* Floor materials, floor coverings and wall and ceiling lining materials need to comply with prescribed fire hazard properties. Refer to Appendix C2D11 & compliance with AS5637.1-2015.	Compliance assumed and will require verification test data for all timber and other combustible linings and materials, including: • Carpets • Vinyls (walling and flooring) • Timber flooring and wall linings • Veneered wall panelling • Spray-on insulation material • Other combustible finishes • Carpark soffit insulation fire test reports, based on 'room fire testing' will be required to meet fire brigade consent conditions if applicable.	Compliance Readily Achievable
Part C3 - Compartmentation and Separation			
C3D3	**General floor area and volume limitations (Type C construction)** The floor area and volume limitations are: Class 6: 2,000m^2 and 12,000m^3	The floor area and volume of the largest fire compartments in the buildings do not exceed the maximum limitations outlined by Table C3D3.	Complies
C3D13	**Separation of equipment** 2hr fire separation is required for: • Lift motor rooms. • Emergency generators sustaining emergency equipment operating in emergency mode. • Central mechanical smoke control plant. • Boilers. A battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more.		Compliance Readily Achievable
C3D14	**Electricity supply system** A substation located within a building or main switchboard that sustains emergency equipment must be separated from the remainder of the building by 2hr fire rated construction.		Noted

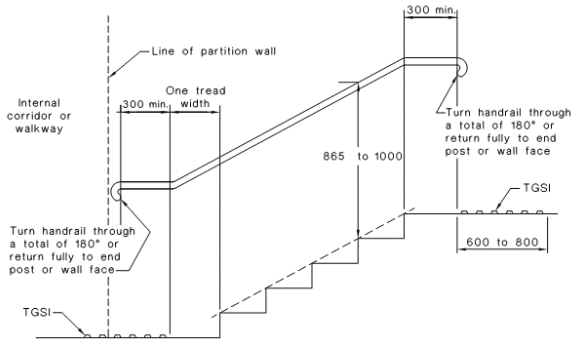
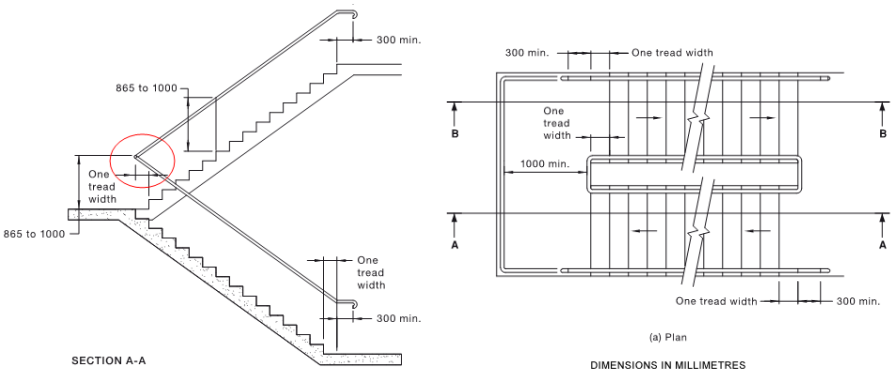
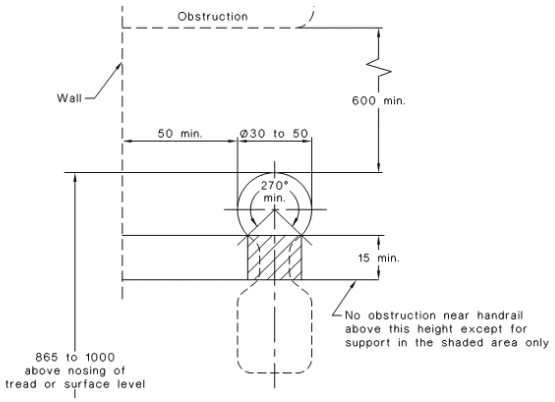
Clause	Description	Comment	Status
	Switchboards sustaining emergency equipment must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of faults.		
Part C4 - Protection of Openings			
C4D3	**Protection of openings in external walls** Openings in the external walls of the building are to be protected in accordance with C4D5, being fire rated windows, external sprinklers or the like, if they are: • Less than 3m to side or rear boundary, • Less than 6m from the far boundary of a road or lane, • Less than 6m from another building on the same allotment. Openings that require protection should not occupy more than $^1/_3$ of the external wall of the storey in which it is located. ***The plans provided do not indicate that openings within parts of new Building A and B external walls are within 6m of another building on the same allotment. Where this detail is developed further the design team will be required to identify how compliance with C4D5 will be achieved.***		Additional Details Required
C4D5	**Acceptable method of protection** • Window openings are to be protected by external wall wetting sprinklers and must automatically close or be permanently fixed in the closed position, -/60/- fire windows that are automatic closing or permanently fixed closed or -/60/60 automatic closing fire shutters. • Doorways are to be protected by external wall wetting sprinklers used with doors that are self-closing or automatic closing, or -/60/30 self-closing or automatic closing fire doors. • Other openings, excluding voids, are to be protected with external wall wetting sprinklers or construction having an FRL not less than -/60/-. ***The plans provided do not indicate that openings within parts of new Building A and B external walls are within 6m of another building on the same allotment. Where this detail is developed further the design team will be required to identify how compliance with C4D5 will be achieved.*** ***Please note that the any openings within the shaded zones below will be required to be provided with an acceptable method of protection as prescribed above.*** ***(Note openings which are shielded by parts of the new external wall will not require protection)*** 		Additional Details Required

