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RE: Suitability of additional ramp at 227 Bungarribee Rd, Blacktown NSW 2148

1. Summary

The proposed building is located at 227 Bungarribee Road, Blacktown NSW 2148 and comprises a boarding house over a carpark basement.

Blacktown Council have indicated that an access ramp may need to be considered to connect the different levels on the first floor of the proposed development. Gus Fares Architects have been requested to provide more information to confirm that it may be used to travel across the ground floor, and also assesses the possibility of replacing a proposed set of stairs at the ground floor with a ramp so that the building is accessible during power failure.

It is recommended to consider that the provision of a lift in a boarding house meets the requirements of part D3 of the Building Code of Australia, Volume 1, Amendment 1 (BCA). Furthermore, the assessment detailed below identified that replacing the stairs with a ramp is not possible as the ramp will not meet the requirements of AS1428.1-2009 due to insufficient space for an AS 1428.1 complying ramp to be installed at the particular location within this building. Additionally, if a ramp is installed at the location of the stairs, it would result in non-compliances with other access and fire safety provisions of the BCA.

2. Provision of Lifts for Class 3 Buildings in accordance with the BCA

Clause D3.1 of the BCA requires that a Class 3 building is accessible:

> *"From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance doorway of each sole-occupancy unit located on that level.*
>
> *To and within not less than 1 of each type of room or space for use in common by the residents …*
>
> *Where a ramp complying with AS 1428.1 or a passenger lift is installed—*
>
> > *(a) to the entrance doorway of each sole-occupancy unit; and*

(b) to and within rooms or spaces for use in common by the residents"

The building contains 11 sole occupancy units and has been provided with 2 accessible sole occupancy units at the ground level. As the proposed building is to be constructed over a slope, the ground floor is split into two sections, with the entrance being at RL 71.40 and the rear section being at RL 69.52. The layout is illustrated at figure 1 below:

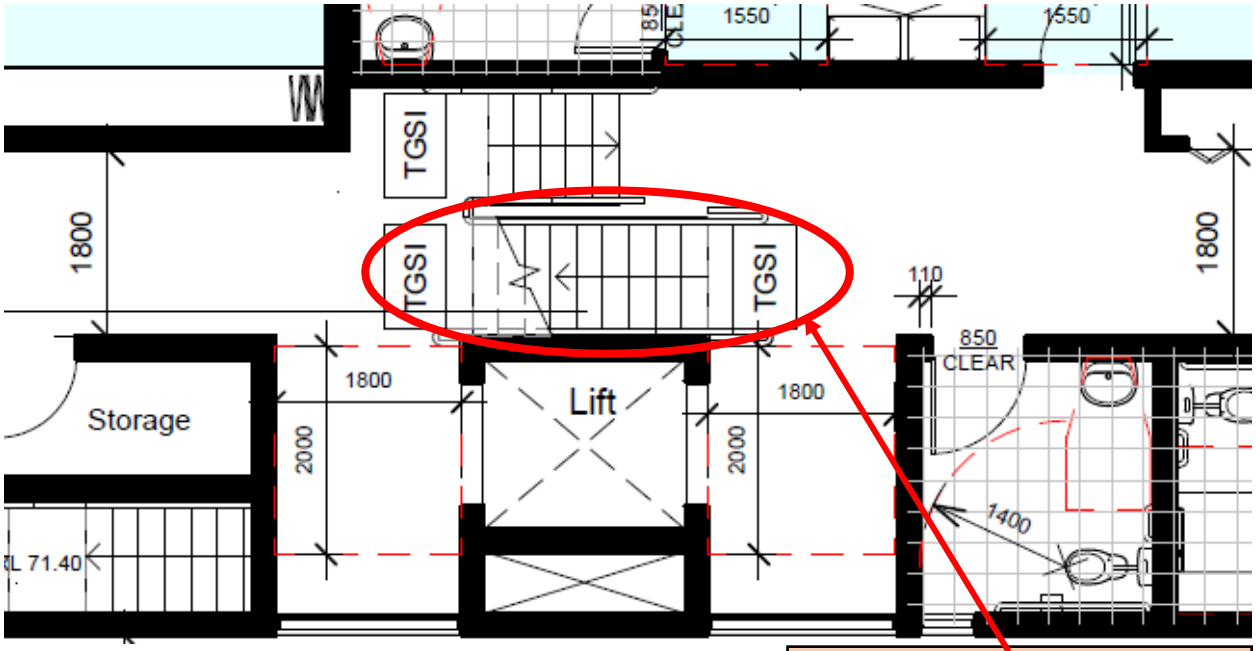

Figure 1: Location of lift between ground floor sections

Access to the sole occupancy units, as well as the common areas, is via a lift situated between the entrance and the rear section, as shown in figure 1 above. The lift contains two openings at either side and will be programmed to be able to stop at the floor level for each of these sections. The BCA definition for *accessway* in a building is referring to the term *continuous accessible path of travel* in Clause 6 AS 1428.1. That excludes listed impediments however does not exclude lifts. BCA clause D3.3 (b) further defines the requirements for lifts in accessible buildings:

