



Project/Client	Queenstown Aquatic Centre
Location	Queenstown, NZ
Architect	ASC Architects
Main Contractor	Naylor Love
Panel Contractor	Wayman Roofing Services
Panel(s)/Colour(s)	Roof: KS1000RW (Trapezoidal) <i>Hamlet</i> KS1000AWP (Architectural) <i>Hamlet</i>

Case Study



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Queenstown Aquatic Centre, Queenstown

Award Winning Alpine Aquatic Centre Scores Industry Accolades Kingspan's Aquasafe Insulated Panel Technology Selected for Roof and Wall Design

Catering to the extreme weather conditions of the snow country in southern New Zealand, ASC Architects of Auckland and LHT Design, structural and pool engineers from Hastings, chose Kingspan insulated panels for the roof and wall cladding of the \$16m Aquatic Centre in Queenstown, the country's 'adventure' capital. The building was designed to enhance the sporting centre of the region, providing a memorable aquatic experience for both residents and visitors to the town. It replaced the town's antiquated outdoor lap pool with an iconic landmark building reflecting the dramatic lines of Queenstown's magnificent alpine landscape surrounds. Located adjacent to the Queenstown Airport in the growth area of Frankton, the complex comprises a public aquatic centre for both competition and leisure (including a 25m lap pool, a leisure pool with lazy river, a toddlers pool, learners pool, a spa pool and twin hydroslides) and a Health and Fitness centre. The Queenstown Aquatic Centre was the winner of a 2008 New Zealand Institute of Architects Southern Branch design award in the Public Architecture category and a Colour Award.

ASC Director Neil Cotton: *'The inspiration for the concept came from the rugged mountain landscape and in particular the Remarkables Range to the south-east, which dominates the site. The intentional strong forms of the building are a series of white roofed wedges, analogous to snow on the mountains, which 'nest' into one another, and 'fan' around the curve of the main cricket oval. The wedges vary in size and height to suit the internal function, whilst the change in orientation improves the views of Coronet Peak to the north and the Remarkables. To further emphasize the tectonic forces that formed the landscape, each wedge also leans to the west creating dramatic building forms. The muted external colour palette is also taken from the landscape to ensure the building is at one with its context. Internally this theme is continued so that pools, spaces, and even smaller elements such as the reception counter and lighting layouts, are jagged and deformed, as if by the forces of nature.'*

And while aesthetic impact is the first of several distinctive advantages of Kingspan panel technology, it is first choice by architects for its high energy 'green' thermal performance credentials. Neil Cotton comments: *'Kingspan Insulated Panels offered high levels of insulation and in this instance acted as an effective vapour barrier plus (they) minimized the fire hazard.'*

Kingspan insulated panel systems comprise the external finish, bonded to a rigid insulation core with pre-finished internal liner offering an all-in-one package. The high performance Polyisocyanurate (PIR) core offers up to twice the thermal performance of most conventional insulated materials. Combined with the quality engineering of the panel joint, which allows minimum air leakage, the panels create a high performance envelope that meets the requirements for maintaining a stable thermal environment in the interior spaces around the pool.

Kingspan KS1000 RW roof panels which have trapezoidal exterior profile, utilize an Aquasafe coating on the internal liner. This Aquasafe coating comprises a 200 micron plastisol layer which creates a highly durable finish. It provides an effective seal for the steel and prevents corrosive attack of the panel resulting from the high humidity and high chlorine environment of the pool. It is therefore an ideal solution for pool environment architecture.

The roof panels are complimented by Kingspan's Architectural wall panels (KS1000AWP) which define the clean minimalist lines of the pool surrounds at ground level. The unique spanning capabilities of the panels reduce the secondary steel requirements by up to half (purlins in the roof and sheeting rails for the walls) generating considerable cost savings in materials and labour.

Helen Flood Kingspan Marketing Manger: *"Kingspan are market leaders in insulated panel technology and the company is not content to simply produce premium performance panel systems; we also look to achieve that extra edge in innovation and design for our products. This particularly is true for Kingspan panels as not only can they be installed up to 50% faster than site assembled, built up alternatives, but the system also has lower lifetime costs because it requires less maintenance."*

Commenting on why the Kingspan insulated panel system was attractive to architects, Neil Cotton says *'Kingspan is a sophisticated product, that's proven technically around the world. In addition, with good technical advice during the design process it allows architects a lot of design freedom as it has many colours and textures to suit various design approaches.'*

Mr. Cotton: *"In conjunction with the insulated precast concrete base we were able to achieve the strong design vision of 'a building distorted by the forces of nature' we had presented to our client, the Queenstown Lakes District Council."*

Since opening to the public in June 2008, early indications are the Council and public are very pleased and proud of the built result and happy to at last be able to enjoy this long awaited aquatic facility.



Kingspan reserve the right to amend product specifications without prior notice. The information, technical details and fixings advice are given in good faith but are intended as a guide only. For further information please contact Kingspan Insulated Panels

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