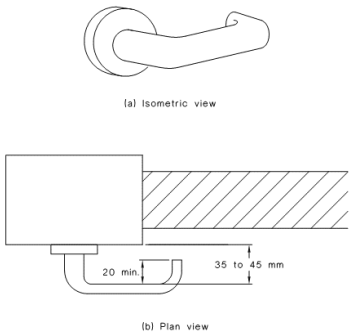
Clause	Description	Comment	Status
C4D9	**Openings in fire-isolated exits** -/60/30 self-closing fire doors are required to doorways providing access to fire isolated stairways.		N/A
C4D10	**Service penetrations in fire-isolated exits** Service penetrations other than electrical wiring for essential service installations or water pipes for fire services are not permissible.		N/A
C4D11	**Openings in fire-isolated lift shafts** Openings in lift shafts are to be protected by -/60/- fire doors complying with AS1735.11. Lift indicator panels are to be backed by construction having an FRL of not less than -/60/60 if they exceed 35,000mm^2 (175 X 200 mm).		N/A
C4D15	**Openings for service installations** Services penetrations through a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, must comply with a tested system or Specification 13. Methods and materials used are to be identical to tested prototypes and in accordance with AS4072.1 and AS1530.4 and must achieve the required FRL or resistance to the incipient spread of fire or other specified method. Ventilation and air-conditioning systems are to be installed in accordance with AS/NZS 1668.1.		Applicable
C4D16	**Construction Joints** Construction joints in elements required to have a fire resistance with respect to integrity and insulation must be protected.	Construction joints are to be fire protected in a manner identical to a prototype tested in accordance with AS4072.1 and AS1530.4 to achieve the required FRL or must otherwise comply with the requirements of this clause.	Applicable
C4D17	**Columns protected with lightweight construction to achieve an FRL**	Columns must be protected in accordance with the identical tested prototype. Product codes should be noted on architectural plans and corresponding test reports provided for review.	Applicable
Section D: Access and Egress			
Part D2 - Provision for Escape			
D2D3	**Number of exits required** At least one exit must be provided from each storey. Based on the plans provided this complies.		Applicable
D2D4	**When fire-isolated stairways and ramps are required** Every stair in a Class 5 to 9 building must be fire isolated unless it does not connect or pass through more than 3 consecutive floors in a sprinkler protected building, or 2 storeys in a non-sprinkler protected building.		N/A
D2D5	**Exit travel distances** The BCA limits maximum travel distances to a point of choice and to an exit. No point on the floor must be more than 20m to an exit or a point in which travel in different directions to 2 exits is available, in which case, the maximum distance to 1 exit cannot exceed 40m.	Compliant egress travel distances have been indicated based on the floor plans reviewed.	Complies
D2D6	**Distance between alternative exits** Alternative exits must be at least 9m apart and no more than 60m apart. Alternative paths of travel must not converge such that they become less than 6m apart.		Complies
D2D7	**Height of exits, paths of travel to exits and doorways** Except for doorways, paths of travel must have a clear height of at least 2m.		Applicable
D2D8	**Width of exits and paths of travel to exits**		Applicable

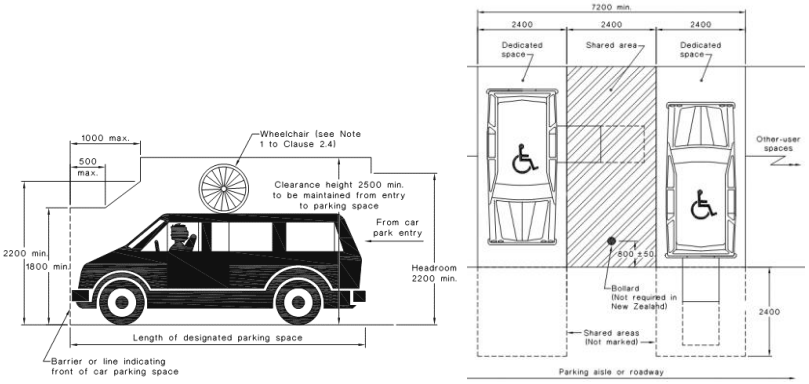
Clause	Description	Comment	Status
	The populations of the following areas have been provided and assumed: • *New Restaurant:* *a) 9 staff* *b) 250 patrons* • *Existing Restaurant* *a) 7 Staff* *b) 86 Patrons* • *Garden Centre – it is assumed once the area has been fit-out there will be less than 100 patrons.* • *Rural Supplies– it is assumed once the area has been fit-out there will be less than 100 patrons.* ***The unobstructed width of exits and paths of travel to exits in the relevant areas must not be less than the following:*** • *New Restaurant – 2m + 500mm for every 75 persons more than 200 persons = 2.5m (Complies 4m provided)* • *Existing Restaurant - 1m (Complies)* • *Garden Centre – 1m (Complies)* • *Rural Supplies – 1m (Complies)*		
D2D9	**Width of doorways in exits or paths of travel to exits** The unobstructed width of each exit provided to comply with D2D8 minus 250 mm; or in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide. ***The plans provided indicate some of the doors with non-compliant widths of doorways. Compliant widths of doorways will need to be evidenced on the CC architectural package.***		Compliance Readily Achievable
D2D10	**Exit width not to diminish in direction of travel** The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space		Applicable
D2D11	**Determination and measurement of exits and paths of travel to exits** For the purposes of D2D7 to D2D10 the following apply: The required width of a stairway or ramp in a required exit or path of travel to an exit must— a) be measured clear of all obstructions such as handrails, projecting parts of barriers and the like; and b) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor surface of the ramp or landing.		Applicable
D2D12	**Travel via fire-isolated exits** No fire isolated exits have been proposed.		N/A
D2D15	**Discharge from exits** An exit must not be blocked nor be capable of being blocked at its point of discharge. The proposed discharge from New Buildings will need to be addressed on a performance basis where open space is not available once an occupant has left the building – open space requires the point of discharge to be open to the sky. Current arrangements would see the discharge from building A and altered areas of the existing building requiring occupants to discharge and travel under a covered walkway for an extended duration until reaching the road within the allotment. ***Open space:*** *A space on the allotment, or a roof or similar part of a building adequately protected from fire, open to the sky and connected directly with a public road.*		Performance Solution
Part D3 - Construction of Exits			
D3D3	**Fire-isolated stairways and ramps** Fire resisting shafts must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage or impair the fire resistance of the shaft.		N/A
D3D8	**Installations in exits and paths of travel** • Electrical meters and motors, distribution boards and telecommunication boards must not be accessed from fire isolated exits and, if located in corridors leading to exits, should occur in		Applicable