- *every passenger lift needs to comply with E3.6*

It is therefore conclusive that BCA clause D3.3 allows for accessways in buildings required to be accessible to be provided either by an AS1428.1 compliant ramp or a passenger lift. Accordingly, the provision of a BCA E3.6 complying lift at this location meets the requirements of Part D3 of the BCA.

As shown on plans, the lift is provided with openings on each level of the first floor i.e., the lift has been designed to service both levels of the first floor.

The BCA does not deal with maintenance requirements and the question of lift being out of service is out of the scope of the BCA assessment. It is assumed that periodic and reactive maintenance provisions will be implemented by the building management in a similar way as in any other building of identical use and size.

3. Possibility of replacing the stairs with a ramp

Council have requested the access consultants consider the accessibility of the rear section of the ground floor in the event the lift is out of service. It is noted that what Council is requesting to be considered is over and above the accessibility requirements of the BCA as there is no requirement for a secondary ramp in the event the lift is not operational.

It should be noted that in a building where the first floor contains an accessible sole occupancy unit, or common areas, that floor would be required to be accessible and a lift would suffice for access to that floor. A person with a disability will need to rely on the lift in order to access their accessible sole occupancy unit, or common area, on a storey above the ground floor and the building management is required to have provisions in place to ensure that the lift is operational in a timely manner in the event of a breakdown. In such a circumstance it would not be reasonable to require the provision of a secondary ramp to reach a level above the ground floor because in many buildings installing such a ramp is not possible as there would not be enough space for a ramp with an AS1428.1 compliant gradient of 1:14 to traverse the height required to reach the second story.

Similarly, there is not enough space in the current development to install a ramp of 1:14 which may traverse the 1.88 m between the sections of the ground floor. This would require the ramp to be over 30 m long including required landings. As the length of the building is only 31.5 m such a ramp would not only take up an unreasonable amount of space, it will be unreasonable to require occupants to travel back and forth over a 30 m long ramp to reach their unit when they could instead use a lift. Figure 2 below illustrates the length required for an AS1428.1 compliant ramp in relation to the building not considering the additional space for landing:

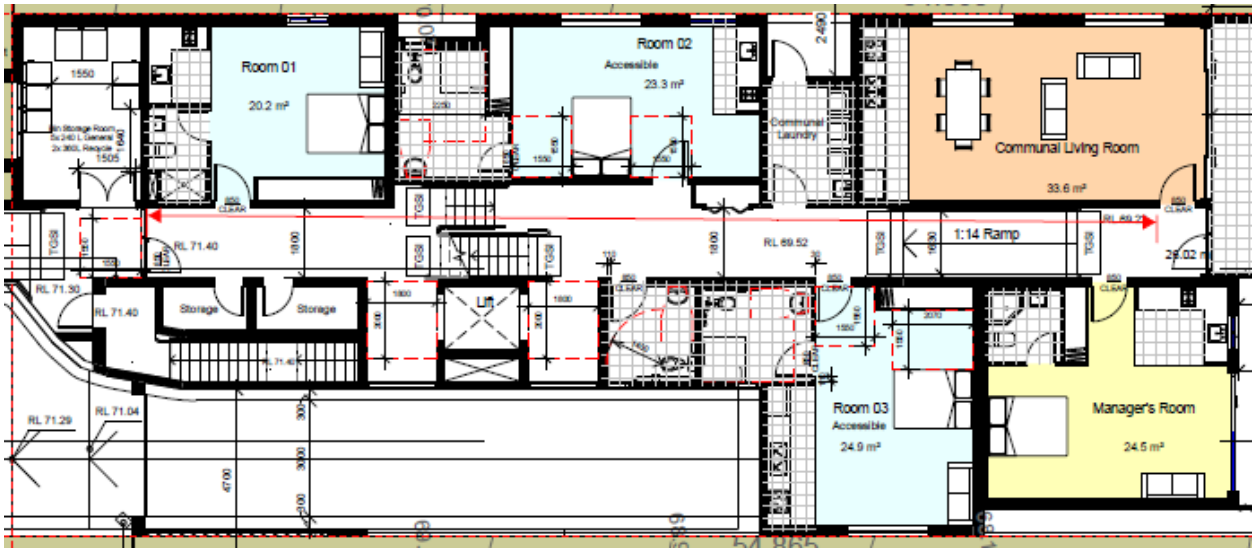

Figure 2: Length required for a 1:14 ramp

Given the 1.88 m difference in floor level between the two sections at the ground floor, the use of a passenger lift to travel between these floors levels is the only practical manner in which BCA compliant access can be provided for this building.

