# Crown Development Certificate

Issued under Environmental Planning & Assessment Act 1979 – Part 4A Division 1 Section 6.28 (2),
Environmental Planning & Assessment Regulation 2000 – Part 13

## Certificate Number: 18000502 / 4

## Section A The Application

### 1. Details of the Applicant

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|---|---|
| Name: | University of Sydney |
| Address: | Campus Infrastructure & Services<br>Services Building G12 , 22 Codrington Street Sydney NSW 2008 |
| Phone: | 0425 277 793 |
| Email: | sabrina.phillips@sydney.edu.au |
| Application Number: | 17000403 |

### 2. Details of the property

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|---|---|
| Unit / Street Number: | |
| Street Name: | The University of Sydney, Western Avenue |
| Suburb & Postcode: | Camperdown |
| Title Particulars (Lot & DP/SP): | Lot 1 (Part) / DP 1171804 |

### 3. Description of the proposed development subject of this Crown Approval Certificate

Signage and facade screen / sun shading element only

### 4. Estimated cost of works

$94,574,160.00

### 5. Development Consent (If applicable)

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|---|---|
| Development Consent No.: | SSD7974 |
| Date Development Consent issued: | 11 Sep 2018 |
| Name of Consent Authority: | Department of Planning & Environment |

### 6. Date application for the Crown Approval Certificate was made

| | |
|---|---|
| CC Application received: | 24 Sep 2018 |

## Section B Certifying Authority

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|---|---|---|---|
| Name: | BPB Corporate Accreditation | Accreditation No.: | ABC13 |
| Entity: | Modern Building Consultants Pty Ltd trading as Modern Building Certifiers (ACN 165 354 218) | | |
| Phone: | 02 9939 1530 | | |
| Email: | info@mbc-group.com.au | | |
| Address: | Suite 3 / 18 Sydney Road Manly NSW 2095 | | |

## Section C Building Classification

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|---|---|
| Class of the proposed building/s under the Building Code of Australia | 9b |

## Section D Attachments

Refer to Appendix A for the Attachments for this Crown Approval Certificate

## Section E Attachments

Refer to Appendix B for the Fire Safety Schedule for this Crown Approval Certificate

## Section F Date of issue

Date of issue of this Certificate: 27 Nov 2019

## Section G Certification

I certify that work completed in accordance with the documentation accompanying the application for this certificate (with such modifications, if any, verified by me as may be shown on that documentation) will comply with the technical provisions of the State's building laws, those being the regulations.

The development is to be carried out in compliance with the following plans and documentation listed below and endorsed by Modern Building Certifiers.

Architectural Plans DWG No. A34-BLP-ARC-DRG-AA10-0101 Rev 17 dated 20 Nov 2019, K34-BLP-ARC-DRG-AA10-0102 Rev 13 dated 10 Oct 2019, K34-BLP-ARC-DRG-AA10-0201 Rev 16 dated 20 Nov 2019, K34-BLP-ARC-DRG-AA10-0202 Rev 1 dated 22 Aug 2019, K34-BLP-ARC-DRG-AA10-0301 Rev 17 dated 20 Nov 2019, K34-BLP-ARC-DRG-AA10-0401 Rev 12 dated 22 Aug 2019, K34-BLP-ARC-DRG-AA10-0501 Rev 15 dated 10 Oct 2019, K34-BLP-ARC-DRG-AA10-0601 Rev 16 dated 29 Oct 2019, K34-BLP-ARC-DRG-AA10-0701 Rev 14 dated 29 Oct 2019, K34-BLP-ARC-DRG-AA10-0801 Rev 12 dated 29 Oct 2019, K34-BLP-ARC-DRG-AA10-0901 Rev 16 dated 20 Nov 2019, K34-BLP-ARC-DRG-AA20-0011, K34-BLP-ARC-DRG-AA20-0012 Rev 14 dated 27 Sep 2019, K34-BLP-ARC-DRG-AA20-1001 Rev 4 dated 25 Jun 2019, K34-BLP-ARC-DRG-AA20-1002 Rev 2 dated 22 May 2019, K34-BLP-ARC-DRG-AA20-1003 Rev 3 dated 25 Jun 2019, K34-BLP-ARC-DRG-AA20-1004 Rev 4 dated 25 Jun 2019 prepared by Billard Leece Partnership Pty Ltd

## Section H Signature

Signature:

Signed on behalf of Modern Building Certifiers BPB Corporate Accreditation No. ABC13

