



**Building a better future
in entertainment stadiums**



The trusted name in building products and solutions since 1945.

CSR NZ is the name behind some of New Zealand's most recognised building product brands. We have a strong history of creating innovative and sustainable building materials that work together to provide better whole-of-project solutions across the New Zealand commercial and residential construction industries.

When you partner with CSR, you can be sure you're working with a brand that provides exceptional quality, unrivalled knowledge and support, as well as an unwavering focus on building a better future.

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Sydney Allianz Stadium

Understanding the needs of the entertainment sector

Entertainment and sporting stadiums are more than functional venues, they are expressions of success, identity, and ambition. From established and iconic venues such as Wellington's Cake Tin, to the recently opened One New Zealand Stadium at Te Kaha, across New Zealand, they serve as central focal points for communities, bringing people together through shared experiences while reflecting the character and pride of their region. At the highest level, these venues also provide an opportunity for New Zealand to present itself on a global stage, hosting events that connect local communities to international audiences.

At CSR, we understand the expectations placed on these landmark facilities and the importance of delivering environments that perform reliably over time. Our systems support the creation of high-quality stadiums and entertainment venues that meet local requirements while contributing to spaces people can enjoy now and into the future.



Design considerations

Entertainment and sporting stadiums are high-functioning architectural facilities that must accommodate large occupancies, with crowd safety, circulation, and efficient egress forming critical design drivers. They are expected to perform reliably over decades, often under intermittent loading conditions, placing emphasis on durability, resilience, and appropriate material selection. This is supported by highly coordinated structural and building services integration to manage complex operational demands.

Modern stadiums are multi-use environments, requiring flexible and adaptable design to support a wide range of events. This

includes the ability to reconfigure spaces over time, through the use of non-structural partitions, operable elements, and connections between internal and external areas.

Sustainability and energy efficiency are key considerations, with design approaches focused on reducing environmental impact and supporting long-term performance in line with the New Zealand Building Code (NZBC). Incorporating national and local values, recognising New Zealand's diverse cultural context, and engaging with local iwi are also important considerations in shaping stadiums that reflect their communities.

Requirements of the NCC

CSR products are backed by continuous testing, research and development to ensure industry leading performance and compliance with the ever-evolving NZBC requirements.



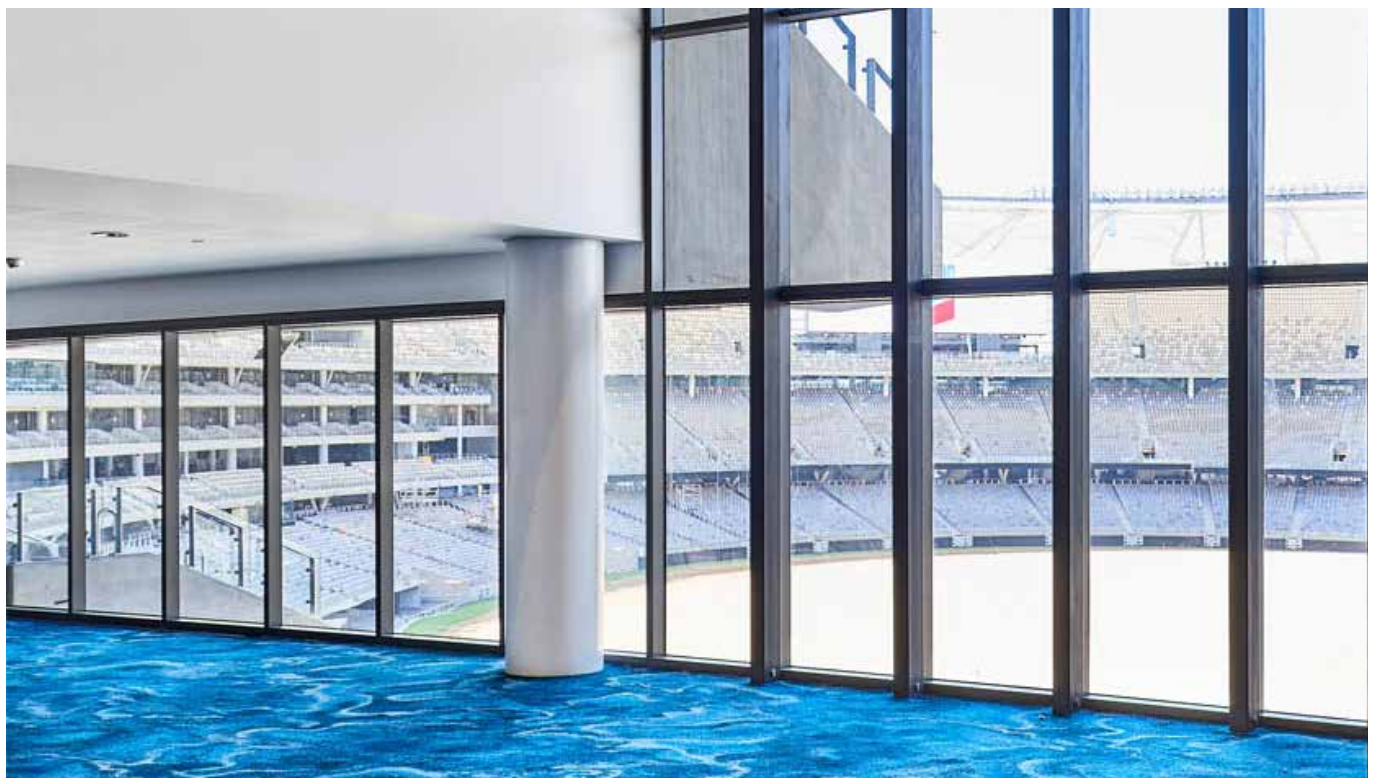
Structural integrity and durability as outlined in:

B1 - Structure

Buildings must resist the loads they are expected to encounter, including wind, earthquake, and forces generated by use and occupancy. The NZBC defines how different loads should be combined and assessed, and sets performance requirements to ensure buildings and building elements remain stable and capable of withstanding physical conditions

during construction, alteration, and throughout their service life. These requirements exist to safeguard people and other property and are supported by various standards including:

- Wind pressures: Under NZS 1170.2, exterior building elements such as claddings must be designed to resist the combined external and internal wind pressures expected for the site. This ensures the building envelope performs safely under wind load conditions.
- Earthquake forces: NZS 1170.5 sets out the seismic actions that building elements must resist.





