

Can Palliside weatherboards be used on Multi-Unit Developments?

We are often asked if Palliside is suitable for use on apartments. The answer is a 'yes', though it is important to acknowledge that there are some limitations.

In recent years we have seen the New Zealand Building Code becoming more performance based; protection from fire being no exception. NZBC Clauses C1-C6 outline the functional and performance requirements when designing and constructing buildings for fire.

Multi-unit dwellings (with no more than one unit above another, and each unit having an escape route independent of all other units) are referred to under risk group SH and are covered in NZBC Acceptable Solution C/AS1.

Typically this type of design will require at least some external walls to be constructed using fire resistant rated (FRR) construction, e.g. inter-tenancy boundaries.

The exterior surface finish requirements of NZBC Acceptable Solution C/AS1 requires the external wall cladding, when it is less than 1.0 m from the relevant boundary, to have a peak heat release rate of less than 100 kW/m² and a total heat release of less than 25 MJ/m². Where the distance to the relevant boundary is greater than or equal to 1.0 m, the building height is greater than 10 m, and the building is unsprinklered, the external wall cladding shall have a peak heat release rate of less than 150 kW/m² and a total heat release of less than 50 MJ/m². Note there is no requirement where the distance to the relevant boundary is greater than or equal to 1.0 m, the building height is greater than 10 m, and the building is sprinklered to NZS 4515.

Palliside weatherboards have been subjected to cone calorimeter testing in accordance with the New Zealand Building Code. The weatherboards achieved a peak heat release rate of 141 kW/m² and a total heat release of 48.6 MJ/m².

Adapted from C/AS1. Table 5.1						
	Distance to relevant boundary (angle between wall and boundary is less than 90°)					
	Palliside Result	Requirement for wall < 1.0m to boundary	Can Palliside be used?	Wall ≥ 1.0m to boundary and building height < 10m	Requirement for wall ≥ 1.0 m to boundary and building height > 10m	Can Palliside be used?
Peak Heat Release rate (kW/m ²)	141	100	No	No requirement	150	Yes
Total Heat Released (MJ/m ²)	48.6	25	No	No requirement	50	Yes
Applies to buildings designed in accordance with Risk Group SH						

Therefore, Palliside can be used on all external walls, providing the wall itself is greater than 1.0 m from a relevant boundary.

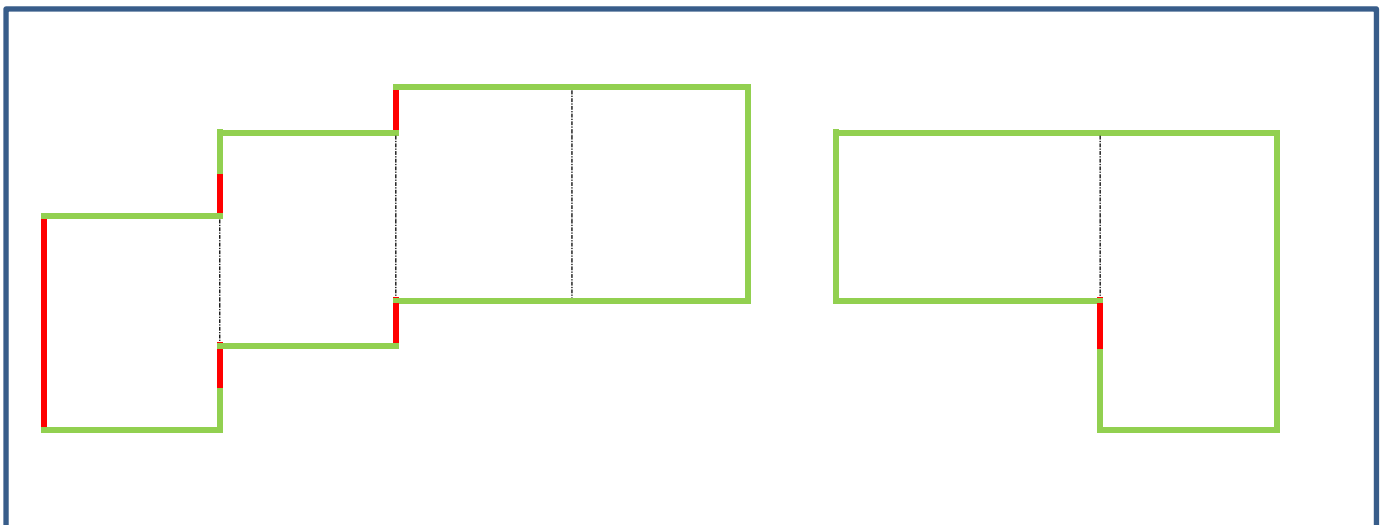
Palliside may also be finished up to a FRR wall providing this is done in a direction which is perpendicular (90 degrees) or greater to the FRR wall it adjoins or it may pass across the front of (such as across the front of an inter-tenancy wall).

Other NZBC risk groups have different requirements around fire protection which may restrict or prevent the use of Palliside unless presented as part of an alternative solution.




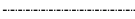
In some cases people get confused or misinterpret the requirements around fire ratings, particularly for low-density, adjoining household units (Risk Group SH) that follow NZBC C/AS1 design.

In a recent case, a BCA refused to issue a building consent because they did not take into consideration the requirements of NZBC C/AS1 Table 5.1, which would have allowed Palliside to be used on the majority of the elevations of the 26 unit development without restriction.

The following is a simple footprint of a SH design development of apartments. It shows where Palliside can and cannot be used.



Key:

	≥1.0m from and/or perpendicular to relevant boundary. Palliside can be used.
	<1.0m from and/or parallel to the boundary. Palliside cannot be used.
	Property boundary
	Inter-tenancy boundary

Should you have any questions please contact Dynex Extrusions Limited on 0800 439 639