



BCA Design Assessment Report

REF Submission Report



Education
School Infrastructure

Department of Education

Milton Public School Upgrade –
9 Thomas Street,
Milton

Fire Safety Engineers | Inclusive Accessibility Consultants | Building Code Consultants

Suite 6 | 113 Reservoir Street Surry Hills NSW 2010 t (02) 8399 3707
hello@dcpartnership.com.au www.dcpartnership.com.au ABN 72 896 582 485

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Revision History—

OUR REFERENCE	REMARKS	ISSUE DATE
P223_109-1_REF (BCA) JR	Final report issued – for REF submission	21 February 2025
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CONTENTS

CONTENTS	3
EXECUTIVE SUMMARY	4
1.0 INTRODUCTION	6
1.1 General	6
1.2 Purpose of report	6
1.3 Documentation Provided for Assessment	6
1.4 Limitations	6
1.5 Report Exclusions	6
1.6 Relevant Legislative Framework	7
2.0 DEVELOPMENT DESCRIPTION	8
2.1 General	8
2.2 Building Description	9
2.3 Fire Safety Schedule	10
2.4 BCA Assessment – Interpretation Notes	11
3.0 CONCLUSION	12
APPENDIX A1 – BCA ASSESSMENT CHECKLIST	13
APPENDIX A2 – DOCUMENTATION PROVIDED FOR ASSESSMENT	17

EXECUTIVE SUMMARY

This BCA Design Assessment Report has been prepared by DC Partnership at the request of the Department of Education and relates to the proposed new state of the art public school development located at 9 Thomas Street, Milton

Based upon our assessment to date we are of the opinion that the subject development is capable of achieving compliance with the performance provisions of the BCA, either by complying with the prescriptive requirements or via a performance-based approach. With respect to the assessment undertaken, the following areas shall be reviewed further as the project progresses beyond REF approval phase—

ITEM	DESCRIPTION	RESPONSIBILITY
1.	Bushfire Protection Strategy Based on discussions with the bushfire consultant and design team, the development site is within a designated bushfire-prone area (as defined by the BCA and EPA Regs). Therefore, compliance with specification 43 will be required. As part of the REF submission, the project will seek dispensation from the RFS regarding compliance with various requirements of Specification 43. If dispensation is not granted, the design will look to achieve compliance through the Deemed-to-Satisfy Provisions and Performance Solutions.	Bushfire Consultant, Project Architect & Design Team

In addition to undertaking an assessment of the design against the prescriptive requirements of the BCA a preliminary performance-based assessment has also been undertaken. The table below lists scenarios where we believe the adoption of a performance design may add value to development in-lieu of complying with the prescriptive (DtS) provisions—

ITEM	PROPOSED PERFORMANCE SOLUTION	BCA DTS CLAUSE	PERFORMANCE REQUIREMENTS
FIRE SAFETY			
1.	Justify the following extended travel distances from: <u>Ground Level</u> - 23m to a point of choice in lieu of the permitted 20m - 46m to an exit in lieu of the permitted 40m; and <u>Level 1</u> - 24m to a point of choice in lieu of the permitted 20m - 45m to an exit in lieu of the permitted 40m; and - 61m between alternate exits in lieu of 60m	D2D5	D1P4 & E2P2
2.	Justify doorways on the ground floor not swinging in the direction of egress and to be fitted with a hold open device	D3D26	D1P4 & E2P2
3.	Justify location of hydrant booster not being within sight of the buildings main entrance. <i>Note – additional system performance issues are anticipated based on project discussions</i>	E1D3	E1P3
NON-FIRE SAFETY			
4.	Waterproofing performance solution report to be prepared by an appropriate consultant (i.e. waterproofing consultant) for the omission of	F1D5	F4P1

ITEM	PROPOSED PERFORMANCE SOLUTION	BCA DTS CLAUSE	PERFORMANCE REQUIREMENTS
	waterproofing membrane to the external balcony required in AS4654.1 & AS4654.2 <i>Note – this performance solution can only be pursued for areas of the projected slab space not above a habitable space</i>		
5.	Weatherproofing performance solution report to be prepared by an appropriate consultant (i.e. façade engineer) demonstrating compliance with performance requirements F3P1 and F3V1	F3D5	F3P1 & F3V1

The implementation of a performance-based approach in lieu of compliance with the deemed-to-satisfy (DtS) provisions shall be in consultation with all relevant stakeholders and is subject to the approval of the certifying authority.

The adoption of performance solutions for fire safety matters must be subject to consultation with the NSW Fire Brigade under Sections 25 – 29, 50, & 51 of the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021.

