

Attn. the Proper Officer  
Forte Sydney Constructions Pty Ltd  
ABN 70 601 561 596  
Unit 203, 3 Rider Boulevard  
RHODES NSW 2138

Service: By registered post and by email

24 April 2023

# Building Work Rectification Order

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

Forte Sydney Construction Pty Ltd ABN 70 601 561 586 is being given this Building Work Rectification Order ("Order") in relation to 2-6 Junction Street, Ryde NSW 2112 (SP99712) ("the Building").

Forte Sydney Construction Pty Ltd ABN 70 601 561 586 is required to cause building work to be carried out to remediate the potential serious defects as set out in paragraphs 9 to 33 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, an authorised officer of the Department along with a third party consultant engaged by the Department attended the Building (**Investigator**) on 27 September 2022. The Investigator prepared a report on serious defects in the Building (**Audit Report**). Authorised Officers of the Department attended a follow up inspection on 7 March 2023 to assist the Developer in identifying listed defects.
4. **Forte Sydney Construction Pty Ltd ABN 70 601 561 586** is the developer of the residential apartment building at the Building (2-6 Junction Street, Ryde NSW 2112 (SP99712)) for the purposes of section 4 of the Act.
5. On 12 December 2022, a notice of intention to issue a building work rectification order (**the Order**) and a draft copy of the Order was served on the Developer, Local Council, Certifier and Owners Corporation. The parties were invited to provide written representations relating to the Order to the Department by 13 January 2023.
  - (a) On 27 January 2023 written submissions were received from the Developer

- (b) On 15 December 2022 written submissions were received from the owners corporation.
- (c) No submissions were received as at the date of this Order from Local Council or Certifier.

6. 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) Act 2017*) in contravention of that Act.

7. 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**

8. I, Elizabeth Stewart, am the decision maker for this Order. I have considered the Audit Report and have decided to issue the Order to **Forte Sydney Construction Pty Ltd ABN 70 601 561 586** 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.

9. 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
<p>The Investigator observed water ingress into the wall linings in a single occupancy unit on the 3<sup>rd</sup> floor of the Building.</p> <p>I have formed the belief that the water ingress 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:</p>	<p><b>BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Performance Requirements FP1.6 Wet area overflows and FP1.7</b> which states:</p> <p><b>FP1.6 Wet area overflows</b></p> <p><i>“Overflow from a bathroom, laundry facility or the like must be prevented from penetrating to—</i></p> <p><i>(a) another sole-occupancy unit used for sleeping accommodation; and</i></p> <p><i>(b) a public space, in a storey below in the same building.”</i></p> <p><b>FP1.7 Wet areas</b></p> <p><i>“To protect the structure of the building and to maintain the amenity of the occupants, water must be prevented from penetrating—</i></p> <p><i>(a) behind fittings and linings; and (b) into concealed spaces,</i></p> <p><i>of sanitary compartments, bathrooms, laundries and the like.”</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>prevent water escape and penetrating walls and spaces;</li> <li>carry out comprehensive assessment throughout the building by waterproofing expert;</li> <li>rectify failed areas to comply with BCA Volume One Section F Health and Amenity, Part F1 Damp and Weatherproofing; and</li> <li>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.</li> </ol>	<p>Within 180 days of issuance of this Order.</p>

**10. 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
<p>When inspecting the rooftop of the Building, the Investigator observed that:</p> <ul style="list-style-type: none"> <li>(a) delaminated membrane had been applied to the rooftop of the Building;</li> <li>(b) there was no evidence of membrane turnup; and</li> <li>(c) there was a lack of overflow provisions.</li> </ul> <p>I have formed the belief that the inadequate draining installation 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:</p>	<p><b>Australian Standard 4654.2-2012 Waterproofing Membranes for External Above Ground Use, Section 2 Design and Installation, 2.8 Termination of membranes, 2.8.1.1 Height, which states:</b></p> <p><i>“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.”</i></p> <p><b>The substrate of the wall and floor junction is adequately prepared with no voids or protrusions in accordance with Australian Standard 4654.2-2012 Waterproofing Membranes for External Above Ground Use, Section 2 Design and Installation, 2.5 Substrate, 2.5.3.1 Fully bonded or liquid- applied, which states:</b></p> <p><i>“The preparation of the substrate for fully bonded or liquid-15 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.”</i></p> <p><b>An appropriate fillet has been installed to the wall and floor junction in accordance with Australian Standard 4654.2-2012 Waterproofing Membranes for External Above Ground Use, Section 2 Design and Installation, 2.7 Fillets, which states in part:</b></p> <p><i>“Fillet shall be used when a membrane changes from a horizontal to vertical or vertical to vertical plane”</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to carry out rectification of the waterproofing defects in accordance with the BCA Volume One and Australian Standard 4654.2 and AS/NZS 3500.3. Particular attention to be given, but not limited to the following:</p> <ol style="list-style-type: none"> <li>1. installation of an appropriate graded screed bed with adequate falls to drainage;</li> <li>2. installation of adequately bonded topping screed to achieve falls to stormwater drainage outlets;</li> <li>3. installation of a new roof rooftop waterproofing membrane in strict accordance with the manufacturer's specifications; and</li> <li>4. installation of skylights and flashings in accordance with manufacturer's recommendations.</li> </ol>	<p>Within 180 days of issuance of this Order.</p>

# 11. 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
<p>When inspecting the rooftop of the Building, the Investigator observed a lack of overflow provisions, together with there being no evidence of a drainage system or a fall to drain points.</p> <p>I have formed the belief that the lack of overflow provisions 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:</p>	<p><b>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</b>, which states:</p> <p><i>“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;...”</i></p> <p><i>AS 3500.3 appears as a standard referenced in the <b>BCA Volume One, Section F Health and Amenity, Part F1 Damp and Weatherproofing, Deemed to Satisfy Provision F1.0, which states:</b></i></p> <p><i>“Stormwater drainage must comply with AS/NZS 3500.3.”</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <p>carry out rectification of the waterproofing defects in accordance with the BCA Volume One and Australian Standard 4654.2 and AS/NZS 3500.3. Particular attention to be given, but not limited to the following:</p> <ol style="list-style-type: none"> <li>1. ensure the new overflows satisfy the design requirements of AS3500.3;</li> <li>2. ensure the membrane is terminated within the overflows in accordance with AS4654.2;</li> <li>3. ensure the discharge points for the overflows do not cause a nuisance to the residents or the general public; and</li> <li>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.</li> </ol>	<p>Within 180 days of issuance of this Order.</p>