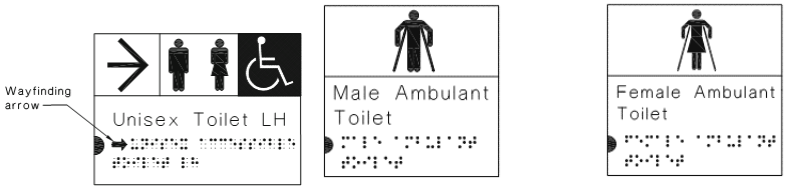
Clause	Description	Comment	Status
	non-combustible or fire protective smoke sealed enclosures. • No openings to ducts conveying hot products of combustion permitted in required exits. • Gas or fuel services not permitted in required exits. • Electric or services equipment in paths of travel to exits must be within a non-combustible and smoke sealed enclosure.		
D3D12	**Fire-isolated passageways** Fire isolated passageways are to have an FRL equivalent to the fire resisting stair shaft as specified in Specification 5 when tested from the outside		N/A
D3D14	**Going and risers** To provide safe passage, stairways must comply with the following: • minimum 2 risers / maximum 18 in each flight • risers 115mm min 190 mm max - going 250mm min 355mm max - 2R+G 550mm min 700mm max. • Adjacent risers, or between adjacent goings a variation no greater than 5mm is permitted and the largest and smallest riser within the flight or the largest and smallest going within a flight is not to exceed a variation of 10mm. • Under the requirements of AS1428.1-2009 open riser are not permitted. • All treads to be fitted with non-slip finish or non-skid strips. • Treads are required to have a surface or nosing strip with a slip-resistance classification not less than listed in Table D3D15 when tested in accordance with AS 4586  Riser (R) / Going (G) [2] / Quantity (2R+G) Max / Min / Max / Min / Max / Min Public stairways: 190 / 115 / 355 / 250 / 700 / 550 Private stairways[1]: 190 / 115 / 355 / 240 / 700 / 550 		Noted
D3D15	**Landings** Ramps Surfaces, stair tread surfaces or nosing strips, and stair landing surfaces, or landing nosing strips to a flight below, must achieve slip-resistance classifications to AS4586-2013 as follows: **Application** / **Dry Surface Conditions** / **Wet Surface Condition** 1:14 or steeper ramps: P4 or R11 / P5 or R12 Ramps of 1:14 to 1:20: P3 or R10 / P4 or R11 Tread or Landing Surface: P3 or R10 / P4 or R10 Nosing Strip or Landing Strip: P3 / P4		Applicable
D3D16	**Thresholds** Steps should not occur at doorways without a threshold landing except as follows: • In a building required to be accessible and the doorway opens to a road or open space and is provided with a threshold ramp or step ramp in accordance with AS1428.1, • Or in any other case a single 190mm step is permitted at doors leading to the exterior.	Note that where access for people with disabilities is required it is not permitted to have a step at the threshold of a doorway.	Compliance Readily Achievable
D3D17	**Barriers to prevent falls**		Noted

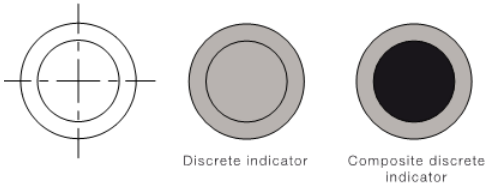
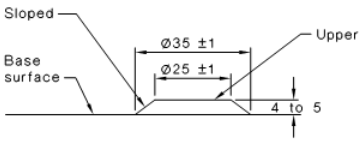
Clause	Description	Comment	Status
	A Continuous barrier must be provided along the side of – 1. A roof to which general access is provided 2. A stairway or ramp 3. A floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and 4. Any delineated path of access to a building, if the trafficable surface is 1 m or more above the surface beneath These barriers must be constructed in accordance with D3D18, D3D19, D3D20 and, if a wire barrier is used, D3D21.		
D3D18	**Height of barriers** Barriers must generally not be less than 865mm for stairways and ramps and 1m in all other cases. A 700mm balustrade is permitted in front of fixed seating in an auditorium.		Noted
D3D19	**Openings in barriers** • Openings in a required barrier must not allow a 125mm sphere to pass through, except for concessions applying to fire-isolated stairs or other emergency use areas excluding Class 9b early childhood centres. • Where a barrier is fixed to the face of a landing, balcony or the like, the opening between the barrier and the face must not permit a 40mm sphere to pass through.		Noted
D3D20	**Barrier climbability** Where the level of the surface below is 4m or more, a balustrade or other barrier must not facilitate climbing of horizontal elements between 150mm and 760mm above the floor.		N/A
D3D22	**Handrails** Handrails to exits including parts of fire isolated exit serving an area required to be accessible to people with disabilities must comply with Clause 12 of AS1428.1, viz: • Handrails not to obstruct circulation space • 30-50mm diameter • 865-1000mm above nosing line of stairs • 865-1000mm above ramps and landings • Consistent height throughout • 50mm grip clearance and no obstructions to handhold • Continuous at internal (return) landings • Provided with handrail extensions and 180 degree curled ends		Noted
	Ramps  (b) Elevation DIMENSIONS IN MILLIMETRES FIGURE 14 RAMP HANDRAILS **Stairways**		