Designing entertainment stadiums introduces additional structural considerations due to large spans, high occupancy loads, and dynamic crowd-induced forces. Structures must accommodate varying load conditions, from low day-to-day use to peak event demand. Seismic performance is also critical in New Zealand, requiring systems that can respond to earthquake actions while supporting complex structural and building services integration required for stadium operation. CSR partners with Rondo, which has developed systems suited to New Zealand seismic conditions.

B2 – Durability

Building materials, components, and construction methods must be durable enough to remain functional for their intended life, not just compliant at the time of construction. Entertainment stadiums need to be made to stand the test of time with long lasting, durable construction and materials. With the huge volume of people coming in and out on a regular basis, they need to be made to withstand the crowds.

A range of NZ Standards provide durability expectations for different materials and outline requirements for designing and selecting products to meet these lifespans, including consideration of environmental exposure, maintenance, and access for repair or replacement.

The CSR Cemintel range of fibre cement claddings and linings comply with the requirements of AS/NZS 2908.2 (Cellulose cement products Part 2: Flat sheets). The durability tests required for compliance with this standard provide evidence of long-term performance in service.



Fire rated structures as outlined in:

C – Protection From Fire

The NZBC sets minimum fire safety requirements to safeguard occupants, protect neighbouring property, and support firefighting and rescue operations.

Entertainment stadiums, like other commercial buildings, have fire safety requirements determined by building use, scale, and occupancy. In these environments, where large numbers of people gather, fire safety is critical.

Fire protection in stadium environments relies on a coordinated approach that includes active fire systems, passive fire-rated construction, and operational preparedness. Fire compartmentation is used to limit the spread of fire, with fire-rated walls, floors, and ceilings forming protected zones to support safe and efficient evacuation under peak occupancy conditions, as well as separation of high-risk areas such as kitchens, plant rooms, and back-of-house spaces.

Fire resistance is expressed as a Fire Resistance Rating (FRR), determined through standardised testing and defined by three performance criteria: structural adequacy, integrity, and insulation. The required FRR will vary depending on the specific building design.

CSR systems for fire-rated construction are supported by testing and research to demonstrate compliance with relevant standards. CSR - Potters NZ stocks the full BOSS Passive Fire range. These products provide tested passive fire protection for walls, floors, ceilings and service penetrations, helping to maintain compartmentalisation and system integrity.

Rondo Steel Stud Wall and Ceiling Systems can be incorporated into fire-rated assemblies to achieve the required FRR when used in conjunction with compatible, tested lining systems. These assemblies can be designed to provide fire protection from one or both sides, depending on the tested configuration.



Building access as outlined in:

D - Access

The NZBC sets requirements to ensure people can safely enter, move within, and exit buildings. These provisions are supported by NZS 4121, which provides guidance on accessible design across a range of building types and associated facilities.

In entertainment stadium environments, access design must accommodate large numbers of people, including individuals with varying mobility and accessibility needs. This includes provision for accessible seating, clear circulation paths, and safe, efficient movement throughout the venue.

Although access is a regulated area under the NZBC, high-quality stadium design requires consideration beyond minimum compliance. Inclusive and well-integrated access design supports user experience, safety, and the ability for all patrons to participate in events comfortably and independently. Well-considered circulation planning also supports intuitive wayfinding, improving both safety and overall user experience.



Managing moisture as outlined in:

E - Moisture

The NZBC sets performance requirements for managing surface water, controlling external moisture at roofs, claddings and openings, and limiting internal moisture in wet areas.

These measures are essential to maintaining the health, durability, and long-term performance of buildings.

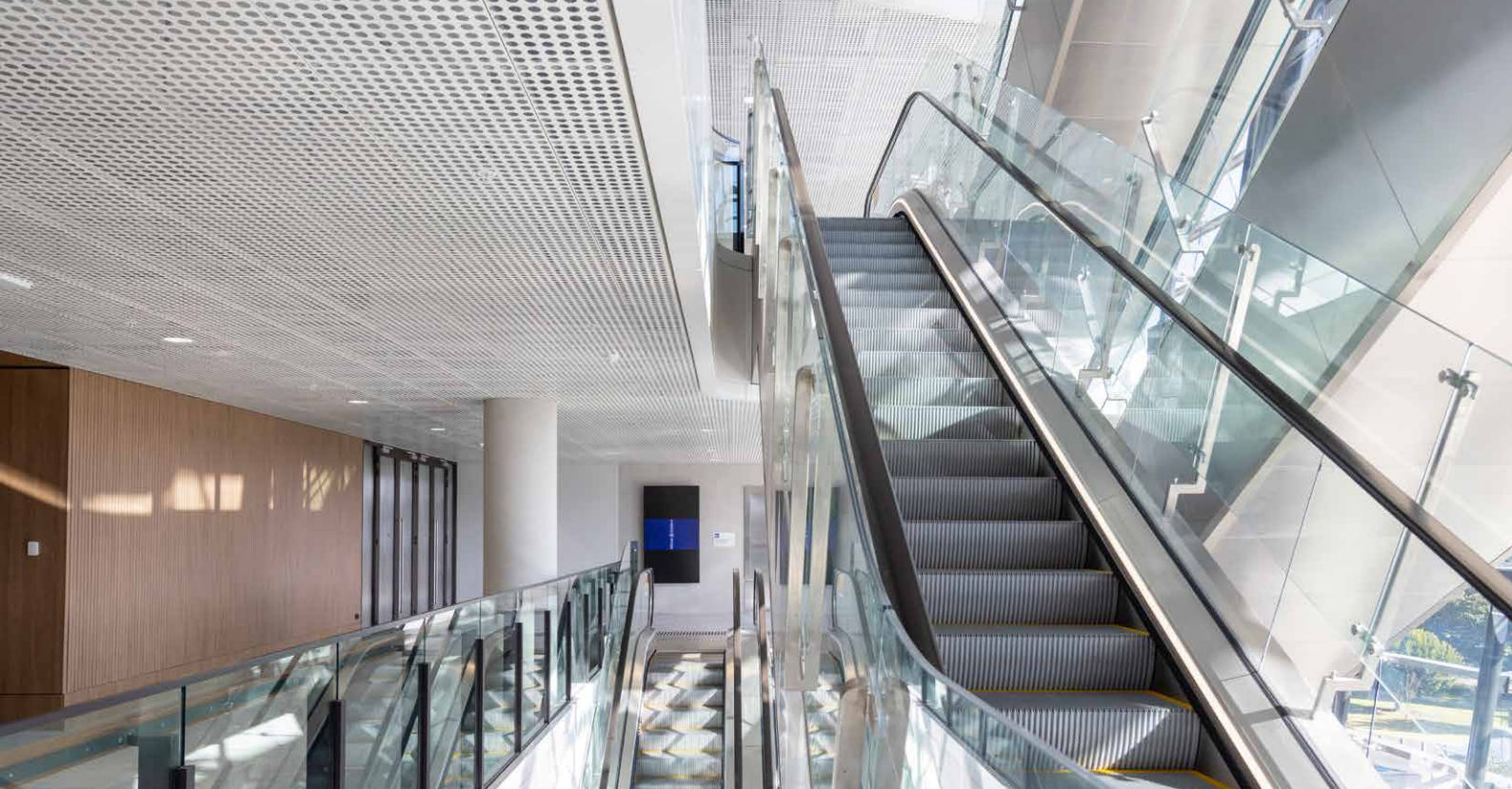
Entertainment stadiums incorporate a wide range of wet areas and exposure conditions, often at large scale and with high usage, requiring robust and well-coordinated moisture management strategies.

