Department of Customer Service

Attn. the Proper Officer
Rothesay Avenue Development Pty Ltd
ACN 165 264 808
Suite 2, 2 Giffnock Avenue
Macquarie Park NSW 2113

Service: By express post and by email 18 January 2024

Building Work Rectification Order

Section 33 of the Residential Apartment Buildings (Compliance and Enforcement Powers) Act 2020

Rothesay Avenue Developments Pty Ltd ACN 165 264 808 is being given this Building Work Rectification Order ("Order") in relation to 20 Nancarrow Avenue Meadowbank NSW 2112 (SP98937) ("the Building").

Rothesay Avenue Developments Pty Ltd ACN 165 264 808 is required to cause building work to be carried out to remediate the potential serious defects as set out in paragraphs 8 to 60 of this Order.

Failure to comply with this Order is a criminal offence.

Background

1. The Department of Customer Service (the Department) administers the Residential Apartment Buildings (Compliance and Enforcement Powers) Act 2020 (the Act).

2. Under section 33 of the Act, if the Secretary of the Department or their authorised delegate has a reasonable belief that building work was carried out in a manner that could result in a serious defect in the Building or that the Building has a serious defect, they may order the developer to rectify building work to remediate the serious defect or potential defect.

3. Elizabeth Stewart is an authorised delegate of the Secretary of the Department. With the consent of the owners corporation, a third party consultant engaged by the Department attended the Building (**Investigator**) on 3 November 2022. The Investigator prepared a report on serious defects in the Building (**Audit Report**).

4. **Rothesay Avenue Developments Pty Ltd ACN 165 264 808** is the developer of the residential apartment building at **20 Nancarrow Avenue Meadowbank NSW 2112** (**SP98937**) (**the Building**) for the purposes of section 4 of the Act.

5. Under section 3 of the Act a serious defect in relation to a building, means –

(a) a defect in a building element that is attributable to a failure to comply with the performance requirements of the *Building Code of Australia*, the relevant Australian Standards or the relevant approved plans, or

(b) a defect in a building product or building element that

(i) is attributable to defective design, defective or faulty workmanship or defective materials, and

(ii) causes or is likely to cause—

(A) the inability to inhabit or use the building (or part of the building) for its intended purpose, or

(B) the destruction of the building or any part of the building, or

(C) a threat of collapse of the building or any part of the building, or

(c) a defect of a kind that is prescribed by the regulations as a serious defect, or

(d) the use of a building product (within the meaning of the *Building Products (Safety) Act2017*) in contravention of that Act.

6. Under s 6(1) of the *Design and Building Practitioners Act* 2020 a building element means any of the following:

(a) the fire safety systems for a building within the meaning of the *Building Code of Australia*,

(b) waterproofing,

(c) an internal or external load-bearing component of a building that is essential to the stability of the building, or a part of it (including but not limited to in-ground and other foundations and footings, floors, walls, roofs, columns and beams),

(d) a component of a building that is part of the building enclosure,

(e) those aspects of the mechanical, plumbing and electrical services for a building that are required to achieve compliance with the *Building Code of Australia*,

(f) other things prescribed by the regulations for the purposes of this section.

Decision to issue a building work rectification order

7. I, Elizabeth Stewart, am the decision maker for this Building Work Rectification Order **(the Order**). I have considered the Audit Report and have decided to issue the Order to **Rothesay Avenue Development Pty Ltd ACN 165 264 808** because I have formed a reasonable belief under s 33(1) of the Act the Building has serious defects as set out in this Order.

Descriptions of serious defects

NOTE: The Design and Building Practitioners Act 2020 applies to the remediation work under this Order. In brief, it requires that there be declared designs by registered practitioners before building work commences and that the designs be uploaded to the NSW Planning Portal. Any variations made to the building work must be reflected in the declared and uploaded designs.

8. Defect 1 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the whole of the basement of the Building the Investigator observed the following: 1. Stagnant discoloured water in the drainage trenches along the wall. The Investigator noted that this observation indicated lack of water tightness of the slab, the wall, and the wall to slab interface. 2. Water seepage through the wall. 3. The seepage was brown in colour. The Investigator further noted that this observation indicated corroded wall reinforcement or unidentified minerals. 4. Odours detected in the vicinity of the stagnated water in the troughs of the basement perimeter walls. I have formed the belief that the water penetration through the basement wall and the inadequate drainage installation within the basement and as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	**BCA Volume One Section F Health and Amenity, Part F1 Damp and Weatherproofing, Performance Requirement FP1.4** which states: *"A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause-* *(a) Unhealthy or dangerous conditions, or loss of amenity for occupants; and* *(b) Undue dampness or deterioration of building elements."* And **FP1.5 Rising damp**, *which states:* *"Moisture from the ground must be prevented from causing—* *(a) undue dampness or deterioration of building elements; and* *(b) unhealthy or dangerous conditions, or loss of amenity for occupants."* **BCA Volume One, Section F1 Damp and Waterproofing, Part F1.1 Stormwater Drainage** and **Australian Standard 3500.3:2015, Plumbing and drainage – Stormwater drainage, Section 6 Surface and subsoil drainage systems - installation, 6.4 Subsoil drains, Clause 6.4.1 General**, which states: *"Subsoil drains shall be laid –* *(a) so any pipe or geo-composite drain can be flushed out;* *(b) with protection to prevent damage;* *(c) with clean-out points for pipes or geo-composite*	Developer to undertake, including but not limited to the following- 1. Rectify the perimeter drainage to comply with the BCA Volume One, Section F1 Damp and Waterproofing, Part F1.1 Stormwater Drainage and Australian Standard 3500.3 Plumbing and drainage – Stormwater drainage and the approved plans. 2. Demonstrate compliance with DA Condition 50. 3. Make good of any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 160 days of issuance of this Order.

	drains- *(i) located at their topmost ends (or heads)* *(ii) located at each change of direction greater than 70°;* *(iii) …;* *(iv) that extend vertically to the top of the paved surfaces or within 300 mm of an unfinished paved surface; and* *(v) that terminate with a screw cap legibly marked 'SW'* *Any pipes and fittings in such drains shall be-* *(i) cleaned internally prior to installation and commissioning* *(ii) continuously supported by embedment (see clause 6.3.5); and* *(iii) jointed using fittings where applicable."* **Australian Standard AS3500.3 appears as a standard referenced in the BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Deemed-to- Satisfy provision F1.1 Stormwater drainage**, which states in part: *"Stormwater drainage must comply with AS/NZS 3500.3."*		

9. Defect 2 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting level 9 of the Building the Investigator observed no visible waterproofing membrane expansion control management. I have formed the belief that the absence of expansion joints in the membrane and as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	**Australian Standard 4654.2-2012 Waterproofing membranes for external above-ground use – Design and installation, Section 2 - Design and installation, 2.9 Movement and Control Joints,** which states in part - *"Where a building or structure has construction joints, movement joints or control joints, to allow for the anticipated movement. Where continuous the membrane shall be unbonded for the first 100mm."*	Developer to undertake, including but not limited to the following- 1. Rectification of the waterproofing defects in accordance with the BCA Volume One and Australian Standard 4654.2. 2. Ensure any disturbed penetrations, junctions, terminations, and overflows comply with AS4654.2 3. Make good any consequential damage 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within160 days of issuance of this Order.

10. Defect 3 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the level 6 and level 9 external rooftops of the Building the Investigator observed the following: 1. The application of the waterproofing to the hob beneath the door opening was substandard. 2. The membrane didn't continue beneath the door assembly. 3. The application of the membrane would not prevent wind driven water from entering the building. 4. Evidence of water damage internally. 5. The substrate to which the waterproofing had been applied was rough. 6. Inadequate termination of membrane. I have formed the belief that the application of the waterproofing membrane to the hob and as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	**AS 4654.2 Waterproofing membranes for external above-ground use, Part 2 Design and installation, Section 2.5.3 Types of substrates, Clause 2.5.3.1 Fully bonded or liquid applied,** which states: *"The preparation of the substrate or fully bonded or liquid applied membranes shall result in the surface of the substrate being smooth, without protrusions, voids or formwork distortions, and clean, dry, and free from dust and contamination.* *NOTE: To aid in adhesion on a concrete or screeded surface, the smoothness of the substrate should be at least equivalent to that of a wood float or light broom finish. Priming may be required for some types of membrane.* *The preparation of the substrate shall result in a moisture content applicable to the type of membrane applied.* *NOTES:* *1 Moisture content of the substrate may be determined by a non-invasive moisture meter test. Moisture content to mortar toppings and concrete should be 8% or less, or suitable for the membrane applied.* *2 Hight moisture content of the substrate may cause blistering in some membranes and failure of the membrane system to fully cure.* *The substrate shall be resistant to moisture damage that is caused by condensation forming on the underside of the substrate.* And **Australian Standard AS4654.2 Waterproofing Membranes for External Above Ground Use, Section 2 Design and Installation, 2.8 Termination of membranes, 2.8.1.1 Height**, which states in part: *"Where the membrane termination is to prevent water entry, the finished height of the membrane above the finished surface level shall be sufficient to prevent water, including wind driven, flowing over the top of the membrane."*	Developer to undertake, including but not limited to the following- 1. Rectify waterproofing membrane to comply with AS 4654 and BCA Volume One. 2. Make good any consequential damage 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 180 days of issuance of this Order.

	And **Australian Standard AS4654.2, Waterproofing Membranes for External Above Ground Use, Section 2 - Design and installation, 2.8 Termination of membranes, 2.8.3 Doors and windows onto external waterproofed areas**, appears as a standard referenced in the BCA which states in part: - *"For doors and windows onto external waterproofed areas, the following apply:* *Sub-sill flashing shall be included as part of the membrane system (see Note 1).* *Where the internal and external finished floor levels do not allow an upturn, the membranes shall be fixed under the sill and terminate in the stormwater system (see Note 2).* *Notes:* *1. For typical detail of sub-sill flashing, see Figure 2.8.* *2. Ideally, the deck surface should fall away from the grate, and additionally the grate should be to the width of or greater than the opening.* *3. Typical details of external terminations at external opening doors and at wall openings are shown in Figure 2.8 and Figure 2.9.* *4. Openings should be provided with a set-down or hob to provide a vertical surface of sufficient dimension. See also Table A1, Appendix A.* *5. Where circumstances do not permit the inclusion of a set-down or hob (e.g., for wheelchair access), a gutter should be formed into the substrate immediately in front of the opening.* *6. Requirements for fixings to seals and frames are given in AS 2047."*		

11. Defect 4 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the rooftop of the Building the Investigator observed the following: 1. Evidence of ponding water on the roof top waterproofing membrane. 2. Inadequate falls to drains. 3. Damaged membrane. 4. Drains located at high points of slab. I have formed the belief that the ponding water on the liquid rooftop membrane and as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	**Australian Standard 4654.2-2012 Waterproofing Membranes for External Above Ground Use, Section 2 Design and Installation, 2.5 Substrate, 2.5.2 Falls**, whichstates: *"Falls in finishes shall ensure water drains to the drainage outlet. Water shall not be retained on the finished surface with the exception of residual water remaining due to surface tension.* *The fall shall be in the structural substrate or formed by a screed over the structural substrate.* *NOTE: Falls for surface drainage should be no flatter than 1 in 100."* **Australian Standard 4654.2** appears as a standard referenced in the **BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Deemed-to- Satisfy provision F1.4** which states: *"Waterproofing membranes for external above ground use must comply with AS 4654.1 and AS 4654.2".* Deemed-to-Satisfy provision F1.4 is a pathway that can satisfy the BCA Volume One, Section F Health and Amenity, Part F1 Damp states: *"A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause-* *(a) Unhealthy or dangerous conditions, or loss of amenity for occupants; and* *(b) Undue dampness or deterioration of building elements."* Therefore, because the installation does not comply with the referenced Australian Standard 4654.2, the BCA Volume One Performance Requirement cannot be shown to have been satisfied.	Developer to undertake, including but not limited to the following- 1. Carry out rectification of the waterproofing defects to comply with the BCA Volume One and Australian Standard 4654.2 Waterproofing membranes for external above ground use. 2. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third party inspection reports.	Within 180 days of issuance of this Order.

12. Defect 5 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the rooftop of the Building the Investigator observed the following: 1. The roof areas were bounded by concrete upstands / parapets of varying heights. 2. No overflow provisions were visible within the upstands / parapets. I have formed the belief that the lack of overflow provisions and as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	**BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Performance Requirement FP1.4** which states in part – *"A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause-* *(a) Unhealthy or dangerous conditions, or loss of amenity for occupants; and* *(b) Undue dampness or deterioration of building elements."* and **Australian Standard AS/NZS 3500.3 –2015 Plumbing and Drainage–Stormwater Drainage, Section 5 Surface Drainage Systems –Design, Clause 5.3.1.1 Roof areas**, which states in part - *"Stormwater from roof areas shall be collected and conveyed in gutters and downpipes (...) and, during periods of high rainfall intensity or blockage of the roof drainage system, be discharged through overflow devices to –(a) site stormwater drains or channels;..."AS 3500.3 appears as a standard referenced in the BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Deemed to Satisfy* *Provision F1.0, which states: "Stormwater drainage must comply with AS/NZS 3500.3."*	Developer to undertake, including but not limited to the following – 1. Carry out rectification of the waterproofing defects to comply with the **BCA Volume One and AS/NZS 3500.3**. 2. Ensure the new overflows satisfy the design requirements of AS3500.3. 3. Ensure the membrane is terminated within the overflows in accordance with AS4654.2. 4. Ensure the discharge points for the overflows do not cause a nuisance to the residents or the general public. 5. Make good any consequential damage. 6. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 180 days of issuance of this Order.

