

Industry Position Paper (IPP 01)

SEPTEMBER 2022

Subject: Lifts Opening directly into Apartments

There is a current trend in building design for lifts to open directly into private apartments/sole-occupancy units, especially when serving penthouses or developments where the footprint of the site, restricts the building envelope, specifically in Class 2 Buildings and especially where MRLs (Machine room Less Type Lifts) are installed.

The **National Construction Code BCA 2019** Volume 1 states:

Section E3.5 Landings,

“Access and egress to and from liftwell landings must comply with the Deemed-to-Satisfy Provisions of Section D.”

Section D1.2 (g):

- (g) **Access to exits** — Without passing through another *sole-occupancy unit* every occupant of a *storey* or part of a *storey* must have access to—
- (i) an *exit*; or
 - (ii) at least 2 *exits* if 2 or more *exits* are *required*”.

If the Lift landing door entering the apartment is deemed to be a “**Doorway**” then the following would be required to be complied with:

Section C3.11 Bounding construction: Class 2 and 3 buildings and Class 4 parts:

NSW C3.11(d)

(d) Protection for a doorway must be at least—

- (i) in a building of Type A construction — a *self-closing* **-/60/30** fire door.

However, for Lift Landing Doors the following applies:

C3.10 Openings in fire-isolated lift shafts

(a) **Doorways** — If a lift *shaft* is *required* to be fire-isolated, an entrance doorway to that *shaft* must be protected by **-/60/-** fire doors that—

- (i) comply with AS 1735.11; and
- (ii) are set to remain closed except when discharging or receiving passengers, goods or vehicles.

Part F5 Sound transmission and insulation requires:

F5.5 Sound insulation rating of walls

(a) A wall in a Class 2 or 3 building must—

- (i) have an $R_w + C_{tr}$ (airborne) not less than 50, if it separates *sole-occupancy units*; and
- (ii) have an R_w (airborne) not less than 50, if it separates a *sole-occupancy unit* from a plant room, lift *shaft*, stairway, *public corridor*, public lobby or the like, or parts of a different classification

In multi-storey apartment buildings where the lift serves directly into separate sole-occupancy units, compliance with D1.2 (g) Access to exits cannot be achieved, as a lift user must be able to gain access to the exits without passing through another sole-occupancy unit, even if the lift should stop at a level that the user does not normally have access to and compliance with Section C3.11 and F5.5 will need to be considered.

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It is our opinion that this type of building design, with lifts opening directly into private residence, we would consider a safety issue and may not meet the National Construction Code, the Design and Building Practitioners Regulations 2021, the regulated-design-guidance-material as required under clause 9(1)(c) of the Design and Building Practitioners Regulation 2021, the Design Standard AS1735 part 1.2 and the Work Health and Safety Legislation.

The AS1735.1.2:2021, which is a direct adoption of the EN 81-20 standard states:

5.2.2.3 *If access to the lift for maintenance and rescue purposes is via private premises, then permanent access of authorized persons to the premises and relevant instructions shall be provided.*

The manufacturer/installer should make the building designer/architect/owner aware of the agreement regarding access, fire, entrapment, and problems of security associated with lifts serving directly into private premises (see 0.4.2 Negotiations).

The first paragraph has a normative requirement so must be complied with for the lift to conform to the Design Standard as required by the Work Health and Safety Legislation, and the Design and Building Practitioners Regulations

The second paragraph requires, a key holder agreement between all stakeholders (e.g., owner(s) of the apartment(s), lift company, rescue services and Regulatory inspection bodies etc.).

This agreement should clearly state that access to the lift is always guaranteed with a copy of the agreement being kept with the lift for its lifetime. In addition, a covenant should be included in the apartment sale documents, to ensure that potential owners are aware of the above requirement and be clearly stated/covered in Strata/Unit bylaws to ensure all future Owners are aware of the requirement to ensure compliance into the future.

The issues in the second paragraph which building designers need to consider are:

- Security systems to restrict access to an apartment via the lift are not fail safe and in the event of a malfunction can allow other persons to enter the apartment.
- Lift doors are designed to be secure from the landing side but are easily unlocked from the lift well. Lift landing doors therefore cannot be considered a secure means of preventing access into an apartment.
- Lift maintenance staff must perform some of their work from the landing and, where this is within a person's apartment, whilst it may be unacceptable to the owner is a mandatory requirement to ensure the safe operation of the lift.
- This is particularly important for Penthouse (top floor) owners to be aware of, as most of the lift equipment in an MRL is in the headroom/overrun of the lift shaft and should there be a failure of a major component located in this area it will necessitate access via the top floor lift landing door by the lift personnel for the removal and replacement of the failed component via the private premises.
- Rescue procedure, where there may be passengers trapped, could result in the lift car arriving at a private landing which does not allow for access by lift personnel or egress for passengers from the lift car. In most instances, this would be unavoidable and therefore would require people to pass through a sole occupancy unit.

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- The NCC has requirements for emergency egress and, in the event of fire, escape by stairs would be needed from lift landings and machinery spaces.
- Lift landing doors do not prevent odours from other apartments transferring into other apartments via the lift shaft
- The **Regulated-Design-Guidance-Material**, which is mandated under the Building and Design Practitioners Regulation 2020, states under **Design aspects and details - Vertical transportation** (i.e., lifts) requires that the following be provided:
 - Access and egress to and from lift landing entrances, lift machine rooms and plant rooms to emergency egress stairs
 - Access for persons and materials for maintenance and or repair of Lift plant
 - Design that integrates products in accordance with their authorisation under s.42 Work Health and Safety Act

The **Design and Building Practitioners Regulation 2021** [NSW] Part 2 Regulated designs and types of work section 9 states in part:

9 Further matters to be included in design compliance declarations

(1) For the purposes of section 8(1)(d) of the Act, a design compliance declaration must include the following matters—

- (d) whether or not specialist advice was sought and considered in preparing the design,
- (e) for a registered design practitioner in the class of design practitioner—vertical transportation—
 - (i) whether or not the design appropriately integrates a vertical transportation product in accordance with the product's authorisation under the *Work Health and Safety Act 2011*, section 42, and
 - (ii) if the design does not appropriately integrate the vertical transportation product—whether or not the practitioner has advised the designer of the product, within the meaning of the *Work Health and Safety Act 2011*, section 22, of that fact, and
 - (iii) whether or not the integration of the vertical transportation product in the design for building work achieves compliance with the requirements of AS 1735, Lifts, Escalators, and Moving Walks, as in force from time to time.

Version Control

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V1.0	IPP 01 Draft	AEA	27/07/2022
V1.1	IPP 01 Final	AEA	03/09/2022