1.0 INTRODUCTION

1.1 General

This BCA Design Assessment Report has been prepared by DC Partnership at the request of the Department of Education and relates to the proposed new state of the art public school development located at 9 Thomas Street, Milton

1.2 Purpose of report

The purpose of this report is to identify the extent to which the architectural design documentation complies with the prescriptive provisions of the NCC 2022 Volume One - Building Code of Australia, thereby after referred to as the BCA.

1.3 Documentation Provided for Assessment

This assessment is based upon the Architectural documentation prepared by Fulton Trotter listed within **Appendix 1**.

1.4 Limitations

In interpreting the report, the following limitations shall be noted –

This report is based upon, and limited to, the information depicted in the documentation provided for assessment, and does not make any assumptions regarding 'design intention' or the like;

This assessment does not contain comments regarding detailed design issues such as (but not limited to): slip resistance, handrail design, door schedule and door hardware specification and lift specification.

The list of fire safety measures in Appendix 6 not a proposed fire safety schedule within the context of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021; and

This report is not a regulated design, as defined by the Design Building Practitioners Regulations 2021.

1.5 Report Exclusions

It is conveyed that this report should not be construed to infer that an assessment for compliance with the following has been undertaken –

- Work Health & Safety Act (2011) and Regulations (2017);
- WorkCover Authority requirements;
- Structural and Services Design Documentation;
- The individual requirements of service authorities (i.e. Telecommunication Carriers, Sydney Water, Endeavour Energy);
- Any conditions imposed by the Consent Authority;
- Any conditions imposed by the Principal Certifying Authority;
- Design and Building Practitioners Act (2020) and Regulations (2021);

- Adaptable Housing (AS4299-1995);
- Liveable Housing Guidelines;
- BASIX certificate;
- The Disability Discrimination Act (DDA) 1992;
- The accessibility requirements of the BCA, as contained within Part D4 and F4D5 of the BCA; and
- The energy efficiency provisions of the BCA, as contained with Section J of the BCA.

1.6 Relevant Legislative Framework

New building works –

Sub-section 19(1)(c) of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulations 2021 requires that all works forming part of the Construction Certification ('new works') comply with the current requirements of the BCA.

All new works proposed in the architectural documentation are required to comply but existing features of an existing building need not comply with the BCA unless specified under different parts of the legislation e.g. change of building use or consent authority may require upgrade of buildings.

2.0 ACTIVITY DESCRIPTION

2.1 General

This has been prepared to support a Review of Environmental Factors (REF) for the NSW Department of Education (DoE) for Milton Public School upgrade (the activity).

The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) as “development permitted without consent” on land carried out by or on behalf of a public authority under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37 of the T&I SEPP.

This document has been prepared in accordance with the Guidelines for Division 5.1 assessments (the Guidelines) by the Department of Planning, Housing and Infrastructure (DPHI) as well as the Addendum Division 5.1 guidelines for schools.

The site is zoned SP2 Educational Establishment and existing development comprises various buildings, sports facilities and play space associated with Milton Public School. Milton Public School currently comprises 24 permanent teaching spaces (PTS) and 12 demountable teaching spaces (DTS). The site contains two locally heritage listed buildings (Building A and Q).

The site is predominantly cleared; however there is existing vegetation interspersed throughout the site and significant trees are present along the northern and western boundary of the site. There is a gradual slope downwards from the south-east to the north-east of the site.

The site is an irregularly shaped lot with a narrow frontage along Thomas Street. Pedestrian and vehicular access is provided from Thomas Street and from Wason Street. Milton Public School is adjoined by low density residential properties to the south, west and east and Milton Rainforest Reserve is located to the north.

