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**Bunjil Place,
Narre Warren, Victoria**





The Project

The KingZip Linea system from Kingspan Insulated Panels has been used to create an intricate roof façade for a cultural precinct project in the City of Casey, Victoria. The \$125 million multipurpose arts, civic and community facility in the outer Melbourne suburb of Narre Warren holds a library, 800-seat theatre, gathering and meeting spaces, council offices, an art gallery, a flexible event space and an outdoor plaza.

Bunjil Place, as the building was officially called, opened on 28 October 2017 following two years in development.

Inspiration for the building's name, Bunjil Place, was derived from stories of the area's traditional landowners, the Boon Wurrung and Wurundjeri people. The building's namesake, Bunjil, is an eagle figure that appears in Boon Wurrung creation myth, which is expressed in the arrangement of the building's two wings and slender roof where the KingZip roofing system was specified.

Sector	Public Buildings
Location	City of Casey, Narre Warren, Victoria
Architect	FJMT
Installer	Barden-Steeldeck Industries Pty Ltd
Product	KingZip Linea Architectural Roofing System

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John Perry, associate partner, FJMT.

Aesthetics



“Superficially it’s a very complex piece of geometry,” said John Perry an associate partner at FJMT, the multi-disciplinary architecture and design firm behind Bunjil Place. “It always concerns people when they start off with double curvature, but it’s a process of getting in their minds around how simple it really is. For something that is as complex as it appears, KingZip achieves it so effortlessly.”

John Perry is a structural engineer with 20 years’ experience specialising as a façade engineer. His focus at FJMT is on the ‘buildability’ of complex designs. The Bunjil Place façade consists of two intersecting circles in elevation, meaning that to match the design, the materials specified needed to be able to achieve double curvature, or three dimensional geometry.

“The roof design looks complicated, but is actually made up of a small number of very simple shapes,” he explains. “What the Kingspan KingZip product offers is that it can form conical and curved surfaces very readily. The sheet itself, which is essentially a U-shaped trough, can be tapered. Because it is relatively thin, you can ‘spring’ it, so you can get the curvature in the other direction.

“It’s one of the most flexible systems available in a roofing market for delivering single and double curvature. As a roof covering it’s very adaptable and I think Bunjil Place is a great example of its flexibility.”

According to Michael Shacklock, General Manager of Barden-Steeldeck Industries, one of Victoria’s leading roofing companies, “KingZip was the only available product we could confidently use to satisfy the design.

“Due to the high visibility of the project, it was important that the roofing and cladding was installed to a good visual effect. We worked closely with Kingspan and the KingZip team to ensure the design intent could be guaranteed.”



The Kingspan Insulated Panels team, led by Niall Horgan, general manager KingZip and BENCHMARK, consulted frequently with the various organisations involved in the project, from design conception in 2014 through to completion in late 2017.

"We worked with FJMT on the design to ensure we could deliver something that would work in practice," explained Horgan. "KingZip Linea can achieve building shapes and geometries that no other products in the market can, however on this project there were a lot of technicalities to work through – such as the many junctions and sheet profile types. Ultimately we issued a set of construction 'shop' drawings for approval by the client.

"The fact that we were involved in the project from the very beginning enabled us to overcome any potential design challenges early on. The installation itself went really smoothly."

