

24 March 2016

Architectural Projects Pty Ltd
The Foundry,
Suite 1, 181 Lawson Street,
DARLINGTON NSW 2008

Attn: Jennifer Hill

Dear Jennifer,

**Re: 48a Queenscliff Avenue, Queenscliff
Effective Height Discussion**

Reference is made to our recent discussions and engagement by the Owners Corporation to provide advice on the issue of the Effective Height of the existing building taking into consideration the current BCA2015 definition as well as the proposed new definition coming into force on 1st May 2016.

The current Effective Height Definition under BCA2015 (which has not changed since circa 1993) states as follows:

Effective height means the height to the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units) from the floor of the lowest storey providing direct egress to a road or open space.

In assessing the existing building against this definition as has been assessed in the past on this project, the following comments were made in BCA Audit and Upgrade Report dated 1 September 2009 which was at the time of the Warringah Council's Fire Order formally accepted:

Based on measurements made on-site, the floor to floor height is estimated at being (on average) 2.7m. A strict or literal interpretation of the definition of effective height (BCA Clause A1.1) would designate the Basement level as the 'lowest storey providing direct egress to a road or open space', and accordingly the building would have an effective height of 27m.

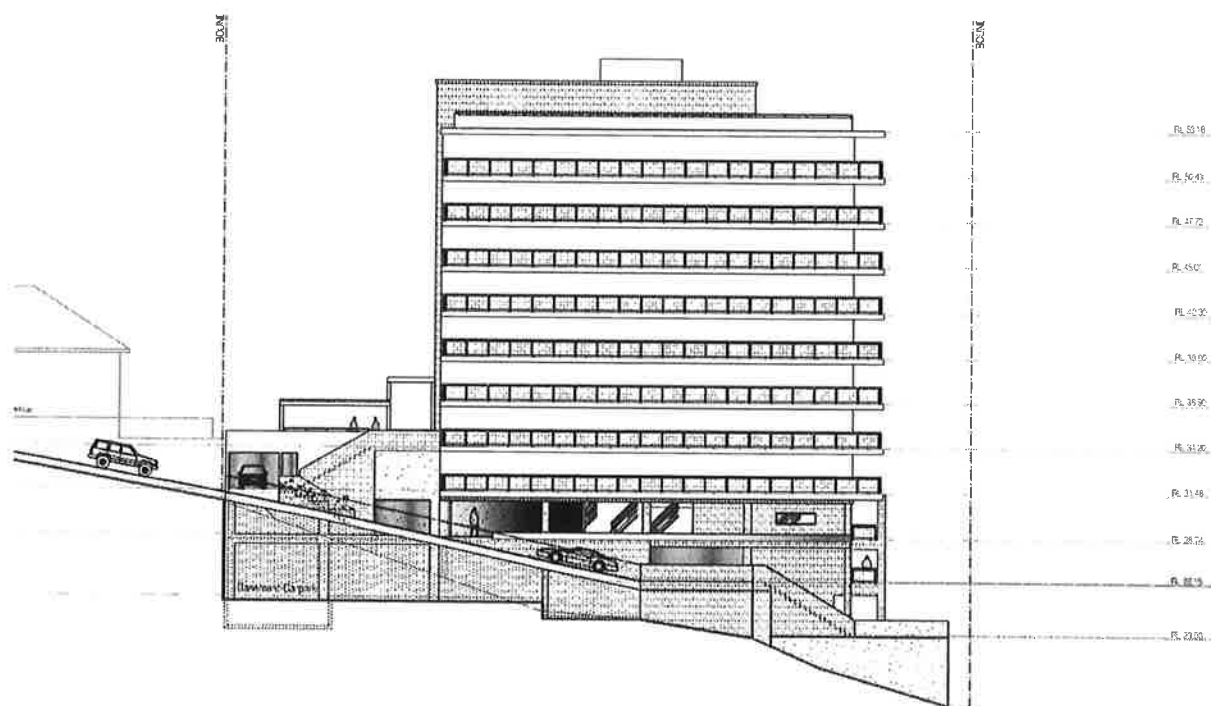
However, there is no direct access to or egress from the Basement Level from/to within the building, such being available only via vehicle and either the non-pedestrian graded vehicular ramp way on the western side, or via an external stairway on the eastern side, the latter normally being accessed from

the open carpark portion of the Ground Floor, although it is noted that at the moment this has been partitioned off.