E2 - External Moisture

Roofs and external walls must be constructed to prevent water penetration and manage the absorption and dissipation of moisture. The NZBC sets requirements for resisting water entry at cladding and facade junctions, joinery openings, penetrations, and transitions, supporting durable and weathertight building envelopes. This envelope should be considered as an integrated system, incorporating cladding, air and moisture control layers, insulation, and structural support to ensure long-term performance and durability.

In stadium applications, facade and roofing systems are often large-span and may include both exposed and enclosed conditions. These systems must perform reliably under wind-driven rain and varying environmental exposure, with careful detailing at interfaces and transitions. CSR facade and building systems such as Cemintel and Hebel are supported by full-scale weather testing to demonstrate weathertightness and compliance with E2. Pre-finished options including Cemintel Barestone and Surround can support efficient installation and reduced ongoing maintenance. Cemintel Rigid Air Barrier can be used in external wall assemblies to enhance moisture resistance and durability.





E3 - Internal Moisture

Spaces supplied with water such as food preparation areas, changing rooms, laundries, and toilets are classified as wet areas. The NZBC requires surfaces in these areas to be impervious, easy to clean, and supported by adequate ventilation to maintain health and safety.

Cemintel Cemiseal Wallboard is commonly used in wet area applications, providing a durable, moisture-resistant substrate suitable for use behind tiled finishes and in areas subject to intermittent moisture exposure.



Energy efficiency as outlined in:

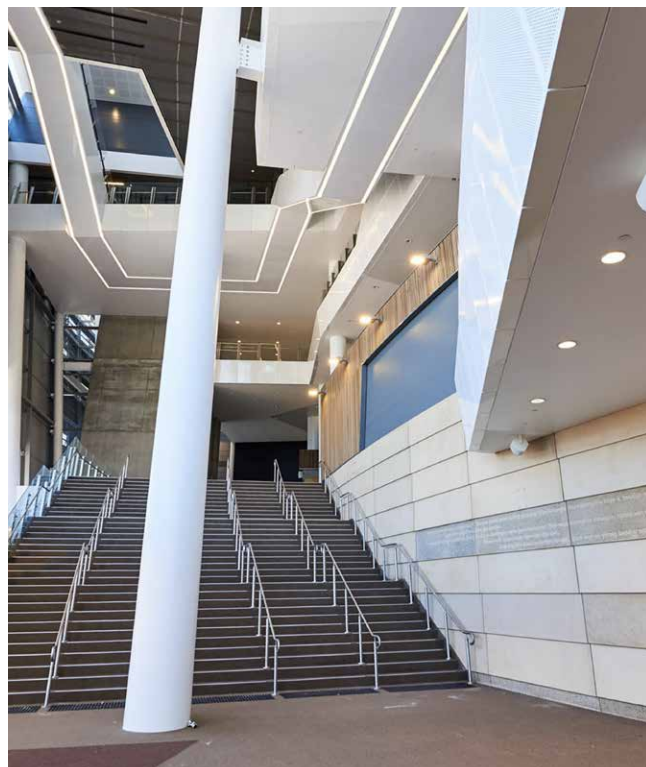
H1 – Energy Efficiency

Entertainment stadiums, due to their large scale, high volumes, and intermittent occupancy, can be energy intensive and often incorporate complex HVAC systems. These buildings must be designed to minimise energy consumption and environmental impact throughout their construction and operation, while also addressing building envelope thermal performance. Sustainability outcomes such as Green Star ratings may also be targeted alongside NZBC H1 compliance.

Energy efficient design should not rely solely on increasing insulation levels. Effective performance is achieved through intelligent design, including building orientation, facade design, airtightness, and integration of mechanical systems. Consideration of thermal bridging, glazing, and overall envelope performance can significantly influence operational efficiency and long-term energy use, often supported by performance-based modelling.

Thermal insulation plays a key role in managing internal conditions, supporting both temperature control and moisture management. When used appropriately within wall and roof assemblies, insulation can contribute to reduced energy

demand, improved internal stability, and lower operational costs. CSR systems can support energy-efficient outcomes in entertainment stadium applications through the use of Bradford Insulation and Hebel. Bradford insulation provides the primary means of achieving thermal resistance, while Hebel wall systems contribute to overall envelope performance. Systems such as Bradford Ashgrid may be incorporated within roof and wall assemblies to support thermal efficiency while assisting with condensation control. Together, these systems assist in reducing heat transfer and maintaining stable internal environments.





Non-regulated design considerations

Beyond NZBC compliance, additional design factors play a key role in delivering world-class, high-performing entertainment stadiums. These considerations influence safety, user experience, operational efficiency, and the long-term adaptability of venues designed to host large crowds and a wide range of events, including the ability to reconfigure spaces as community needs evolve over time.



Acoustic Design

Effective acoustic design in entertainment stadiums supports safe operation, user experience, and management of noise both within the venue and to surrounding areas. High noise levels generated by crowds, events, and plant systems require careful consideration of both sound transmission and internal sound control throughout the facility.



Sound transmission

Sound transmission is the transfer of noise between different areas and is an important consideration in the design of entertainment stadiums, particularly where large crowds, amplified sound systems, and mechanical plant generate high noise levels. This can be reduced through the use of appropriate wall and floor systems, or by isolating high-noise areas such as plant rooms, back-of-house spaces, and event zones from adjacent areas.

In addition to internal separation, consideration must also be given to noise transmission beyond the building envelope, particularly where stadiums are located near residential or mixed-use areas. Facade and roof systems play a key role in managing noise breakout and supporting compliance with local environmental noise limits. Acoustic performance of building elements is commonly expressed by the Weighted Sound Reduction Index (R_w), which indicates the ability of an assembly to reduce sound transmission between spaces.