13. Defect 6 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the rooftop of the Building the Investigator observed that penetrations had been made to the rooftop slab membrane that had not been sealed as part of the membrane system with adequate termination height. I have formed the belief that the penetration of the membrane and as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	**BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Performance Requirement FP1.4 Weatherproofing**, which states in part: *"A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause - (a) unhealthy or dangerous conditions, or loss of amenity for occupants; and (b) undue dampness or deterioration of building elements."* and **Australian Standard AS4654.2 Waterproofing membranes for external above-ground use – Design and installation, Section 2 - Design and installation, 2.8 Termination of membranes, 2.8.4 penetrations,** appears as a standard referenced in the BCA Volume One, which states in part: *"Any fixings that penetrate the membrane shall be sealed. The sealant shall be compatible with the surface material. Where backing rods are used to support the sealant, they shall be a minimum 12mm. NOTES: 1.* *Typical details of penetrations are shown in Figures 2.10 and 2.11. 2. Typical details of metal post supports are shown in Figure 2.12."*	Developer to undertake, including but not limited to the following- 1. Rectify the system to comply with the BCA Volume One Section F Health and Amenity, Part F1 Damp and Weatherproofing, Performance Requirement FP1.4 and Australian Standard 4654.2 Waterproofing membranes for external above ground use, design and installation. 2. Rectification of waterproofing membrane in strict accordance with the manufacturer's specifications. 3. Ensure any disturbed penetrations, junctions, terminations, and overflows comply with AS4654.2. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 160 days of issuance of this Order.

14. Defect 7 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the slab on ground in the basement of the Building the Investigator observed the following: 1. Water, sediment and leachates rising up and permeating through the cracks in the slab on ground. 2. Evidence that the continuous vapour barrier below the slab on ground had failed. The Investigator further noted that one of the Owners Corporation representatives stated at the time of inspection that; "there is more flooding during a high tide". I have formed the belief that the failure to prevent water entering the building through the slab and as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	**BCA Volume One Section F Health and Amenity, Part F1 Damp and Weatherproofing FP 1.5 Rising damp,** which states *"Moisture from the ground must be prevented from causing—* *(a) undue dampness or deterioration of building elements; and* *(b) unhealthy or dangerous conditions, or loss of amenity for occupants.* And **Structural drawing S8.000 (C) Issued for construction 25.11.16 General Notes Sheet 1 of 3, Subgrade Preparation SP8 which states:** *"The slab is to be entirely underlaid with a 0.2mm polyethylene vapour barrier with all joints adequately lapped and taped at penetrations"*	Developer to undertake, including but not limited to the following- 1. Demonstrate compliance with Structural drawing Concrete Notes. 2. Rectify vapour barrier to comply with BCA Volume One and the approved Structural drawings 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 180 days of issuance of this Order.

15. Defect 8 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the rooftop of the Building the Investigator observed unprotected openings on the rooftop. I have formed the belief that the unprotected opening as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	**BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Performance Requirement FP1.4 Weatherproofing**, which states in part: *"A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause –* *(a) unhealthy or dangerous conditions, or loss of amenity for occupants; and* *(b) undue dampness or deterioration of building elements."*	Developer to undertake, including but not limited to the following- 1. Cover the unprotected opening to prevent water entry into the building to comply with the BCA Volume One. 2. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third party inspection reports.	Within 180 days of issuance of this Order.

16. Defect 9 – Waterproofing

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the external concrete soffits of the Building the Investigator observed drip grooves missing from multiple concrete soffits. I have formed the belief that the absence of drip grooves and as described above is a serious defect because it is a defect in a building element (waterproofing) that is attributable to a failure to comply with the following:	The absence of drip grove demonstrates a failure to comply with Australian Standards 4654.2-2012 Waterproofing Membranes for External Above Ground Use, Section 2 Design and Installation, 2.8 Termination of membranes, 2.8.2 Vertical Downward Termination, 2.8.2.1 Roofs and Balcony, which states in part: "*For balconies with a fully bonded membrane, the membrane may be terminated at the drip groove".* Australian Standard 4654.2 appears as a standard referenced in the BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Deemed-to-Satisfy provision F1.4 which states: "*Waterproofing membranes for external above ground use must comply with AS 4654.1 and AS 4654.2".* BCA Volume One, Section F Health and Amenity, Part 1 Damp and Weatherproofing, Performance Requirements FP1.4, which states in part: *"A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause-* *(a) Unhealthy or dangerous conditions, or loss of amenity for occupants; and* *(b) Undue dampness or deterioration of building elements."*	Developer to undertake, including but not limited to the following- 1. Rectify the defect to comply with BCA Volume One. 2. Demonstrate compliance of rectification work by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third party inspection reports.	Within 120 days of issuance of this Order.

17. Defect 10 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire isolated stairway (FS03) in the basement carpark and otherwise in multiple locations of the Building the Investigator observed service pipe passing through the fire isolated stairway enclosure, in multiple locations. I have formed the belief that the service pipes passing through the fire isolated stairway and the penetrations within the walls bounding the fire isolated stairway caused by service pipes as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Part C3: Protection of Openings, C3.9 Service penetrations in fire isolated exits**, that states: *"Fire-isolated exits must not be penetrated by any services other than—* *(a) electrical wiring permitted by D2.7(e) to be installed within the exit; or* *(b) ducting associated with a pressurisation system if it—* *(i) is constructed of material having an FRL of not less than –/120/60 where it passes through any other part of the building; and* *(ii) does not open into any other part of the building; or* *(c) water supply pipes for fire services."* **NCC BCA Volume One, Part C1 Fire resistance and stability, Specification C1.1: Fire- Resisting Construction,** which requires walls bounding fire isolated exits in basement carpark (Class 7a) to have a fire resistance level (FRL) of not less than 120/120/120.	Developer to undertake, including but not limited to the following- 1. Rectify the defects to comply with **NCC BCA Volume One.** 2. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

18. Defect 11 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire isolated stairways in the basement carpark and otherwise in multiple locations of the Building the Investigator observed gaps around the fire door frames within the fire rated walls bounding the fire isolated stairways. I have formed the belief that the gaps around fire-rated doors and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**Australian Standard AS 1905.1 Components for the protection of openings in fire resistant walls, Part 1: Fire-resistant doorsets, Section 5: Installation**, which states (in part): *"5.2 Metal doorframes in non-masonry walls* *Fixing and filling of metal doorframes in non-masonry walls shall be as per the tested specimen."* *"5.3 Metal doorframes in masonry walls* *5.3.2 Backfilling of metal doorframes* *"Unless an alternative method of fixing has been demonstrated by a full-scale standard fire resistance test, metal doorframes used in the construction of a fire-rated doorset for masonry construction, frame head and jamb cavities shall be backfilled by thoroughly and progressively grouting with cement mortar, concrete, a non-shrink grout or with material with a temperature of fusion not less the 1000°C."* **Australian Standard AS 1905.1** appears as a standard referenced in the **NCC BCA Volume One, Specification C3.4 Fire doors, smoke doors, fire windows and shutters**, that states (in part): *1. Scope* *"This Specification sets out requirements for the construction of fire doors, smoke doors, fire windows and fire shutters."* *2. Fire Doors* *"A required fire door must—* *(a) comply with AS 1905.1; and* *(b) …."*	Developer to undertake, including but not limited to the following- 1. Rectify non-compliant doorsets and doorframes to comply with AS 1905 and the NCC BCA Volume One. 2. Make good any consequential damage. 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

19. Defect 12 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire isolated stairways in the basement carpark and otherwise in multiple locations of the Building the Investigator performed a knock test to the fire-rated frames of the fire-resistant doorsets which emitted a hollow sound when tapped consistent with fire-resistant doorsets that were not thoroughly grouted. I have formed the belief that the voids in the grouted door frame and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section C Fire resistance, Specification C3.4 Fire doors, smoke doors, fire windows and shutters, Clause 2. Fire doors**, which states in part – *"A required fire door must—* *(a) comply with AS 1905.1;"* **Specification C3.4 Fire doors, smoke doors, fire windows and shutters, Clause 2. Fire doors, is a pathway that can satisfy the BCA Volume One, Section C Fire resistance, Performance Requirement CP2,** which states in part - *"(a) A building must have elements which will, to the degree necessary, avoid the spread of fire—* *(i) to exits; and* *(ii) to sole-occupancy units and public corridors; and* *(iii) between buildings; and* *(iv) in a building".* **Australian Standard AS1905.1- Components for the protection of openings in fire-resistant wall Part 1: Fire resistant doorsets, Section 5 Installation, 5.3 Metal doorframes in masonry walls, 5.3.2 Backfilling of metal door frames**, appears as a standard referenced in the BCA which states in part - *"Unless an alternative method of fixing has been demonstrated by a full-scale standard fire resistance test, metal door frames used in the construction of a fire-rated doorset for masonry construction, frame head and jamb cavities shall be backfilled by thoroughly and progressively grouting with cement mortar, concrete, a non-shrink grout or with material with a temperature of fusion not less than 1000°C".* Therefore, because the installation does not comply with the **BCA Volume One** and referenced **Australian Standard 1905.1,** the Performance Requirement cannot be shown to have been satisfied. **Australian Standard AS 1905.1** appears as a standard referenced in the **NCC BCA Volume One, Specification C3.4 Fire doors, smoke doors, fire windows and shutters**, that states (in part): *1. Scope* *"This Specification sets out requirements for the construction of fire doors, smoke doors, fire windows and fire shutters."*	Developer to undertake, including but not limited to the following- 1. Rectify non-compliant doorsets and door frames to comply with Australian Standard AS 1905.1 and BCA Volume One. 2. Make good any consequential damage. 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third party inspection reports.	Within 90 days of issuance of this Order.

	2. *Fire Doors* *"A required fire door must—* *(a) comply with AS 1905.1; and* *(b) …."*		

20. Defect 13 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting all levels at multiple locations of the Building the Investigator observed the following: 1. Redundant unprotected penetrations were found in cupboards in the public corridor. 2. Generally, the public corridors and common cupboards that were inspected had set false ceilings and it was not possible to ascertain whether penetrations above false ceilings were protected. I have formed the belief that the inadequate fire-resisting sealing of redundant penetrations and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Section C Fire Resistance, Performance Requirements, CP8 Fire protection of openings and penetrations**, which states: *"Any building element provided to resist the spread of fire must be protected, to the degree necessary, so that an adequate level of performance is maintained—* *(a) where openings, construction joints and the like occur; and* *(b) where penetrations occur for building services."* **NCC BCA Volume One, Section C Fire Resistance, Deemed to Satisfy Provision, C3.12 Openings in floors and ceilings for services**, which states: *(a) Where a service passes through—* *(i) a floor that is required to have an FRL with respect to integrity and insulation; or* *(ii) a ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with (b).* *(b) A service must be protected—* *(i) in a building of Type A construction, by a shaft complying with Specification C1.1; or* *(ii) in a building of Type B or C construction, by a shaft that will not reduce the fire performance of the building elements it penetrates; or* *(iii) in accordance with C3.15.* *(c) Where a service passes through a floor which is required to be protected by a fire-protective covering, the penetration must not reduce the fire performance of the covering."* The inadequate fire-resisting sealing of penetrations will not prevent the passage of flames and hot gases in an event of a fire and therefore fails to comply with the requirements of the **NCC BCA Volume One** for resisting fire spread.	Developer to undertake, including but not limited to the following- 1. Install access panels to ceilings to access services and penetrations. 2. Engage appropriately qualified contractor to conduct a site audit to identify all non-compliant wall and floor penetrations. 3. Rectify all non-compliant wall and floor penetrations to comply with NCC BCA Volume One. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

21. Defect 14 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire isolated passageway in basement level B1 of the Building the Investigator observed the following: 1. Service pipes passing through the walls bounding the fire isolated passageway. 2. Gaps around service pipe penetrations within the walls bounding the exit. 3. A fire rated ceiling was partially constructed within the fire isolated passageway. I have formed the belief that the services passing through the walls bounding the fire-isolated passageway and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part C3: Protection of Openings, C3.9,** that states: *"Fire-isolated exits must not be penetrated by any services other than—* *(a) electrical wiring permitted by D2.7(e) to be installed within the exit; or* *(b) ducting associated with a pressurisation system if it—* *(i) is constructed of material having an FRL of not less than –/120/60 where it passes through any other part of the building; and* *(ii) does not open into any other part of the building; or* *(c) water supply pipes for fire services."*	Developer to undertake, including but not limited to the following- 1. Conduct an audit of all fire isolated exits within the building to identify any service penetrations or installations that fail to comply with NCC BCA Volume One. 2. Rectify all non-compliant wall and floor penetrations to comply with the BCA Volume One. 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

22. Defect 15 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire isolated passageway in basement level B1 of the Building the Investigator observed partially installed, or redundant mechanical plant and equipment in fire isolated corridor. I have formed the belief that the mechanical plant and equipment in the fire isolated corridor and exit and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part D2: Construction of exits, D2.7,** which states (in part): *"(a) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp."* And **NCC BCA Volume One, Part C3: Protection of Openings, C3.9,** which states (in part): *"Fire-isolated exits must not be penetrated by any services other than—* *(a) electrical wiring permitted by **D2.7(e)** to be installed within the exit; or* *(b) ducting associated with a pressurisation system if it—* *(i) …* *(c) water supply pipes for fire services."*	Developer to undertake, including but not limited to the following- 1. Demonstrate the fire isolated corridor complies with BCA Volume One. 2. Rectify the defects and non-compliances in the fire isolated corridor to comply with BCA Volume One Volume One. 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

