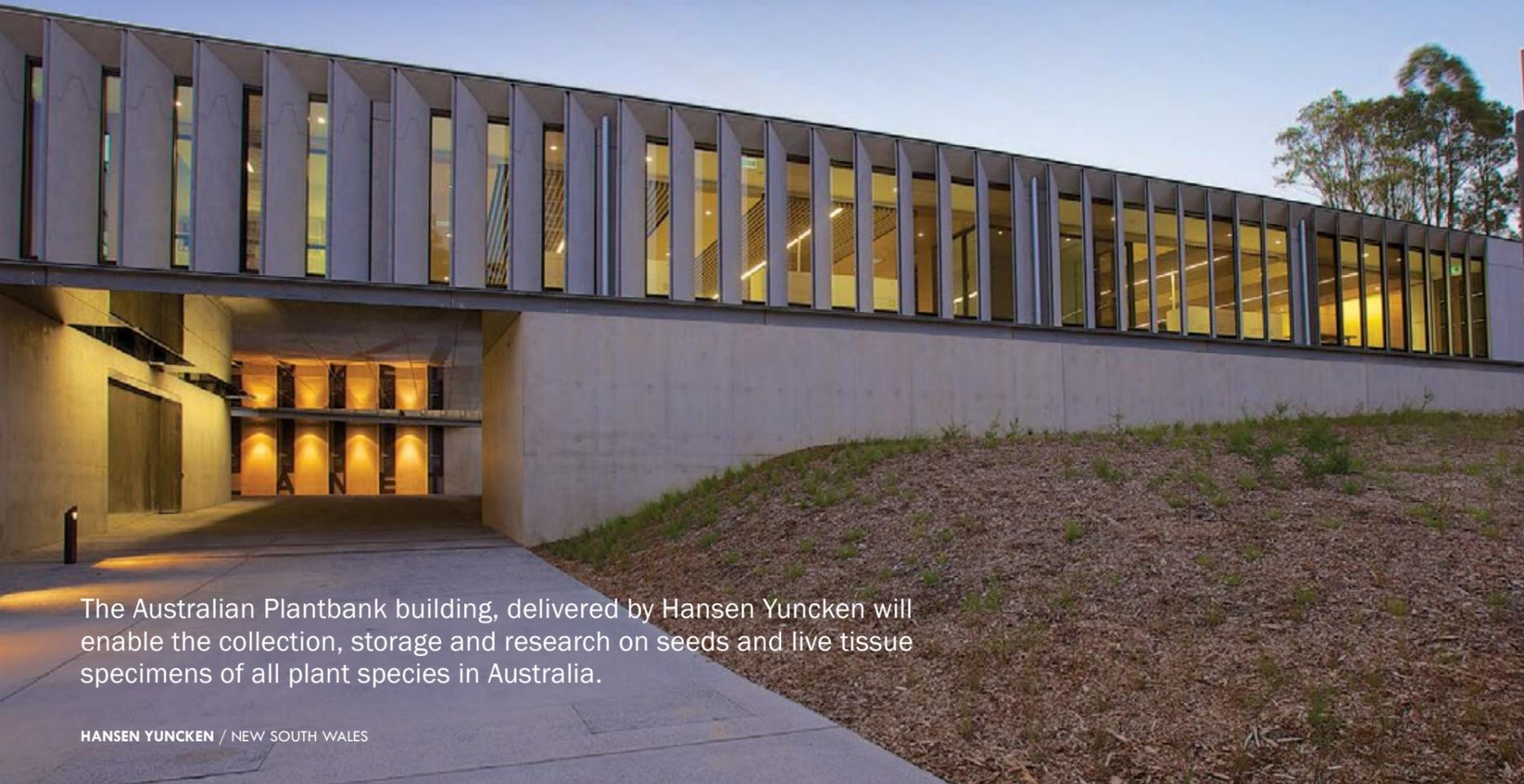


# THE AUSTRALIAN PLANTBANK



The Australian Plantbank building, delivered by Hansen Yuncken will enable the collection, storage and research on seeds and live tissue specimens of all plant species in Australia.