Signed by: Eric Bailey

Accreditation No. BPB0016

Date of endorsement: 27 Nov 2019

Certificate Number: 18000502 / 4

**APPENDIX A - 18000502 / 4**

Attachments

- Application Form
- Fire Engineering Report No.SLR0103/R002 Revision I dated 18 November 2019 prepared by Umow Lai
- Assessment report No.FCO-3073 prepared by CSIRO, dated 28 August 2014
- JV3 Report No.M.LOR0118/R001 Revision 3 dated 21 June 2019 prepared by Umow Lai
- Design Consultant Certificate prepared by Umow Lai, dated 22 October 2019

**APPENDIX B**
Fire Safety Schedule
*(Pursuant to Clause 168 of the Environmental Planning and Assessment Regulation 2000)*

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|---|---|---|
| Access panels, doors and hoppers to fire-resisting shafts | N | BCA 2016 Amendment 1 Clause C3.13, AS 1905.1-2015, AS1905.2-2005. |
| Automatic fail-safe device | N | BCA 2016 Amendment 1 Clause D2.19, D2.21 |
| Automatic fire detection and alarm system | N | AS 1670.1-2015, Fire Engineering Report, SLOR0103/R002 Revision I Section 3.4, prepared by Umow Lai dated 11 April 2019. |
| Automatic fire suppression system | N | BCA 2016 Amendment 1 Clause E1.5, Spec. E1.5, AS 2118.1-2017, Fire Engineering Report, SLOR0103/R002 Revision I Section 3.5, prepared by Umow Lai 18 November 2019. |
| Egress | N | Fire Engineering Report, SLOR0103/R002 Revision I Section 3.2, prepared by Umow Lai dated 11 April 2019. |
| Emergency lift | N | BCA 2016 Amendment 1 Clause E3.4, AS 1735.1-2016, AS 1735.2-2001, AS1735.11-1986, AS1735.12 1999 |
| Emergency lighting | N | BCA 2016 Amendment 1 Clause E4.2, E4.3 E4.4, AS 2293.1-2005 |
| Exit signs | N | BCA 2016 Amendment 1 Clause E4.5, NSW E4.6 & E4.8, Spec E4.8, AS 2293.1-2005, Fire Engineering Report, SLOR0103/R002 Revision I Section 3.8, prepared by Umow Lai dated 18 November 2019. |
| Fire dampers | N | BCA 2016 Amendment 1 Clause E2.2, C3.12, C3.15, Spec E2.2, AS/NZS 1668.1-2015, AS 1682.1-2015, AS 1682.2-2015 |
| Fire doors | N | BCA 2016 Amendment 1 Clause C2.12, C2.13, C3.4, C3.8, AS 1905.1-2015, |
| Fire hose reel systems | N | BCA 2016 Amendment 1 Clause E1.4, AS 2441-2005, Fire Engineering Report, SLOR0103/R002 Revision I Section 3.6, prepared by Umow Lai dated 18 November 2019. |
| Fire hydrant systems | N | BCA 2016 Amendment 1 Clause E1.3, AS 2419.1-2005, Fire Engineering Report, SLOR0103/R002 Revision I Section 3.7, prepared by Umow Lai dated 18 November 2019. |
| Fire resistance & compartmentation | N | Fire Engineering Report, SLOR0103/R002 Revision E Section 3.1.2, prepared by Umow Lai dated 11 April 2019. |
| Fire seals (protecting openings and service penetrations in fire resisting components of the building) | N | BCA 2016 Amendment 1 Clause C3.12, C3.15, Spec C3.15, AS 4072.1-2005, AS 1530.4-2014, Fire Engineering Report SLOR0103/R002 Revision I Section 3.1.2 (e), prepared by Umow Lai dated 18 November 2019. |
| Lightweight construction | N | BCA 2016 Amendment 1 Clause C1.8, Spec A2.3, Spec C1.8 |

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|---|---|---|
| Mechanical air handling systems | N | BCA 2016 Amendment 1 Clause E2.2, Spec E2.2a, Spec G3.8, AS/NZS 1668.1-2015, AS 1668.2-2012 |
| Portable fire extinguishers | N | BCA 2016 Amendment 1 Clause E1.6, AS 2444-2001, Fire Engineering Report, SLOR0103/R002 Revision I Section 3.6, prepared by Umow Lai dated 18 November 2019. |
| Smoke Curtain | | Fire Engineering Report SLOR0103/R002 Revision I Section 3.3.1.1 (a) and (b), prepared by Umow Lai dated 18 November 2019. |
| Smoke Compartmentation | | Fire Engineering Report SLOR0103/R002 Revision I Sections 3.1.3 and 3.3.1.1 (c), prepared by Umow Lai dated 18 November 2019. |
| Smoke dampers | N | Fire Engineering Report SLOR0103/R002 Revision I prepared by Umow Lai dated 18 November 2019. |
| Smoke doors | N | Fire Engineering Report SLOR0103/R002 Revision I Section 3.2.3, prepared by Umow Lai dated 18 November 2019. |
| Smoke hazard management (inc smoke exhaust, supply makeup air, zone smoke control and stair pressurisation) | N | Fire Engineering Report, SLOR0103/R002 Revision I Sections 3.3.1.2, 3.3.1.3, 3.3.2 and 3.3.3, prepared by Umow Lai dated 18 November 2019. |
| Sound systems and intercom systems for emergency purposes/ Emergency Warning Intercommunication System | N | BCA 2016 Amendment 1 Clause E4.9, AS 1670.4-2015, Fire Engineering Report SLOR0103/R002 Revision I Section 3.4, prepared by Umow Lai dated 18 November 2019. |
| Wall wetting sprinkler and drencher systems | N | Fire Engineering Report SLOR0103/R002 Revision I Section 3.5, prepared by Umow Lai dated 18 November 2019. |
| Warning and operational signs | N | Clause 183 of the Environmental Planning and Assessment Regulation 2000, Fire Engineering Report SLOR0103/R002 Revision I Section 3.9, prepared by Umow Lai dated 18 November 2019. |