23. Defect 16 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the basement level B1 of the Building the Investigator observed that the basement level B1 contained rooms that were required to be fire separated, including main switchboard and garbage room. In respect of those rooms the Investigator noted the following: 1. Unprotected service penetrations passing through fire rated masonry walls. 2. Defective or missing fire dampers. I have formed the belief that the unprotected service penetrations in fire rated walls and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part C3: Protection of Openings, C3.15 and Specification C3.15,** which states (in part): *"Where an electrical, electronic, plumbing, mechanical ventilation, air- conditioning, or other service penetrates 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, that installation must comply with any one of the following:* *(a) Tested systems* *(i) The service, building element and any protection method at the penetration are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the required FRL or resistance to the incipient spread of fire.* *(b) …* *(c) Compliance with Specification C3.15*	Developer to undertake, including but not limited to the following- 1. Engage appropriately qualified contractor to conduct a site audit to identify all non-compliant wall and floor service penetrations. 2. Rectify all non-compliant wall and floor penetrations to comply with BCA Volume One. 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

24. Defect 17 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the basement level B1 of the Building the Investigator observed that the basement level B1 contained rooms that were required to be fire separated, including main switchboard and garbage room. As well as this the Investigator observed gaps between fire rated masonry walls and concrete slabs. I have formed the belief that the unprotected service penetrations between fire rated walls and fire rated floors and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part C3: Protection of Openings, C3.16,** which states (in part): *"C3.16 Construction joints* (4) *(a) Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS1530.4 to achieve the required FRL."*	Developer to undertake, including but not limited to the following- 1. Engage appropriately qualified contractor to conduct a site audit to identify all non-compliant wall and floor junctions. 2. Rectify all non-compliant wall and slab junctions. 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

25. Defect 18 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the basement fire stair (FS04) of the Building the Investigator observed that the height of first riser in the ascending flight was lower than the height of the second riser by more than 5mm (~15mm or more). I have formed the belief that the inconsistent stair tread heights throughout the stairwell and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**Building Code of Australia Volume One (BCA) Section D Access and egress, Part D2 Construction of exits, Deemed-to- Satisfy provision D2.13 Goings and risers**, which states in part: *"(a) A stairway must have –* *(iii) constant goings and risers throughout each flight, except as permitted by (b) and (c), and the dimensions of goings (G) and risers* *(R) in accordance with (a)(ii) are considered constant if the variation between-* *(A)adjacent risers, or between adjacent goings, is no greater than 5 mm and* *(B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm"* Deemed-to-Satisfy provision D.13 goings and risers is a pathway that can satisfy the **BCA Volume One, Section D Access and egress, Performance Requirement DP2 Safe movement to and within a building**, which states in part *"So that people can move safely to and within a building, it must have-* *(c) any stairways and ramps with-* *(v) in the case of a stairway, suitable safe passage in relation to the nature, volume and frequency of likely usage,"* Therefore, because the stair dimensions do not comply with the **Deemed-to- Satisfy provision D2.13 Goings and risers, the BCA Volume One** Performance Requirements cannot be shown to have been satisfied.	Developer to undertake, including but not limited to the following- 1. Carry out rectification in accordance with the **BCA Volume One** to achieve compliance. 2. Make good any consequential damage. 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

26. Defect 19 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the external stairway of the Building the Investigator observed the following: 1. External stairway was not provided with handrails. 2. External stairway was not provided with slip resistant nosing strips. I have formed the belief that the lack of handrails and slip resistant nosing strips as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part D2: Construction of exits, D2.17,** which state (in part) - *"(a) Except for handrails referred to in D2.18, handrails must be— (i)located along at least one side of the ramp or flight; and* *(ii)located along each side if the total width of the stairway or ramp is 2 m or more; and…"* And **NCC BCA Volume One, Part D2: Construction of exits, D2.13**, which state (in part)- *"D2.13 Goings and risers* *…(v) treads which have—* *(A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when teste accordance with AS 4586; or* *(B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested* *in accordance with AS 4586; and…"*	Developer to undertake, including but not limited to the following- 1. Conduct an audit of all external stairs to verify compliance with the requirements of **NCC BCA Volume One.** 2. Rectify non-compliant stairs to comply with **NCC BCA Volume One.** 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

27. Defect 20 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the water tank and pump rooms of the Building the Investigator observed that the clear width of path of travel within the water tank and pump rooms was less than 1 meter. I have formed the belief that the width of path of travel of less than 1 meter as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part D1: Provision for escape, D1.6,** which states (in part)- *"D1.6 Dimensions of exits and paths of travel to exits In a required exit or path of travel to an exit—* *(a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway maybe reduced to not less than 1980 mm; and* *(b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than—* *(i)1 m; or…"* And The **Australian Standard AS 2419.1-2005,** which states (in part)- *"6.4 PUMPROOM* *6.4.1 General* *Fixed on-site pumpsets and associated equipment shall be contained in a weatherproof room and be—* *(e) constructed with a minimum 2.1 m high internal clearance with adequate space for pump maintenance and replacement"* **Australian Standard AS 2419.1** appears as a standard referenced in the **NCC BCA Volume One, E1.3**, which states (in part): *E1.3 Fire hydrants* *(b)The fire hydrant system—* *(i)must be installed in accordance with AS 2419.1, except—* *(A) …"*	Developer to undertake, including but not limited to the following- 1. Demonstrate compliance through a performance solution; or 2. Conduct an audit of all service rooms to verify compliance with the requirements of **NCC BCA Volume One.** 3. Rectify width of path of travel to comply with **NCC BCA Volume One.** 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

28. Defect 21 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting multiple locations of the Building the Investigator observed the following: 1. Basement stair with reduced ceiling height was not provided with adequate signs and marking. 2. The ceiling height in certain locations within the plant room on level 11 (under the ductwork) in the Building was only 1500mm. Additionally, the low height ducting was not provided with adequate marking. 3. Louvred vents on both ends of the public corridors on levels 9 and 10 could be manually operated to reduce the open area down to 30%, approximately. I have formed the belief that the inadequate ceiling height with inadequate signage and marking, and louvred vents as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	The fire engineering performance solution report number 9003, revision E, dated 03.12.20218 (the performance solution), which specifies the following (among other things): a. *"Permanent marking and signs are required to be mounted on the wall adjacent to the low ceiling area. Refer to Image 2.11.4.* b. *The ceiling height within level 11 plantroom can be only reduced to 1.65m.* c. *The side and the underside of the ductwork (in plant room on level 11) are to be provided with reflective yellow chevron marking.* d. *Louvred vents are be provided at the ends of the level 9 and 10 public corridors and to have a minimum discharge coefficient of 0.8."* The fire engineering performance solution report number 9003, revision E, dated 03.12.20218 (the performance solution) justifies several deviations from the Deemed to Satisfy (DTS) provisions of the **NCC BCA Volume One** by demonstrating compliance with the performance requirements of the **NCC BCA Volume One**. Failure to implement the requirements of the performance solution fails to comply with **NCC BCA Volume One (2016), A0.1, A0.2 & A1.5,** which state: *"A0.1 Compliance with the NCC* *Compliance with NCC is achieved by satisfying the Performance Requirements"* *"A0.2 Meeting the Performance Requirements* *The Performance Requirements can only be satisfied by-* *(a) A Performance Solution; or* *(b) Deemed-to-Satisfy solution; or* *(c) combination of (a) and (b). Refer to Figure 2.11.5* *"A1.5 Compliance with all performance requirements* *Subject to A1.6, Class 2-9 buildings must be so designed and constructed that they comply with the relevant provisions of Section A and the performance requirements of this Volume"*	Developer to undertake, including but not limited to the following- 1. Engage a suitably qualified Fire Safety Engineer to audit the whole building and verify compliance with the Fire engineering performance solution report number 9003, revision E, dated 03.12.20218 (the performance solution). 2. Rectify all non-compliances to comply with the **NCC BCA Volume One**. 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

29. Defect 22 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting levels 1 to 11 of the Building the Investigator observed the following: 1. Doors of fire isolated stairways were locked from the inside of the stairways. 2. Doors of fire isolated stairways had doorknobs from the inside of the stairways. I have formed the belief that locking doors to fire isolated stairways from the inside of the stairway enclosure, and the installation of doorknobs inside the stairway as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part D2: Construction of exits, D2.22,** which states: *"D2.22 Re-entry from fire-isolated exits* *(a) Doors of a fire-isolated exit must not be locked from the inside as follows:* *(i)In a Class 9a health-care building.* *(ii) In a Class 9c building.* *(iii) In a fire-isolated exit serving any storey above an effective height of 25 m, throughout the exit.* *(b)The requirements of (a) do not apply to a door fitted with a fail-safe device that automatically unlocks the door upon the activation of a fire alarm and—* *(i) on at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or* *(ii) an intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation."* Doorknobs fail to comply with **NCC BCA Volume One, Part D2: Construction of exits, D2.21**, which states (in part): *"D2.21 Operation of latch* *(a) A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by—* *" (i) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area required to be accessible by Part D3—*	Developer to undertake, including but not limited to the following- 1. Rectify the non-compliances to comply with **the NCC BCA Volume One**. 2. Make good any consequential damage. 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

	(A) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and *(B) have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35 mm and not more than 45 mm; or…"*		

30. Defect 23 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting level 11 of the Building the Investigator observed a trip hazard in front of the doorway to the fire isolated exit. I have formed the belief that the trip hazard as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part D2: Construction of exits, D2.15,** which states: *"D2.15 Thresholds* *The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—* *(a) in patient care areas in a Class 9a health-care building, the door sill is not more than 25 mm above the finished floor level to which the doorway opens; or* *(b) in a Class 9c building, a ramp is provided with a maximum gradient of 1:8 for a maximum height of 25 mm over the threshold; or* *(c) in a building required to be accessible by Part D3, the doorway—* *(i) opens to a road or open space; and* *(ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or* *(d) in a Class 9b building used as an entertainment venue, the door sill of a doorway opening to a road, open space, external stair landing or external balcony is not more than 50 mm above the finished floor level to which the doorway opens; or* *(e) in other cases—* *(i) the doorway opens to a road or open space, external stair landing or external balcony; and* *(ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens."*	Developer to undertake, including but not limited to the following- 1. Engage a suitably qualified contractor to conduct an audit of all door thresholds. 2. Rectify the non-compliances to comply with the **NCC BCA Volume One.** 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

31. Defect 24 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the basement storage cages of the Building the Investigator observed that the clearance between the storage cages and the sprinkler deflectors was less than 500mm. I have formed the belief that the inadequate clearance between the storage cages and the sprinkler deflectors as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**Australian Standard AS 2118.1,** which states (in part): *"5.4.8 Clear space below sprinklers* *Except as provided in Clauses 11.1.3.4(b) and 11.1.3.6(d) a clear space not less than 500 mm shall always be maintained below the level of the sprinkler deflectors throughout the room. For high piled combustible stock, clearance not less than 1 m shall be provided."* **Australian Standard AS 2118.1** appears as a standard referenced in the **NCC BCA Volume One, E1.5 & Specification E1.5,** which state (in part)**:** *"E1.5 Sprinklers* *A sprinkler system must—* *(a) be installed in a building or part of a building when required by Table E1.5; and* *(b) comply with Specification E1.5."* *4. "Specification E1.5 Fire sprinkler systems* *1. Scope* *This Specification sets out requirements for the design and installation of fire sprinkler systems.* *2. Adoption of AS 2118* *Subject to this Specification, an automatic fire sprinkler system must comply with—* *(a) AS 2118.1; or* *(b) for a class 2 or 3 building: AS 2118.4, as applicable; or* *(c)* for a combined sprinkler and fire hydrant system: AS 2118.6, or *(d)* …" Lack of 500mm clearance below sprinkler deflectors also fails to comply with the Fire engineering performance solution report number 9003, revision E, dated 03.12.20218 (the performance solution).	Developer to undertake, including but not limited to the following- 1. Demonstrate compliance through a performance solution; or 2. Rectify the non-compliances to comply with the **NCC BCA Volume One.** 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

32. Defect 25 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire hydrant and sprinkler boosters of the Building the Investigator observed the following: 1. Block plans were located behind the equipment and their details weren't clearly visible. 2. Overgrown vegetation in front of the booster assembly. The Investigator further noted that the information on block plans did not reflect requirements of the Fire engineering performance solution report number 9003, revision E, dated 03.12.20218 (the performance solution), for example, location of fire isolated passageway and sprinkler control valves assembly. I have formed the belief that locating the block plans behind the booster assembly causing it to be not readily seen, and the overgrown vegetation in front of the booster assembly as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**Australian Standard AS 2419.1**, which states (in part): *"7.11 BLOCK PLAN* *A block plan, A3 minimum size, shall be fixed within the booster cabinet, enclosure, recess, fire control room and pump room where it can be readily seen."* **Australian Standard AS 2419.1, Section 7.3 Location, Clause 7.3.3 Accessibility, clearance and protection**, which states (in part): *"Where a fire brigade booster assembly is installed it shall -* *(a)…..* *(b)…* *(g) Be unobstructed by stored goods, vehicle, vegetation or similar;"* **Australian Standard AS 2419.1** appears as a standard referenced in the **NCC BCA Volume One, Part E1 Fire Fighting Equipment, E1.3,** which state (in part)**:** (4) *"E1.3 Fire hydrants* *(b) The fire hydrant system-* (4) *(i) must be installed in accordance with AS 2419.1, except…"* *Not providing the information required under the performance solution on block plans is failure to comply with NCC Volume One, Performance Requirement EP1.3, which states:* *"EP1.3 Fire hydrants* *A fire hydrant system must be provided to the degree necessary to facilitate the needs of the fire brigade appropriate to—* *(a) fire-fighting operations; and* *(b) the floor area of the building; and* *(c) the fire hazard."*	Developer to undertake, including but not limited to the following- 1. Engage a suitably qualified contractor to conduct an audit of the fire hydrant system. 2. Rectify the non-compliances to comply with the **NCC BCA Volume One.** 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 60 days of issuance of this Order.