12. 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
<p>When inspecting the car park in the basement area of the Building, the Investigator observed a metal tray under the soffit was emitting sounds of water dripping into it.</p> <p>I have formed the belief that the water seepage 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:</p>	<p><b>BCA Volume One, Section F Damp and Weatherproofing, Performance Requirements FP1.3 which states:</b></p> <p><i>“A drainage system for the disposal of surface water must –</i></p> <p style="padding-left: 40px;"><i>(a) convey surface water to an appropriate outfall; and</i></p> <p style="padding-left: 40px;"><i>(b) avoid surface water damaging the building;..”</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. prevent water entry into building in accordance with NCC BCA Volume One, Section F Health and Amenity, Part F Damp and Weatherproofing, Performance Requirements FP1.3;</li> <li>2. make good any consequential damage;</li> <li>3. provide adequate rectification methodology in compliance with the BCA; and</li> <li>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.</li> </ol>	<p>Within 180 days of issuance of this Order.</p>

### 13. Defect 5 – 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
<p>When inspecting the basement carpark and main switchboard room of the Building, the Investigator observed that the fire dampers were missing for services penetrating fire-rated walls.</p> <p>I have formed the belief that the inadequate fire damper installation 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:</p>	<p><b>Australian Standard 1682.1:2015 Fire, smoke and air dampers, Part 1 Specification, Section 1 Scope and General, 1.8 Installation instructions, which states:</b></p> <p><i>"Installation instructions shall be in accordance with the instructions provided to the testing authority for the purpose of the damper test or installation variations for which a testing authority has assessed and has given the opinion that satisfactory performance will be achieved.</i></p> <p><i>Where the damper's closure is reliant upon an actuator, the details of the actuator torque required to open, close and seal motorized dampers shall be provided in the installation instructions."</i></p> <p><i>And</i></p> <p><i>Appendix A Performance criteria for fire damper installations, which states:</i></p> <p><i>"Where fire dampers and combination fire smoke dampers are installed, the performance criteria for the installation are as follows:</i></p> <p><i>(a) Construction of the penetration in the building element shall be in accordance with the building element manufacturer's instructions and an assessment or test report.</i></p> <p><i>(b) Installation of the damper shall be in accordance with the damper manufacturer's installation instructions, an assessment or test report.</i></p> <p><i>(c) The damper shall be retained in the fire-resisting structure in which it is installed so that it cannot be dislodged in a fire scenario or during normal usage.</i></p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. carry out rectification of the defective fire damper installation to comply with BCA Volume One Section C, CP2 Spread of Fire and Australian Standard 1682.1:2015 Fire, smoke and air dampers and follow the manufacturer's installation specifications; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

	<p>(d) <i>The damper shall be installed with adequate clearance for expansion during a fire such that it will not damage the building element or prevent closure.</i></p> <p>(e) <i>Damper casing or mounting sleeve shall not extend beyond the face of the wall or floor by more than 150 mm on either side, except in the case of a motorized fire damper (smoke damper), where the maximum extension on the motor side only shall be 250 mm.</i></p> <p>(f) <i>A breakaway joint shall be installed to connect the fire damper to the duct. The method of attachment of ductwork to the fire damper, shall be such that any or deformation or collapse of the ductwork in a fire, does not dislodge the fire damper or adversely affect its operation or performance (refer to Appendix C).</i></p> <p>(g) <i>Any device or fitting adjacent to a fire damper (e.g. tamper proof grill, volume control damper, etc.) shall be installed so that any deformation or collapse of such items in a fire does not dislodge the fire damper or adversely affect its operational performance.</i></p> <p>(h) <i>Where installed in a slab, fire dampers shall have FRL insulation, or the duct above shall be insulated to prevent ignition of adjacent materials.</i></p> <p>(i) <i>Where construction continues after dampers have been initially commissioned dampers shall be inspected again, debris removed, and operation checked.</i></p> <p>(j) <i>Convenient access shall be provided to release and reset of the damper mechanism for maintenance and to allow for inspection, cleaning and removal of debris as necessary".</i></p> <p><i>NOTE: Where the manufacturer's installation instructions state that packing is not required, packing need not be installed"</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>		
--	--	--	--



#### 14. Defect 6 – 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
<p>When inspecting the car park level of the Building, the Investigator observed that bollards had been installed in locations which would impede the path of egress from the fire stairs.</p> <p>I have formed the belief that the installation of bollards in front of fire exits 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:</p>	<p><b>BCA Volume One, Section D Access and Egress, D1.10 Discharge from exits, which states</b></p> <p><i>“(a) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it.</i></p> <p><i>(b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than—</i></p> <p><i>(i) the minimum width of the required exit; or</i></p> <p><i>(ii) 1 m,</i></p> <p><i>whichever is the greater.”</i></p> <p><b>And</b></p> <p><i>Clause D1.6 of the Building Code of Australia requires that the unobstructed width of the path of travel to an exit be no less than 1000mm.</i></p> <p><i>The reduced path of travel does not appear to have been addressed in the Fire Engineering Report that was issued with approved with the Construction Certificates.</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>remove any obstructions and ensure compliance with BCA Volume One, Section D Access and Egress, D1.10 Discharge from exits of all fire exits; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

## 15. Defect 7 – 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
<p>When inspecting the car park level of the Building known as "B1" and specifically areas in close proximity to the lift and electrical meter room, the Investigator observed that slab/ceiling openings for services were inadequately fire checked/sealed.</p> <p>I have formed the belief that the inadequate fire checking 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:</p>	<p><b>NCC BCA Volume One 2014, Section C Fire Resistance, Part C3 Protection of Openings, Deemed-to- Satisfy Provisions, Clause C3.15 Openings for Service installations</b>, which states:</p> <p><i>"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:</i></p> <p><i>(c) Compliance with Specification C3.15</i></p> <p><i>(iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification C3.15 and it—</i></p> <p><i>(A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and</i></p> <p><i>(B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts.</i></p> <p>And</p> <p><b>Specification C3.15 Penetration of Walls, Floors and Ceilings by Services, Clause 5 Wires and Cables</b>, which states:</p> <p><i>"If a wire or cable or cluster of wires or cables penetrates a floor, wall or ceiling—</i></p> <p><i>(c) the gap between the service and the wall, floor or ceiling must be fire-stopped in accordance with Clause 7.</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. carry out rectification of the protection of service penetrations to comply with BCA Volume One, Section 3 Fire resistance, Part C3 Protection of openings, Deemed-to-satisfy provision C3.15 Openings for service installations; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

## 16. Defect 8 – 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
<p>When inspecting the fire rated stairwell in the part of the Building known as "B1", the Investigator observed that the fire rated door frame exhibited hollow sound when tapped.</p> <p>I have formed the belief that the voids in the grouted door frame 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:</p>	<p><b>Australian Standard 1905.1-2015 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</b>, which states:</p> <p><i>"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".</i></p> <p><b>Australian Standard 1905.1 appears as a standard referenced in the BCA Volume One, Section C Fire resistance, Specification C3.4 Fire doors, smoke doors, fire windows and shutters, Clause 2. Fire doors</b>, which states in part:</p> <p><i>"A required fire door must—</i>  <i>(a) comply with AS 1905.1;"</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>engage a passive fire protection specialist to undertake comprehensive Inspection of the entire building to ascertain the complete scope of works for remediation;</li> <li>rectify door frames in accordance with AS 1905 and the BCA Volume One, Section C Fire resistance, Specification C3.4 Fire doors, smoke doors, fire windows and shutters, Clause 2. Fire doors; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