Figure 1 Aerial Photograph



Source: Urbis, April, 2025

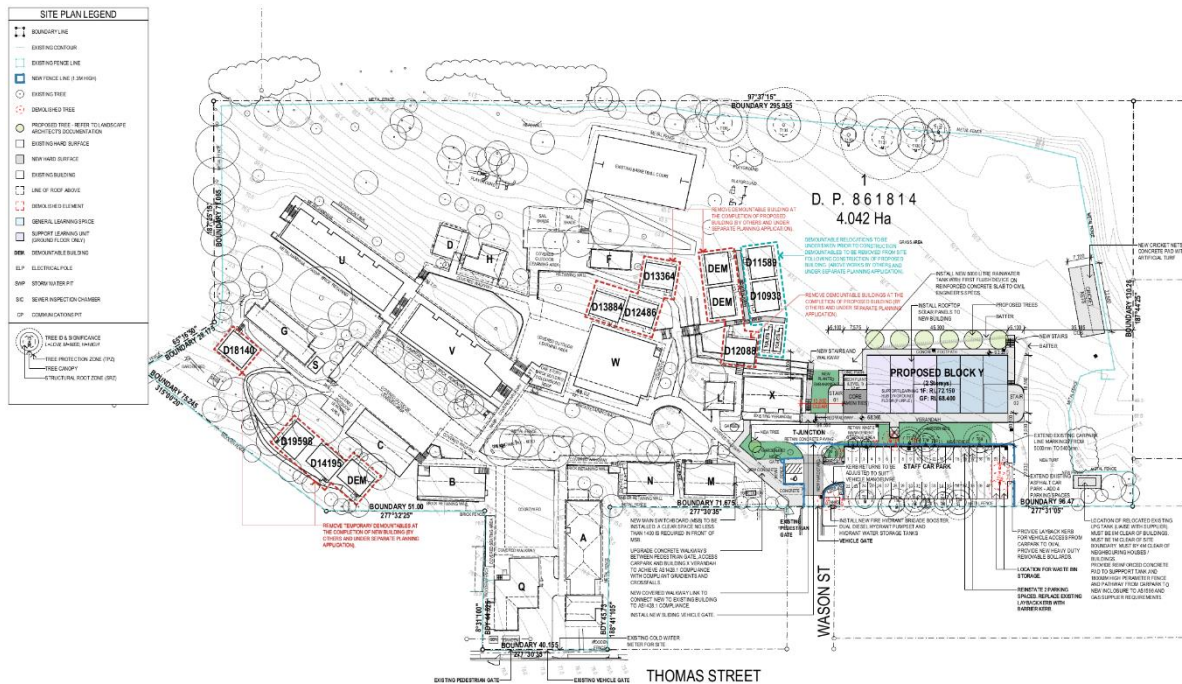
2.2 Building Description

The proposed activity relates to upgrades to Milton Public School. Specifically, the proposed activity comprises the following:

- Construction of a new two-storey home base building.
- Installation of additional solar panels.
- Relocation of existing cricket nets to the eastern boundary of site.
- Construction of new stairs and covered walkways linking the new building to the existing school.
- Construction of new fencing.
- Construction of new hardstand area.
- Minor alterations to the existing staff car park.
- Disconnection and relocation of existing LPG tank.
- Tree removal.
- External landscape works.

Any works relating to demountables or the water tank will proceed via a separate planning pathway. **Figure 2** provides an extract of the proposed site plan.

Figure 2 Site Plan



Source: Fulton Trotter, 2025

This correspondence has been provided to assist with development of the REF submission along with schematic design documentation. A broad assessment has been undertaken of the proposed design as detailed within the documentation listed in **Appendix A2**.

Within the context of the BCA, the development / building can be described as –

DESCRIPTION		
Classification	School/Assembly Building	Class 9b
Storeys Contained	Two (2)	
Rise in Storeys	Two (2)	
Type of Construction	Type C	
Effective Height	Less than 12m	(RL 68.400 – RL 72.150 = 3.75m)
Floor Area	Ground Level = 1,207m ² Level 1 = 1,207m ²	Total = 2,414m ²
Sprinkler Protected	N/A	
Max Permitted Fire Compartment Size	Class 9b – 5,500m ² / 33,000m ³	Within Limitation
Climate Zone	Zone 6	
Bushfire Prone Land	Yes	

Table 2.2 – Building description

2.3 Fire Safety Schedule

Schedule of Statutory Fire Safety Measures

MEASURE	STANDARD OF PERFORMANCE
Emergency Lighting	BCA 2022 Clause E4D2, E4D3 & E4D4 AS 2293.1-2018
Exit And Directional Signage	BCA 2022 Clause E4D5, E4D6 & E4D8, Spec 25 AS 2293.1-2018
Fire Dampers	BCA 2022 C4D15, Spec. 20 AS/NZS 1668.1-2015, AS 1682.1-2015, AS 1682.2-2015, Manufacturer's specifications
Fire Doors	BCA 2022 Clause C3D13, C3D14, AS 1905.1-2015
Fire Hydrant Systems	BCA 2022 Clause E1D2 AS 2419.1-2021, AS 2118.6-2012 (Combined System)
Fire Seals (Protecting Openings in Fire-Resisting Components Of The Building)	BCA 2022 Clause C4D15, Spec. 13 AS 4072.1-2005, AS 1530.4-2014, Manufacturer's specifications
Lightweight Construction	BCA 2022 Clause C2D9, Spec. 6, Manufacturer's specifications
Mechanical Air Handling Systems	BCA 2022 Clause E2D3, Spec. 20, AS/NZS 1668.1-2015, AS 1668.2-2012
Portable Fire Extinguishers	BCA 2022 Clause E1D14 AS 2444-2001
Fire Engineering Report Measure (TBC)	Fire Engineering Report (TBC)