33. Defect 26 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire stairs and otherwise in multiple locations of the Building the Investigator observed the following: 1. A volume control damper was not installed at the supply air grille openings on every floor of fire stair well. 2. The building had a rise in storey of 11 or more and effective height of more than 25 meters. I have formed the belief that the absence of a balancing damper as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**Australian Standard AS/NZS 1668.1:2015 The use of ventilation and air conditioning in buildings Part 1: Fire and smoke control in buildings Section 10 Protection of Fire Isolated Exits, 10.3 Performance Criteria (C)**, which states: *"For shutdown systems, or where no smoke control system is provided other than stair pressurization relief:* *The fire-isolated exit pressurization system shall sustain an air velocity from the pressurized fire-isolated exit, through each doorway into thefire-affected compartment, of not less than 1 m/s averaged over the full area of each doorway while the following doors are open:* *(A) All doors from fire-isolated exits to the fire-affected compartment.* *(B) All doors immediately above/adjacent to the fire-affected compartment.* *(C) The main discharge doors from all fire-isolated exits.* *All other doors to non-fire-affected compartments shall be closed.* *The fire-isolated exit pressurization system shall comply with the door opening force and latching requirements of Clause 4.7 with all fire-isolated doors closed."* **Australian Standard AS/NZS 1668.1:2015 appears as a standard referenced in the BCA 2016 Volume One, Section E, Part E2 – Smoke Hazard Management, E2.3 Provision for special hazards, Table E2.2a GENERAL PROVISIONS, Fire-isolated Exits**, which states: *"must be provided with-* *(c) an automatic air pressurisation system for fire- isolated exits in accordance with AS/NZS 1668.1;"* As stair pressurisation commissioning results are not accessible to prove compliance with Deemed-to-satisfy provision 10.3 (i) Performance Criteria, The BCA Volume One Performance Requirement cannot be shown to have been satisfied. It is considered Industry Standard practice to control pressure and air	Developer to undertake, including but not limited to the following- 1. Demonstrate compliance, OR; 2. Rectify the Stair Pressurization System to comply with BCA Volume One. 3. Rectify any consequential damage 4. Developer to demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and commissioning results data sheets, with documented references	Within 90 days of issuance of this Order.

	flow of stair pressurization systems to achieve the sustained average air velocity through each doorway of 1m/s, by volume control dampers at each supply grille outlet.		

34. Defect 27 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the basements and adjoining utility rooms and otherwise in multiple locations of the Building the Investigator observed the following: 1. The fire damper mounting flange did not fully cover the masonry wall leaving an exposed gap. 2. The fire resistance level of the subject walls was considered to have been reduced due to the excessive clearances or damage to the walls. The Investigator further noted that the above observations were typical throughout the Building. I have formed the belief that the openings in the walls and the exposed gap as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section 3 Fire resistance, Specification C1.1 Fire-resisting construction, Deemed-to-satisfy provision 3. Type A fire-resisting construction, Clause 3.1 Fire-resistance of building elements**, which states in part: *"In a building required to be of Type A construction—* *(4) (a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned;…"* **Table 3 Type A Construction: FRL of building elements**, notes that for walls in Class 7a buildings a Fire Resistance Level (FRL) of 120/120/120 is required. Refer to Figure 2.17.2. The presence of the openings determines the required FRL has not been maintained. **Deemed-to-satisfy provision 3. Type A fire-resisting construction, is a pathway that can satisfy the BCA Volume One, Section C Fire resistance, Performance Requirement CP2**, which states in part: *"(a) A building must have elements which will, to the degree necessary, avoid the spread of fire—* *(i) to exits; and* *(ii) to sole-occupant units and public corridors* *(iii) between buildings; and* *(iv) in a building".* Therefore, as the openings in the walls do not comply with Deemed-to-satisfy provision 3. Type A fire-resisting construction, the BCA Volume One Performance Requirement cannot be shown to have been satisfied.	Developer to undertake, including but not limited to the following- 1. Rectify the openings in the walls in accordance with the BCA Volume One 2. Make good any consequential damage 3. Developer to demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

35. Defect 28 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the main switch room and otherwise in multiple locations of the Building the Investigator observed: 1. The fire damper connection to the duct did not have a break away joint. 2. The power conduit serving the fan was bolted to the wall, and duct joining duct and fire damper together impeding function of the breakaway joint. The Investigator further noted that the above observations were typical throughout the Building. I have formed the belief that the absence of a break away joint and connection of the duct with wall holding fire damper as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**Australian Standard AS 1682.2:2015 Fire, smoke and air dampers, Part 2: Installation, Section 6 Installation Requirements, 6.1 Fire Dampers and combined fire and smoke dampers**, which states; *"The installation shall be in accordance with the manufacturer's installation instructions, an assessment, test report or allowable installation variations in AS 1682.1. In addition, the installation shall comply with the following site specific requirements:* *(a) The method of attachment of ductwork to the fire damper shall include breakaway joints in accordance with Appendix C so that any deformation or collapse of the ductwork in a fire does not dislodge the fire damper or adversely affect its operation or performance. Attachment between damper and riser ducts do not require breakaway joints providing that the riser shaft only contains building services, excluding gas and fuel lines, and is not used in any way for storage of materials."* **Australian Standard AS 1682.2:2015** appears as a standard referenced in **AS/NZS 1668.1:2015, 2.5 Dampers, 2.5.1 Manufacture and installation. Australian Standard AS/NZS 1668.1:2015, appears as a standard referenced in the BCA 2016 Volume One, Section C, C3.15 Openings for service installations**, which states in part: *" (b) **Ventilation and air-conditioning** — In the case of ventilating or air- conditioning ducts or equipment, the installation is in accordance with AS/NZS 1668.1."*	Developer to undertake, including but not limited to the following- 1. Rectify the connections to fire damper installations to include break away joints to AS1682.2., 6.1, Figure C1. 2. Make good any consequential damage 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and commissioning results data sheets, with documented references.	Within 90 days of issuance of this Order.

36. Defect 29 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire sprinkler pump rooms of the Building the Investigator observed the following: 1. Opening in wall which connects into air transfer plenum in fire passageway, to other pump room, was rough, open, not sealed and not fire protected. The Investigator noted that it opened the fire separated fire passageway, and the sprinkler pump rooms, breaking FRL. 2. The ventilation duct passing through the bounding wall had gaps all around it. The Investigator noted that this breaks FRL. I have formed the belief that the opening in the walls and the ventilation ducts with gaps as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section 3 Fire resistance, Specification C1.1 Fire-resisting construction**, **Deemed-to-satisfy Provision 3, Type A fire-resisting construction, Clause 3.1 Fire-resistance of building elements**, which states in part: *"In a building required to be of Type A construction—* *(a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned;…"* **Table 3 Type A Construction: FRL of building elements**, notes that for walls in Class 7a buildings a Fire Resistance Level (FRL) of 120/120/120 is required. Refer to Image 2.19.3. The presence of the openings determines the required FRL has not been maintained. **Deemed-to-satisfy provision 3. Type A fire-resisting construction, is a pathway that can satisfy the BCA Volume One, Section C Fire resistance, Performance Requirement CP2**, which states in part: *"(a) A building must have elements which will, to the degree necessary, avoid the spread of fire—* *(i) to exits; and* *(ii) to sole-occupant units and public corridors* *(iii) between buildings; and* *(iv) in a building".* Therefore, as the openings in the walls do not comply with Deemed-to-satisfy provision 3. Type A fire-resisting construction, the BCA Volume One Performance Requirement cannot be shown to have been satisfied.	Developer to undertake, including but not limited to the following- 1. Developer to rectify the openings in the walls in accordance with the BCA Volume One. 2. Make good any consequential damage. 3. Developer to demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

37. Defect 30 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire escape passage of the Building the Investigator observed that unprotected holes and gaps exist in the fire rated ceiling of the fire escape passageway where services penetrate, creating connection between two separate fire compartments. I have formed the belief that the openings in the walls and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section 3 Fire resistance, Specification C1.1 Fire-resisting construction, Deemed-to-satisfy provision 3. Type A fire-resisting construction, Clause 3.1 Fire-resistance of building elements**, which states in part: *"In a building required to be of Type A construction—* *(a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned;…"* Table 3 Type A Construction: FRL of building elements, notes that for walls in Class 7a buildings a Fire Resistance Level (FRL) of 120/120/120 is required. The presence of the openings determines the required FRL has not been maintained. Deemed-to-satisfy provision 3. Type A fire-resisting construction, is a pathway that can satisfy the BCA Volume One, Section C Fire resistance, Performance Requirement CP2, which states in part: *"(a) A building must have elements which will, to the degree necessary, avoid the spread of fire—* *(i) to exits; and* *(ii) to sole-occupant units and public corridors* *(iii) between buildings; and* *(iv) in a building".* Therefore, as the openings in the walls do not comply with Deemed-to-satisfy provision 3. Type A fire-resisting construction, the BCA Volume One Performance Requirement cannot be shown to have been satisfied.	Developer to undertake, including but not limited to the following- 1. Rectify the openings in the walls to comply with the BCA Volume One. 2. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

38. Defect 31 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire sprinkler pump room of the Building the Investigator observed the volume control damper for the sprinkler pump room ventilation system lacked a locking device, allowing the dampers to close when operational and creating possible cessation of air flow to room. I have formed the belief that the inadequate fire sprinkler pump room ventilation system and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**Australian Standard AS/NZS 1668.1:2015 The use of ventilation and air conditioning in buildings Part 1:Fire and smoke control in buildings Section 4 Electrical Installation, 4.10.2.2, C4.10.2.2 Exceptions**, which states: *"Fans that have been installed to ventilate diesel fire pump rooms (sprinkler pump, hydrant pump, etc.) are required to operate in fire mode and so would be required by Clause 4.10 to have fire-resistant wiring and be connected to the essential electrical power supply. If these pumps are required to continue running when the building's power supply has failed, the designer should consider permanent natural ventilation of the diesel pump room or allow for the provision of independent power supplies for these fans.."* **Australian Standard AS/NZS 1668.1:2015 appears as a standard referenced in the BCA 2016 Volume One, Section E, Specification E1.8 – Fire Control Centres, 10 Ventilation and Power supply for a fire control room**, which states in part: *"A fire control room must be ventilated by—* *(a) natural ventilation from a window or doorway in an external wall of the building which opens directly into the fire control room from a road or open space; or* *(b) a pressurisation system that only serves the fire control room, and—* *(i) is installed in accordance with AS/NZS 1668.1 as though the room is a fire-isolated stairway; and…"*	Developer to undertake, including but not limited to the following- 1. Rectify the volume control damper with a fastening device to hold the dampers in place when operating. 2. Make good any consequential damage. 3. Developer to demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and commissioning results data sheets, with documented references.	Within 90 days of issuance of this Order.

39. Defect 32 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the fire isolated stairway in the basement carpark of the Building the Investigator observed corroded handrails and permanent steel formwork in the fire isolated exits in the basement carpark. The Investigator further noted that if left unattended, corroded elements could deteriorate further and become a hazard for occupants using fire isolated stairways, including in an emergency evacuation scenario. I have formed the belief that the corroded handrails and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**BCA Volume One Section D, Access and Egress, Performance Requirements DP2** which states in part: *"So that people can move safely to and within buildings, it must have –* *(a) …..* *(b) ….* *(c) any stairways and ramps with –* *(i) ……* *(ii) suitable handrails where necessary to assist and provide stability to people using the stairway or ramp; and……"*	Developer to undertake, including but not limited to the following- 1. Repair and/or replace corroded handrails and steel formwork, taking into consideration humidity within basement levels in compliance with NCC BCA Volume One. 2. Make good any consequential damage. 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

40. Defect 33 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the level 1 to 10 scissor stairs of the Building the Investigator observed construction joints/gaps between scissor stairs along stair flights that had been sealed using what appeared to be fire sealants. The investigator noted that those gaps/joints were confined between concrete walls and galvanised steel permanent formwork along the side of stair flights. I have formed the belief that the construction joints/gaps and use of fire sealant to close off the gaps/joints and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	1. Construction elements bounding a fire isolated stairway are required to have an FRL, pursuant to **NCC BCA Volume One, Specification C1.1, Table 3.** 2. Fire sealant used to close off the gaps/joints may not be tested in accordance with **Australian Standard AS 1530.4,** due to different substrates bounding the joints (including steel sheets and concrete). **Australian Standard AS 1530.4** appears as a standard referenced in the **NCC BCA Volume One, Part C3 Protection of openings, C3.16,** which state (in part)**:** *"C3.16 Construction joints* *(a) Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS1530.4 to achieve the required FRL."*	Developer to undertake, including but not limited to the following- 1. Demonstrate compliance of all construction joints between scissor stairs using a material/system that complies with NCC BCA Volume One. 2. Make good any consequential damage. 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

41. Defect 34 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the level 1 to 10 service cupboards of the Building the Investigator observed set plasterboard false ceiling in public corridors and service cupboards. The Investigator noted that due to the lack of access to ceiling voids in public corridors it was not possible to check whether services passing through intervening floors were fire stopped. The Investigator further noted that fire stopping wasn't applied on the top side of the concrete slabs in several locations. I have formed the belief that the false ceilings and inadequate fire stopping of service penetrations and as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	Service penetrations in intervening floors are required to be fire stopped in accordance with **NCC BCA Volume One, Part C3: Protection of Openings, C3.15 and Specification C3.15.** Fire stopping of service penetrations is an essential fire safety measure and set false ceilings (with no inspection openings and/or access panels) could prevent inspections or assessment for the purpose of issuing annual fire safety statements, pursuant to Clause 88 of the **Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021**, since fire stopping didn't appear to be applied on the top side of the slabs, in many cases.	Developer to undertake, including but not limited to the following- 1. Install access panels to ceilings to access services and penetrations. 2. Engage appropriately qualified contractor to conduct a site audit to identify all non-compliant wall and floor penetrations. 3. Rectify all non-compliant wall and floor penetrations to comply with **NCC BCA Volume One.** 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

42. Defect 35 – Fire Safety Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the stair pressurisation fan room of the Building the Investigator observed an unknown substance sprayed on the ceiling of the stair pressurisation fan room. I have formed the belief that the unknown substance sprayed on the ceiling of the stair pressurisation fan room as described above is a serious defect because it is a defect in a building element (fire safety systems) that is attributable to a failure to comply with the following:	**NCC BCA Volume One, Part C1: Fire resistance and stability, C1.10,** which states (in part)- *"(a)The fire hazard properties of the following internal linings, materials and assemblies within a Class 2 to 9 building must comply with Specification C1.10:* *(i)Floor linings and floor coverings.* *(ii)Wall linings and ceiling linings.* *(iii) Air-Handling ductwork* *(iv)…"*	Developer to undertake, including but not limited to the following- 1. Demonstrate compliance by verifying the fire hazard properties of the material sprayed on the ceiling. 2. Provide suitable evidence of compliance or rectify the non-compliant ceiling lining in compliance with NCC BCA Volume One. 3. Make good any consequential damage. 4. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive Photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

43. Defect 36 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the Basement (B4) of the Building the Investigator observed the following: 1. Uncontrolled cracking in the basement slabs. The Investigator noted that the crack widths varied up to 4mm, and some cracks had been grouted. 2. The sawcut joints had not been sealed. 3. A differential settlement between 10mm and 15mm across a joint. I have formed the belief that the uncontrolled cracking and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section B Structure, Deemed-to-Satisfy provision B1.4 - Determination of structural resistance of materials and forms of construction** which states in part - *"The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate: ...* *(b) Concrete:* *(i) Concrete construction (including reinforced and prestressed concrete): AS 3600".* **Australian Standard 3600-2009 Concrete structures, Section 2 Design procedures, actions and loads, 2.3, Design for serviceability, 2.3.3, Cracking** appears as a standard referenced in the BCA which states in part - *"2.3.3.1 General Cracking in concrete structures shall be controlled so that structural performance, durability and appearance of the structure are not compromised."*	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify the defects in accordance with the BCA Volume One and AS3600 Concrete structures. 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 160 days of issuance of this Order.