Fire Engineering Report SLOR0103/R002 Revision I prepared by Umow Lai dated 18 November 2019.

1. Performance Based Smoke Exhaust

EP2.2, Performance based smoke exhaust systems are proposed on Level 2 and Level 3.

2. Fire Compartmentation

CP2, BCA DTS compartmentation limits are proposed to be met with the extent of voids limited to non-G3 atrium requirements through a combination of passive and active measures (including drenchered glazing). Whereby under BCA Spec A2.3, any tested prototype should achieve the FRL without the assistance of an active fire suppression systems. Additionally, components of the Western fire stair will include glazed construction protected by drenchered glazing.

3. Riser Construction

CP2, It is proposed to provide a sheet metal lid to the services risers within the L9 plantroom in lieu of a fire rated lid.

4. Extended Travel Distances

DP4, EP2.2, Travel distances exceed the BCA DTS limits of 20/40/60 m to a point of choice/to an exit respectively. Distances shall be limited to:

- 30 m to a point of choice generally
- Up to 60m to an exit generally

5. Extended Travel Distances

DP4, EP2.2, Travel distances between exits exceed BCA DTS limits of 60m. Distances shall be limited to:

- 90m between exits generally
- 100m between exits at Level 7 and 8.
- 110m between exits at Level 9.

6. Travel Via Nonfire-Isolated Stairs

DP5, A non-fire-isolated stair connects 4 storeys in lieu of 3, between Levels 1-4.

7. Travel Via Nonfire-Isolated Stairs

DP4, Egress widths on Level 03 are below BCA DTS requirements if the non-fire-isolated stair is not considered a required exit (noting that a Performance Solution has been provided to permit the use of this stair as part of Solution 6).

8. Consecutive Stair Risers

DP4, Stair 11-16 on Level 03 is provided with 60 consecutive risers without a 30° change of direction in lieu of 36 consecutive risers.

9. Sub-Floor Plantroom Egress Width

DP4, DP6, The egress widths within the sub-floor plantroom are a minimum of 600mm in lieu of 1m as required by BCA Clause D1.6.

10. Lift Shaft Sprinkler Protection

EP1.4, It is proposed to provide wet sprinkler coverage within the lift shafts in lieu of dry sprinkler coverage.

11. External Hydrant Locations

EP1.3, An external fire hydrant is located within 10m of the building façade, without protection by a shield wall in accordance with AS 2419.1 – 2005

12. Sprinkler Omission

EP1.4, Sprinkler coverage is proposed to be omitted from various overhangs around the perimeter of the building at L1 and L4.

13. Monitoring Valves

EP1.4, It is proposed to utilise Class B monitoring valves in lieu of Class A valves, located within the fire stair which will be accessible by the public.

14. Hose Reel Coverage

EP1.1, Fire hose reel coverage is not to be provided to the main switch room and communications rooms enclosed by 120-minute fire resistant construction.

15. Hose Reel Coverage

EP1.1, A fire hose reel on Levels 02 and 03 is not to be located within 4m from an exit, including:

- Up to 21m to an exit in lieu of 4m on Level 02
- Up to 7.5m to an exit in lieu of 4m on Level 03

16. Ground Floor Smoke Lobby & Hose Reel Coverage

DP4, EP1.1, EP2.2, The (Fire) Stair 3 discharge corridor is to be pressurised, however it is proposed to provide a smoke lobby in lieu of achieving 1m/s velocity across the exit door (Level 01). The lobby won't be pressurised, and doors from the classrooms into the lobby will swing against the direction of egress.

17. Ground Floor Smoke Lobby & Hose Reel Coverage

EP1.1, It is proposed to allow fire hose reel coverage to be achieved through the Level 01 airlock.