Clause	Description	Comment	Status
	 SECTIONAL VIEW DIMENSIONS IN MILLIMETRES FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY  DIMENSIONS IN MILLIMETRES **Handrail Profile** 		
D3D24	**Doorways and doors** Must not be revolving door, roller shutter or tilt door. Can be fitted with a sliding door if it leads directly to open space and can be opened manually under a force of not more than 110N and be fitted with a fail-safe device if the door is power operated.		Applicable
D3D25	**Swinging doors** Defined exit doors that serve a part of a building with a floor area over 200m^2 must swing outward in the direction of exit travel. Exit doors must not encroach more than 500mm into the required width of the stair or 100mm when fully open and must swing in the direction of travel.		Applicable
D3D26	**Operation of latch** Exit doors should be provided with “free handle” egress via a downward or pushing action and, if serving an area accessible to people with disabilities, must have non-slip “D” pull handles with 35-45mm hand clearances.		Additional Details Required

Clause	Description	Comment	Status
	 Where the latch operation device is not located on the door leaf itself- • manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located not less than 500 mm from an internal corner; and • for a hinged door, between 1 m and 2 m from the door leaf in any position; • and for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. • braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. ***Compliance with the above requirements will need to be documented on the CC architectural package.***		
D3D28	**Signs on doors** Signage in capital letters not less than 20mm high to be provided on doors as follows i. An automatic door held open by an automatic hold-open device: **FIRE SAFETY DOOR - DO NOT OBSTRUCT** ii. for a self-closing door **FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN** iii. for a door discharging from a fire-isolated exit **FIRE SAFETY DOOR - DO NOT OBSTRUCT**	Under Section 108 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 a notice is to be displayed in a conspicuous location adjacent to a doorway providing access to but not within a fire isolated stairway, passageway or ramp. The words "**OFFENCES RELATING TO FIRE EXITS**" are to be provided in letters at least 8mm high and the remaining words are to be at least 2.5mm high. The notice is to state the following: **OFFENCES RELATING TO FIRE EXITS** It is an offence under the Environmental Planning and Assessment Act 1979 (a) to place anything in or near this fire exit that may obstruct persons moving to or from this exit, or (b) to interfere with or obstruct the operation of any fire doors, or (c) to remove, damage or otherwise interfere with this notice.	N/A
Part D4 - Access for People with Disabilities			
D4D2	**General building access requirements** Access is generally required for persons with a disability throughout all areas unless specifically exempted.	Access is required throughout. Consultation with the access consultant is required.	Applicable
D4D3	**Access to buildings** External access to the building for people with a disability must be provided: • From main pedestrian entry points at the allotment boundary. • Through the principle pedestrian entrance.		Applicable

Clause	Description	Comment	Status
	• Through at least 50% of all pedestrian entries. • From accessible car parking spaces. • For buildings over 500m², so that an accessible entry occurs within 50m of any non-accessible entry. From any another accessible building on the site.		
D4D4	**Parts of the building to be accessible** • All parts of the building must be accessible to people with a disability except for areas where access would be inappropriate due to the particular use or areas that would pose a health or safety risk to people with a disability. • Every ramp, except a fire isolated ramp, must comply with Clause 10 if AS 1428.1. • Every stairway, except a fire isolated stairway, must comply with Clause 11 of AS 1428.1. • A fire isolated stairway must comply with Clause 11(f) and (g) of AS 1428.1. • Every passenger lift must comply with Clause E3D7. • Access ways must have passing spaces and turning spaces complying with AS 1428.1. • A ramp or passenger lift need not be provided to serve a storey or level other than the entrance storey of a class 5, 6, 7b or 8 building containing not more than 3 storeys and with a floor area of each storey, excluding the entrance floor, of not more than 200m^2. • Pile height or pile thickness of carpets shall comply with the requirements of this Clause and AS 1428.1		Applicable
D4D5	**Exemptions** Certain areas may not need to be accessible if the area is deemed inappropriate because of the particular use or the area would pose a health or safety risk for people with disabilities.		Noted
D4D6	**Accessible carparking** The accessible parking spaces must comply with AS/NZS 2890.6 - 2009. General requirements are: • 2.4m x 5.4m. • 2.2m head clearance for access and egress routes to and from accessible car spaces. • 2.5m head clearances over accessible car spaces. • Flat even surfaces. • Designated and sign posted for disabled users.  		Applicable
D4D7	**Signage** Braille and tactile signage complying with Specification 15 and incorporating the international symbol of access or deafness in accordance with AS1428.1 must identify every accessible sanitary facility and space with a hearing augmentation system. Every doorway required to be provided with an exit sign under Clause E4D5 is to be provided with braille and tactile signage that states "**EXIT**" and identify the floor level "**LEVEL #**".		Applicable

Clause	Description	Comment	Status
	 Signage identifying ambulant accessible sanitary facilities in accordance with AS 1428.1 must be located on the door of the facility.  Where the pedestrian entrance is not accessible, directional signage in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest accessible pedestrian entrance. Where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary facility.		