44. Defect 37 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the whole of basement and roof top ventilation shaft of the Building the Investigator observed the following: 1. That there was a column near the On-Site Detention Tank (adjacent to parking lot 312) that had foreign objects embedded at the top along the western edge. 2. Concrete spalling of soffit. 3. Insufficient steel reinforcement cover. 4. Concrete spalling to the roof top ventilation shaft. I have formed the belief that the foreign objects embedded in the column, concrete spalling and insufficient steel reinforcement and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**Structural drawing S8.0230** or **Australian Standard AS 3600 Concrete structures, Section 4 Design for durability, 4.10 Requirements for cover to reinforcing steel and tendons, Clause 4.10.3 Cover for corrosion protection**, **4.10.3.7 Embedded items cover General**, which states: *""Embedded items", as defined in Clause 19.2, "shall be protected from corrosion or deterioration.* *The cover to embedded items that are not corrosion resistant shall be as given in Table 4.10.3.2 and 4.10.3.3, as applicable."*	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify the defects to comply with the BCA Volume One and Australian Standard AS3600 Concrete structures. 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

45. Defect 38 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the whole of the basement of the Building the Investigator observed an absence of isolation joints between columns and floor slab. I have formed the belief that the absence of isolation joints as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section B Structure, Part B1 Structural Provisions, Performance Requirements BP1.1** which states: *""Structural reliability* *A building or structure, during construction and use, with appropriate degrees of reliability, must- (i) Perform adequately under all reasonably expected design actions; and* *(ii) Withstand extreme or frequently repeated design actions; and* *(iii) Be designed to sustain local damage, with the structural system as a whole remaining stable and not being damaged to an extent disproportionate to the original local damage; and* *(iv)…"* And: **Australian Standard 3600-2009 Concrete structures, Section 16 Slab-on-Ground Floors, Pavement and Footings, 16.2 Design Considerations** which states: *"16.2 Design Considerations* *The design of pavements and slabs supported by the ground and any joints therein shall take into account, but not be limited to, the following considerations:* *(a) The determination of appropriate design loading.* *(b) Soil-structure interaction.* *(c) The influence of the pavement or slab on the behaviour of the other parts of the structure.* *(d) Effects of traffic on joints.* *(e) Differential movement at joints.* *(f) The limitation of moisture passing through the slab or pavement.* *(g) The effect of water pressure, if any.* *(h) Techniques to control and minimize cracking.* *(i) Techniques to minimize shrinkage warping.* *(j) Techniques to minimize differential temperature effects.*	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify the defects to comply with the BCA Volume One and Australian Standard AS3600 Concrete structures and approved structural drawings. 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

	And The 'For construction' plans, prepared by Australian Consulting Engineers, titled; "STAGE 8 FOOTING DETAILS", drawing No. S8.0201 revision F dated 2 February 2017 which depicts a 10mm Filler board between the Basement floor slab and column. Refer to Image 3.3.3.		

46. Defect 39 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the whole of the basement of the Building the Investigator observed the following: 1. Through cracks in multiple locations and cracking in the soffit and at the top surface. 2. Cracks at a corner where the Post Tensioning (PT) cables could not be extended. 3. Cracks across the possible locations of PT cables. 4. Calcite formation which the Investigator noted indicates that water is seeping through the crack. The Investigator further noted that the reinforcement across the crack would have direct contact with the water and not have any protection as required by Structural drawing S8.0001 (C) Note C4 and clause 4.10.3 of AS3600 and would corrode due to water leakage. I have formed the belief that the cracking and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section B Structure, Deemed-to-Satisfy provision B1.4 - Determination of structural resistance of materials and forms of construction** which states in part - *"The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate: ...* *(b)Concrete:* *(i) Concrete construction (including reinforced and prestressed concrete): AS 3600".* **Australian Standard 3600-2009 Concrete structures, Section 2 Design procedures, actions and loads, 2.3, Design for serviceability, 2.3.3, Cracking** appears as a standard referenced in the BCA which states in part - *"2.3.3.1 General Cracking in concrete structures shall be controlled so that structural performance, durability and appearance of the structure are not compromised."*	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify the defects in accordance with the BCA Volume One, AS3600 Concrete structures and approved structural drawings and specifications. 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

47. Defect 40 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the whole of the basement of the Building the Investigator observed the following: 1. Honeycombed concrete at the slab and beam soffits adjacent to the wall support. 2. Improperly or incomplete concrete placement in structural walls. I have formed the belief that the honeycombing in the concrete and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**Australian Standard AS 3600 Concrete Structures** as follows: **1. <u>Section 4</u> – Design for durability, 4.10 Requirements for cover to reinforcing steel and tendons, 4.10.3 Cover for corrosion protection, 4.10.3.7 Embedded items cover**, which states in part - *"Embedded items", as defined in Clause 19.2, "shall be protected from corrosion or deterioration. The cover to embedded items that are not corrosion resistant shall be as given in Table 0.3.2 and 4–10.3.3, as applicable.* **2. <u>Section 17</u> - Materials and construction requirements, 17.1.7- Rejection of concrete, 17.1.7.2 Hardened concrete,** which states: *"Hardened concrete shall be liable to rejection if -* *(a) it does not satisfy the requirements of Clause 17.1.6;* *(b) it is porous, segregated, or honeycombed, or contains surface defects outside the specified limits; or* *(c) it fails to comply with the other requirements of this Standard."* **3. Section 17.1.3 Handling, placing and compacting of concrete** that states in part – *"Concrete shall be handled, placed and compacted as to –* *(a) Limit segregation or loss of materials* *(b) limit premature stiffening* *(c) produce a monolithic mass between planned joints or the extremities of members, or both.* *(d) completely fill the formwork to the specified level, expel entrapped air, and closely surround all reinforcement, tendons, ducts, anchorages embedment's and fixings, and* *(e) provide the specified finish to the formed surfaces of the member."*	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify the defects to comply with the BCA Volume One, Australian Standard AS3600 Concrete structures and the approved structural drawings and specifications. 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

48. Defect 41 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the whole of the basement of the Building the Investigator observed the following: 1. Exposed steel reinforcement in the wall submerged in stagnated water. 2. Strong odour emanating from the vicinity of the perimeter drains. The Investigator further noted that there was the possibility of the water containing corrosive elements to the presence of acid sulfate soils as identified in the GMP. I have formed the belief that the unprotected reinforcement and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Part B1 Structural provisions, BP1.1 Structural reliability**, which states: *"(a) A building or structure, during construction and use, with appropriate degrees of reliability, must-* *(i) perform adequately under all reasonably expected design actions; and* *(ii) withstand extreme or frequently repeated design actions; and* *(iii) be designed to sustain local damage, with the structural system as a whole remaining stable and not being damaged to an extent disproportionate to the original local damage and* *(iv) …"* and **Australian Standard AS3600 Concrete structures, Section 4, Design for durability 4.10 Requirements for cover to reinforcing steel and tendons, 4.10,3 Cover for corrosion protection 10.4.3.1 General** which states in part - *"For corrosion protection, the cover shall be not less than the value given in accordance with Clauses 4.10.3.2 to 4.10.3.7."* In accordance with clauses 4.10.3.2 to 4.10.3.7 depending on exposure classification and concrete characteristic strength, required cover varies between 20mm to 70 mm. and **Section 4 Design for Durability, 4.10 Requirements for cover to reinforcing steel and tendons, 4.10.3 Cover for corrosion protection, 4.10.3.7 Embeded items cover**, which states in part – *"Embedded items, as defined in Clause 19.2, shall be protected from corrosion or deterioration. The cover to embedded items that are not corrosion resistant shall be as given in Table 4.10.3.2 and Table 4.10.3.3, as applicable.* *Metals such as aluminium shall not be embedded in structural concrete unless effectively coated, covered, or treated to prevent chemical action between the metal and the concrete and electrolytic action between the metal and steel."* and	Developer to undertake, including but not limited to the following- 1. Demonstrate compliance with the Development Application Conditions in relation to Acid Sulphate soils. 2. Provide evidence of Geotechnical Engineers inspection reports and certification during construction, including final sign off. 3. Seek structural design engineers' recommendations to rectify the defects in accordance with the BCA Volume One and Australian Standard AS3600 Concrete structures. 4. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 5. Make good any consequential damage. 6. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

	Australian Standard 3600 - 17.1.3 Handling, placing and compacting of concrete that states in part – *Concrete shall be handled, placed and compacted as to –* *(a) Limit segregation or loss of materials* *(b) limit premature stiffening* *(c) produce a monolithic mass between planned joints or the extremities of members, or both.* *(d) completely fill the formwork to the specified level, expel entrapped air, and closely surround all reinforcement, tendons, ducts, anchorages and fixings, and* *(e) Provide the specified finish to the formed surfaces of the member.*		

49. Defect 42 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the level 10 slab of the Building the Investigator observed cracking and evidence of calcite formation on the soffit of the slab. I have formed the belief that the cracking and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section B Structure, Deemed-to-Satisfy provision B1.4 – Determination of structural resistance of materials and forms of construction** which states in part - *"The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate: …* *(b) Concrete:* *(i) Concrete construction (including reinforced and prestressed concrete): AS 3600".* **Australian Standard 3600-2009 Concrete structures, Section 2 Design procedures, actions and loads, 2.3, Design for serviceability, 2.3.3, Cracking** appears as a standard referenced in the BCA which states in part - *"2.3.3.1 General Cracking in concrete structures shall be controlled so that structural performance, durability and appearance of the structure are not compromised."*	Developer to undertake, including but not limited to the following- 1. Demonstrate compliance with the requirements of DA Condition 50, including Geotechnical engineers certification during excavation basement construction. 2. Seek structural design engineers' recommendations to rectify the defects in accordance with the BCA Volume One and AS3600 Concrete structures. 3. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 4. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 5. Make good any consequential damage. 6. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

50. Defect 43 – Structural Systems (This Defect Has Been Removed)

51. Defect 44 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the level 9 terrace of the Building the Investigator observed the following: 1. A number of precast concrete parapet wall panels had tilted. The top of the wall had permanently drifted by more than15mm. 2. The rotation indicated inadequacy of the fixing to the floor slab. The Investigator further noted that further displacement due to creep and shrinkage may result in failure. 3. Random cracks in walls. I have formed the belief that the rotation of the precast concrete parapet panel and the cracking as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**BCA Volume One Section B, Part B1 Structural Provisions, Performance Requirements BP1.1**, which states: *(a) A building or structure, during construction and use, with appropriate degrees of reliability, must—* *(i) perform adequately under all reasonably expected design actions; and* *(ii) withstand extreme or frequently repeated design actions; and* *(iii) be designed to sustain local damage, with the structural system as a whole remaining stable and not being damaged to an extent disproportionate the original local damage; and* *(iv) avoid causing damage to other properties, by resisting the actions to which it may reasonably expect to be subjected.* *(b) The actions to be considered to satisfy include but are not limited to—* *(i) permanent actions (dead loads); and* *(ii) imposed actions (live loads arising from occupancy and use); and* *(iii) wind act and* *(iv) earthquake action; and* *(v) snow action; and* *(vi) liquid pressure action; and* *(vii) ground water action; and* *(viii) rainwater action (including ponding action); and* *(ix) earth pressure action; and* *(x) differential movement; and* *(xi) time dependent effects (including creep and shrinkage); and* *(xii) thermal effects; and* *(xiii) ground movement caused by—* *(A) swelling, shrinkage or freezing of the subsoil; and* *(B) landslip or subsidence; and* *(C) siteworks associated with the building*	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify the defects in accordance with the BCA Volume One, AS3600 Concrete structures and the approved structural drawings and specifications. 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

	or structure; and *(xiv) construction activity actions; and* *(xv) termite actions.* **BCA Volume One, Section B Structure, Deemed-to-Satisfy provision B1.4 - Determination of structural resistance of materials and forms of construction** which states in part - *"The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate: ... (b) Concrete: (i) Concrete construction (including reinforced and prestressed concrete): AS 3600".* **Australian Standard 3600-2009 Concrete structures, Section 2 Design procedures, actions and loads, 2.3, Design for serviceability, 2.3.3, Cracking** appears as a standard referenced in the BCA which states in part - *"2.3.3.1 General Cracking in concrete structures shall be controlled so that structural performance, durability and appearance of the structure are not compromised."*		

