

BRISBANE CONVENTION & EXHIBITION CENTRE

CLIENT : South Bank Corporation
 MANAGEMENT GROUP : AEG Ogden
 PROJECT MANAGERS : RCP
 PROJECT END VALUE : \$130 Million
 COMPLETION : February 2012
 ARCHITECTS : Cox Rayner
 SURVEYOR : Alan Sullivan & Associates

BRINGING NEW LIFE INTO A WELL KNOWN SITE

South Bank Corporation is a well-established development authority that has received numerous awards for its urban design, marketing, retail, engineering, sustainability and public-space creation projects. It is the developer for the Brisbane Convention and Exhibition Centre (BCEC) expansion, which is managed by international venue management group AEG Ogden on behalf of the Corporation.

Designed by renowned architectural firm Cox Rayner, the expanded centre fills in one of the “missing teeth” in Grey Street. The new expansion provides a new front door to the BCEC facility on Grey Street, and will provide greater flexibility for exhibitions and conferences in that it allows events of all types and sizes to be catered for under one roof.

In recent times there has been strong demand in the area of smaller conferences/conventions (i.e. Less than 600 delegates). The expansion is designed to cater for this market and to capture new business.

The main challenge of the project was fitting the required facilities into such a long, narrow space. Exemplary work by the project architect (Cox Rayner) and the project managers (RCP) meant that the requirements of the brief – which included the construction of client/speaker preparation areas, a large function terrace overlooking the river, a VIP lounge and two boardrooms, and office and retail spaces – were in fact exceeded.

The site was also very difficult to manage from a constructability viewpoint as it is on a major inner-city road, is adjacent to a heritage-listed railway

station and many “sensitive” neighbours such as hotels and performing arts facilities.

South Bank Corporation is behind some other key projects in Brisbane, including the new ABC headquarters opposite the BCEC. The purpose-built building covers a 15,435-square-metre gross floor area and features four stories and a basement. It has achieved a 5 star rating under the Green Star system.

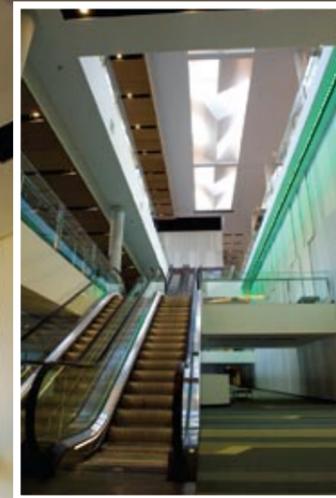
South Bank Corporation is also the development authority for the South Point development on the corner of Grey and Vulture Streets. This \$570 million project is one of Queensland's largest mixed-use, transport-oriented developments, and will include 179 residential apartments,

42,000 square metres of commercial office space, a 178-room five-star boutique hotel and significant retail space including a supermarket. The project also incorporates a multi-million dollar upgrade of the South Bank rail station.

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The striking interior of the Brisbane Convention & Exhibition Centre, QLD.



CERTIFYING BCEC

Certis is a commercial building certification company that assesses new building works for compliance with the Building Code of Australia (BCA) in order to issue building approvals. Founded in 2000, the firm currently employs twenty-nine staff.

On the BCEC project, Certis assessed the plans for compliance with the BCA, suggested opportunities for alternative building solutions, worked with the fire engineer and fire brigade to ensure an acceptable level of occupant safety, issued the building permit, carried out inspections to ensure that compliance was achieved and issued the Certificate of Classification upon substantial completion.

The project was a particularly significant one for Certis, mainly because of its size. "Large public buildings always create interesting challenges because of the large population of building occupants," says Peter Hofstetter, director of Certis Brisbane.

The most unusual challenge encountered by Certis on the project related to the egress analysis. "The new extension was built on the site of an eight-metre-wide escape stair and two-metre-wide ramp that served the existing

Convention Centre," explains Peter. "As this building was an extension of the existing Centre, the egress analysis had to include the population of the existing building as well the new. This created a requirement for a massive quantity of exit stairs that had to be rationalised by the fire engineer."

The approval process also had to recognise the safety issues for people using the existing building, which would continue to operate during construction. Part of the occupant safety strategy involved negotiation and agreement with the owners of the adjoining Rydges Hotel to allow evacuation through the hotel in the unlikely event of a fire. The building's atrium also created some challenges for both the mechanical and fire engineers in that the volume of smoke and make-up air required detailed and lengthy modeling in order to get a satisfactory result.

Currently Certis is working on many projects including the new Oral Health Centre for the University of Queensland, Circa Nundah Village development in Brisbane and the Gasworks precinct at Newstead.

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ARUP BRINGS EXPERIENCE AND CREATIVE THINKING TO THE BCEC EXPANSION

Arup was responsible for the structural, civil and facade engineering of the BCEC on Grey Street development. As the structural, civil and facade designers of the original award-winning BCEC, Arup was able to bring to the project a detailed knowledge of the original building and the substantial challenges posed by the site, as well as cutting edge design skills.

The new building spans over Russell Street, and a major rail corridor, connecting the centre to Grey Street. Arup devised a number of innovative engineering design solutions to overcome the site's challenges in a buildable and cost-effective manner, including the design of composite steel-framed floors and long-span steel trusses to seamlessly bridge over Russell Street, and long-span post-tensioned construction for the new stacked auditoria.

Perhaps the most distinguishable innovation is the spectacular eastern elevation where the unusual inclined columns are not only visually striking but are an integral part of a three storey vierendeel frame

that cantilevers from the building and supports the building's eastern concourses and Grey Street facade.

In addition to BCEC and its new Grey Street extension, Arup's Brisbane office of over 450 staff has designed many of the Brisbane's most important and admired public buildings and structures including many in the vicinity of South Bank such as the Millennium Arts Project, Kurilpa Bridge, Suncorp Stadium, and the South Bank Education and Training Precinct.

For enquiries or further information on the engineering of BCEC on Grey Street, please contact Ian Ainsworth, Principal.

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