Hebel systems provide effective acoustic performance, helping to contain noise generated within event and plant areas and reduce transmission to adjacent spaces and surrounding environments.



Sound absorption

Sound absorption relates to the control of reverberation within a space, typically expressed by the Noise Reduction Coefficient (NRC), which indicates the ability of a material to absorb sound.

In entertainment stadium environments, managing reverberation is important to control crowd noise, improve speech intelligibility for announcements, and enhance overall event acoustics. Acoustic performance can be improved through the selection of appropriate linings and finishes within wall and ceiling systems, particularly in enclosed areas such as concourses, hospitality spaces, and broadcast facilities.

Martini acoustic products provide high-performance sound absorption, suitable for use within wall and ceiling assemblies or behind perforated linings to reduce reverberation generated by crowds and amplified sound. Designed for use within concealed or semi-exposed applications, they absorb sound across a broad frequency range, supporting controlled internal acoustic conditions.



Aesthetics

The overall architectural expression of an entertainment stadium is critical, acting as a defining statement of identity and ambition within its region. Alongside this big-picture form, careful attention to internal planning and detailing is essential to support both user experience and functionality.

Due to large crowds, careful human-movement design is crucial to ensure a safe and intuitive experience for patrons. Circulation routes, sightlines, lighting, and wayfinding should be coordinated to support clear and efficient movement, contributing to both user experience and crowd safety. Clear signage as well as well-designed building elements assist patrons to navigate within a stadium's vast spaces, from locating restrooms and facilities to finding seating.

Colour, cladding, and facade elements are important considerations in the design, whether the intention is to reflect local identity, respond to context, or incorporate branding. Given the long lifespan of stadium structures, consideration should also be given to elements that can be easily updated or replaced over time, allowing the building's appearance to evolve while maintaining the integrity of the primary structure.

Pre-finished facade systems are also practical ways of combining consistent visual quality with durable, low-maintenance performance. Systems such as CSR Cemintel pre-finished Barestone and Surround are examples of aesthetic finishes with practical application.



Security and crowd management

Entertainment stadiums must safely accommodate large numbers of people while maintaining clear and controlled access throughout the venue. Design should consider security screening, controlled entry points, and separation between public, operational, and back-of-house areas. Effective planning supports both day-to-day operations and major events, while contributing to safe and efficient crowd movement.



Cultural connection

Entertainment stadiums play an important role in reflecting the identity of their communities. Incorporating national and local values, and engaging with iwi and stakeholders, helps ensure venues respond meaningfully to their cultural context.

Recent projects such as the new One New Zealand Stadium at Te Kaha in Christchurch demonstrate this connection. "Te Kaha," meaning strength or force, reflects resilience and is closely associated with the phrase "kia kaha" (stay strong), symbolising the spirit of the community.

Thoughtful integration of cultural narratives, materials, and design elements can help create stadiums that are not only functional, but also representative of place and identity.



Building solutions for every entertainment stadium project

Bradford HVAC
insulation



Rondo Key Lock
ceiling system



Ecophon Class A
ceiling tiles



Potter Aluminium
C Series partitions



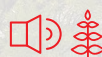
Rigitone perforated
plasterboard



Martini dECO 3D
acoustic tiles



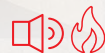
AMF Heradesign



Woven Image Array 24mm
acoustic ceiling baffle system



AMF Heradesign



Building solutions for every entertainment stadium project

Bradford
EcoPower vents



Martini dECO 3D
acoustic tiles



Hebel
PowerFloor



Boss Passive Fire



Hebel Intertency Systems



Bradford Ashgrid roof
spacer system



Cemintel Territory brick-look
cement bonded cladding



Protone 12mm
Square Minigrid





Why partner with CSR

In an increasingly complex building world, you need a trusted partner that offers proven quality and expertise to help you achieve your project goals. One that is dedicated to continual innovation and leading the building industry into a sustainable future.

Experience, knowledge

With a strong focus on research and development, product innovation and system design, we are equipped with an unrivalled level of expertise to support our customers with their projects.

As industry specialists, we understand the complexities of the building industry and have developed specialist teams and tools to help architects and designers at all stages of the design and construction process.

Specification support



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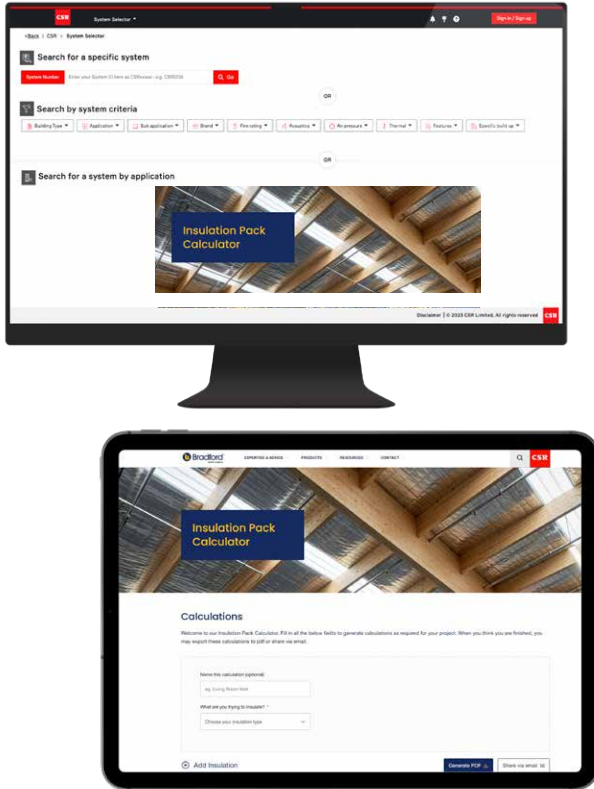
To assist with material specification for your entertainment stadium project, our Architectural Finishes Schedule provides a list of CSR product details. This includes information on product type, description, specification details and colour options.

REPLACE QR CODE



Digital tools

At CSR New Zealand, we're continually enhancing our suite of digital tools to support your specification and project planning needs. Our resources help you work smarter and more efficiently: The Bradford Pack Calculator allows you to quickly estimate the number of insulation packs required for your project, helping ensure accurate ordering and installation.



Additional CSR CAD/BIM files help you navigate the product and system selection process. These are available on our product websites.

Compliance

As leaders in the building industry, we understand that compliance is at the core of building requirements. Our portfolio covers such a breadth of brands and products, we have the knowledge, expertise and capability to offer compliance details on an extensive number of complete system solutions. When you partner with CSR, you can rest easy knowing what's specified fulfils all your compliance requirements.