## 17. Defect 9 – 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
<p>When inspecting the control room in the part of the Building known as "B1", the Investigator observed an unprotected penetration in the floor slab (which was also not adequately fire checked).</p> <p>I have formed the belief that the inadequate fire checking of the penetration in the floor slab 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:</p>	<p><b>NCC BCA Volume One, Section C Fire Resistance, Part C1 Fire Resistance and Stability, Specification C1.1 Fire-Resisting Construction, Part 3 Type A Fire-Resisting Construction, Clause 3.1 Fire-Resistance of Building Elements</b>, which states</p> <p><i>"In a building required to be of Type A construction—</i>  <i>(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; and...</i>" Refer to Table 2.7.2.</p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. protect the openings to comply with the BCA Volume One, Section C Fire Resistance, Part C1 Fire Resistance and Stability, Specification C1.1 Fire-Resisting Construction, Part 3 Type A Fire-Resisting Construction, Clause 3.1 Fire-Resistance of Building Elements; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

**18. 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
<p>When inspecting the fire booster located on the ground floor (external) of the Building, it was observed by the Investigator that the fire booster assembly had been carried out without proper structural bracing.</p> <p>I have formed the belief that the inadequate pipe support 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:</p>	<p><b>Australian Standard 2419.1 Fire Hydrants, Section 8 Pipework and Valves, 8.7 Support of Fire Hydrant Pipework, Clause 8.7.2 Pipe Support Design</b>, which states:</p> <p><i>“Pipework associated with fire hydrant systems shall be adequately supported by either –</i></p> <p><i>(a) a pipe support system, the individual components of which comply with the requirements of Clause 8.7.5; or</i></p> <p><i>(b) pipe supports and fasteners that are capable of supporting two times the mass of the pipework filled with water plus a mass of 115 kg at each point of support.</i></p> <p><i>In addition to providing support for the pipework, pipe- support systems shall be designed to prevent sway in the pipework.</i></p> <p><i>NOTE: Verification by test may be used to confirm the structural adequacy of the design.</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. install adequate structural bracing for hydrant booster with relevant testing to comply with AS 2419.1 Fire Hydrants; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

**19. 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
<p>When inspecting the stair well connecting those parts of the Building known as "B1" and "B2", the Investigator observed that there were inadequate emergency luminaries (such as exit signs and emergency lights) at the fire exit stairwell. The Investigator also formed the view that this was a safety hazard as during emergency evacuations events a safe path of evacuation could not be clearly located.</p> <p>I have formed the belief that the inadequate emergency luminaries 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:</p>	<p><b>NCC BCA Volume One, Section E Services and Equipment, Part 4 Visibility in an Emergency, Exit Signs and Warning Signs, Deemed-to-Satisfy provision E 4.2 Emergency Lighting Requirements and E4.5 Exit Signs</b>, which states in part:</p> <p><u><i>E4.2 Emergency Lighting Requirements</i></u></p> <p><i>“An emergency lighting system must be installed –</i></p> <p><i>In every fire-isolated stairway, fire-isolated passageway or fire-isolated ramp..”</i></p> <p>And</p> <p><u><i>E4.5 Exit Signs</i></u></p> <p><i>“An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each –</i></p> <p><i>door providing direct egress from a storey to –</i></p> <p><i>(i) an enclosed stairway passageway or ramp serving as a required exit; and</i></p> <p><i>(ii) an external stairway, passageway or ramp serving as a required exit; and</i></p> <p><i>(iii) an external access balcony leading to a required exit,”</i></p> <p>Deemed-to-Satisfy provision <b>E4.2 Emergency Lighting Requirements and E4.5 Exit signs</b> is a pathway that can satisfy the <b>NCC BCA Volume One, Section E Services and equipment, Performance Requirement EP4.2 Identification of exits</b>, which states in part:</p> <p><u><i>Performance Requirement EP4.2</i></u></p> <p><i>“To facilitate evacuation, suitable signs or other means of identification must, to the degree necessary –</i></p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. install required exit signs in accordance with BCA Volume One, Section E Services and Equipment, Part 4 Visibility in an Emergency, Exit Signs and Warning Signs; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

	<p><i>(a) be provided to identify the location of exits; and</i></p> <p><i>(b) guide occupants to exits; and</i></p> <p><i>(c) be clearly visible to occupants; and</i></p> <p><i>(d) operate in the event of a power failure of the main lighting system for sufficient time for occupants to safely evacuate”</i></p> <p>Therefore, as the inadequacy of the exit sign and emergency light at the fire exit stairwell does not comply with Deemed-to- Satisfy provision E4.5 Exit signs, the NCC BCA Volume One Performance Requirement cannot be shown to have been satisfied.</p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>		
--	---	--	--

## 20. 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
<p>When inspecting the electrical meter room located on the 1<sup>st</sup> floor of the Building, the Investigator identified inadequate fire protection to elements of the cable system, in particular that the cable system was not fastened with a non-flammable (i.e. stainless steel) fastener.</p> <p>I have formed the belief that the inadequate fire protection to elements of the wiring system as described above 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:</p>	<p><b>BCA Volume One, Section C Fire Resistance, Part C2 Compartmentation and Separation, Deemed-to-Satisfy Provisions Clause C2.13 Electricity Supply System</b>, which states:</p> <p><i>“(c) Electrical conductors located within a building that supply—</i></p> <p><i>(i) a substation located within the building which supplies a main switchboard covered by (b); or</i></p> <p><i>(ii) a main switchboard covered by (b), must—</i></p> <p><i>(iii) have a classification in accordance with AS/NZS 3013 of not less than—</i></p> <p><i>(A) if located in a position that could be subject to damage by motor vehicles — WS53W; or</i></p> <p><i>(B) otherwise — WS52W; or</i></p> <p><i>(iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120”</i></p> <p>Wherein, <b>AS/NZS 3013:2005 Electrical Installations – Classification of the Fire and Mechanical Performance of Wiring System Elements, Section 3 Classification System, Part 3.2 First Characteristic Numeral, Clause 3.2.3 Compliance</b>, states that:</p> <p><i>“Compliance of a wiring system element with a stated degree of fire protection means that the element also complies with degrees of protection of lower rank in <b>Table 3.1</b>, i.e. of a lower numeral, and therefore tests for degrees of protection of lower rank need not be conducted.” Refer to Table 2.11.2</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>engage an electrical engineer to undertake comprehensive Inspection of the entire building to ascertain the complete scope of works for remediation;</li> <li>replace non-compliant cable ties with stainless steel variants in accordance with the BCA Volume One, Section C Fire Resistance; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>



