

Timber Bridge

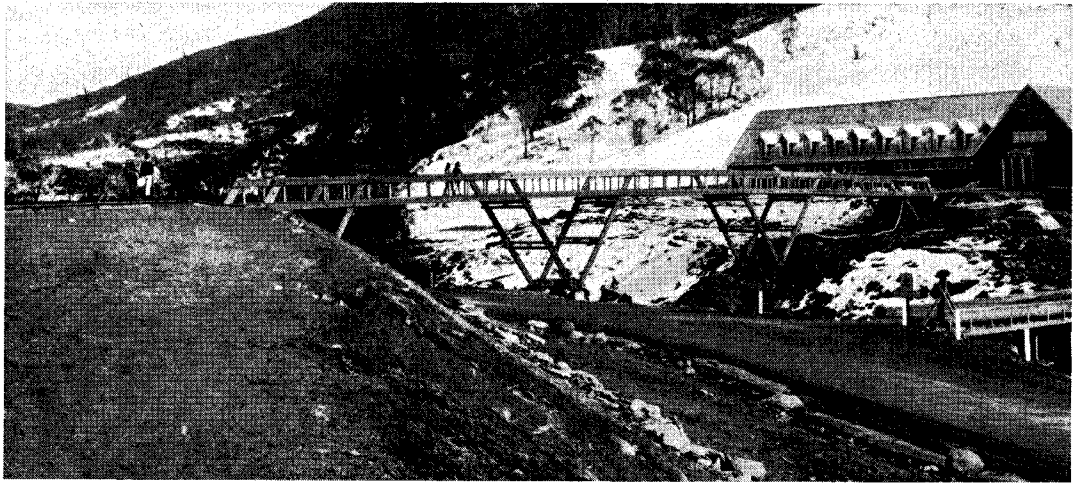
Thredbo, NSW

design: the firm Clarke Gazzard and Yeomans
engineer: Miller Milston and Ferris
builder: Civil & Civic Pty Ltd

The ski-ing village of Thredbo in the Australian Alps is situated on one side of a valley and separated from the chair lifts up the mountain on the other side by the Crackenback River and the main entrance road. During the process of replanning parts of the village, the planning consultants, Clarke Gazzard Yeomans, suggested a broad terrace

in front of the new hotel under construction, to face the snow-covered slopes and eventually to provide glazed outdoor cafes, skating rinks, etc., as in Europe. This terrace was on approximately the same level as the bottom station of the chair lift on the other side of the valley, so a pedestrian bridge spanning 180ft was proposed





photographs: Geoffrey Lee

connecting the two and going over the road and the river below. Roads within the village converge at the entrance to the hotel and access to the terrace and bridge is through the broad hotel lobby, lined with shops, bars, and restaurants. Seven alternative designs were prepared by the architects, Clarke Gizzard Yeomans, in close collaboration with the engineers, Miller Milston and Ferris, ranging from a timber bridge through various steel and precast concrete solutions to a single span post-tensioned prestressed concrete bridge. The architects recommended

to the clients, Civil & Civic Pty. Ltd., the adoption of the timber bridge on the grounds of cost, speed and simplicity of erection, and the feeling that it was generally more sympathetic to the character of the area.

This bridge consists essentially of a continuous beam over seven spans supported by raking columns which are collected at their base so that only four main footings are required. The top and bottom timber rails of the balustrade act as the main supporting beams and share the weight of the timber deck. The timber supports were raked so

as to obtain the dual benefit of reducing the span for the bridge beams and minimising the number of ground supports. The location and number of such supports were critically limited by the river and road which the bridge had to cross. By raking the supports, it was also possible to obtain the benefits of a rigid frame in resisting horizontal loads on the bridge without requiring rigid connections between columns and beams which are difficult to obtain in timber structures.