HANSEN YUNCKEN / NEW SOUTH WALES



The iconic Australian PlantBank building, commissioned by the Royal Botanic Gardens & Domain Trust, was completed in October 2013. Hansen Yuncken delivered the project under a \$17 million Lump Sum contract over a 12 month period.

The Australian PlantBank is located at the Australian Botanic Gardens Mount Annan in south western Sydney. The purpose of the facility is to enable collection, storage and research on seeds and live tissue specimens of all plant species in Australia. Australian PlantBank will eventually conserve 100 per cent of NSW flora. Australia is home to 14 per cent of threatened plant species globally and almost a quarter of that is in danger of becoming extinct.

Australian PlantBank will conserve plant material using cryo-storage techniques, which involves storing small sections of plant tissue long-term in liquid nitrogen. The modern 3,000sqm facility uses energy efficient thermal mass technology and is fitted out with research laboratories, vaults and seed rooms in a climate controlled glasshouse infrastructure. The facility also houses offices, libraries, meeting rooms and lecture theatres.



The building finishes are feature elements, some of which have been constructed for the first time in Australia including the stainless steel mirror panel façade and 4.5 metre toughened curved glass panels. Colour controlled concrete walls with blow holes and landscape walls that splay and change direction in a series of triangulations add to the three dimensional illusions in the building.

The facility also includes a lichen garden consisting of old sandstone pieces salvaged from the Royal Botanic Gardens in Sydney and placed in a jigsaw puzzle to add further dimension to the project. In all eight different façade products have come together to create a truly iconic facility for Australia.

The Australian Plantbank research and educational facility is open to the public for viewing of day to day research activities.

For more information contact Hansen Yuncken Pty Ltd, Level 6, 15 Bourke Road Mascot NSW 2020, phone 02 9770 7600, fax 02 9770 7601, website [www.hansenyuncken.com.au](http://www.hansenyuncken.com.au)



# THINC MANAGES CONSERVATION BY INNOVATION

Set in over 400 hectares of woodland, PlantBank was completed in October 2013.

CLIENT : Royal Botanic Gardens And Domain Trust  
 PROJECT MANAGER : Thinc  
 PROJECT END VALUE: \$20 million  
 COMPLETION : October 2013  
 ARCHITECT : BVN Donovan Hill  
 LANDSCAPE ARCHITECT : 360°  
 BCA CONSULTANT : Blackett Maguire & Goldsmith  
 PLANNING : Urbis

the research and teaching laboratories to have a sterile working environment, where research and development and professional education will be undertaken.

The conservation element requires stringent temperature control and high security access. Seeds will be housed in a central concrete vault, its walls interspersed with foam linings to enhance temperature control. The vault will have a four-hour fire rating and a high security door. Mount Annan project manager for PlantBank, John Siemon said, "PlantBank is exciting because it offers us the ability to store seed collections for over 200 years."

The seeds will be stored at temperatures between four degrees C and -20 degrees C for different species, and for some seeds, e.g., rainforest seeds such as Lilly Pilly, cryogenic storage at -196 degrees C will be necessary.

A significant amount of energy is required to achieve such low temperatures. A natural cooling device has therefore been installed to save energy expenditure. Outside air will be taken into a thermal labyrinth - an underground concrete-lined two meter square tunnel. The air is pre-cooled by up to seven degrees C as it passes slowly through the labyrinth on its way to the air conditioning unit.

Community education will be encouraged by visitor interaction and the facility offers glass-sided laboratories, explanatory text and interactive displays, as well as a theatrette, available for visitors and school group tours.

Thinc is currently working on another project for the Trust: managing the redevelopment of the Sydney Tropical Centre in the Royal Botanic Gardens; as well as a project for Charles Sturt University: building student residences across the Wagga and Orange campuses and further campus enhancement.

*For more information contact Thinc*, Level 3, 8 Spring Street Sydney 2000 phone 02 9256 4700, visit [www.thinc.com.au](http://www.thinc.com.au)

Something exciting is happening south of Sydney, something novel at the Australian Botanic Garden, Mount Annan. The Australian plant garden of the Royal Botanic Gardens & Domain Trust is the site of a new world-class seed conservation facility called PlantBank.

