

21 March 2022

John Obeid
RSL Lifecare
Narrabeen, NSW

Dear John,

Re: Bushfire Hazard Letter for Elevators at RSL Lifecare 39-49 Cutler Circuit, Narrabeen

This letter details provides the Bushfire Attack Levels (BALs) for the two Elevators at RSL Lifecare 39-49 Cutler Circuit, Narrabeen. This letter confirms the subject lot is mapped Bushfire Prone. Kate Harris (BPAD L3) has undertaken a site assessment. This assessment is provided in accordance with:

- *Planning for Bushfire Protection 2019;*
- *AS3959 2018 Construction of buildings in bushfire prone areas.*

The Elevators are located on Cutler Hall Way, within the existing buildings at RSL Lifecare.

Attachment 1 shows the managed and unmanaged land within 140 m of the Elevators. The vegetation formations are described below and summarised in Table 1 and Table 2 for the western Elevator and the eastern Elevator respectively.

The predominate vegetation on all elevations is classified 'Forest' in accordance with PBP. On the northern elevation, there is vegetation also classified as 'Grassland' in accordance with PBP.

The vegetation on the west is considered 15-20 degrees downslope and on the north 10-15 degrees downslope.

Vegetation Assessment

Table 1 Predominate Vegetation Classification for Western Elevator

	Vegetation Formation	Effective Slope	Distance from façade to hazard
North	Grassland Forest	15-20° Downslope	54 m 60 m
South	Forest	10-15° Downslope	99 m
East	Forest	15-20° Downslope	>100 m
West	Forest	21.8° Downslope	>100 m

Table 2 Predominate Vegetation Classification for Eastern Elevator

	Vegetation Formation	Effective Slope	Distance from façade to hazard
North	Forest	15-20° Downslope	80 m
South	Forest	10-15° Downslope	>100 m
East	Forest	15-20° Downslope	61 m
West	Forest	21.8° Downslope	>100 m

Asset Protection Zones

Table A1.12.5 *Planning for Bush Fire Protection 2019* has been used to determine the BAL, flame length and the width of the required APZ for the Elevators using the vegetation and slope data identified.

This location is within the 100 Fire Danger Index (FDI). Tables 3 and 4 show the BAL determination for the western Elevator and the eastern Elevator respectively.

The existing APZ should be maintained for perpetuity.

Table 3 APZ and BAL Determination for Western Elevator

	NORTH	SOUTH	EAST	WEST
Vegetation	Forest	Forest	Forest	Forest
Gradient	15-20° Downslope	10-15° Downslope	15-20° Downslope	21.8° Downslope
Distance between façade and hazard	60 m	99 m	>100 m	>100 m
BAL 29 required APZ	56 -< 73 m			
BAL 12.5 required APZ		77 -< 100		
BAL Rating	BAL 29	BAL 29	BAL 29	BAL 29

Table 4 APZ and BAL Determination for Western Elevator

	NORTH	SOUTH	EAST	WEST
Vegetation	Forest	Forest	Forest	Forest
Gradient	15-20° Downslope	10-15° Downslope	15-20° Downslope	21.8° Downslope
Distance between façade and hazard	80 m	>100 m	61 m	>100 m
BAL 29 required APZ			56 -< 73 m	
BAL 19 required APZ	73 -< 92 m			
BAL Rating	BAL 29	BAL 29	BAL 29	BAL 29

Construction Standards

The Australian Standard AS3959 – 2018 and NASH Standard Steel Framed Construction in Bushfire Areas (2014) are the enabling standards that address the performance requirements of both parts 2.3.4 and Part GF5.1 of the Building Code of Australia for the Construction of Class 1, 2 and Class 3 buildings within a designated Bushfire Prone Area.

The following was determined for this site:

Relevant fire danger index *FDI 100*

Flame temperature *1090 K*

The Elevators meet the APZ for **BAL 29** as specified by AS3959 - 2018 Construction for Buildings in Bushfire Prone Areas, NASH Standard Steel Framed Construction in Bushfire Areas (2014) and PBP 2019.

The following variations to AS 3959 apply in NSW for the purposes of NSW G5.2(a)(i) of Volume One and NSW 3.10.5.0(c)(i) of Volume Two of the NCC.

- Clause 3.10 of AS 3959 is deleted and any sarking used for BAL-12.5, BAL-19, BAL-29 or BAL-40 shall:
 - o be non-combustible; or
 - o complies with AS/NZS 4200.1,
- Be installed on the outside of the frame and have a flammability index of not more than 5 as determined by AS 1530.2; and clause 5.2 and 6.2 of AS 3959 is replaced by clause 7.2 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL.
- Clause 5.7 and 6.7 of AS 3959 is replaced by clause 7.7 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL.

This letter is provided for BAL only. The BAL ratings applicable are:

- Western Elevator: **BAL 29**
- Eastern Elevator: **BAL 29**

No other bushfire protection measures have been assessed.

Kind Regards



Katherine Harris
BPAD-L3-26927
GRAD DIP BUSH FIRE PROTECTION, UWS
GRAD DIP ENVIRO MANG HERTS, UK,
GRAD DIP NAT RES UNE,
BSC APP SC, AGRICULTURE HAC

REFERENCES

Australia, G. (2019). *ELVIS - Elevation - Foundation Spatial Data*. Elevation.fsdf.org.au. Available at: <http://elevation.fsdf.org.au/>

Keith, D. (2004). "Ocean Shores to Desert Dunes" Department of Environment and Conservation, Sydney

National Association of Steel-Framed Housing (2014) *NASH Standard Steel Framed Construction in Bushfire Areas*

NSW Department of Environment, Climate Change and Water (2010) Southeast NSW Native Vegetation Classification and Mapping - SCIVI VIS_ID 2230 20030101. Bioregional Assessment Source Dataset.

<http://data.bioregionalassessments.gov.au/dataset/0f1aeb33-1b49-4839-88fa-8b635cf9d3ab>.

NSW Department of Planning and Environment. Planning Portal. Accessed at: <https://www.planningportal.nsw.gov.au/>

NSW Office of Environment and Heritage (2020). Biodiversity Value Map. Accessed at: <https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BVMap>

NSW Rural Fire Service (2019). *Planning for Bushfire Protection. A Guide for Councils, Planners, Fire Authorities and Developers*. November 2019

Standards Australia (2018). *AS3959, Construction of buildings in bushfire-prone areas*.

Tozer MG, Turner K, Keith DA, Tindall D, Pennay C, Simpson C, MacKenzie B, Beukers P, Cox S (2010). *Native Vegetation of southeast NSW: a revised classification and map for the coast and eastern tablelands*. *Cunninghamia* 11:359-406.

ATTACHMENT 1: VEGETATION WITHIN 140 M OF ELEVATORS