4. Non-compliances which arise from replacing stairs with a ramp

Figure 3 below illustrates how a ramp will use the available corridor width over a segment of that corridor.

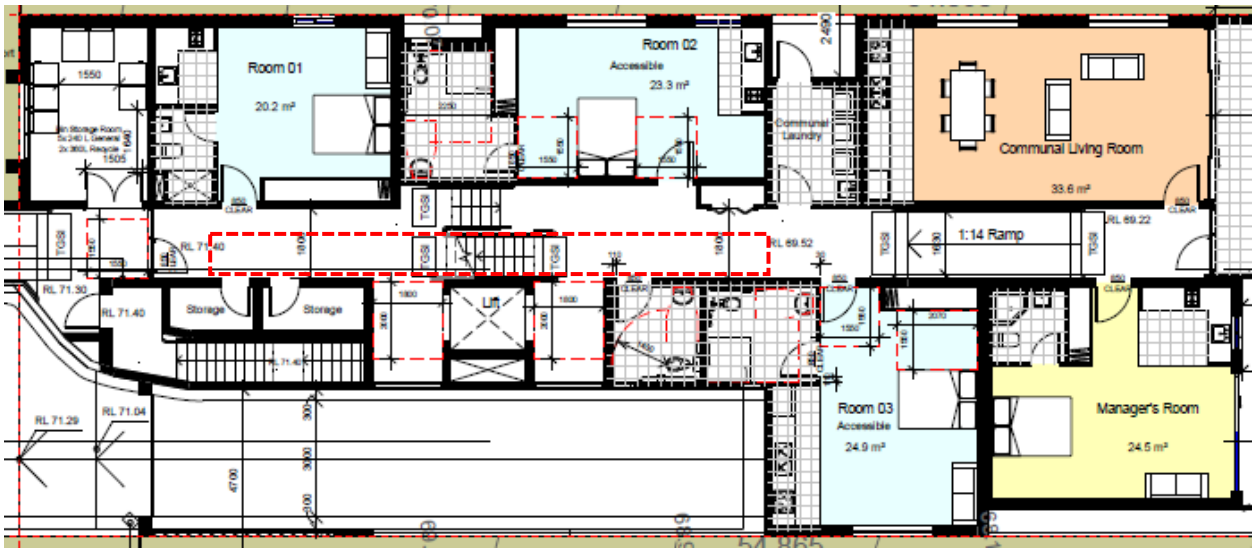

Figure 3: Location of hypothetical ramp

Even if a ramp was to hypothetically be installed in lieu of the stairs, as shown in figure 3 above, use of a ramp would result in non-complying circulation spaces at doorways and actual blockage of access into the communal living room, managers room, communal laundry, common area toilet and render access to the first floor via the lift impossible. This results in a non-compliance with clauses D3.1 as common areas are no longer accessible and D3.2 as the lift from the basement carpark can no longer be used to access the ground floor.

As the width of the corridor is only 1.8 m at parts, installing a ramp within this corridor will result in non-compliances with BCA clause D1.6 regarding the fire safety in relation to paths of travel to exits, as the passageway used for egress at Room 01 and Room 2 is less than 1 m.

Installing a ramp within the building corridor will also result in inadequate circulation space for the doorways outside Room 01 and Room 02 as required under AS1428.1, which is of particular significance for Room 02 as this is an accessible sole occupancy unit. Additionally, a ramp will also potentially result in inadequate circulation space at the entrance doorway as well as the laundry. Inadequate circulation space is a non-compliance under BCA clause D3.3.

Replacing the stairs with a ramp will result in non-compliances regarding access for people with disabilities at BCA clauses D3.1, D3.2 and D3.3, as well as non-compliances with D1.6 regarding fire safety egress. It is recommended to consider that the non-compliances that arise, in particular for people with disabilities, substantially outweigh any minor benefit to people with a disability that would be obtained from having a secondary ramp in the event the lifts are not operational.

5. Conclusion

It is recommended to consider that the replacement of the staircase with a ramp is not only unnecessary under Part D3 of the BCA, but impractical for a building of this size if the ramp is to

have an AS1428.1-2009 compliant gradient. Additionally, this would result in several non-compliances under the BCA regarding access for people with a disability as well as the fire safety. The current provision of lift is adequately addressing the access requirements of the BCA.

Kind Regards

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