## 21. 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
<p>When inspecting the pump room in that part of the Building known as "B1", the investigator identified that a door grille of an unknown material had been installed on a fire-rated door (pump room door).</p> <p>I have formed the belief that the inadequate construction of the pump room door as described above 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:</p>	<p><b>NCC BCA Volume One, Section C Fire Resistance, Part C3.4, Clause 2 Fire Doors and AS1905.1:2005</b> which states:</p> <p><i>"A required fire door must—</i></p> <p><i>(a) comply with AS 1905.1; and</i></p> <p><i>(b) not fail by radiation through any glazed part during the period specified for integrity in the required FRL."</i></p> <p>Wherein, <b>AS1905.1:2005 Components for the Protection of Openings in Fire-Resistant Walls, Part 1 Fire-Resistant Doorsets, Section 2 Design Requirements, 2.1 General, Clause 2.1.1 Materials</b>, states that:</p> <p><i>"Unless otherwise specified by the regulatory authority or in this Section, no restriction shall be imposed on the materials of construction of the doorset, provided that the tested specimen satisfies the requirements of this Standard."</i></p> <p>The grating installed is of unknown material and FRL rating.</p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. demonstrate doorset and frame complies with AS1905; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

## 22. Defect 14 – 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
<p>At the stairwell which connects those parts of the Building known as "B1" and "B2", the Investigator observed:</p> <p>(a) rust had developed on the surface of exposed steel reinforcements on the slab; and</p> <p>(b) exposure of steel reinforcement caused by the inadequate concrete cover; and</p> <p>(c) that the exposed reinforcement had an absence of adequate corrosion and fire protection and had the potential to compromise the structural integrity of the slab.</p> <p>I have formed the belief that the exposed steel reinforcements as described above serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:</p>	<p><b>Australian Standard AS 3600 Concrete Structures, Section 4 Design for durability, 4.10 Requirements for cover to reinforcing steel and tendons, 4.10.1 General</b>, which states:</p> <p><i>"The cover to reinforcing steel and tendons shall be the greatest of the values determined from Clauses 4.10.2 and 4.10.3, as appropriate, unless exceeded by the covers required by Section 5 for fire resistance."</i></p> <p>And</p> <p><b>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 Embedded items cover</b>, which states:</p> <p><i>"Embedded items, as defined in Clause 14.2, 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."</i></p> <p><i>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."</i></p> <p><b>Deemed-to-Satisfy section B Structure is a pathway that can satisfy the BCA Volume One, Part B1 Structural provisions, BP1.1 Structural reliability</b>, which states:</p> <p><i>"Structural reliability</i></p> <p><i>(a) A building or structure, during construction and use, with appropriate degrees of reliability, must-</i></p> <p><i>(i) Perform adequately under all reasonably expected design actions; and</i></p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. demonstrate compliance with approved structural drawings;</li> <li>2. engage structural engineer to undertake a comprehensive assessment of all structural concrete elements;</li> <li>3. rectify all defective concrete and reinforcement to comply with AS 3600;</li> <li>4. make good any consequential damage; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

	<p><i>(ii) Withstand extreme or frequently repeated design actions; and</i></p> <p><i>(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; ...”</i></p> <p>Corrosion of steel reinforcement is a defect in a building element that is attributable to a failure to comply with <b>BCA Volume One, Section B Structure, Part B1 Structural Provisions, Clause B1.4 Determination of Structural Resistance of Materials and Forms of Construction</b>, which states:</p> <p><i>“The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate:</i></p> <p><i>(a) Concrete construction (including reinforced and prestressed concrete): AS 3600.</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>		
--	--	--	--

## 23. Defect 15 – 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
<p>When inspecting the all basement car park levels of the Building, the Investigator observed uncontrolled cracking around the drains.</p> <p>I have formed the belief that the uncontrolled cracking as described above serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:</p>	<p><b>Australian Standard AS 3600, Section 2.3.3 Cracking, 2.3.3.1 General</b>, which states</p> <p><i>“Cracking in concrete structures shall be controlled so that structural performance, durability and appearance of the structure are not compromised”</i></p> <p>Structural concrete elements are to comply with <b>NCC BCA Volume One, Section B Structure, Part B1 Structural Provisions, Clause B1.4 Determination of Structural Resistance of Materials and Forms of Construction</b>, which states:</p> <p><i>“The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate:</i></p> <p><i>(a).....</i></p> <p><i>(b) Concrete construction (including reinforced and prestressed concrete): AS 3600.”</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>engage structural engineer to undertake a comprehensive assessment of all structural concrete elements;</li> <li>rectify defective structural concrete elements to comply with AS 3600 and BCA Volume One, Section B Structure, Part B1;</li> <li>make good any consequential damage; and</li> <li>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.</li> </ol>	<p>Within 180 days of issuance of this Order.</p>

## 24. Defect 16 – 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
<p>At the stairwell which connects those parts of the Building known as "B1" and "B2", the Investigator observed the delamination of the concrete stair riser.</p> <p>I have formed the belief that the reduced concrete cover to the steel reinforcement as described above serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:</p>	<p><b>Australian Standard AS 3600 Concrete Structures, Section 4 Design for durability, 4.10 Requirements for cover to reinforcing steel and tendons, 4.10.1 General</b>, which states:</p> <p><i>"The cover to reinforcing steel and tendons shall be the greatest of the values determined from Clauses 4.10.2 and 4.10.3, as appropriate, unless exceeded by the covers required by Section 5 for fire resistance."</i></p> <p>And</p> <p><b>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 Embedded items cover</b>, which states:</p> <p><i>"Embedded items, as defined in Clause 14.2, 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."</i></p> <p><i>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."</i></p> <p><b>Deemed-to-Satisfy section B Structure is a pathway that can satisfy the BCA Volume One, Part B1 Structural provisions, BP1.1 Structural reliability</b>, which states:</p> <p><i>"Structural reliability</i></p> <p><i>(a) A building or structure, during construction and use, with appropriate degrees of reliability, must-</i></p> <p><i>(i) Perform adequately under all reasonably expected design actions; and</i></p> <p><i>(ii) Withstand extreme or frequently repeated design actions;</i></p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. rectify concrete stair flights to comply with Australian Standard AS 3600 Concrete Structures.</li> </ol>	<p>Within 180 days of issuance of this Order.</p>

	<p>and</p> <p><i>(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;</i></p> <p>...</p> <p>Corrosion of steel reinforcement is a defect in a building element that is attributable to a failure to comply with <b>BCA Volume One, Section B Structure, Part B1 Structural Provisions, Clause B1.4 Determination of Structural Resistance of Materials and Forms of Construction</b>, which states:</p> <p><i>“The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate:</i></p> <p><i>(b) Concrete construction (including reinforced and prestressed concrete): AS 3600.</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>		
--	---	--	--