D4D9	**Tactile indicators (TGSIs)**
	Tactile indicators are to be provided to all stairways, ramps and escalators must be provided to warn people who are blind or have a vision impairment that they are approaching:
	• a stairway, other than a fire-isolated stairway,
	• an escalator, passenger conveyor or moving walk,
	• a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp, or
	• in the absence of a suitable barrier an overhead:
	  ○ obstruction less than 2 m above floor level, other than a doorway
	  ○ an access way meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D4D5, if there is no kerb or kerb ramp at that point
	Tactile ground surface indicators must comply with sections 1 and 2 of AS/NZS 1428.4.1
	 
	(a) Plans of individual truncated cones
	 
	(b) Elevation of individual truncated cone
			Compliance Readily Achievable

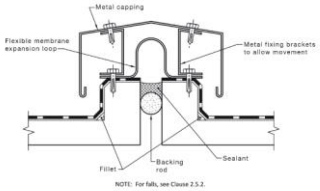
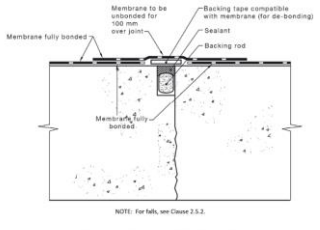
D4D12	**Ramps** On an access way a series of connected ramps must not have a combined vertical rise of more than 3.6m. A landing for a step ramp must not overlap a landing of another step ramp or ramp.		Applicable
D4D13	**Glazing on an accessway** On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.		Applicable

Clause	Description	Comment	Status
Section E: Services and Equipment			
Part E1 - Fire Fighting Equipment			
E1D2	**Fire hydrants** The building requires a fire hydrant system in accordance with AS 2419.1 - 2021. The fire brigade booster assembly is required to be installed in accordance with AS2419.1 - 2021 except that it may be located between 3.5m and 10m of the building where the assembly is protected by an adjacent fire-rated freestanding wall that— • achieves an FRL of not less than 90/90/90; and • extends not less than 1 m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3 m wide; and • extends to a height of not less than 2 m above finished ground level.	Full compliance with AS2419.1 will be required unless varied via fire brigade approval. *The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building from the available hydrants and must provide design certification to accompany the drawings certifying the design complies with Clause E1D2 of the BCA and AS2419.1 - 2021* (noting any non-compliances, which are to be addressed as an Alternative Solution). *Note 1: The hydrant hose must extend at least 1m into rooms to be counted for coverage.* *Note 2: If full coverage is not provided from hydrants located within the stairs alone. Intermittent hydrant outlets can be installed to achieve a compliant coverage. The hydrants are to be located not more than 25m from another hydrant to allow for progressive attack.*	Compliance Readily Achievable
E1D3	**Fire hose reels** Fire hose reel coverage to AS2441-2005 is required throughout with hose reels located adjacent to stairs and exits. Where coverage is not achieved with hose reels located Additional hose reels are permitted to be located along the paths of travel to achieve coverage where Hoses are not permitted to pass through fire or smoke doors to achieve hose reel cover.	*The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building and must provide design certification to accompany the drawings certifying the design complies with Clause E1D3 of the BCA and AS2441 - 2005.*	Compliance Readily Achievable
E1D14	**Portable fire extinguishers** Portable Fire Extinguishers are required be installed to sections (3) and (4) in Clause E1D14 and AS 2444 requirements, at: • Throughout Class 5 buildings • emergency services switchboards • kitchens • flammable liquid stores • at nurses' stations • special risk areas • where fire hose reels are not installed		Applicable

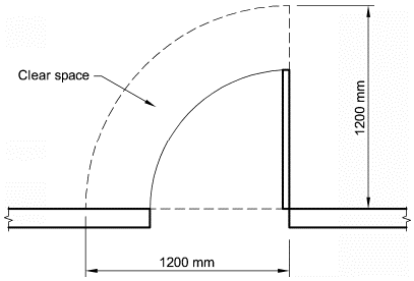
Clause	Description	Comment	Status
Part E4 - Emergency Lighting, Exit and Warning Systems			

E4D2	**Emergency lighting requirements**
	Emergency lighting is to be provided throughout the building.
		Emergency lighting is to be provided in:
		• every fire-isolated stairway, fire-isolated ramp or fire-isolated passageway.
		• Every passageway, hallway, corridor or the like and
		• Every passageway, hallway, corridor or the like, that is part of the path of travel to an exit.
		• In every room having a floor area more than 100m^2 that does not open to a corridor or space that has emergency lighting or to a road or open space.
		• In any room having a floor area more than 300m^2.
		• In every required non-fire isolated stairway
		• To every room or space that has public access in a Class 6 or 9b building if:
		  • the floor area is more than 300m^2;
		  • or if any point on the floor is more than 20m from the nearest doorway opening directly to the road or open space; or
		  • if the egress involves a vertical rise within the building of more than 1.5m.
			Applicable

E4D4	**Design and operation of emergency lighting** Emergency lighting must comply with to AS2293.1		Applicable
E4D5	**Exit signs** Exit signs are to be provided in accordance with Clause E4D5 of the BCA.	Exit signs must be clearly visible to person approaching the exit and must be installed on, above or adjacent to; 1. A door providing direct egress from a storey to a stairway, passageway or ramp serving as a required exit. 2. A door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space. 3. A horizontal exit 4. A door serving as or forming part of a required exit in a storey required to be provided with emergency lighting.	Applicable
E4D6	**Direction signs** Where an exit is not readily apparent then exit signs with directional arrows must be installed in appropriate positions in corridors, hallways, lobbies and the like indicating the direction to a required exit		Applicable
E4D8	**Design and operation of exit signs** 1. Exit signs are to operate in accordance with AS 2293.1. 2. Photo luminescent exit sign are to comply with Specification 25.		Applicable