Furthermore, the very nature of this site and the absence of either a driveway or any suitable flat hardstand area within but not closer than 10m from the building, that could support a Fire Brigade appliance, means that Fire Brigade access to this building using ladder based appliances etc. is simply not feasible. Access by the Brigade can therefore only be achieved by foot down the driveway and in via the fire isolated stairway at the northern or property entry end of the building i.e. at Ground Floor level, in which case the effective height from this level is (approximately) 24.3m and therefore less than 25m.

Even if vehicular access could be achieved down to the northern end of the building, access by the Brigade into the main part of the tower would be separate from that to the Basement Level and achieved from a point on or about the Ground Floor level.

Accordingly, it is considered that a basis exists for this existing building to be assessed as similar or equal to a building with an effective height less than 25m.



At the time – correspondence was issued by NBSW Fire & Rescue dated 19 October 2010 that stated:

The NSWFB has no objection to the Fire Safety Upgrade Strategy detailed in the abovementioned Fire Safety Report being implemented provided the following comments are addressed:

1. In this instance the NSWFB does not object to the building being described as having an effective height of less than 25 metres as discussed in Part 2 of the Fire Safety Upgrade Report.

As such historically this particular building has been treated as equating to a Building with an Effective Height of less than 25m

However, since that time – whilst the Effective Height definition has not changed in the BCA - there have been a number of recent Court Cases and Fire incidents that have altered the interpretation of the Effective Height Definition.

In a recent court case "*The Owners – Strata Plan No 69312 v Rockdale City Council*", the judgment determined that the lowest level providing egress does not necessarily have to simply result in required pedestrian egress and could also involve vehicular egress and the like. Thus irrespective of where the egress to the street occurs – if such egress required or non-required is available at a lower level and then occupants have to walk up through a site via non-compliant gradients – the lowest level is still considered.

Due to the judgement of this particular court case as well as direction and opinions given by other Authorities, the interpretation currently by building practitioners is taken extremely conservatively and is based on the lowest level in a building where any egress to open space is available – not just required pedestrian egress.

To provide some clarity on this issue – the new definition in the BCA2016 version due to be implemented on 1st May 2016 states as follows:

Effective height

Is a measure of the height of a building. It is used to determine when various provisions are required to be implemented and when certain concessions cannot apply.

Effective height is the vertical distance between:

- *the floor level of the topmost storey in the building (excluding a storey which only contains equipment as listed); and*
- *the floor level of the lowest storey which is included in a determination of rise in storeys (see*

C1.2).

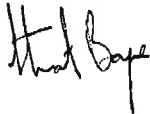
Thus based on the BCA2016 definition – the effective height of the subject building would be measured from RL23.0 to RL 53.18 which results in an effective height of 30.18.

Hoping the above affords some clarity to the Effective Height definition when applied to this particular building.

There are separate issues that also need to be taken into consideration when alterations and additions are carried out to existing buildings under Clauses 93 and 94 of the EP & A Regulations as well as under Clause 143 of the EP & A Regulations 2000 in so far as existing buildings do not necessarily have to be upgraded to meet the current BCA standards provided the level of occupant fire and life safety is not reduced to that which exists onsite already. This assessment under Clause 143 of the EP & A Regulations 2000 is made by the Accredited Certifying Authority engaged to issue the Construction Certificate for the proposed alterations and additions.

If you require any further information or explanation of the above, please do not hesitate to contact the undersigned

Yours faithfully,



Stuart Boyce
Director
BCA Logic Pty Ltd

E. ANNEXURE E

Revised BASIX Certification