Designed by international architects BVN Donovan Hill, the \$19.8 million PlantBank project is managed by Thinc, a leading independent management consultancy, specialising in projects. Set in over 400 hectares of woodland, PlantBank is due for completion in Spring 2013. The contemporary sustainable facility, constructed by Yuncken, will provide fresh housing for the current NSW Seedbank, and a new and stimulating venue for research, education and community interaction.

The NSW Seedbank stores millions of seeds collected from plants all over Australia, with a focus on NSW native species and on threatened species. The Seedbank research team has a

well-established program and works closely with scientists studying native seed biology in Australia, as well as with the Millennium Seed Bank (UK). The high quality of the team's collection, processing and research supports conservation, the development of the Australian Botanic Garden, and a range of horticultural research projects and specific conservation projects, such as the Wollemi Pine.

Commenting on the project, senior consultant at Thinc, Michael Dunn said, "At Thinc, we aspire to make a difference – economically, socially and environmentally. Through this state-of-the-art, efficient facility, we are doing just that by helping to protect the future of Australian biodiversity and enabling national and international visitors to interact with leading scientists."

Incorporating all the scientific, conservation and education elements into the project, however, has not been without its challenges. The scientific element of the project requires



## FAIRVIEW HOLDS A MIRROR TO NATURE

The exterior of the new national seed bank in the Australian Botanical Garden at Mount Annan, south of Sydney, is no ordinary façade. Supplier of the cladding, Fairview Architectural has provided Vitrabond stainless steel composite panels to envelope the construction in a strong, fire-resistant cladding with a high mirror-finish, complementing the innovative design and top-drawer technology of the sustainable building.

The PlantBank project is a seed conservation facility, ensuring our botanical heritage survives hazards such as climatic extremes, weeds, pests and diseases. Seeds from 25,000 Australian native species will be stored at Mount Annan, where scientists already collect and process seeds for research and conservation. Research laboratories and teaching facilities within the new building will enable professionals from Australia, and from the Pacific region, to learn and experiment within their chosen fields, while visitors learn more about the activities undertaken within the building.

Fairview Architectural Pty Ltd manufactures and distributes a range of façade products throughout Australia. Its head office and 5,000m<sup>2</sup> manufacturing warehouse is located in Lithgow, NSW, within two hours' reach of the eastern seaboard. Fairview's stock holdings of aluminium composite are among the largest in Australia, ensuring adequate supply to its dedicated installer network. Timely distribution is assured by a company-owned transport facility.

Fairview also supplies high quality façade materials to the international construction industry, and the company has branch offices in the UK and USA. The exterior cladding produced by Fairview can be delivered to the construction site either in bulk, as it was for the PlantBank project, or as ready-to-use panels.

With over 20 years experience in the market Fairview Architectural started out servicing

the composite façade market with its product Vitrabond 4mm aluminium composite cladding. Fairview maintains that Vitrabond offers superior product performance, unlimited colours, and is very affordable considering the excellent aesthetic touch it brings as a façade.

Fairview now manufactures and/or distributes the following cladding products:

- Vitrabond aluminum composite panels
- Omega aluminum composite panels
- Vitracore aluminum honeycomb panels
- Fundermax high pressure laminate panels
- Equitone prefinished CFC
- Cerama prefinished CFC
- Trimo insulated sandwich panels
- Argeton terracotta façade tiles

Vitrabond was selected for this project because of its superior flatness and reflective qualities. The panels consists of a 3.2mm fire-rated mineral-filled core with a 0.4mm skin of stainless steel on either side. This composite forms part of the fire protection for the precious seeds held within the building and its mirror-finish reflects the surrounding woodland landscape, allowing the building to fit into its environment despite its high tech content. The panels are conceal-fixed into place on junction studs on the walls of the building.

Other unique projects Fairview have supplied in Sydney include aluminium composite cladding for the grandstands and visitor areas of the new Randwick Racecourse, the exterior cladding of the HMAS Penguin Naval Base, the White Bay Cruise Passenger Terminal and the Star City Hotel/Casino.

**For more information contact Fairview Architectural Pty Ltd, 18 Donald Street Lithgow NSW 2790, phone 02 6352 2355, fax 02 6352 3115, website [www.fairviewarchitectural.com.au](http://www.fairviewarchitectural.com.au)**