Clause	Description	Comment	Status
Section F: Health and Amenity			
Part F1 - Surface Water Management, Rising Damp and External Waterproofing			
F1D1	**Deemed-to-Satisfy Provisions** Performance requirements F1P1 to F1P4 are satisfied by complying with Clause F1D2 to F1D10.	A test report on the proposed wall system is to be provided. The test report must include the following information: (i) Name and address of the person supervising the test. (ii) Test report number. (iii) Date of the test. (iv) Cladding manufacturer's name and address. (v) Construction details of the test specimen, including a description, and drawings and details of the components, showing modifications, if any. (vi) Test sequence with the pressures used in all tests. (vii) For each of the static and cyclic pressure tests, full details of all leakages, including position, extent and timing.	Applicable
F1D3	**Stormwater drainage** Stormwater drainage must comply with AS/NZS 3500.3.	Hydraulic drawings and design certification to be provided at Construction Certificate stage.	Applicable
F1D4	**Exposed joints** Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must be protected in accordance with Section 2.9 of AS 4654.2; and not be located beneath or run through a planter box, water feature or similar part of the building.  FIGURE 2.13 TYPICAL DISCONTINUOUS ONE-WAY MOVEMENT JOINT  FIGURE 2.14 TYPICAL CONTINUOUS MOVEMENT JOINT	Structural engineer/architect to confirm compliance.	Applicable
F1D5	**External waterproofing membranes** Trafficable roofs, balconies, podiums or similar parts of a building require a waterproofing membrane complying with AS4654.1 and AS4654.2, which must be installed directly on the structural substrate.	A waterproofing detail illustrating compliance with this clause is needed for review.	Applicable
F1D6	**Damp-proofing**		Applicable

Clause	Description	Comment	Status
	Moisture from the ground must be prevented from reaching the lowest floor timber and the walls above the lowest floor joists, the walls above the dam proof course and the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. Damp proof course must consist of a material that complies with AS/NZS 2904 or an impervious termite shield in accordance with AS 3660.1.		
F1D7	**Damp-proofing of floors on the ground** A vapour barrier in accordance with AS2870 is to be provided beneath the basement floor slab.		Applicable
Part F3 - Roof and wall cladding			
F3D1	**Deemed-to-Satisfy Provisions** Where a Deemed-to-Satisfy Solution is proposed, Performance Requirement F3P1 is satisfied by complying with F3D2 to F3D5. Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.		Applicable
F3D2	**Roof coverings** A roof must be covered with the following: 1. Roof tiles complying with AS 2049, fixed in accordance with AS 2050; or 2. Metal sheet roofing complying with AS 1562.1; or 3. Plastic sheet roofing designed and installed in accordance with AS 1562.3; or 4. Terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS 4597, except in cyclonic areas; or 5. An external waterproofing membrane complying with F1D5.		Applicable
F3D3	**Sarking** Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.		Applicable
F3D4	**Glazed assemblies** Windows, sliding doors with a frame, adjustable louvres, shopfronts and window walls with one piece framing in an external wall must comply with AS 2047 requirements for resistance to water penetration.		Applicable
F3D5	**Wall cladding** External wall cladding must comply with one or a combination of the following: • Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700 • Autoclaved aerated concrete: AS 5146.3. • Metal wall cladding: AS 1562.1.	External wall claddings which are not captured under Clause F3D5 will require a performance solution to be documented by an appropriately qualified practitioner in accordance with *Clause A2G2 - Performance Solution.*	Additional Details Required
Part F4 - Sanitary and other facilities			
F4D3 & F4P1	**Personal hygiene facilities & Calculation of number of occupants and fixtures** The BCA requires that suitable sanitary facilities for personal hygiene must be provided in a convenient location within or associated with a building, to the degree necessary, appropriate to: 1. The function or use of the building; and 2. The number and gender of the occupants; and 3. The disability or other particular needs of the occupants.		Compliance Readily Achievable
F4D4	**Facilities in Class 3 to 9 buildings** Toilet facilities are required in appropriate numbers based on the number of persons accommodated. ***Based on the proposed populations the following number of sanitary facilities will be required:*** The population numbers provided include a total of 36 employees and 336 customers/patrons throughout the existing and proposed buildings. This requires a total of the following:		Complies

Clause	Description	Comment	Status
	• Male: 3 toilet pans, 5 urinals and 3 handwash basins • Female: 7 toilet pans and 4 handwash basins The works proposed will result with a surplus of sanitary facilities.		
F4D5	**Accessible sanitary facilities** Accessible unisex toilets for people with a disability are required on each storey and at 50% of toilet banks on any storey. Facilities should be constructed to AS1428.1 - 2009 although an existing WC facility that fully complies with AS1428.1 - 2001 may substitute as a concession. Separate male and female ambulant facilities are required at each bank of toilets that contains one or more toilets in addition to an accessible unisex facility.		Applicable
F4D6	**Accessible unisex sanitary compartments** Where required by F4D5(a), the minimum number of accessible unisex sanitary compartments for each class of building is as follows: • For Class 5, 6, 7, 8 or 9 buildings, where F4D4 requires closet pans: ○ 1 on every storey containing sanitary compartments; and ○ where a storey has more than 1 bank of sanitary compartments containing male and female sanitary compartments, at not less than 50% of those banks.		Applicable
F4D8	**Construction of sanitary compartments** Where clear space between closet pan and doorway is less than 1.2m, doors must open outwards, slide or be readily removable from outside.	All hinged doors that swing inward to sanitary facilities and do not comply with achieving a 1200mm clearance to pan are required to be installed with lift-off hinges 	Applicable
F4D9	**Interpretation: Urinals and washbasins**	Each 600mm length of a continuous urinal trough is counted as 1 urinal.	Noted
Part F5 - Room heights			
F5D2	**Height of rooms and other spaces** Generally, a minimum ceiling height of 2.4m is required throughout except: • For a corridor, passageway or the like a minimum ceiling height of 2.1m is required • For a bathroom, shower room, sanitary compartment, other than an accessible adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m • Above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like ***Additional detailed sections and elevations will be required to form part of the CC package.***		Additional Details Required
Part F6 - Light and ventilation			
F6D5	**Artificial lighting** The artificial lighting system must comply with AS/NZS 1680.0.	Design details and certification from an electrical engineer is required	Applicable
F6D6	**Ventilation of rooms** *(NSW variation for Public Health Regulation)* Ventilation shall be provided throughout the building in by means of natural ventilation complying with Clause F6D7 or mechanical	Design details and certification from a mechanical engineer is required	Applicable

