

## **BSP01 Replacing Trough Section Roofs at a 1° Pitch**

---

4 March 2024

Version 2

For many years, trough section roofs could be laid at 1° pitch throughout Australasia. This limit still applies in Australia and the Pacific Islands. New Zealand elected to change the minimum recommended pitch to 3° because at 1° fall, deflection of the roof and support structure, and settlement of the building, sometimes caused ponding, resulting in reduced roof life.

### **Re-Roofing without building consent**

Roof replacement with a “like with like” does not require a building consent (Exemptions Guidance for Schedule 1 of the Building Act 2004, Fifth edition August 2020). An existing flat roof that has met the performance requirements of E2—External Moisture, and B2—Durability, can be replaced with a comparable product, without re-pitching the roof.

### **Roofing support structure**

All necessary purlin replacements must follow NZS 3604 or the Loadings Code. When keeping existing materials, it is prudent to consider the ongoing performance of these components. Any retained purlins, netting, and underlay should have an assessed residual life of up to 50 years. For this reason, it is recommended that underlays be replaced during any re-roofing work. One of the weakest points of old roofs is the purlin/rafter connection, which often comprised skew nailed black steel nails. It is recommended that existing purlin rafter connections be augmented by fitting at least one purlin screw at each connection..

### **Roof Drainage**

To ensure a reasonable life from the new roof, purlins should be packed or replaced if necessary to get a true pitch and to eliminate any ponding. Ensure penetrations do not block the flow of water and prevent free draining; consider cricket flashings rather than flat back trays for penetrations on flat pitches. The new roof should be inspected at least annually to remove any build-up of debris and carry out maintenance if required.

---

### **Updates, Disclaimer, Copyright and Scope**

This bulletin was based on the best available information at time of publication. Any updates are available at <https://www.metalroofing.org.nz/bulletins>.

This bulletin is subject to the Disclaimer, Copyright and Scope of the NZ Metal Roof and Wall Cladding Code of Practice, available at <https://www.metalroofing.org.nz/copfull/introduction>.

## Durability

It should be noted that, due to the danger of future ponding, NZ material suppliers do not offer warranties for profiles used at less than their recommended minimum pitch. However, following the above guidelines, the new roof can be expected to meet the structural and weathertightness requirements of the NZ Building Code. It is also reasonable to suppose, when using modern pre-painted roofing systems, that the life of the replacement roof will be comparable to that of the previous roof.

Yours Sincerely,

Rod Newbold  
Technical Consultant to NZ Metal Roofing Manufacturers Association  
Editor Metal Roofing and Wall Cladding Code of Practice