52. Defect 45 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the level 1 slab of the Building the Investigator observed uncontrolled cracking of a critical transfer beam supporting the upper floors directly beneath an embedded pipe. I have formed the belief that the cracking and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**BCA Volume One, Section B Structure, Deemed-to-Satisfy provision B1.4 - Determination of structural resistance of materials and forms of construction** which states in part - *"The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate: ...* *(b) Concrete:* *(i) Concrete construction (including reinforced and prestressed concrete): AS 3600".* **Australian Standard 3600-2009 Concrete structures, Section 2 Design procedures, actions and loads, 2.3, Design for serviceability, 2.3.3, Cracking** appears as a standard referenced in the BCA which states in part - *"2.3.3.1 General Cracking in concrete structures shall be controlled so that structural performance, durability and appearance of the structure are not compromised."* And Structural drawing S8.0001 (C) Issued for construction 25.11.16 General Notes Sheet 2 of 3 Concrete Note C9 states: *"No holes, chases or embedment's of pipes other than those shown on the structural drawings shall be made without the prior approval of the engineer."*	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify the defects in accordance with the BCA Volume One and AS3600 Concrete structures. 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

53. Defect 46 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the driveway to B1 of the Building the Investigator observed a crack on the driveway slab parallel to the long edge and diagonal. The Investigator noted that it did not match the pattern of a shrinkage crack and appeared to be a crack due to settlement due to uncompacted subbase. I have formed the belief that the crack and settlement and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**Australian Standard 3600-2009 Concrete structures, Section 2 Design procedures, actions and loads, 2.3, Design for serviceability, 2.3.3, Cracking** appears as a standard referenced in the BCA which states in part - *"2.3.3.1 General Cracking in concrete structures shall be controlled so that structural performance, durability and appearance of the structure are not compromised."* and Structural Engineer's **Drawing S8.0321** which specifies '*Well Compacted Fill'*. Refer to Image 3.9.2.	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify the defects in accordance with the BCA Volume One, AS3600 Concrete structures and the approved design drawings. 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120days of issuance of this Order.

54. Defect 47 – Structural Systems

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the basement carpark of the Building the Investigator observed localised excavation of the structural basement wall to accommodate a drain point, resulting in reduced durability of the structure including cover to steel reinforcement. I have formed the belief that the excavation of the wall and cutting to the slab and as described above is a serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:	**BCA Volume 1,Section B Structure, Part B1 Structural Provisions, Performance Requirements BP1.1** which states in part - *"Structural reliability* *(b) A building or structure, during construction and use, with appropriate degrees of reliability, must-* *(i) Perform adequately under all reasonably expected design actions; and* *(ii) Withstand extreme or frequently repeated design actions; and* *Be designed to sustain local damage, with the structural system as a whole remaining stable and not being damaged to an extent disproportionate to the original local damage; and* *(v) ….."*	Developer to undertake, including but not limited to the following- 1. Seek structural design engineers' recommendations to rectify in accordance with the **BCA Volume 1** and **AS3600 Concrete structures.** 2. Prepare and execute a rectification methodology to the structural concrete slab in consultation with the structural design engineer. 3. Ensure the repair methodology is capable of sustaining anticipated movement and control of cracking throughout the service life of the structure. 4. Make good any consequential damage. 5. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 120 days of issuance of this Order.

55. Defect 48 – Building Enclosure

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the roof top of the Building the Investigator observed the following: 1. Cladding capping did not extend over the hob, relying on silicone to prevent water ingress behind the cladding. 2. Top of hob finish was cracked and crazed. I have formed the belief that the failure to properly install the cladding over the top of the hob to prevent water entry into the cavity and as described above is a serious defect because it is a defect in a building element (building enclosure) that is attributable to a failure to comply with the following:	**BCA Volume One Section F Health and Amenity, Part F1 Damp and Weatherproofing, Performance Requirement FP1.4** which states: *"A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause-* *(a) Unhealthy or dangerous conditions, or loss of amenity for occupants; and* *(b) Undue dampness or deterioration of building elements."*	Developer to undertake, including but not limited to the following- 1. Rectify the capping to prevent water ingress into cavity and to comply with AS 4654 and BCA Volume One. 2. Make good any consequential damage 3. Demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third-party inspection reports.	Within 90 days of issuance of this Order.

56. Defect 49 – Building Enclosure (This Defect Has Been Removed)

57. Defect 50 – Building Enclosure (This Defect Has Been Removed)

58. Defect 51 – Building Enclosure (This Defect Has Been Removed)

59. Defect 52– Building Essential Services

Description of serious defect	Applicable performance requirements	Remediation work to be carried out or caused to be carried out by the Developer	Time period for compliance
When inspecting the electrical switch room of the Building the Investigator observed Spoon / dish drain in electrical switch room. I have formed the belief that the inadequate electrical installation and as described above is a serious defect because it is a defect in a building element (building essential services) that is attributable to a failure to comply with the following:	Australian Standard AS 3000 Electrical Installation "Wiring Rules", 1.5 Fundamental Principles, 1.5.1 Protection against dangers and damage, which states in part: *"The requirements of the Standard are intended to ensure the safety of persons, livestock, and property against dangers and damage that may arise in the reasonable use of the electrical installations"*	Developer to undertake, including but not limited to the following- 1. Developer to carry out rectification of the defects in accordance with Australian Standard AS 3000:2018 – Electrical installations, and AS/NZS 3000. 2. Developer to demonstrate compliance of remediation works by providing evidence including but not limited to comprehensive photographs of work in progress, installer compliance certificates and any third party inspection reports.	Within120 days of issuance of this Order.

60. Defect 53– Building Essential Services (This Defect Has Been Removed)

Conditions of this Order

61. The Developer must notify in writing, by email sent to ocaudits@customerservice.nsw.gov.au within 2 business days of the work required by this Order being completed.

62. Make good any consequential damage caused in carrying out the works specified in this Order.

63. For any building work to address a serious defect in this Order you must comply with the requirements of the Design and Building Practitioners Act 2020 (NSW).

Duration of this Order

64. This Order remains in force until it is revoked by the Secretary.

65. This order is given on the date that it is listed above in accordance with section 67 of the RAB Act.

Elizabeth Stewart
Acting Executive Director
Building Operations and Assistant Building Commissioner
Building Commission NSW

Reasons for the Order

Reasonable belief and serious defects

I, Elizabeth Stewart, an authorised delegate of the Secretary of the Department, have formed a reasonable belief for the purposes of s 33(1) of the Act in relation to Defects 1 to 53 in the Order, that the Building has serious defects.

1. **Defect 1 –** The water penetration through the basement wall of the Building as described in paragraph 8 of the order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as particularised in paragraph 8 of the order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 1.1 in which I also observed photographs which depicted:

Stagnant and discoloured water in the drainage tranches along the wall of the basement of the Building;

Water seepage/leachate penetrating through the basement wall of the Building;

The seepage being of a brown colour;

Stagnated discoloured water, and

as otherwise particularised in section 1.1 of the Audit Report and paragraph 8 of the Order.

2. **Defect 2** – The absence of expansion joints in the membrane on level 9 of the Building as described in paragraph 9 of the Order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as particularised in paragraph 9 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 1.2 in which I also observed a photograph which depicted the absence of membrane expansion joint on level 9 of the Building together with an extract from AS 4654 Figure 2.14 which depicted typical continuous movement joint and as otherwise particularised in section 1.2 of the Audit Report and paragraph 9 of the Order.

3. **Defect 3** – The application of the waterproofing membrane to the hob to the external rooftops of levels 6 and 9 of the Building and as described in paragraph 10 of the Order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as particularised in paragraph 10 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 1.3 in which I also observed a photograph which depicted the inadequate waterproofing to the hob, along with a close up view of the poorly prepared substrate to receive the membrane (and water ponding), together with evidence of water damage internally, and internal water damage in the corridor of level 6 along with an extract from AS 4652.2 Figure 2.2 showing the typical upward termination – detail of over-flashing for liquid or fully bonded sheet membranes along with AS 4654.2 Figure 2.8 showing typical details of membrane termination at external opening doors and as otherwise particularised in section 1.3 of the Audit Report and paragraph 10 of the Order.

4. **Defect 4** – The ponding water on the liquid rooftop membrane of the Building and as described in paragraph 11 of the Order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as particularised in paragraph 11 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 1.4 in which I also observed photographs which depicted evidence of the damaged membrane and ponding of water in the low point of the rooftop, together with evidence of low points in the rooftop slab and inadequate fall to the rooftop drain and as otherwise particularised in section 1.4 of the Audit Report and paragraph 11 of the Order.

5. **Defect 5** – The lack of overflow provisions on the rooftop of the Building and as described in paragraph 12 of the Order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as particularised in paragraph 12 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 1.5 in which I also observed photographs which depicted no evidence of overflows to the rooftop of the Building or to balconies of the Building together with an extract (in part) from AS 4654 Figure 2.16 which shows typical details of overflow and as otherwise particularised in section 1.5 of the Audit Report and paragraph 12 of the Order.

6. **Defect 6** – The penetration of the rooftop slab membrane of the Building and as described in paragraph 13 of the Order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as particularised in paragraph 13 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 1.6. in which I also observed a photograph which depicted fixings penetrating the membrane together with an extract from AS 4654.2 Figure 2.12 (in part) which shows the typical details of metal post support and as otherwise particularised in section 1.6 of the Audit Report and paragraph 13 of the Order.

7. **Defect 7** – The failure to prevent water from entering the Building through the basement slab on ground of the Building as described in paragraph 14 of the Order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as set out in paragraph 14 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 1.7 in which I also observed photographs which showed unidentified leachate presenting through cracks in the basement slab of the Building and as otherwise particularised in section 1.7 of the Audit Report and paragraph 14 of the Order.

8. **Defect 8** – The unprotected opening on the rooftop of the Building as described in paragraph 15 of the Order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as set out in paragraph 15 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.2.20 in which I also observed a photograph which depicted the unprotected opening on the rooftop of the Building and as otherwise particularised in section 1.8 of the Audit Report and paragraph 15 of the Order.

9. **Defect 9** – The absence of drip grooves from multiple concrete soffits on the external façade of the Building and as otherwise described in paragraph 16 of the Order, is a serious defect because it is a deficiency in a building element (waterproofing) that are required to achieve compliance with the performance requirements as particularised in paragraph 16 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 1.7 in which I also observed photographs which depicted the drip grooves missing in various locations as otherwise particularised in section 1.7 of the Audit Report and paragraph 16 of the Order.

10. **Defect 10** – The service pipes passing through the fire isolated stairway FS03 – basement car park (in multiple locations) of the Building and as described in paragraph 17 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 17 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.1 in which I also observed photographs which depicted a service pipe passing through the fire isolated stairway, Level B2 of the Building together with a service pipe passing through the fire isolated stairway, Level B3 of the Building together with an extract from BCA Volume One, Specification C1.1, Table 3 Type A Construction: FRL of Building Elements and as otherwise particularised in section 2.1 of the Audit Report and paragraph 17 of the Order.

11. **Defect 11** – The gaps around fire-rated door frames in the fire isolated stairways in the basement car park (multiple locations) of the Building and as otherwise described in paragraph 18 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required

to achieve compliance with the performance requirements as particularised in paragraph 18 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.2 in which I also observed a photograph which depicted the absence of a Block plan at the fire bridge booster assembly together with photographs which showed gaps within the wall bounding the fire isolated stairway around the fire door frame in the basement carpark of the Building and as otherwise particularised in section 2.2 of the Audit Report and paragraph 18 of the Order.

12. **Defect 12** – The voids in the grouted door frames of fire-resistant door sets in the fire isolated stairways of the Building (in particular the basement car park of the Building) and as described in paragraph 19 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 19 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.3 in which I also observed photographs which depicted a partially hollow fire door frame protecting a doorway to the fire isolated stairway in the basement car park of the Building and to the main switchboard room in the basement car park of the Building and as otherwise particularised in section 2.3 of the Audit Report and paragraph 19 of the Order.

13. **Defect 13** – The inadequate fire-resisting sealing of redundant penetrations on all levels and in multiple locations of the Building and as described in paragraph 20 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 20 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.4 in which I also observed a photograph which depicted the redundant penetrations in the concrete slab filled with paper in the fire extinguisher cupboard level 6 of the Building, along with redundant penetrations in the concrete slab of the service cupboards on level 9 of the Building and as otherwise particularised in section 2.4 of the Audit Report and paragraph 20 of the Order.

14. **Defect 14** – The services passing through the walls bounding the fire-isolated passageway in basement level B1 of the Building and as described in paragraph 21 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 21 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.5 in which I also observed a photograph which depicted a pipe passing through a wall bounding a fire isolated passageway and as otherwise particularised in section 2.5 of the Audit Report and paragraph 21 of the Order.

15. **Defect 15** – The partially installed, or redundant mechanical plant and equipment in the fire isolated corridor of the basement level B1 of the Building and as described in paragraph 22 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 22 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.6 in which I also observed a photograph which showed equipment within the fire isolated passageway enclosure and as otherwise particularised in section 2.6 of the Audit Report and paragraph 22 of the Order.

16. **Defect 16** – The unprotected service penetrations in fire rated walls in basement level 1 of the Building and as described in paragraph 23 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 23 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.7 in which I also observed photographs which depicted unprotected service penetrations passing through the garbage room wall in basement B1 of the Building (no fire collars) together with a defective fire damper in the main switchboard room in basement B1 of the Building and as otherwise particularised in section 2.7 of the Audit Report and paragraph 23 of the Order.