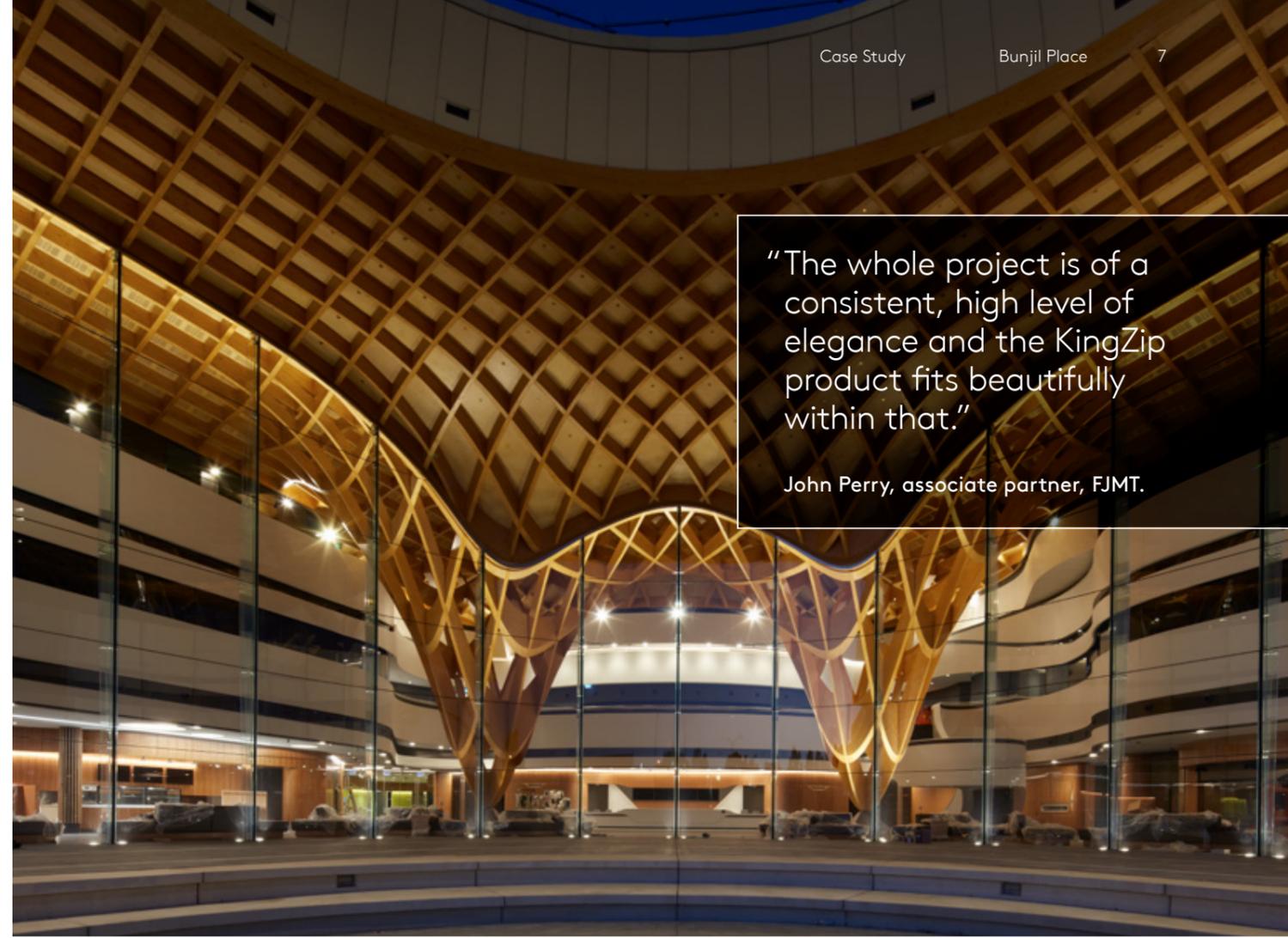
KingZip is made to design on site using Kingspan Insulated Panels 'roll-former'. Housed in a 12 metre modified shipping container, the roll-former takes coil of material and manufactures parallel and tapered sheets to match the design. A secondary process is used to form curved sheets. Once prepared, each sheet can then be put straight into position.

FJMT had used the KingZip system on previous Australian projects and knew that it was one of the only options for its design for Bunjil Place. Kingspan also made use of its full design service which includes design and calculations, shop drawings, installation training and onsite training

"Not all building processes are easy but this one was," said John Perry from FJMT. "We went through a shop drawing process with Kingspan and there were almost no mark-ups because they are comfortable with how the system works.

"The strength of Kingspan Insulated Panels and all their products is that their technical documentation and technical support is really good at explaining what their systems can and can't do. They have a range of different products in their repertoire that you can almost always find something that is close enough to what you need.

"The whole project is of a consistent, high level of elegance and the KingZip product fits beautifully within that. What I like about it is that in every part of the building, including the roof, it's well detailed, well thought through, and well-constructed," stated Perry. "The standout for me is that it looks as we always expected it to."



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