

Case Study

Acoustic Insulation for Perth's latest towers at Iconic Elizabeth Quay

August 2024



Project name

Elizabeth Quay West

Products used

Knauf Insulation Acoustic batts

Building type

Hotel and Serviced & Residential Apartments

Application

Internal partition & inter-tenancy walls and shaft walls

Architect

Kerry Hill Architects

Construction Company

D&C Built Pty Ltd

Distributor

Perth Plasterboard Centre

Build on us.



D&C Built commenced their latest construction project comprising of two towers in Perth's iconic waterfront, Elizabeth Quay, situated above a shared podium and plaza, and will deliver a diverse mix of land uses. The two buildings have a combined total area of 70,000m².

The tower closest to the river is a 58-storey residential complex comprising of 250 high quality apartments. These apartments will enjoy views across Perth up to Rottnest Island with the tower also incorporating Australia's only high-rise public art gallery and viewing deck. ▶

The adjoining building will feature a hotel and serviced apartments with a total of 190 short stay accommodation. This tower will also encompass contemporary commercial space with retail outlets and wellness centre facilities. ▼



What were the insulation requirements?

Insulation in high-rise buildings is crucial for energy efficiency, occupant comfort, and acoustic performance. With the scale and scope of the project, it was critical for the insulation to pass stringent testing within the BGC wall systems and provide excellent thermal and acoustic performance along with non-combustible classification. Acoustic insulation was necessary to ensure the residents experience the highest comfort levels and no compromise to privacy and health.

What Knauf Insulation products were specified?

Knauf Insulation products were involved in rigorous testing within BGC wall systems, achieving a non-combustible classification in strict accordance with AS 1530.1.

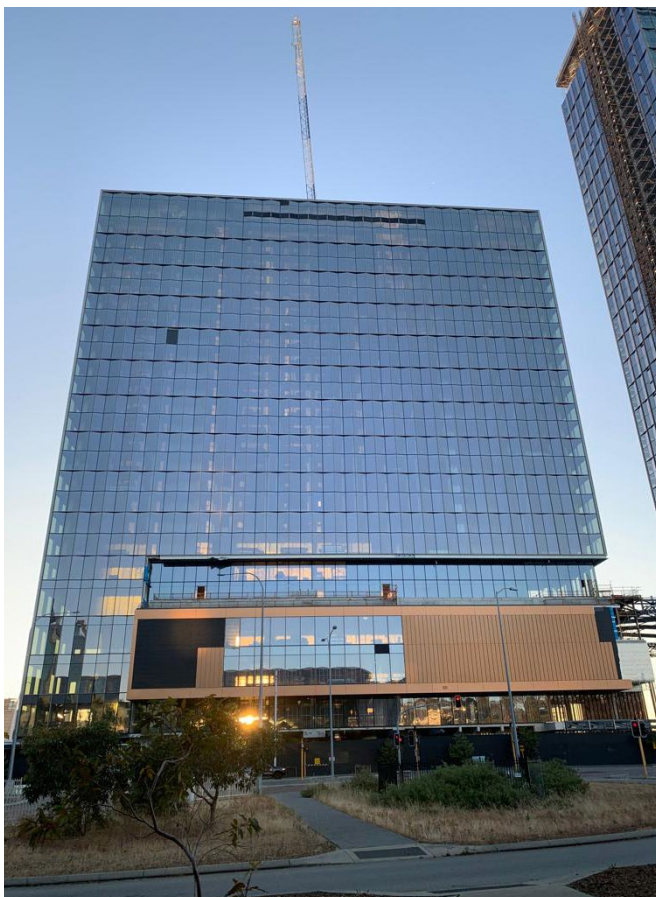
Knauf Insulation 14kg/m³ Acoustic batts were chosen for walls between residential and short-term apartments to create an airtight inter-tenancy barrier which would improve the thermal and acoustic envelope.

Knauf Insulation 24kg/m³ Acoustic batts were used for GTEK™ Protect Shaftwall, achieving the required R_w* 50, complying with the National Construction Code of Australia.

What assistance did Knauf Insulation provide throughout the project?

Knauf Insulation was able to provide independent certification that established confidence in the insulation materials being specified, such as BRANZ and Codemark, which simplified the compliance process. Further certification such as Declare and Eurofins Gold were able to demonstrate the products' safety during installation.

Knauf Insulation's distributor, Perth Plasterboard, successfully secured the tender as they have a reputation of success on high profile buildings, with a competitive insulation offer and guaranteed product turnaround times to meet strict project deadlines.



(*R_w is Weighted sound Reduction)

Why was Knauf Insulation the preferred choice over competitor solutions?

Knauf Insulation's range of glasswool was chosen over foam boards because of its non-combustible status as well as the high thermal and acoustic performance that it delivered in the BGC systems.

Knauf Insulation was chosen over other mineral wool products due to its availability in the region as well as compression packaging for ease of storage and on-site handling.

What new products or technologies were used to achieve a sustainable building?

Knauf Insulation is the only glasswool in Australia to have Global GreenTag GreenRate Level A Certification which helped contribute to the 5-star Green Star and 5-star NABERS ratings of both buildings. Knauf Insulation is also the only glasswool in Australia to have Declare certification, classifying the products as 'Red List Free'. This provides installers and ultimately occupants with the peace of mind that no harmful chemicals are in the building.

What was unique or special about this project?

- › Perth's largest commercial development in recent years
- › The Two tower project is valued at \$1.1 billion, with a construction cost of \$367 million
- › The taller tower will stand 58 storeys while the second will be 21 storeys
- › Australia's only high-rise public art museum and viewing area, with views across Perth to Rottnest Island set to become one of the city's most important tourist destinations
- › High performance acoustic insulation tested in BGC wall systems
- › Additional insulation used in bathrooms and around pipes to reduce noise



About Knauf Insulation Acoustic Range

The Knauf Insulation Acoustic range includes a selection of densities to provide builders, designers, and installers the opportunity to choose the best acoustic performance for their project.

The products are available in the form of pre-cut batts and as rolls to accommodate every user's requirement. Knauf Insulation Acoustic products will improve the acoustic performance of the building in which they have been installed by absorbing the transfer of unwanted sound from external sources and between adjoining rooms.

Acoustic Range Benefits:

- > Sound absorbing
- > Non-combustible
- > No added formaldehyde
- > Soft to handle and install
- > 50-year warranty
- > Compression packed – more product per pack
- > Odourless



ECOSE® Technology

A unique bio-based binder which contains no added formaldehyde or phenol. It is made from natural raw materials that are rapidly renewable, is 70% less energy intensive to manufacture than traditional binders, and makes our insulation soft to touch and easy to handle.



TwinTech® Technology

An advancement in insulation manufacture - the dual forming technique enables thicker products for evolving building code requirements and ensures there is a smooth finish on both sides of the insulation for optimal product handling and appearance.

Declare.



DECLARE Red List Free

To achieve the DECLARE label, we've gone through rigorous testing and disclosed the entire composition of our glass mineral wool products down to 0.01%. Our product range is manufactured with up to 80% recycled content and the remaining percentage composed entirely from Red List Free raw materials. DECLARE also contributes to green building rating systems such as LEED and WELL.



For more information about Knauf Insulation's range of insulation products, visit:
www.knaufinsulation.com.au

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