17. **Defect 17** – The unprotected service penetrations between fire rated walls and fire rated floors in the basement level B1 of the Building and as described in paragraph 24 of the Order, is a serious defect

because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 24 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.8 in which I also observed a photograph which depicted gaps between the masonry wall and the concrete slab in the garbage room basement B1 of the Building as otherwise particularised in section 2.8 of the Audit Report and paragraph 24 of the Order.

18. **Defect 18** – The inconsistent stair tread heights throughout the stairwell in the basement fire stairs of the Building and as described in paragraph 25 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 25 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022, section 2.9 in which I also observed a photograph which showed inconsistent riser heights within the same flight of stairs and as otherwise particularised in section 2.9 of the Audit Report and paragraph 25 of the Order.

19. **Defect 19** – The lack of handrails and slip resistant nosing strips in the external stairway of the Building and as described in paragraph 26 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 26 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 2 May 2022, section 2.9 in which I also observed photographs which showed the external stairway which was missing handrails and slip resistant nosing strips and as otherwise particularised in section 2.9 of the Audit Report and paragraph 26 of the Order.

20. **Defect 20** – The width of the path of travel in the water tank and pump rooms (being less than 1 metre) of the Building and as otherwise described in paragraph 27 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 27 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.10 in which I also observed photographs which depicted the width of travel in the water tank and pump rooms as being less than 1 metre and as otherwise particularised in section 2.10 of the Audit Report and paragraph 27 of the Order.

21. **Defect 21** – The:

(a) reduced ceiling height and inadequate signage and marking in the basement stairs of the Building;

(b) adequate ceiling height and marking in certain locations within the plant room on Level 11 (under the ductwork);

(c) louvred vents on both ends of the public corridors on Levels 9 and 10 being capable of manual operation to reduce the open area down to 30% (approximately),and

as otherwise described in paragraph 28 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 28 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.11 in which I observed photographs which depicted:

the reduced stair height in basement level B1 of the Building;

the Level 11 plant room with a clear height of approximately 1500mm; and

the Level 10 louvred door – with the louvres capable of being manually adjusted to reduce the open percentage down to approximately 30%,

together with an image extracted from the performance solution report illustrating the required signage and marking, along with an extract from NCC BCA Volume One (Figure 0.2) NCC Compliance Structure and as otherwise particularised in section 2.11 of the Audit Report and paragraph 28 of the Order.

22. **Defect 22** – The locking of doors to the fire isolated stairways from the inside of the stairway enclosure (without fail safe devices that automatically unlock the doors in an event of fire) through Levels 1 to 11 of the Building and as otherwise described in paragraph 29 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 29 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.12 in which I also observed photographs which depicted the inside of a fire isolated stairway with no re-entry facilities and a door knob having been installed and as otherwise particularised in section 2.12 of the Audit Report and paragraph 29 of the Order.

23. **Defect 23** – The trip hazard in the front of the doorway to the fire isolated exit on Level 11 of the Building and as otherwise described in paragraph 30 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 30 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.13 in which I also observed a photograph which depicted the trip hazard in front of the doorway to the fire isolated exit bon Level 11 and as otherwise particularised in section 2.13 of the Audit Report and paragraph 30 of the Order.

24. **Defect 24** – The inadequate clearance between storage cages and sprinkler deflectors in the storage cages in the basement of the Building and as otherwise described in paragraph 31 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 31 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.14 in which I also observed a photograph which depicted the clearance between the storage cages and the sprinkler deflectors in the basement car park of the Building as being less than 0.5m and as otherwise particularised in section 2.14 of the Audit Report and paragraph 31 of the Order.

25. **Defect 25** – The:

(a) location of the block plans behind the booster assembly;

(b) overgrown vegetation in front of the booster assembly; and

(c) inadequate information on the block plans,

- all in respect of the fire hydrant and sprinkler boosters of the Building and as otherwise described in paragraph 32 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 32 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.15 in which I also observed photographs which depicted the fire hydrant and sprinkler booster assemblies and as otherwise particularised in section 2.15 of the Audit Report and paragraph 32 of the Order.

26. **Defect 26** – The issues identified in relation to the fire stairs of the Building and as otherwise described in paragraph 33 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 33 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.16 in which I also observed a photograph depicted the fire stair pressurisation grille without balancing and as otherwise particularised in section 2.16 of the Audit Report and paragraph 33 of the Order.

27. **Defect 27** – The opening in the walls of the basements and adjoining utility rooms of the Building and as otherwise described in paragraph 34 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 34 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.17 in which I also observed photographs which depicted an opening in the wall not covered and protected by fire damper flange together with an extract from the Deemed-to-Satisfy Provisions Table 3 Type A Construction: FRL of Building Elements and as otherwise particularised in section 2.17 of the Audit Report and paragraph 34 of the Order.

28. **Defect 28** – The absence of a break away joint and connection of duct with wall holding fire damper in the main switch room of the Building and as otherwise described in paragraph 35 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 35 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.18 in which I also observed photographs which depicted the fire damper and duct connection lacking a compliant break away joint and as otherwise particularised in section 2.18 of the Audit Report and paragraph 35 of the Order.

29. **Defect 29** – The opening in the walls of the fire sprinkler pump room of the Building and as otherwise described in paragraph 36 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 36 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.19 in which I also observed photographs which showed an unprotected opening in the fire rated wall together with an extract from the Deemed-to-Satisfy Provisions Table 3 Type A Construction: FRL of Building Elements and as otherwise particularised in section 2.19 of the Audit Report and paragraph 36 of the Order.

30. **Defect 30** – The openings in the walls of the fire escape passageway of the Building and as otherwise described in paragraph 37 of the Order, is a serious defect because it is a deficiency in a building element (fire safety system) that are required to achieve compliance with the performance requirements as particularised in paragraph 37 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.20 in which I also observed a photograph which depicted unprotected and unsealed openings in fire separating structure in the fire escape passageway of the Building and as otherwise particularised in section 2.20 of the Audit Report and paragraph 37 of the Order.

31. **Defect 31** – The issues identified in the fire sprinkler pump room of the Building and as otherwise described in paragraph 38 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 38 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.21 in which I also observed a photograph which showed the volume control damper without a locking mechanism and as otherwise particularised in section 2.21 of the Audit Report and paragraph 38 of the Order.

32. **Defect 32** – The absence of non channel rubber installed to copper pipe work in Basement 1 and 2 of the Building and as otherwise described in paragraph 39 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 39 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.16 in which I also observed a photograph which showed the basement stairs in the fire isolated stairway with a corroded handrail and permanent formwork and as otherwise particularised in section 2.16 of the Audit Report and paragraph 39 of the Order.

33. **Defect 33** – The issues identified with the scissor stairs in Levels 1 to 10 of the Building (generally) and as otherwise described in paragraph 40 of the Order, is a serious defect because it is a deficiency in a building element (fire safety services) that are required to achieve compliance with the

performance requirements as particularised in paragraph 40 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.17 in which I also observed photographs which showed a gap/joint between scissor stairs sealant and as otherwise particularised in section 2.17 of the Audit Report and paragraph 40 of the Order.

34. **Defect 34** – The issues identified with the service penetrations in the service cupboards in Levels 1 to 10 of the Building and as otherwise described in paragraph 41 of the Order, is a serious defect because it is a deficiency in a building element (fire safety services) that are required to achieve compliance with the performance requirements as particularised in paragraph 41 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.18 in which I also observed photographs which showed the installations in service cupboards in public corridors (of which the Audit Report advised were on various residential floors) and as otherwise particularised in section 2.18 of the Audit Report and paragraph 41 of the Order.

35. **Defect 35** – The presence of an unknown substance on the ceiling of the stair pressurisation fan room of the Building and as otherwise described in paragraph 42 of the Order, is a serious defect because it is a deficiency in a building element (fire safety systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 42 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 2.19 in which I also observed photographs which showed the ceiling of the stair pressurisation fan room with an unknown substance having been sprayed on the ceiling and as otherwise particularised in section 2.19 of the Audit Report and paragraph 42 of the Order.

36. **Defect 36** – The cracking identified in the basement (B4) of the Building and as otherwise described in paragraph 43 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 43 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.1 in which I also observed photographs which showed uncontrolled cracking of the basement slab of the Building together with photographs of the differential settlement of concrete slab in the basement of the Building and as otherwise particularised in section 3.1 of the Audit Report and paragraph 43 of the Order.

37. **Defect 37** – The issues identified in the basement and roof top ventilation shaft of the Building and as otherwise described in paragraph 44 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 44 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.2 in which I also observed photographs which showed foreign objects being embedded in the column near the on-site detention tank, along with foreign objects and concrete spalling in the soffit and evidence of steel reinforcement without the design cover and concrete spalling to the roof top ventilation shaft and as otherwise particularised in section 3.2 of the Audit Report and paragraph 44 of the Order.

38. **Defect 38** – The absence of isolation joints, together with evidence of uncontrolled cracking in the whole of the basement of the Building and as otherwise described in paragraph 45 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 45 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.3 in which I also observed photographs which showed no isolation joint or "filler board" being visible at the base of the column together with an extract from For Construction Drawing dated 2.2.17 S8.0201 (F) Stage 8 Footing, and as otherwise particularised in section 3.3 of the Audit Report and paragraph 45 of the Order.

39. **Defect 39** – The cracking identified in the whole of the basement the Building and as otherwise described in paragraph 46 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 46 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.4 in which I also observed photographs

which showed uncontrolled through cracks in the soffit with evidence of water seepage and calcite build up and as otherwise particularised in section 3.4 of the Audit Report and paragraph 46 of the Order.

40. **Defect 40** – The honeycombing in the concrete installation in the whole of the basement of the Building and as otherwise described in paragraph 47 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 47 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.5 in which I also observed photographs which depicted the honeycombed concrete soffit together with the misaligned permanent formwork with cavities visible in the concrete and as otherwise particularised in section 3.5 of the Audit Report and paragraph 47 of the Order.

41. **Defect 41** – The unprotected reinforcement in the basement of the Building and as otherwise described in paragraph 48 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 48 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.6 in which I also observed a photograph which showed unprotected steel reinforcement starter bars submerged in stagnated water and as otherwise particularised in section 3.6 of the Audit Report and paragraph 48 of the Order.

42. **Defect 42** – The cracking identified in the level 10 slab of the Building and as otherwise described in paragraph 49 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 49 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.7 in which I also observed a photograph which showed cracking and evidence of calcite formation and as otherwise particularised in section 3.7 of the Audit Report and paragraph 49 of the Order.

43. **Defect 43** – This Defect Has Been Removed.

44. **Defect 44** – The rotation of the precast concrete parapet panel on the Level 9 Terrace of the Building and as otherwise described in paragraph 51 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 51 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.9 in which I also observed photographs which depicted the rotation of the precast parapet wall, the cracking of the parapet wall, together with an extract from S8.0701 Level 1 Sections and Precast Details and as otherwise particularised in section 3.9 of the Audit Report and paragraph 51 of the Order.

45. **Defect 45** – The cracking identified in the level 1 slab of the Building and as otherwise described in paragraph 52 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 52 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.10 in which I also observed a photograph which depicted cracking and calcite formation beneath an embedded pipe in a transfer beam and as otherwise particularised in section 3.10 of the Audit Report and paragraph 52 of the Order.

46. **Defect 46** – The cracking indicating issues with the settlement of the Driveway to B1 of the Building and as otherwise described in paragraph 53 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 53 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.9 in which I also observed a photograph which depicted cracking to the driveway slab, together with an extract from structural drawing S8.0321 and as otherwise particularised in section 3.9 of the Audit Report and paragraph 53 of the Order.

47. **Defect 47** – The cutting to the slab in the basement car park of the Building and as otherwise described in paragraph 54 of the Order, is a serious defect because it is a deficiency in a building element (structural systems) that are required to achieve compliance with the performance requirements as particularised in paragraph 54 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 3.10 [NB section 3.10 already used in Audit Report] in which I also observed a photograph which depicted the structural wall had been excavated to accommodate drainage and as otherwise particularised in section 3.10 of the Audit Report and paragraph 54 of the Order.

48. **Defect 48** – The failure to properly install the cladding over the top of the hob to prevent water entry into the cavity in relation to the roof top of the Building and as otherwise described in paragraph 55 of the Order, is a serious defect because it is a deficiency in a building element (building enclosure) that are required to achieve compliance with the performance requirements as particularised in paragraph 55 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 4.1 in which I also observed a photograph which depicted cladding on the rooftop not returning over the hob, together with the top of the hob being cracked and crazed and as otherwise particularised in section 4.1 of the Audit Report and paragraph 55 of the Order.

49. **Defect 49** – This Defect Has Been Removed.

50. **Defect 50** – This Defect Has Been Removed.

51. **Defect 51** – This Defect Has Been Removed.

52. **Defect 52** – The inadequate electrical installation in the electrical switch room of the Building and as otherwise described in paragraph 59 of the Order, is a serious defect because it is a deficiency in a building element (building essential services) that are required to achieve compliance with the performance requirements as particularised in paragraph 59 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 8 December 2022 section 5.1 in which I also observed a photograph which depicted a spoon / dish drain in the electrical switch room of the Building and as otherwise particularised in section 5.1 of the Audit Report and paragraph 59 of the Order.

53. **Defect 53** – This Defect Has Been Removed.

54. **Period for compliance**

I am of the view that a time periods set out alongside each serious defect in the Order are reasonable periods for compliance in all the circumstances for the rectification work required by the Order to be carried out. I have formed this belief balancing the risks that the serious defect poses against the period of time it will take to give effect to the rectification work. I am aware that there are residents occupying this location as the Building is completed which will delay rectification work. I am of the view that the time periods as set out in set out alongside each serious defect in the Order are sufficient to conduct the work as particularised set out alongside each serious defect in the Order.