## 25. Defect 17 – 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
<p>In the basement level fire stairs of the Building, the Investigator observed severe degradation of the metal handrail in the fire stairs due to water pooling at the base of the fire stairs. The Investigator formed the view that the resultant corrosion of the metal handrail is due to prolonged exposure to damp or wet conditions because of the uncontrolled entry of water into the fire stairs.</p> <p>I have formed the belief that the corrosion as described above is serious defect because it is a defect in a building element (structural systems) that is attributable to a failure to comply with the following:</p>	<p><b>BCA Volume 1, Section B Structure, Part B1 Structural Provisions, Performance Requirements BP1.1 Structural reliability</b>, which states:</p> <p><i>“ A building or structure, during construction and use, with appropriate degrees of reliability, must –</i></p> <p><i>(i) Perform adequately under all reasonably expected design actions; and</i></p> <p><i>(ii) Withstand extreme or frequently repeated design actions; and</i></p> <p><i>(iii) ....”</i></p> <p>The installation demonstrates a failure to comply with <b>Australian Standard 2312.2:2014 - Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings, Section 7 -General Design Requirements, 7.3-Connections and 7.3.2-Welding considerations related to coatings.</b></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>rectify handrails to comply with BCA Volume One, DP2 Safe movement to and within a building, and to be fit for purpose; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

## 26. Defect 18 – 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
<p>When inspecting a single occupancy unit on the 3<sup>rd</sup> floor of the Building, the Investigator identified that the glass balustrade on the balcony was warping slightly outwards and the required vertical supports were not observed. The Investigator also observed large gaps in the balustrade.</p> <p>I have formed the belief that the inadequate installation of the balustrades as described above is serious defect because it is a defect in a building element (building enclosure) that is attributable to a failure to comply with the following:</p>	<p><b>NCC BCA Volume One, Section B1 Structural Provisions, Part B1.4 Determination of Structural Resistance of Materials and Forms of Construction</b>, which states:</p> <p><u><i>Part B1.4 Determination of Structural Resistance of Materials and Forms of Construction</i></u></p> <p><i>“The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate:</i></p> <p><i>(ii) All glazed assemblies not covered by (i) and the following glazed assemblies must comply with AS 1288:</i></p> <p>...</p> <p><i>(K) Glazing used in balustrades and sloping overhead glazing.”</i></p> <p>Wherein, <b>AS1288:2006 Glass in Buildings – Selection and Installation, Section 3 General Design Criteria, Part 3.3 Limit States, Clause 3.3.3 Serviceability Limit States</b>, states:</p> <p><u><i>Clause 3.3.3 Serviceability Limit States</i></u></p> <p><i>“Glass shall be designed for the serviceability limit states by controlling or limiting deflection.</i></p> <p><i>The maximum deflection for all glass under serviceability limit state actions shall be limited to—</i></p> <p><i>(a) span/60 for two-, three- or four- edge supported panels;</i> <i>or</i></p> <p><i>(b) height/30 (or cantilever length/30) for cantilevered panels such as cantilevered structural glass balustrade.</i></p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>engage structural engineer to undertake a comprehensive assessment of all handrail assemblies and installation for structural adequacy and compliance with Australian Standards AS 1288;</li> <li>rectify all non-compliant handrail assemblies to comply with Australian Standard AS 1288;</li> <li>make good any consequential damage; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>



	<p>Developer has not provided evidence of glass and windows meeting the performance requirements of the <b>Australian Standards 1288 and Australian Standard 2047.</b></p> <p><b>Windows and External Glazed Doors in Buildings section 8 Labelling and Certificate 8.1 General 8.2 Labelling</b> which states:</p> <p><i>"The label shall be so positioned that the window can be identified when viewed in situ. Each window shall have the following information marked anywhere on the window assembly, except on the glazing:</i></p> <ul style="list-style-type: none"> <li><i>a. The manufactures identification mark</i></li> <li><i>b. The serviceability limit state wind pressure</i></li> <li><i>c. The ultimate limit state wind pressure</i></li> <li><i>d. The Water penetrations resistance."</i></li> </ul> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>		
--	--	--	--

## 27. Defect 19 – 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
<p>When inspecting the basement car park of the Building, the Investigator identified that:</p> <p>(a) the ventilation system was inadequate (in particular that the make-up air system was missing);</p> <p>(b) the air-balancing was inadequate (in particular the CO monitoring system was unlikely to be operational); and</p> <p>(c) the VSD for the exhaust system was not calibrated and non-operational.</p> <p>I have formed the belief that the inadequate air system as described above is serious defect because it is a defect in a building element (building enclosure) that is attributable to a failure to comply with the following:</p>	<p><b>AS1668 The Use of Ventilation and Airconditioning in Buildings Part 2 Mechanical Ventilation in Buildings, Section 4 Ventilation of Enclosures used by Vehicles with Combustion Engines, Clause 4.8 Make-up of Exhaust Air, AS1668.2 Clause 4.4.1 and Clause 4.12.3,</b> which states:</p> <p><u>Clause 4.8 Make-up of Exhaust Air</u></p> <p><i>“The make-up of exhaust air shall be in accordance with Clause 3.8. Where a supply ventilation system for make-up air is provided, it shall have a flow rate of not less than 75% and not more than 90% of the exhaust airflow rate.”</i></p> <p>And</p> <p><u>Clause 4.4.1 General</u></p> <p><i>“Car parks that are not adequately naturally ventilated shall be mechanically ventilated by a combination of general exhaust with flow rates in accordance with Clause 4.4.3 or 4.4.4, as applicable, and supply with flow rates as required to comply with Clause 4.8, subject to the following variations...”</i></p> <p>And</p> <p><u>Clause 4.12.3 Operation and accuracy of CO monitors</u> <i>“The monitoring system shall be selected to measure the concentration of CO to within 10% of the exposure limit (EL) for measurements in the range between 10% and 120% of the EL, and to within 10% of the full range deflection of the monitoring system for measurements over 120% of the EL.”</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. commission a HVAC engineer to access the deficient issue across the site;</li> <li>2. provide air systems car parks as stated in clause 3 and 4 of AS 1668.2:2012; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

## 28. Defect 20 – 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
<p>When inspecting the exterior of the south-west side of the Building, the Investigator identified that a diesel exhaust pipe had been installed in close proximity to the window areas of single occupancy units immediately above, posing a threat to health and safety risks to the occupants of those single occupancy units.</p> <p>I have formed the belief that the proximity of the diesel exhaust pipe to window areas of single occupancy units 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:</p>	<p><b>Australian Standard 1668.2:2012, Clause 3.10.3 Discharges Deemed Objectionable</b>, which states:</p> <p><u><i>Clause 3.10.3 Discharges Deemed Objectionable</i></u></p> <p><i>Air discharges that are deemed to contain objectionable effluent (see Clause 3.10.1) shall be in accordance with Clause 3.10.2 and-</i></p> <p><i>(c) located not less than 6 m from a property boundary (see Notes 1 and 2), any boundary to a public street, any outdoor air intake opening or any natural ventilation device or opening;</i></p> <p>In this case the exhaust is located directly below a natural ventilation (window) of a unit.</p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. relocate exhaust pipe in compliance with AS1668.2:2012 C 3.10.3; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