Sustainability

Sustainability is an increasingly important topic in the building industry from both a product and design perspective. We are proud to focus on developing sustainable manufacturing processes, products that produce minimal environmental impact and systems that enable building efficiency.



Scan to download

Our efforts have seen us gain accreditation and certification with a number of regulatory and industry bodies. For a complete picture of our commitment to sustainability, we invite you to scan the QR code to read our latest reports.

Whatever your design, construction and compliance challenges, we are dedicated to helping you achieve your sustainability goals.

Industry-leading warranty

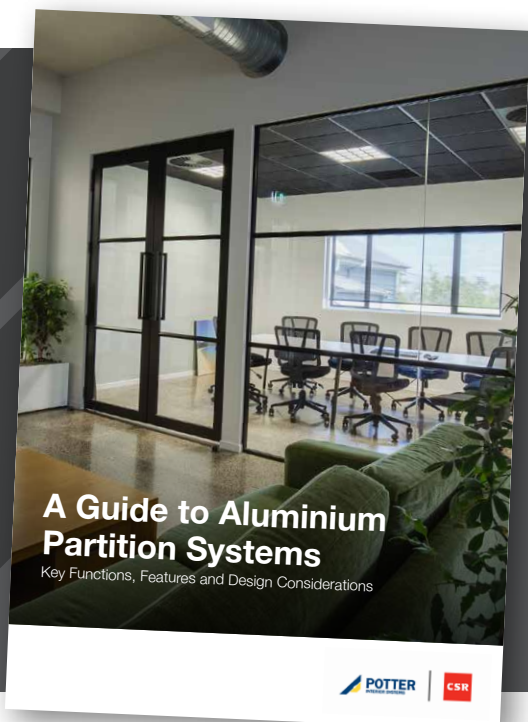
All CSR products and systems are of an industry-leading standard. As such they are guaranteed to perform and are backed by a comprehensive warranty, whether they are manufactured in Australia or sourced from a trusted international partner. All products are covered by warranties that provide buyer confidence and peace of mind.



Potter Interior Systems brings deep expertise in interior systems, backed by CSR's commitment to technical excellence and innovation. Potter Interiors provide detailed guidance on acoustic performance, fire ratings, structural design, and compliance with New Zealand Building Code standards through a range of white papers, including a guide to partition systems.



Scan to see
the latest





CSR case studies

Sydney Football Stadium (Allianz Stadium)

Background

The Sydney Football Stadium (known commercially as Allianz Stadium) was recently redeveloped as commissioned by the NSW government \$828 million incentive to boost the local economy and provide a world-class sports and entertainment experience for the Sydney and visitors community. John Holland Group partnered with Aurecon, Cox Architecture and Schlaich Bergermann to deliver the stadium that is host to many sporting and entertainment events in NSW.

Challenge

This was a large-scale project with many layers of complexity in terms of the design and material requirements for so many different spaces each with unique uses. Within the various areas of a stadium, walls might be subject to heavy pedestrian traffic, significant furniture, fixture and equipment requirements, and be required in a range of sizes, shapes and configurations. They must meet a higher requirement set by the standard, based on the predominant functions of the space, and must have exceptional acoustic and thermal properties in order to adequately insulate the area they're being applied in.

Rondo was tasked with the design and manufacture of steel wall systems that would be able to withstand pressures like wind and seismic loads which increased, to match the building's importance and function. These walls were then to be installed with Gyprock, requiring a close and meticulous approach to ensure each room was fit for purpose.

Solution

Rondo's expertise in customised and compliant wall designs left them perfectly placed to cater to this project's crucial elements such as crowd pressure, and Furniture, Fixtures & Equipment (FF&E). Rondo's design engineers needed to factor in the National Construction Code's sections relating to crowd movement and horizontal imposed actions in order to produce bespoke designs that could meet the non-standard load requirements of certain areas of the stadium. These designs were created with Gyprock in mind, intended to work harmoniously with their versatile, functional, and aesthetically advanced range of products.

Contractor Sydney Plaster implemented the Rondo designs, which included back-to-back Steel Studs at 250mm centres installed with two rows of double punch nogging tracks for MAXIjamb® Studs. This allowed heavy loads to be transferred from Gyprock's Impactchek™ 13 mm thick plasterboard, directly into the steel stud frame. Impactchek is a high-strength plasterboard with a reinforced core that is ideal for use in high impact areas such as hallways and the 'Rev Up' Room. In addition, the ease of installation and safety profile of combined Rondo and Gyprock walls make them ideal for crowd pressure walls.

Gyprock 8mm Rigitone was specified for the ceilings of the corporate areas, VIP entrance and Eastern side main concourse. Rigitone strikes a careful balance between aesthetics and functionality, offering exceptional acoustic performance while delivering a visually appealing, perforated pattern. Some rooms (such as the Corporate Platinum room) required curved ceilings - and for this, Gyprock's premium Flexible plasterboard was ideal. The 6.5mm thick Gyprock Flexible enables specifiers to easily create curved walls and ceilings through an enhanced gypsum core which is

designed to bend, enabling convex curves with a 250mm radius and concave curves with a 450mm radius.

In certain areas, the attachment of FF&E also contributed to loads on the walls, where hardware weighing up to 65kg was attached to 5.7m high walls. In most wall scenarios, the wind load would exceed seismic forces, but in this case, the added weight of FF&E was required to be included in load calculations, which greatly increased the seismic load, causing it to surpass standard wind load forces. Rondo Engineers designed security room steel stud walls to meet the higher load to ensure seismic requirements and compliance were met.

The complexity of this project highlights just how important it is to work with experienced, knowledgeable teams who are adept at designing customised, innovative solutions to meet

the specifics of any given application. Years of expertise combined with premium-quality products, meant the teams at both Rondo and Gyprock were able to manage this complexity to deliver this project to the highest standard, on time and under budget.

“These designs were created with Gyprock in mind, intended to work harmoniously with their versatile, functional, and aesthetically advanced range of products.”