Table 2.3 – Fire Safety Schedule

Note - the fire safety schedule is subject to change as the design progress and will need to be amended with an inclusion of a fire engineered performance solution

2.4 BCA Assessment – Interpretation Notes

To provide the reader with additional context, the following information regarding assessment methodology used in this assessment is provided below—

- For the purpose of assessing sanitary facilities calculations, the required number of male urinals have been added to the closet pan calculations;
- For an assessment of the BCA accessibility provisions as principally contained in Parts D4, E3D8, F4D5 and F4D6, refer to the Access Design Assessment Report prepared by Design Confidence [P223_273-3 (ACCESS) RT].

Several acronyms and abbreviations are used throughout this report, refer to **Appendix 2** for clarification.

3.0 CONCLUSION

Our strategy for ensuring compliance will be refined and documented during the design process in conjunction with the continual development of the architectural documentation, as required.

Based upon our assessment to date we are of the opinion that the subject development is capable of achieving compliance with the performance provisions of the BCA. Compliance would be achieved via a mixture of adopting a performance based approach as well as complying with the relevant deemed-to-satisfy requirements as outlined within the BCA, compliance via the performance based approach could occur without significant changes to the proposed design.

The Performance Solutions for the building will be developed as part of the ongoing design and consultation with the design team.

The details of the proposed Performance Solutions with respect to fire safety are subject to the outcome of the fire engineering brief and analysis which will be carried out in accordance with the International Fire Engineering Guidelines.

Report By



Jake Robson
Senior Building Regulations Consultant
For Design Confidence (Sydney) Pty Ltd

Verified By



Lindsay Beard
Principal | Building Regulations
For Design Confidence (Sydney) Pty Ltd

APPENDIX A1 – BCA ASSESSMENT CHECKLIST

The following table summarises the compliance status of the architectural design in terms of each applicable prescriptive provision of the BCA and indicates a capability for compliance with the BCA.

Table 3 – BCA Assessment summary checklist

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
Section B – Structure				
Part B1 - Structural provisions				
B1D2	Resistance to actions			✓
B1D3	Determination of individual actions			✓
B1D4	Determination of structural resistance of materials and forms of construction			✓
Section C – Fire Resistance				
Part C2 - Fire Resistance and Stability				
C2D2	Type of construction required			✓
C2D9	Lightweight construction			✓
C2D10	Non-combustible building elements			✓
C2D11	Fire hazard properties			✓
C2D14	Ancillary elements			✓
C2D15	Fixing of bonded laminated cladding panels			✓
Part C3 - Compartmentation and separation				
C3D3	General floor area and volume limitations	✓		
C3D13	Separation of equipment			✓
C3D14	Electricity supply system			✓
Part C4 - Protection of openings				
C4D3	Protection of openings in external walls	✓		
C4D5	Acceptable methods of protection			✓
C4D15	Openings for service installations			✓
Section D – Access and Egress				
Part D2 - Provisions for escape				
D2D3	Number of exits required	✓		
D2D5	Exit travel distances		PS	
D2D6	Distance between alternative exits		PS	
D2D7	Height of exits, paths of travel to exits and doorways			✓
D2D8	Width of exits and paths of travel to exits			✓
D2D9	Width of doorways in exits or paths of travel to exits			✓
D2D10	Exit width not to diminish in direction of travel			✓
D2D11	Determination and measurement of exits and paths of travel to exits	Note		
D2D15	Discharge from exits			✓