55. **Consideration of written representations**

(a) On 27 February 2023 a notice of intention to issue the Order and a draft copy of the Order was served on the Developer, City of Ryde Council ("**Local Council**"), the Owners of Strata Plan No 98937 ("**Owners Corporation**") and Vic Lilli & Partners "(**Private Certifier**"). The parties were invited to provide submissions relating to the draft copy of the Order by 17/03/2023.

(b) The Owners Corporation did not provide written submissions.

(c) The Developer provided the Department with written submissions on 17 March 2023 ("**Developer Representations**") which included, among other things, the following:

i. That a Deed of Settlement and Release was reached on 18 January 2022 ("**the Deed**") within the context of proceedings commenced by the Owners Corporation in the NSW Civil & Administrative Tribunal on 30 July 2021 in respect of Upright Builders Pty Ltd (the principal contractor) and related entities, which included the Developer ("**the Respondents**").

ii. That the Respondents had provided the Owners Corporation with a construction program and had commenced and continued to progress the rectification works which had been agreed between the Owners Corporation and the Respondents following the parties' commissioning of a joint expert report ("**Joint Expert Report**").

iii. That the Respondents had kept an open and transparent dialogue in relation to its intention to rectify any defective and non-complying work at the Building and resolve any claims by the Owners Corporation.

iv. That from June 2021 the Respondents had engaged with the Department, and in response to the Departments involvement on 13 January 2022 the Respondents wrote to the Department in relation to the Audit Report and provided proposed methodologies for the rectification of defects identified and confirmed that the Respondents would take steps to commence and progress the rectification work.

v. That the Respondents and Owners Corporation are in continued discussions in relation to a variation to the Deed to incorporate the further work which has been agreed and or identified in this Order.

vi. That in the circumstances the Developer is of the view that this Order should not be issued, and that the Department can be satisfied that the rectification of defective and non-compliant building work is underway, and is being treated seriously and being managed appropriately.

(d) I have reviewed and considered the Developer Representations pursuant to section 47 of the Act.

(e) I make the following observations in relation to the Developer Representations:

i. I acknowledge that the Respondents (including the Developer) and the Owners Corporation have entered into the Deed and continue to engage with one another in relation to the further works required.

ii. The Joint Expert Report did not include acceptable scopes of works, principally in that they did not include the requirements of the *Design and Building Practitioners Act 2020 (NSW)*.

iii. Whilst the Developer advised the Department that the defects identified in the draft copy of the BWRO and the Audit Report were being addressed as between itself and the Owners Corporation, no supporting evidence or definitive timeframes for rectification were provided.

iv. The proposed rectification works have not been lodged or uploaded to the NSW Planning Portal as required by the *Design and Building Practitioners Act 2020 (NSW).*

v. I do not consider that the making of this Order would unnecessarily cause prejudice to the Developer and the Owners Corporation.

56. Why is it appropriate to give the Building Work Rectification Order?

I have considered all of the circumstances. I accept that the order requires considerable further construction work that is likely to be costly, and I give this consideration moderate weight. However, the cost to the developer must be balanced against the benefit to the occupiers of the units which comprise the Building in having the Building constructed to the approved plans and in accordance with the Building Code of Australia and the relevant Australian Standards so as to ensure in respect of:

(a) Defect 1 – that the water penetration through the basement wall of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(b) Defect 2 – that the absence of expansions joints in the membrane on level 9 of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(c) Defect 3 – that the application to the waterproofing membrane to the hob on the external rooftops of the Building (levels 6 and 9 of the Building) be rectified so as to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water;

(d) Defect 4 – that the ponding of water on the liquid rooftop membrane of the Building be rectified to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(e) Defect 5 – that the lack of overflow provisions on the rooftop of the Building be rectified to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(f) Defect 6 – that the penetration of the membrane on the rooftop of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(g) Defect 7 – that water penetration of the Building and in particular the slab on ground in the basement of the Building be rectified so as to achieve compliance and to otherwise that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(h) Defect 8 – that the unprotected opening on the rooftop of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(i) Defect 9 – that the absence of drop grooves from multiple concrete soffits on the external façade of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(j) Defect 10 – that the service pipes passing through the fire isolated stairway in the basement car park of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is otherwise capable of resisting the spread of fire;

(k) Defect 11 – that the gaps around the fire-rated door frames in the fire isolated stairway in the basement car park of the Building be rectified so as to achieve compliance;

(l) Defect 12 – that voids in the grouted door frames in the fire isolated stairway in the basement car park of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is capable of resisting the spread of fire;

(m) Defect 13 – that the inadequate fire-resisting sealing of redundant penetrations generally throughout the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is capable of resisting the spread of fire;

(n) Defect 14 – that the services passing through the walls bounding the fire-isolated passageway in basement level B1 of the Building be rectified so as to achieve compliance;

(o) Defect 15 – that the partially installed or redundant mechanical plant and equipment in the fire isolated corridor of the Building be rectified so as to achieve compliance;

(p) Defect 16 – that the unprotected service penetrations in the fire rated walls in the basement level B1 of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is capable of resisting the spread of fire;

(q) Defect 17 – that the unprotected service penetrations between fire rated walls and fire rated floors in the basement level B1 of the Building be rectified so as to achieve compliance and to otherwise ensure the Building is capable of resisting the spread of fire;

(r) Defect 18 – that the inconsistent stair tread heights throughout the stairwell of the fire stairs (in particular in the basement) of the Building be rectified so as to achieve compliance and to otherwise ensure that occupants can move safely to and within the Building;

(s) Defect 19 – that the lack of handrails and slip resistant nosing strips in the external stairway of the Building be rectified so as to achieve compliance and to otherwise ensure that occupants can move safely to and within the Building;;

(t) Defect 20 – that the inadequate width of the path of travel within the water tank and pump rooms be rectified so as to achieve compliance;

(u) Defect 21 – that the issues identified be rectified so as to achieve compliance with the requirements of the fire engineering performance solution;;

(v) Defect 22 – that the locking doors to the fire isolated stairways from the inside of the stairway enclosure of the Building be rectified so as to achieve compliance;

(w) Defect 23 – that the trip hazard in front of the doorway to the fire isolated exit on level 11 of the Building be rectified so as to achieve compliance and to otherwise ensure that occupants can move safely to and within the Building;

(x) Defect 24 – that the inadequate clearance between the storage cages and sprinkler deflectors in the basement storage cages of the Building be rectified so as to achieve compliance; ;

(y) Defect 25 – that the issues identified in relation to the fire hydrant and sprinkler booster assembly be rectified so as to achieve compliance and to otherwise ensure that the fire hydrant system which services the Building is able to meet the needs of the fire brigade appropriate to fire-fighting operations and the like;

(z) Defect 26 – that the absence of balancing damper in the fire stairs of the Building be rectified so as to achieve compliance;

(aa) Defect 27 – that the openings in the walls of the basements and adjoining utility rooms of the Building be rectified so as to achieve compliance and to otherwise ensure the Building is capable of avoiding the spread of fire;

(bb) Defect 28 – that the absence of a break away joint and connection of duct with wall holding fire damper in the main switch room of the Building be rectified so as to achieve compliance;;

(cc) Defect 29 – that the opening in the wall of the fire sprinkler pump room of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is capable of avoiding the spread of fire;

(dd) Defect 30 – that the openings in the walls of the fire escape passageway of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is capable of avoiding the spread of fire;

(ee) Defect 31 – that the fire sprinkler pump room be rectified so as to achieve compliance and to otherwise ensure that the room is adequately ventilated event in the event of the loss of power (so that diesel sprinkler pumps are able to continue operation);

(ff) Defect 32 – that the corroded handrails in the fire isolated stairway of the basement car park of the Building be rectified so as to achieve compliance and to otherwise ensure that occupants can move safely to and within the Building ;

(gg) Defect 33 – that the gaps and joints between the scissor stairs sealant between levels 1 to 10 of the Building be rectified so as to achieve compliance and to otherwise ensure the fire-resistance of the Building ;

(hh) Defect 34 – that the service penetrations in the service cupboards from levels 1 to 10 of the Building be rectified so as to achieve compliance;

(ii) Defect 35 – that the unknown substance having been sprayed onto the ceiling of the stair pressurisation fan room be rectified so as to achieve compliance;

(jj) Defect 36 – that the cracking identified in the basement B4 of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(kk) Defect 37 – that the concreting issues identified be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(ll) Defect 38 – that the absence of expansion joints together with uncontrolled cracking in the whole of the basement of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(mm) Defect 39 – that the cracking identified in the whole of the basement of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(nn) Defect 40 – that the honeycombing in the concrete installation in the whole of the basement of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(oo) Defect 41 – that the unprotected steel reinforcements in the whole of the basement of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(pp) Defect 42 – that the cracking identified in the level 10 slab (and formation of calcite) be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(qq) Defect 43 – This Defect Has Been Removed.

(rr) Defect 44 – that the rotation of the precast concrete parapet panel on the level 9 terrace of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;;

(ss) Defect 45 – that the cracking identified in the level 1 slab of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(tt) Defect 46 – that the settlement issues identified in relation to the driveway to B1 of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(uu) Defect 47 – that the excavations/cuttings into the slab of the basement carpark of the Building be rectified so as to achieve compliance and to otherwise ensure the structural reliability and durability of the Building;

(vv) Defect 48 – that the inadequately installed cladding on the rooftop of the Building be rectified so as to achieve compliance and to otherwise ensure that the Building is appropriately weatherproofed and waterproofed so as to prevent the penetration of water, and unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;

(ww) Defect 49 – This Defect Has Been Removed.

(xx) Defect 50 – This Defect Has Been Removed.

(yy) Defect 51 – This Defect Has Been Removed.

(zz) Defect 52 – that the inadequate installation of the spoon / dish drain in the electrical switch room of the Building be rectified so as to achieve compliance;

(aaa) Defect 53 – This Defect Has Been Removed.

Notes about this Order

- **A person is not required to obtain consent or approval under the *Environmental Planning and Assessment Act 1979* to carry out work in compliance with a requirement of a Building Work Rectification Order.**

- **It is an offence to fail to comply with this Order. The maximum penalty for a company is 3,000 penalty units and in addition, for every day the offence continues, 300 penalty units. For and individual the maximum penalty is 1,000 penalty units and in addition, for every day the offence continues, 100 penalty units.**

- **You may appeal to the Land and Environment Court against this Order within 30 days after this Order is given, unless the Land and Environment Court grants leave for it to be made after that time. Lodging an appeal does not operate to stop the effect of this Order unless ordered by the Court.**

- **You are entitled to be given reasons for this Order, unless it has been given in an emergency. The reasons have been included within this Order and are not provided separately.**

- **The Secretary has given the following persons notice of the making of this building work rectification order:**

    - **the relevant local council,**

    - **if the local council is not the certifier in relation to the building work—the principal certifier,**

    - **if you are not the owner of the land concerned—the owner of the land concerned,**

    - **the Registrar-General,**

    - **if the order relates to a strata building—the relevant owners corporation,**

    - **any other person prescribed by the regulations.**

This Order specifies a time by which, or period within which, the order must be complied with. This Order continues to have effect until it is complied with even though the time has passed, or the period has expired, unless any requirement under this Order is revoked.

Annexure A

serious defect, in relation to a building, means—

(a) a defect in a building element that is attributable to a failure to comply with the performance requirements of the Building Code of Australia, the relevant Australian Standards or the relevant approved plans, or

(b) a defect in a building product or building element that—

(i) is attributable to defective design, defective or faulty workmanship or defective materials, and

(ii) causes or is likely to cause—

(A) the inability to inhabit or use the building (or part of the building) for its intended purpose, or

(B) the destruction of the building or any part of the building, or

(C) a threat of collapse of the building or any part of the building, or

(c) a defect of a kind that is prescribed by the regulations as a serious defect, or

(d) the use of a building product (within the meaning of the Building Products (Safety) Act 2017) in contravention of that Act.

building element, as defined in the *Design and Building Practitioners Act 2020* (NSW), means any of the following—

(a) the fire safety systems for a building within the meaning of the Building Code of Australia,

(b) waterproofing,

(c) an internal or external load-bearing component of a building that is essential to the stability of the building, or a part of it (including but not limited to in-ground and other foundations and footings, floors, walls, roofs, columns and beams),

(d) a component of a building that is part of the building enclosure,

(e) those aspects of the mechanical, plumbing and electrical services for a building that are required to achieve compliance with the Building Code of Australia,

(f) other things prescribed by the regulations for the purposes of this section.

(2) The regulations may exclude things from being building elements for the purposes of this Act.

(3) In this section—

above grade wall means a wall above the level of the ground surrounding a building.

below grade wall means a wall below the level of the ground surrounding a building.

building enclosure means the part of the building that physically separates the interior environment of the building from the exterior environment, including roof systems, above grade and below grade walls (including windows and doors).

a **developer**, in relation to building work, means any of the following persons, but does not include any person excluded from this definition by the regulations—

(a) the person who contracted or arranged for, or facilitated or otherwise caused, (whether directly or indirectly) the building work to be carried out,

(b) if the building work is the erection or construction of a building or part of a building—the owner of the land on which the building work is carried out at the time the building work is carried out,

(c) the principal contractor for the building work within the meaning of the Environmental Planning and Assessment Act 1979,

(d) in relation to building work for a strata scheme—the developer of the strata scheme within the meaning of the Strata Schemes Management Act 2015,

(e) any other person prescribed by the regulations for the purposes of this definition.

Section 6 - Act applies only to residential apartment building work

(1) The exercise of any function under this Act applies only to building work in respect of a residential apartment building that—

(a) is or was authorised to commence in accordance with a construction certificate or complying development certificate issued under the Environmental Planning and Assessment Act 1979, or is required to be authorised by a construction certificate or complying development certificate, and

(b) has not been completed or has been completed within the period of 10 years before the exercise of that function.

(2) The regulations may provide that a specified provision, or specified provisions, of this Act extend to other classes of buildings (within the meaning of the Building Code of Australia).