Building challenge/need	Materials used	Key benefits/features
Internal and external walls and ceilings needed to be built to withstand non-standard load requirements and pressure from high human traffic and large crowds as well as being able to hold additional weight of up to 65kg of FF&E attachments, resulting in the need for very high seismic load requirements	Rondo Steel Studs & Track Framing System Rondo MAXIjamb® External Wall Framing System Rondo KEY-LOCK® Concealed Ceiling System Rondo DUO® Exposed Grid Ceiling System	• Exceptional strength ideal for extreme load bearing properties • Cost savings due to minimal man hours in assembling, due to simple install process, no cutting and measuring on-site
Walls needed to withstand high crowd pressures and be very high load bearing, impact resistant, with high acoustic performance and easy to install on site	Gyprock Impactchek™ 13 mm thick plasterboard	Reinforced core and excellent impact resistance that is ideal for use in high impact areas such as hallways
Walls in corporate and VIP areas needed to be design-led, visually appealing while still being highly functional	Gyprock Rigitone™ Matrix 8mm plasterboard with Activ'Air technology	• Exceptional acoustic control with ultimate design freedom • Maximum acoustic absorption is achieved through a combination of perforation patterns and a highly effective black acoustic fabric backing • VOCs are converted into non-harmful inert compounds that are permanently locked in the board and cannot be released back into the air
Highly functional and flexible plasterboard required for curved ceiling and wall designs in certain areas	Gyprock's premium 6.5mm thick Flexible plasterboard	Enables specifiers to easily create curved walls and ceilings through an enhanced gypsum core which is designed to bend
Provide effective moisture control	Gyprock Aquachek™ plasterboard	The core, face and back of Gyprock Aquachek™ are treated to make it resistant to moisture and humidity without compromising integrity
Lining solution needed to meet fire and moisture control requirements	Gyprock Fyrchek plasterboard	Fire and acoustic grade board with enhanced moisture resistance, the perfect lining solution for fire-rated wall and ceiling systems in wet areas



CSR case studies

Optus Stadium, Perth

Background

One of Perth's most iconic projects, the Optus Stadium, has been successfully open and hosting a myriad of sporting and entertainment events for several years now, following 36 months of construction. With a 'fans first' approach to planning and design, the multi-purpose venue offers an unrivalled spectator experience for a crowd of up to 60,000 (in AFL mode) with exceptional event atmosphere and cutting-edge stadium design and technology. It was awarded 'The most beautiful stadium in the world' in the 2019 Prix Versailles international architecture awards.

Challenge

The stadium is a six-level, steel and concrete structure with a colosseum seating bowl of 60,000 seats, a lightweight fabric roof covering 85% of seats that results in an impressive suspended 'halo' effect. Building a structure of this magnitude presented challenges predominantly around logistics and the sheer amount of labour and materials required.

On-site logistics required careful consideration and ongoing management due to the volume of traffic movement in and around the site, with multiple work fronts under construction. At the peak, 18 cranes were operating on the site with a workforce of up to 1,350 people.

Solution

Gyprock were chosen by the wall and ceiling contractor Cubic Interiors WA to supply this project, partnering with Cubic to guide product specification and providing technical support on site. The proximity of Gyprock's factory in Welshpool, approximately 12 kilometres from the stadium construction site, was also important as it helped to save freight costs and lead-time. It also allowed for Gyprock's technical team to provide on-site assistance as required.

Gyprock products including EC08 Complete, Gyptone and Rigitone, were specified for the project, with 80 semi-trailer deliveries made, transporting approximately 200,000m² of plasterboard to the construction site.

Gyprock EC08 Complete is a premium plasterboard and made up approximately one-quarter (58,000m²) of the plasterboard product used on the project. It was specifically used in the corridors, lounges, general admission areas and food and beverage outlets due to its superior performance for mould, impact, fire, acoustic and moisture resistance.

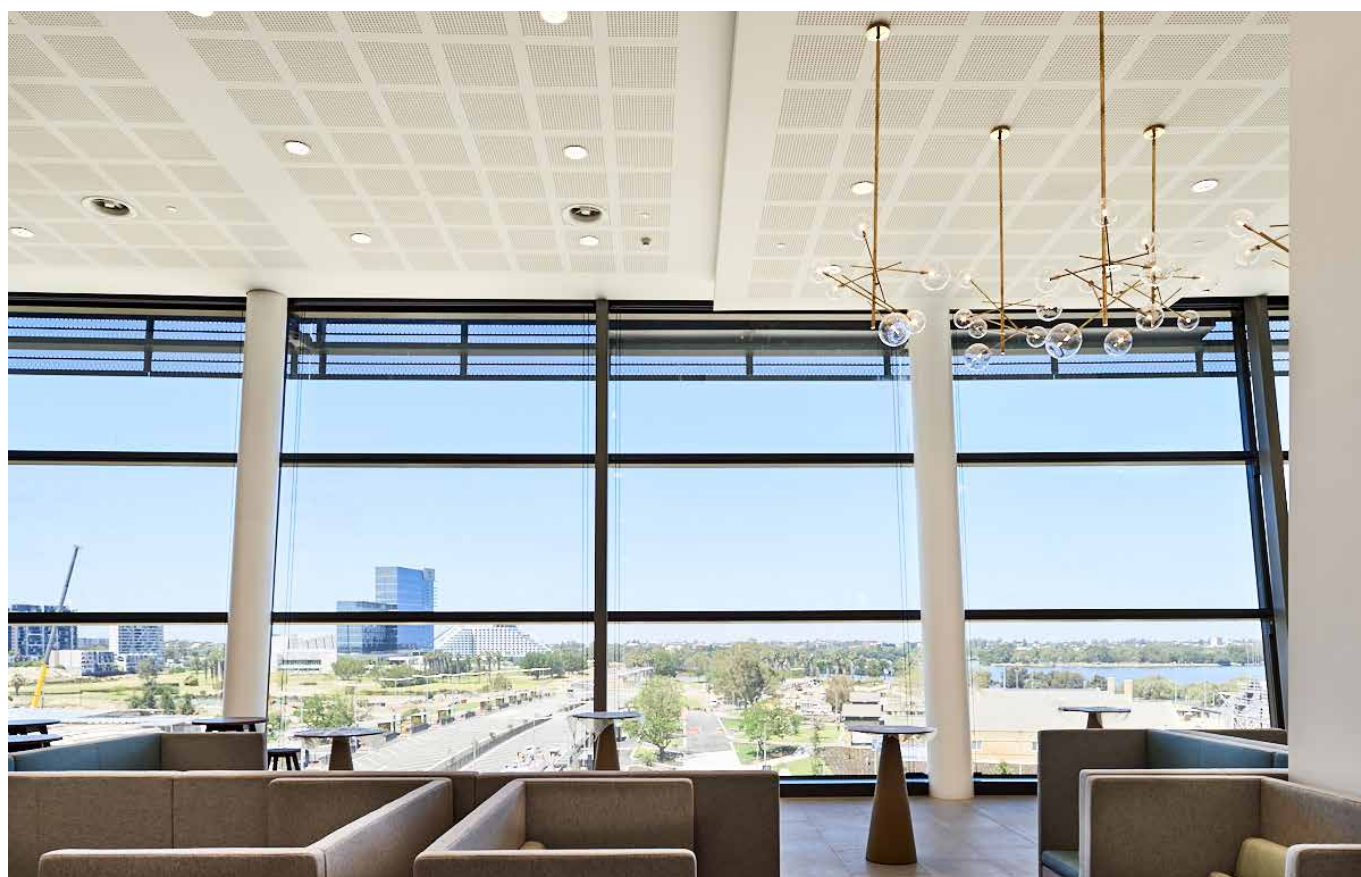


With consideration of the volume of EC08 Complete required in the project, Gyprock's Welshpool factory responded by expanding its manufacturing capabilities to produce the premium plasterboard locally and to specific project requirements, including size of rooms, height and length of walls, and to help reduce wastage on site.