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
D2D17	Non-required stairways, ramps or escalators			✓
D2D21	Plant rooms, lift machine rooms and electricity network substations: Concession	Note		
D2D22	Access to lift pits	✓		
Part D3 - Construction of exits				
D3D4	Non-fire-isolated stairways and ramps			✓
D3D8	Installations in exits and paths of travel			✓
D3D9	Enclosure of space under stairs and ramps			✓
D3D10	Width of required stairways and ramps			✓
D3D13	Roof as open space			✓
D3D14	Goings and risers			✓
D3D15	Landings			✓
D3D16	Thresholds			✓
D3D17	Barriers to prevent falls			✓
D3D18	Height of barriers			✓
D3D19	Openings in barriers			✓
D3D20	Barrier climbability			✓
D3D21	Wire barriers			✓
D3D22	Handrails			✓
D3D23	Fixed platforms, walkways, stairways and ladders			✓
D3D24	Doorways and doors			✓
D3D25	Swinging doors			✓
D3D26	Operation of latch			✓
D3D28	Signs on doors			✓
Section E – Services and Equipment				
Part E1 – Fire fighting equipment				
E1D2	Fire hydrants		PS	
E1D3	Fire hose reels			✓
E1D14	Portable fire extinguishers			✓
Part E2 - Smoke hazard management				
E2D5 - E2D20	Smoke hazard management system			✓
Part E3 - Lift installations				
E3D2	Lift installations			✓
E3D4	Warning against use of lifts in fire			✓
E3D6	Landings	✓		
Part E4 - Visibility in an emergency, exit signs and warning systems				
E4D4	Design and operation of emergency lighting			✓
E4D8	Design and operation of exit signs			✓

BCA CLAUSE		COMPLIES	DOES NOT COMPLY	CAPABLE OF COMPLIANCE
Section F - Health and amenity				
Part F1 - Surface water management, rising damp and external waterproofing				
F1D3	Stormwater drainage			✓
F1D4	Exposed joints			✓
F1D5	External waterproofing membranes		PS	
F1D6	Damp-proofing			✓
F1D7	Damp-proofing of floors on the ground			✓
Part F2 - Wet areas and overflow protection				
F2D2	Wet area construction			✓
F2D4	Floor wastes			✓
Part F3 - Roof and wall cladding				
F3D2	Roof coverings			✓
F3D3	Sarking			✓
F3D4	Glazed assemblies			✓
F3D5	Wall cladding		PS	
Part F4 - Sanitary and other facilities				
F4D4	Facilities in Class 3 to 9 buildings	✓		
F4D8	Construction of sanitary compartments			✓
F4D11	Waste management			✓
Part F5 - Room heights				
F5D2	Height of rooms and other spaces	✓		
Part F6 - Light and ventilation				
F6D2	Provision of natural light			✓
F6D3	Methods and extent of natural light	Note		
F6D5	Artificial lighting			✓
F6D6	Ventilation of rooms			✓
F6D7	Natural ventilation	Note		
F6D9	Restriction on location of sanitary compartments			✓
F6D10	Airlocks			✓
Section G - Ancillary provisions				
Part G5 - Construction in Bushfire Prone Areas				
G6D4 (NSW)	Protection — certain Class 9 buildings used as a special fire protection purpose			✓
Part G6 - Occupiable outdoor areas				
G6D2 – G6D10	Occupiable outdoor areas			✓

APPENDIX A2 – DOCUMENTATION PROVIDED FOR ASSESSMENT

This BCA assessment was based upon the Consultants Coordination architectural documentation prepared by Fulton Trotter namely—

DRAWING NUMBER	REV	DRAWING TITLE	DATE
MPS-FTA-00-00-DR-A-1001	11	EXISTING & DEMOLITION SITE PLAN	03/04/2025
MPS-FTA-00-00-DR-A-1101	11	PROPOSED SITE PLAN	03/04/2025
MPS-FTA-00-00-DR-A-1201	09	SITE SECTIONS	03/04/2025
MPS-FTA-00-00-DR-A-1401	03	EXTERNAL WORKS PLAN	03/04/2025
MPS-FTA-B00Y-GF-DR-A-2101	12	PROPOSED GROUND FLOOR PLAN	03/04/2025
MPS-FTA-B00Y-L1-DR-A-2102	12	PROPOSED LEVEL 1 FLOOR PLAN	03/04/2025
MPS-FTA-B00Y-LR-DR-A-2103	11	PROPOSED ROOF PLAN	03/04/2025
MPS-FTA-B00Y-ZZ-DR-A-3201	06	PROPOSED ELEVATIONS	03/04/2025
MPS-FTA-B00Y-ZZ-DR-A-3202	06	PROPOSED ELEVATIONS	03/04/2025
MPS-FTA-B00Y-ZZ-DR-A-3301	06	PROPOSED SECTIONS	03/04/2025

DC Partnership Pty Limited

Suite 6 | 113 Reservoir Street, Surry Hills NSW 2010
ABN: 72 896 582 485

T: 02 8399 3707
E: hello@dcpartnership.com.au
W: www.dcpartnership.com.au

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