Clause	Description	Comment	Status
	ventilation complying with the requirements of AS1668.2 as required by Clause F6D6 of the BCA.		
F6D12	**Kitchen local exhaust ventilation** A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1 and AS 1668.2, where: • any cooking apparatus has a total maximum electrical power input exceeding 8kW, or • a total gas power input exceeding 29 MJ/h, or the total maximum power input to more than one apparatus exceeds 0.5kW electrical power or 1.8 MJ gas per metre square of the room or enclosure.		Applicable
NSW Section J: Energy Efficiency Energy Efficiency for buildings requires buildings to reduce greenhouse gas emissions by efficiently using energy. A building's services must have features that facilitate the efficient use of energy. The discipline of Energy Efficiency with the BCA has become a specialised field where compliance with BCA Section J is to be certified with the issue of a Certificate of Compliance - Design from the relevant Services Engineer/Consultant. The purpose of this section is to provide a brief explanation of which areas are to achieve compliance with BCA Section J - Energy Efficiency during design and construction. The BCA should be referenced for exact requirements, clarification and further explanation.			
Section J	**Energy efficiency measures** Energy efficiency measures are prescribed for the following building elements to limit energy consumption:- • Building fabric • External glazing • Building sealing • Air movement. • Air-conditioning and ventilation systems. • Artificial lighting and power • Hot water supply • Access for maintenance	Compliance assumed, although further information is required to confirm compliance. A performance based BCA J1V3 assessment may be adopted for the project if compliance with BCA deemed to satisfy provisions are problematic.	Noted
	A suitably qualified ESD / Section J consultant would need to be engaged to undertake a complete assessment of the provisions found within Section J. ***Please note that NCC2022 currently offers a transitional concession period from 1 May 2023 the requirements of NCC2022 can be postponed until to 30 September 2023. Section J from BCA 2019 Amendment 1 can be utilised until such time.***		

15. Appendix A - Referenced Documentation

The following documentation was used in the preparation of this report:

Drawing No.	Title	Issue	Date	Drawn By
A00-01	TITLE SHEET, LOCATION PLAN & DRAWING LIST	2	24.05.23	BN Group
A00-04	SAFETY IN DESIGN STATEMENT	2	24.05.23	BN Group
A00-05	SITE ANALYSIS	2	24.05.23	BN Group
A01-01	EXISTING & DEMOLITION - SITE PLAN	3	24.05.23	BN Group
A01-02	EXISTING & DEMOLITION – GROUND FLOOR PLAN	3	24.05.23	BN Group
A01-10	EXISTING & DEMOLITION – ROOF PLAN	3	24.05.23	BN Group
A01-30	EXISTING & DEMOLITION - ELEVATIONS	3	24.05.23	BN Group
A01-40	EXISTING & DEMOLITION - SECTIONS	3	24.05.23	BN Group
A02-01	PROPOSED OVERALL SITE PLAN	6	24.05.23	BN Group
A02-20	PROPOSED GROUND FLOOR PLAN	5	24.05.23	BN Group
A02-21	MEZZANINE PLAN	5	24.05.23	BN Group
A02-40	PROPOSED ROOF PLAN	5	24.05.23	BN Group
A02-50	3D VISUALISATIONS / PERSPECTIVES	4	24.05.23	BN Group
A09-01	PROPOSED EXTERNAL ELEVATIONS	4	24.05.23	BN Group
A11-01	PROPOSED BUILDING SECTIONS	4	24.05.23	BN Group
A60-01	SIGNS & DISPLAYS	3	24.05.23	BN Group
A70-01	MATERIAL SAMPLE BOARD	3	24.05.23	BN Group
A100-20	GREEN RATIO & PARKING ANALYSIS	5	24.05.23	BN Group
A100-21	GFA ANALYSIS GROUND LEVEL	6	24.05.23	BN Group
A100-22	GFA ANALYSIS MEZZANINE LEVEL	6	24.05.23	BN Group
A100-50	SOLAR STUDY	4	24.05.23	BN Group

16. Appendix B - Statutory Fire Safety Measures

Schedule of Statutory Fire Safety Measures

Measure	Standard of Performance
Emergency Lighting	BCA 2022 Clause E4D2, E4D4 and AS/NZS 2293.1 - 2018
Exit Signs	BCA 2022 Clause E4D5, NSW E4D6, E4D8 and AS/NZS 2293.1 - 2018
Fire Doors	BCA 2022 Specification 12 and AS/NZS 1905.1 - 2015
Fire Hydrants Systems	BCA 2022 Clause E1D2 and AS 2419.1 - 2005
Fire Seals Protecting Opening In Fire Resisting Components Of The Building	BCA 2022 Clause C4D15, Specification 13, AS 1530.4 - 2014, AS 4072.1 - 2005 and installed in accordance with the tested prototype.
Hose Reel System	BCA 2022 Clause E1D3 and AS 2441 - 2005
Lightweight Construction	BCA 2022 Specification 6, Clause A2G3 and AS 1530.4 - 2014
Portable Fire Extinguishers	BCA 2022 Clause E1D14 and AS 2444 - 2001
Fire Engineering Report	***To be confirmed***

Note the fire safety schedule will need to be amended subject to the inclusion of a fire engineered performance solution.