Functional acoustic performance was high on the list of requirements for the dining, conference and private entertainment areas of the stadium, but at a competitive cost of the aesthetic finish of the spaces. Balancing acoustic excellence and visual impact, the panel perforations of the Gyprock perforated plasterboard range, combined with the products' acoustic fabric lining and insulation as required, deliver reduced echo and noise reverberation to create more comfortable environments.

“Perth’s state-of-the-art Optus Stadium had long been on CSR Gyprock’s radar, with the aim to support the project with high performance products in large volumes.”

Building challenge/need	Materials used	Key benefits/features
Needed an all-purpose, cost effective, plasterboard solution that met a range of functional requirements for multiple areas	Gyprock EC08 Complete plasterboard	• Exceptional all-in-one performance for mould, impact, fire, acoustic and moisture resistance, making it versatile to use in multiple areas with multiple purposes • Produced in mass volume and cut to size prior to delivery and easy on-site installation
Needed a balance between high acoustic performance and visually impactful plasterboard solutions for multiple areas	Gyprock Gyptone™ 12mm plasterboard and Gyprock Rigitone™ Matrix 8mm plasterboard with Activ'Air technology	• High performance plasterboard for commercial ceilings where a high level of acoustic performance is required • Maximum acoustic absorption is achieved through a combination of perforation patterns and a highly effective black acoustic fabric backing • VOCs are converted into non-harmful inert compounds that are permanently locked in the board and cannot be released back into the air





CSR case studies

Salisbury Aquatic Centre, SA

Background

Emerging from within the picturesque setting of Happy Home Reserve, the Salisbury Aquatic Centre has been a much loved community hub for decades, and has recently undergone comprehensive redevelopment spearheaded by the City of Salisbury and the Government of South Australia.

Driven by a vision to create a state-of-the-art aquatic centre that answered the needs of it's community, the project set out to create facilities that catered to a range of fun, fitness, and educational activities. "The primary goal was to create a multi-functional facility that would serve various community needs," explains Susan Powell, Project Leader with City Collective, the practice behind the project.

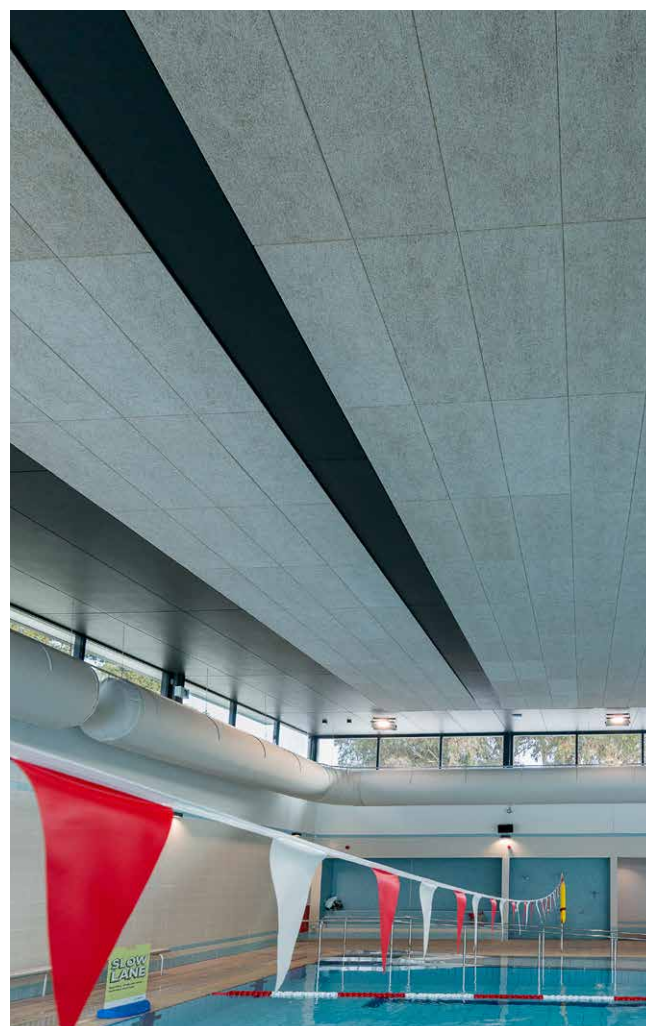
Susan explains that the design prioritised equity, accessibility and inclusion, with sustainability as another essential criteria for the project. "Integrating environmental considerations into the design was a key principle," Susan notes. "This included energy-efficient systems, water-saving technologies, and the use of sustainable materials".

Challenge

With such an ambitious scope, bringing the highly-considered design vision for the centre to life didn't come without its challenges.

Ensuring the seamless integration of various building components and systems was crucial to the project's success. It was also paramount to specify enduring and high-performing materials that could withstand the demanding

environment of a pool hall, while meeting environmental, aesthetic and functional requirements. "The detail of the vapour barrier was pivotal in ensuring the protection of the fixings and the steel behind the lining," Susan remarks.



Solution

Overcoming these challenges called for a combination of technical expertise, innovative materials, and close collaboration between suppliers, and the project team turned to Rondo and Himmel, for their expertise and innovative solutions.

“We chose Rondo and Himmel due to their trusted reputations,” Susan explains. “Their prior relationship with each other was a crucial factor, aiding in the development of detailed specifications and ensuring comprehensive warranties.”

Rondo’s KEY-LOCK® Ceiling System with a 64mm Furring Channel and Himmel’s Troldekt Acoustic Panels with a K5 Edge were both specified for the project. The KEY-LOCK® system is designed to produce a high-quality structure, while the Troldekt panels are resistant to moisture and suitable for installation in spaces with up to 98% humidity (+/- 2%). That makes them ideal for environments where both acoustics and proximity to water are essential considerations. Together, they provided a reliable combination of durability, sustainability, acoustic performance, and aesthetic appeal.