## 29. Defect 21 – 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
<p>When inspecting the car park entryway to the Building, the Investigator identified there was insufficient transitioning lighting at the car park entryway.</p> <p>I have formed the belief that the insufficient transitioning lighting 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:</p>	<p><b>BCA Volume One, Section F Health and Amenity, Part F4 Light and Ventilation, Deemed-to-Satisfy Provision F4.4 Artificial Lighting</b>, which states in part:</p> <p><u><i>F4.4 Artificial Lighting</i></u></p> <p><i>“(b) The artificial lighting system must comply with AS 1680”</i></p> <p>Wherein, Table D1 from AS 1680 Interior and Workplace Lighting Part 2.1 Specific Applications – Circulation Spaces and Other General Areas, Appendix D Specific Recommendations for Circulation Spaces and Other General Areas, shows that:</p> <p><i>Carparks (Indoors) must maintain a illuminance of 800 lx on entrances during Daytime – first 15 meters and 160 lux on the next 4 meters. Refer to Table 5.3.2.</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>install additional lightings in compliance with the BCA Volume One, relevant testings are required; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

### 30. Defect 22 – 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
<p>When inspecting that part of the Building known as the "B1" pump room, the Investigator observed an inadequate ventilation to the enclosure.</p> <p>I have formed the belief that the inadequate ventilation system 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:</p>	<p><b>NCC BCA Volume One, Section F Health and Amenity, Part F4.5 Ventilation of rooms</b>, which states:</p> <p><u><i>Part F4.5 Ventilation of Rooms</i></u></p> <p><i>“A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have—</i></p> <p><i>(a) natural ventilation complying with F4.6; or NSW F4.5(b)</i></p> <p><i>(b) a mechanical ventilation or air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1.</i></p> <p>The pump room in question has neither natural ventilation nor mechanical ventilation and hence deemed noncompliant with F4.5 of the BCA.</p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>install mechanical ventilation or air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

### 31. Defect 23 – 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
<p>Throughout the entire Building and at a selection of locations, the Investigator observed that there was insufficient ventilation inside the gas meter cupboards.</p> <p>I have formed the belief that the inadequate ventilation system 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:</p>	<p><b>BCA Volume One 2014, Section F Health and Amenity, Part F4 Light and Ventilation, Deemed-to-Satisfy Provision, Clause F4.5 Ventilation of Rooms</b>, which states in part:</p> <p><u>Clause F4.5 Ventilation of Rooms</u></p> <p><i>“(b) a mechanical ventilation or air-conditioning system complying with AS 1668.2”</i></p> <p>Wherein, AS 1668 The Use of Ventilation and Air conditioning in Buildings, Part 2 Mechanical Ventilation in Buildings, Section 1 Scope and General, Clause 1.1 Scope, Note 8, states that:</p> <p><u>Clause 1.1 Scope, Note 8</u></p> <p><i>“Requirements for ventilation in relation to the safe operation of gas appliances are covered in AS 5601.1”</i></p> <p>Wherein <b>AS 5601 Gas Installations, Part 1 General Installations, Section 5 Means of Compliance – Installing Consumer Piping, Part 5.13 Ventilation of Gas Equipment, Clause 5.13.14 Mechanical Ventilation</b>, states that:</p> <p><u>Clause 5.13.14 Mechanical Ventilation</u></p> <p><i>“Where the ventilation for the enclosure is to be provided by mechanical means, this shall be directly to outside and the system shall comply with Table 5.8. Fan motors shall be remote from the exhaust duct (indirect drive) or be rated to operate in a Zone 1 hazardous area (see AS 60079.10.1) Where a combination of natural and mechanical ventilation is to be used to ventilate an enclosure –</i></p> <p><i>(a) exhaust air shall be provided by mechanical means; and</i></p> <p><i>(b) no open flued gas appliance shall be installed in the enclosure”</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>install adequate mechanical ventilation system for gas meter cupboard accordance with AS 5601 Gas Installations; and</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>

### 32. Defect 24 – 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
<p>When inspecting the carpark (in particular close to the lift area) in that part of the basement of the Building known as "B1", the Investigator identified an excessive opening at an airduct.</p> <p>I have formed the belief that the inadequate sealing of the airduct 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:</p>	<p><b>BCA Volume One 2014, Section J Energy Efficiency, Part J5 Air-Conditioning and Ventilation Systems, Specification J5.2 Ductwork Insulation and Sealing, Deemed-to-Satisfy Provision Clause 2 Ductwork Sealing</b>, which states in part:</p> <p><u>Clause 2 Ductwork Sealing</u></p> <p><i>“(a) Heating or cooling ductwork and fittings must be sealed against air loss—</i></p> <p><i>(i) by closing all openings in the surface, joints and seams of ductwork with adhesives, mastics, sealants or gaskets in accordance with the duct sealing requirements of AS 4254 Parts 1 and 2 for the static pressure in the system; or</i></p> <p><i>(ii) for flexible ductwork at an operating static pressure of less than 500 Pa, with a draw band in conjunction with a sealant or adhesive tape.”</i></p> <p>And</p> <p><b>AS 4254.2:2012 Ductwork for Air-Handling Systems in Buildings, Part 2 Rigid Duct, Section 2 Duct Construction and Installation, Part 2.2 Duct Sealing, Clause 2.2.1 General</b>, which states:</p> <p><u>Clause 2.2.1 General</u></p> <p><i>“Where sealing is a requirement of this Standard, the following criteria apply to the sealing of ducts:</i></p> <p><i>(g) Duct shall be sealed in accordance with Table 2.2.1</i></p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to:</p> <ol style="list-style-type: none"> <li>1. repair and rectify damaged ducts to maintain the seal and static pressure stated in AS4254.2;</li> <li>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.</li> </ol>	<p>Within 90 days of issuance of this Order.</p>





### 33. Defect 25 – 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
<p>When inspecting the external courtyards of the Building, the Investigator identified exposed services with inadequate cover or protection.</p> <p>I have formed the belief that the inadequate installation of services 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:</p>	<p><b>Australian Standard AS/NZS 3000 Electrical Installations, section 3.11 underground wiring systems, section 3.11.1 suitability, and protection</b> states:</p> <p><i>Cables installed underground shall be:</i></p> <ul style="list-style-type: none"> <li>(a) <i>Suitable for the environment in which they are placed.</i></li> <li>(b) <i>Provided with protection against inadvertent damage likely to be caused by manual or mechanical excavation works.</i></li> </ul> <p>and Australian Standard AS/NZS 3500 Plumbing and Drainage, also creating a trip hazard.</p> <p>That causes or is likely to cause the inability to inhabit or use the building (or part of the building) for its intended purpose.</p>	<p>Developer to re-install the services to comply with Australian Standard AS/NZS 3000, Australian Standard AS/NZS 3500 and BCA Volume 3 Plumbing Code of Australia.</p>	<p>Within 90 days of issuance of this Order.</p>

### Conditions of this Order

34. **Forte Sydney Construction Pty Ltd** must notify Chris Lentholt, in writing, by email sent to [projectintervene@customerservice.nsw.gov.au](mailto:projectintervene@customerservice.nsw.gov.au) within 2 business days of the work required by this Order being completed.