17. Appendix C2D2 - Fire Rating Requirements

Type C Construction: FRL of Building Elements				
Building element		**Class of building - FRL:** (in minutes) *Structural adequacy/Integrity/Insulation*		
	2, 3 or 4 part	5, 9 or 7a	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is-				
less than 1.5m	90/90/90	90/90/90	90/90/90	90/90/90
1.5 to less than 3 m	-/-/-	60/60/60	60/60/60	60/60/60
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is-				
less than 1.5 m	90/ - / -	90/ - / -	90/ - / -	90/ - / -
1.5 or less than 3 m	- / - / -	60/ - / -	60/ - / -	60/ - / -
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
COMMON WALLS and FIRE WALLS	90/90/90	90/90/90	90/90/90	90/90/90
INTERNAL WALLS-				
Bounding public corridors, public lobbies and the like-				
	60/60/60	- / - / -	- / - / -	- / - / -
Between or bounding sole-occupancy units-				
	60/60/60	-/ - / -	-/ - / -	-/ - / -
Bounding a stair if required to be rated-				
	60/60/60	- / - / -	- / - / -	- / - / -
ROOFS	- / - / -	- / - / -	- / - / -	- / - / -

18. Appendix C2D11 - Early Fire Hazard Properties for Materials

Floor materials, floor coverings and wall and ceiling lining materials are required to comply with BCA prescribed fire hazard properties and AS5637.1-2015

Floor Linings and Floor Coverings	
General Non Sprinklered Areas	Minimum 2.2 (or 4.5 for Class 3 areas and 9a patient care areas) kw/m^2 critical radiant heat flux and, a maximum smoke development rate of 750 percent minutes.
General Sprinklered Areas	Minimum 1.2(or 2.2 for Class 3, 9a patient care, and 9c residential use areas) kw/m^2 critical radiant heat flux
Fire Isolated Exits and Fire Control Rooms	Minimum 2.2/(or 4.5 for Class 3, 9a and 9c areas) kw/m^2 critical radiant heat flux
Lift Cars	Minimum 2.2 kw/m^2 critical radiant heat flux

Wall Linings and Ceiling Linings	
Generally	Variously Group 1,2, or 3 materials (more restrictive Group number for non-sprinklered areas, public corridors, health care corridors and other prescribed locations) when tested to AS/ISO 9705 or clause 3 of BCA Spec A2.4 and AS/NZ 3837
Fire Isolated Exits	Group 1 material when tested as above
Lift Cars	Group 1 or 2 materials when tested as above

In addition, in non-sprinklered areas, wall and ceiling linings must have a smoke growth rate index not more than 100 or an average specific extinction area less than 250m^2/g.

Other than above, construction materials generally need to achieve as1530.3 early fire hazard indices requirements as follows:	
Generally	Spread of flame Index not > 9 Smoke developed index not > 8
Sarking	Flammability Index not > 5
Fire Isolated Exits and Fire Control Rooms	Spread of Flame Index 0 Smoke Developed Index not > 2 Sarking Flammability 0
Non Fire Isolated Stairs & Escalators and Auditorium Fixed Seating	Spread of Flame Index 0 Smoke Developed Index not > 5
Lifts	To AS 1735.2
Air Ducts	To AS4254

19. Appendix D4 - Significant Accessibility Requirements

Access for wheelchair users and people with disabilities generally must be to AS1428.1-2009. Principle requirements are:

- Continuous accessible paths of travel throughout
- Minimum 1m wide travel paths with maximum 3-5mm joints, lips, level changes etc.
- No deep pile carpets or grates with large slots.
- Walls or 75-150mm kerbs at travel path sides or if level change occurs to cause a wheelchair hazard.
- 1.8m wide x 2m long wheelchair passing spaces at 20m intervals in passageways where a direct line of sight is not available.
- Turning spaces at 20m intervals and within 2m of dead end access ways. 1.5m x 1.5m 90 deg turning spaces (with splayed internal corner) and 1.54m x 2.07m long 180 deg turning spaces are required including at dead ends in passageways.
- Step ramps, kerb ramps and threshold ramps as prescribed.
- 1:14 maximum ramps with 9m between landings.
- 1.9m x 1 in 10 (maximum 190mm rise) step ramps
- 1.52m x 1 in 8 (maximum 190mm rise) kerb ramps.
- 30-50mm handrails with 300mm extensions and curls and 50mm clearances on both sides of steps, ramps, etc.
- 850mm clear width doors with 340 - 900mm latch side clearances and 1220-1670mm approach clearances depending on arrangements.
- Stairs and ramps set back from building lines and corridors to allow space for handrail extensions and TGSIs.
- Decals to glazing.
- 900-1100mm door hardware height.
- Lever handle hardware with low opening forces.
- Landings at doorways, direction changes and at intervals on ramps and inclined walkways.
- Walkways with colour contrast borders.
- Flat even surfaces.
- Colour contrasted hand rails and door frames.
- “D” pull handles to doors.
- Continuous protected paths from disabled persons’ car spaces to lifts, access points, etc.
- Ambulant disabled persons’ toilets with grab rails and outward swinging doors or longer cubicles.
- Prescribed types of water entry arrangements for swimming pools depending on pool size.
- Non fire enclosed stairs with opaque risers.
- Fire stairs and non-fire enclosed stairs with colour contrasting nosing strips.
- All switches and controls 900-1100mm above floor level.

The following general requirements apply to accessible toilets:

- Unisex facility.
- ~1.9 x 2.7m or 2.3 x 2.4m minimum room dimensions depending on arrangements. (~2.2m x 1.6m if AS1428.1-2001 concession applies).
- 30-40mm grab rails with 50-60mm clearances.
- Doors with appropriate clearances and circulation spaces and able to be operated externally in emergencies
- Washbasins with clearances as required.
- Shielded hot water pipes.
- Mirror, shelf, dispensers and coat hooks.
- Mirrored layout for alternative facilities

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