“Both Rondo and Himmel actively participated in workshops, providing valuable advice throughout the process,” Susan adds. “Their involvement in the journey and, crucially, in the actual specification writing enabled them to offer a written warranty that acknowledged each other’s contributions.”

This collaborative approach helped ensure that the detail of the vapour barrier was expertly taken care of. “When construction

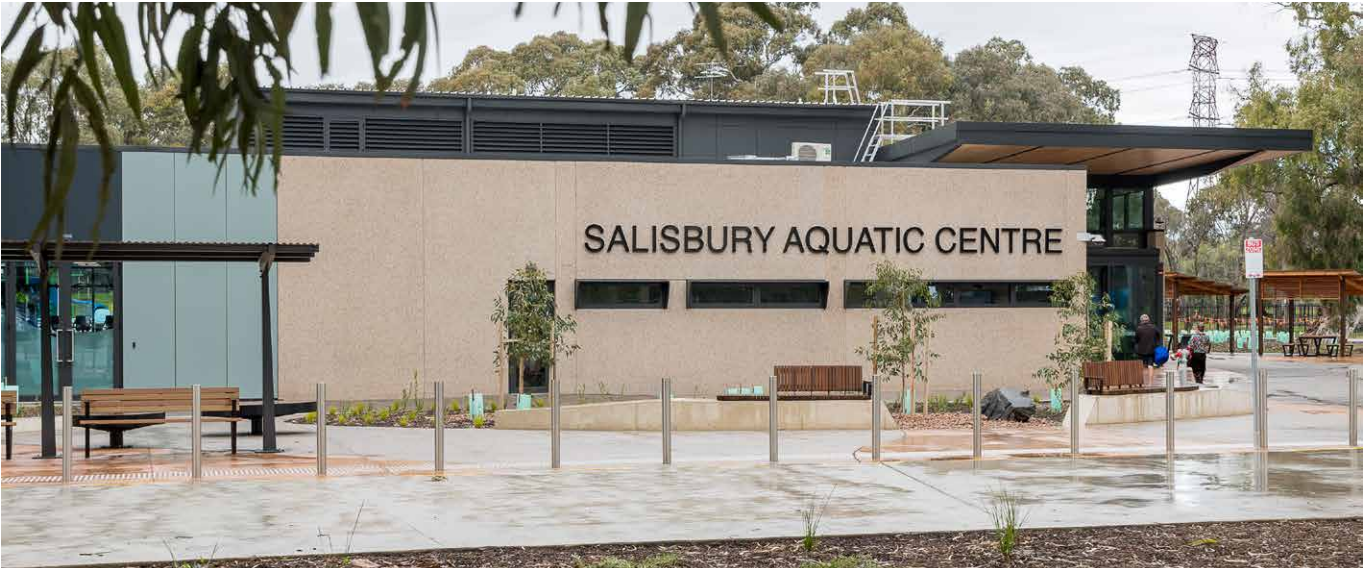
commenced, representatives from Rondo, CSR, and the building trades were on-site to discuss the installation and make necessary adjustments,” Susan adds. “We have been very happy with the result and have enjoyed working with both parties.”

The Salisbury Aquatic Centre showcases the transformative power of collaboration, innovative design, and high-quality materials that honour the building’s holistic life cycle. Thanks to the dedication of the project team, this cherished community hub is set to thrive for generations to come, providing space for recreation, wellness, and social interaction for the evolving community.

“We chose Rondo and Himmel due to their trusted reputations. Both Rondo and Himmel actively participated in workshops, providing valuable advice throughout the process”

Susan Powell, Project Leader with City Collective

Building challenge/need	Materials used	Key benefits/features
High quality, strong ceiling framework needed to be easily installed with minimal time on site	Rondo’s KEY-LOCK® Ceiling System with a 64mm Furring Channel	Backed by expertise and quality, designed to simply snap into sections, without the aid of mechanical tools, minimising installation labour time and effort
Needed high aesthetics combined with excellent moisture and mould resistance due to the very high indoor humidity levels	Himmel’s Troldekt Acoustic Panels with a K5 Edge	• Classic ceiling panels, with excellent moisture resistance allows ceiling panels to be suitable for applications with very high humidity, ideal for aquatic centres • Good acoustic performance with an NRC of 0.50 through to 1.00 able to be achieved • Designed to work in conjunction with Rondo ceiling systems



Notes

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AFS is the leading provider of fibre cement-based permanent formwork systems, through Rediwall® products, a polymer-based system for concrete walls.

afsformwork.com.au



CSR Bradford is Australia's leading supplier of insulation, acoustic control, ventilation and energy-saving products for homes & commercial buildings, offering a range of environmentally-sustainable solutions that can help you improve comfort & energy efficiency.

bradfordinsulation.com.au



CSR Cemintel provides a complete range of lightweight fibre cement systems, including external facades, internal linings, flooring and ceiling systems.

Cemintel.com.au



Proudly Australian made, CSR Gyprock is the leading brand of plasterboard in Australia with a comprehensive range of plasterboard, compounds, cornices and associated finishing products.

gyprock.com.au



CSR Hebel is Australia's only manufacturer of high performance, autoclaved, aerated concrete for residential, commercial and civil applications.

hebel.com.au



CSR Himmel offers a complete range of interior solutions through its global product portfolio, consisting of ceiling, wall, high-performance acoustic and aluminium options for commercial buildings.

himmel.com.au



Proudly Australian manufactured, CSR Martini manufactures high performance acoustic products that are specifically engineered to perform across multiple environments within commercial interior spaces.

csrmartini.com.au



CSR Monier is one of Australia's most experienced and diverse roofing companies, manufacturing quality concrete and terracotta roof tiles in Australia.

Monier.com.au



CSR PGH bricks and pavers provides a broad range of quality clay bricks and pavers across the east coast of Australia.

pghbricks.com.au



CSR Potter Interior Systems is leading supplier of building materials in New Zealand, including ceiling tiles and aluminium partitioning for the commercial wall and ceiling industries.

potters.co.nz



Woven Image are the design leaders in sustainable acoustic finishes and textiles for commercial interiors, including EchoPanel® acoustic panels, ceiling baffles and acoustic tiles.

wovenimage.com

Proud Partner



Rondo is a highly focused business involved in the manufacturing and supply of a wide range of light gauge rolled-formed steel products and systems, primarily for the construction industry in Australia and New Zealand.

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