### Duration of this Order

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



Elizabeth Stewart  
**Director Legal Operations**  
**Department of Customer Service**

## 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 24 in the Order, that in the Building has serious defects. The defect items that do not appear have been satisfactorily resolved.

- 36. Defect 1** – The water ingress 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 16 November 2022, section 1.2 in which I also observed photographs which depicted water ingress into wall linings and as otherwise particularised in section 1.2 of the Audit report and paragraph 9 of the Order.
- 37. Defect 2** – The waterproofing membrane issues identified on the rooftop 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 16 November 2022, section 1.5 in which I also observed a photograph which showed a delaminated membrane together with no evidence of the membrane having been turned up and exhibiting a lack of overflow provisions and as otherwise particularised in section 1.5 of the Audit Report and paragraph 10 of the Order.
- 38. Defect 3** – The lack of overflow provisions on the rooftop of the Building 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 16 November 2022, section 1.6 in which I also observed a photograph taken of the rooftop of the Building which demonstrated there being a lack of overflow provisions and as otherwise particularised in section 1.6 of the Audit Report and paragraph 11 of the Order.
- 39. Defect 4** – The water seepage in the basement carpark area of the Building and as otherwise 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 16 November 2022, section 1.8 in which I also observed a photograph which showed the metal tray installed at the soffit of the basement carpark which the Investigator in the Audit Report noted omitted a water dripping sound (thereby indicating water seepage from above) and as otherwise particularised in section 1.8 of the Audit Report and paragraph 12 of the Order.
- 40. Defect 5** – The inadequate fire damper installation in the basement carpark and main switchboard room of the Building and as otherwise described in paragraph 13 of the Order, is a serious defect because it is a deficiency in a building element (fires safety systems) 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 16 November 2022, section 2.1 in which I also observed photographs which showed fire dampers missing in the basement carpark area and the main switchboard room respectively and as otherwise particularised in section 2.1 of the Audit Report and paragraph 13 of the Order.
- 41. Defect 6** – The installation of a bollard in front of the fire exits throughout the carpark level of the Building and as otherwise described in paragraph 14 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 14 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 2.2 in which I also observed a photograph which depicted the installation of a bollard immediately before the entrance to a set of fire stairs and as otherwise particularised in section 2.2 of the Audit Report and paragraph 14 of the Order.

42. **Defect 7** – The inadequate fire checking for service openings at ceilings (noting that this was a common feature throughout the Building) as described in paragraph 15 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 15 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 2.3 in which I also observed photographs which depicted slab/ceiling openings penetrated by wires and cables that were inadequately sealed and as otherwise particularised in section 2.3 of the Audit Report and paragraph 15 of the Order.
43. **Defect 8** – The voids identified in the grouted doorframe to fire rated stairwell in that part of the Building known as the "B1" and as described in paragraph 16 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 16 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 2.6 in which I also observed a photograph which provided an overview of the door to the fire exit. I also in particular reviewed the comments of the Investigator in that a knock test was conducted in respect of the fire rated doorframe and this test exhibited hollow sounds and as otherwise particularised in section 2.6 of the Audit Report and paragraph 16 of the Order.
44. **Defect 9** – The inadequate fire checking of the penetration at the floor slab in the control room of the part of the Building known as the "B1" 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 16 November 2022, section 2.7 in which I also observed a photograph which showed the unprotected penetration at the control room slab and a table (Table 2.7.2) extracted from BCA Volume One Spec C1.1 which sets out Type A Construction: FRL of Building Elements and as otherwise particularised in section 2.7 of the Audit Report and paragraph 17 of the Order.
45. **Defect 10** – The inadequate emergency luminaries in the stairwell connecting those parts of the Building identified as the "B1" and "B2" and as 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 16 November 2022, section 2.9 in which I also observed a photograph which showed the inadequate emergency luminaries at the fire exit stairwell and as otherwise particularised in section 2.9 of the Audit Report and paragraph 18 of the Order.
46. **Defect 11** – The inadequate fire protection to elements of the wiring system in the electrical meter room located on the first floor 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 16 November 2022, section 2.11 in which I observed a photograph which depicted the cable system which had not been fastened with non-flammable (ie stainless steel fasteners) and a table (2.11.2) extracted from AS3013:2015 regarding protection against fire conditions and as otherwise particularised in section 2.11 of the Audit Report and paragraph 19 of the Order.
47. **Defect 12** – The construction of door grilles in the pump room located in that part of the Building known as "B1" with unknown materials and as otherwise 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 16 November 2022, section 2.12 in which I also observed a photograph which showed the door grille at the pump room door and as otherwise particularised in section 2.12 of the Audit Report and paragraph 20 of the Order.
48. **Defect 13** – The exposed steel reinforcement of the concrete slab in the stairwell connecting those parts of the Building known as "B1" and "B2" and as described in paragraph 21 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 21 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 3.1 in which I also observed photographs which depicted the exposed steel reinforcement on the slab and as otherwise particularised in section 3.1 of the Audit Report and paragraph 21 of the Order.

49. **Defect 14** – The uncontrolled cracking in the basement carpark level at a selection of locations 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 (structural 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 16 November 2022, section 3.2 in which I also observed photographs which depicted extensive cracking in the carpark slab and around drains and as otherwise particularised in section 3.2 of the Audit Report and paragraph 22 of the Order.
50. **Defect 15** – The delamination of the concrete stair riser in the stairwell connecting those parts of the Building known as "B1" and "B2" and as described in paragraph 23 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 23 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 3.3 in which I also observed a photograph which depicted the delaminated concrete riser and as otherwise particularised in section 3.3 of the Audit Report and paragraph 23 of the Order.
51. **Defect 16** – The severe degradation of the metal handrail in the fire stairs located in the basement level of Building and as described in paragraph 24 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 24 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 3.5 in which I also observed a photograph which showed a handrail in the fire stairs which appeared to be considerably rusted and corroded and as otherwise particularised in section 3.5 of the Audit Report and paragraph 24 of the Order.
52. **Defect 17** – The inadequate erection of glass balustrades on the balcony of a single occupancy unit located on the third floor of the Balcony described in paragraph 25 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 25 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 4.1 in which I also observed photographs which showed the glass balustrade in question and in particular demonstrated the existence of a gap between the wall and the glass balustrade and as otherwise particularised in section 4.1 of the Audit Report and paragraph 25 of the Order.
53. **Defect 18** – The inadequate air system throughout the basement carpark 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 (building essential services) 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 16 November 2022, section 5.1 in which I also observed photographs which depicted the inadequate ventilation system within the carpark, the inadequate air balancing within the carpark, and the variable speed drives (VSDs) at the control room not being operational and as otherwise particularised in section 5.1 of the Audit Report and paragraph 26 of the Order.
54. **Defect 19** – The installation of a diesel exhaust pipe in close proximity to the windows of single occupancy units on the southwest side of the Building and as described in paragraph 27 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 27 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 5.2 in which I also observed a photograph which depicted the exhaust pipe of the building clearly immediately below windows of single occupancy units and as otherwise particularised in section 5.2 of the Audit Report and paragraph 27 of the Order.
55. **Defect 20** – The insufficient transitioning lighting in the carpark entry way of the Building as described in paragraph 28 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 28 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 5.3 in which I also observed a photograph of the carpark entry way with a table extracted from AS1680 which sets out the lighting requirements/recommendations for carparks and as otherwise particularised in section 5.3 of the Audit Report and paragraph 28 of the Order.

- 56. Defect 21** – The inadequate ventilation system in the pump room located in that part of the Building known as "B1" and as described in paragraph 29 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 29 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 5.5 in which I also observed a photograph of the pump room door and as otherwise particularised in section 5.5 of the Audit Report and paragraph 29 of the Order.
- 57. Defect 22** – The insufficient ventilation at the gas meter cupboard throughout the Building and as described in paragraph 30 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 30 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 5.6 in which I also observed photographs which showed the insufficient ventilation inside a gas meter cupboard and as otherwise particularised in section 5.6 of the Audit Report and paragraph 30 of the Order.
- 58. Defect 23** – The inadequate sealing of the airducts in the basement carpark close to the lift in that part of the Building known as "B1" and as described in paragraph 31 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 31 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 5.8 in which I also observed a photograph which depicted the excessive openings at the airducts together with a duct sealing requirements table extracted from AS4254.2:2012 and as otherwise particularised in section 5.8 of the Audit Report and paragraph 31 of the Order.
- 59. Defect 24** – The inadequate installation of services in the external courtyards of the Building, 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 32 of the Order. I have formed this belief after reviewing a copy of the Audit Report dated 16 November 2022, section 5.9 in which I also observed a photograph which depicted exposed services which were also a trip hazard and as otherwise particularised in section 5.9 of the Audit Report and paragraph 32 of the Order.

### **Period for compliance**

- 60.** I am of the view that the 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.

### **Consideration of written representations**

- 61.** On 12 December 2022, a notice of intention to issue the Order and a draft copy of the Order was served on the Developer, Local Council, Certifier and Owners Corporation. The parties were invited to provide written representations relating to the Order to the Department by 13 January 2023.
- (a) On 27 January 2023 written submissions were received from the Developer.
  - (b) On 15 December 2022 written submissions were received from the owners corporation.



- (c) No submissions were received as at the date of this Order from Local Council or Certifier.

62. The Developer provided me with written submissions on 27 January 2023. I have reviewed the Developer representations and the result of the inspection on 7 March 2023 by Authorised Officers. I have also considered the Owners Corporations written representations.

### **Why is it appropriate to give the Building Work Rectification Order?**

63. 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 3<sup>rd</sup> floor bedroom unit in the Building be free from water penetration and consequent unhealthy or dangerous conditions, or loss of amenity to occupants or undue dampness or deterioration of building elements;
- (b) Defect 2 – that the waterproofing membrane on the rooftop of the Building be rectified so that the surface of the substrate is smooth, without protrusions, voids or formwork distortions, and clean, dry, and free from dust and contamination;
- (c) Defect 3 – that the lack of overflow provisions on the rooftop of the Building be rectified so that stormwater from roof areas is collected and conveyed in gutters and downpipes and ensure that the discharge points for the overflows do not cause a nuisance to occupants;
- (d) Defect 4 – that the basement carpark of the Building be rectified so that the surface water is conveyed to an appropriate outfall and avoids damage to the Building;
- (e) Defect 5 – that the missing fire dampers in the basement carpark and main switchboard room of the Building be rectified so as to resist and reduce the spread of fire within the Building;
- (f) Defect 6 – that the bollards installed in carpark level of the Building be rectified so that the exits leads to an open space and are not obstructed;
- (g) Defect 7 – that the penetrations close to the lift and electrical meter room of the Building be rectified so as to resist and reduce the spread of fire within the Building;
- (h) Defect 8 – that the fire rated stairwell in the Building be rectified so as to ensure that the door frames are capable of preventing the spread of fire;
- (i) Defect 9 – that the floor slab in the control room ("B1") of the Building be rectified so as to ensure the slab is fire resistant and capable of preventing the spread of fire;
- (j) Defect 10 – that the emergency lighting in the stairwell (connecting those parts of the Building known as "B1" and "B2") be rectified so as to render it compliant and otherwise provide occupants with the clear and safe identification of the location of exits and to guide them to those exits;
- (k) Defect 11 – that the wiring system in the electrical meter room in the 1<sup>st</sup> floor of the Building be rectified by adequately fire-protecting the wiring system with non-combustible materials;
- (l) Defect 12 – that the door grille on the pump room in the part of the Building known as "B1" be rectified to ensure compliance and otherwise prevent the spread of fire throughout the Building;
- (m) Defect 13 – that the exposed steel reinforcements in the stairwell connecting those parts of the Building known as "B1" and "B2" be rectified so as to ensure the structural reliability and durability of the Building;

- (n) Defect 14 – that the uncontrolled cracking in the basement carpark level of the Building be rectified so as to ensure the structural reliability and durability of the Building;
- (o) Defect 15 – that the delaminated concrete stair riser in the stairwell connecting those parts of the Building known as "B1" and "B2" be rectified so as to ensure the structural reliability and durability of the Building;
- (p) Defect 16 – that the severely degrading handrail in the basement level (fire stairs) of the Building be rectified to ensure that that part of the Building is capable of withstanding frequent and repeated use and otherwise ensure that the services within the Building are structurally reliable and durable;
- (q) Defect 17 – that the glass balustrades on the balcony of a unit located on the 3<sup>rd</sup> floor of the Building be rectified so as to render them compliant;
- (r) Defect 18 – that the air ventilation system in the basement car park of the Building be rectified so as to render it compliant and otherwise ensure adequate ventilation;
- (s) Defect 19 – that the diesel exhaust pipe on the exterior wall of the Building (south west) be relocated to an alternative location so as not to impose a health and safety risk to occupants of the Building;
- (t) Defect 20 – that the insufficient transitioning lighting in the carpark entryway the Building be rectified by installing additional lightings so as to render them compliant and otherwise provide adequate artificial lighting to the carpark entryway of the Building;
- (u) Defect 21 – that the inadequate air ventilation in the pump room in that part of the Building known as "B1" be rectified so as to render it compliant and otherwise ensure adequate ventilation;
- (v) Defect 22 – that the insufficient air ventilation in throughout the Building known be rectified so as to render it compliant and otherwise ensure adequate ventilation;
- (w) Defect 23 –that the excessive opening of the airduct in the basement carpark (close to lift) in that part of the Building known as "B1" be rectified by adequately sealing the duct to prevent air loss;
- (x) Defect 24 – that the exposed services in the external courtyards of the Building be rectified by providing adequate protection to them to prevent against damage.