FACT SHEET - BUILDINGS

THE NATIONAL ARBORETUM CANBERRA

Following the devastating 2003 bushfires in Canberra, the ACT Government dedicated an area of burnt-out pine forest west of the city as the site for an innovative new national arboretum.

A national design competition was held for the new arboretum and in 2005 the winners were announced - Taylor Cullity Lethlean Landscape Architects and Tonkin Zulaikha Greer Architects with their ‘100 forests and 100 gardens’ joint proposal. Their winning concept focused on the establishment of 100 forests of rare, threatened and symbolic trees from Australia and around the world.

The master plan for the site included a mosaic of gardens, outdoor sculptures, amphitheatre, cafe, visitor centre, bonsai and penjing pavilion, children’s playground, pavilion and a spacious outdoor events space.

ARCHITECTS AND LANDSCAPE ARCHITECTS

The Village Centre and Margaret Whitlam Pavilion at the National Arboretum Canberra were designed by Tonkin Zulaikha Greer Architects (Sydney). Pod Playground was designed by Taylor Cullity Lethlean Landscape Architects, who also designed the Arboretum landscape.

THE VILLAGE CENTRE

Designed by Peter Tonkin of Tonkin Zulaikha Greer Architects, the Village Centre nestles into the landscape just below the ridgeline to complement the surrounding topography. The building creates a strong sense of indoor-outdoor connection, contrasting a high arching roof and huge windows with low stone-clad walls. The Village Centre was built by Project Coordination.

Visitors enter the Village Centre through a stone-walled cutting; opening into a vaulted, light-filled space with panoramic views over Canberra, Lake Burley Griffin and beyond.

The Village Centre accommodates a range of visitor facilities, including the National Bonsai and Penjing Collection of Australia, Pod Playground, a café, restaurant, gift shop and multimedia information displays. The building won the Institute of Architects Award for ‘Best Public Building in the ACT’ in 2013.

The Architect, Peter Tonkin, explains,

“The heart of the building is its main light-filled space, which accommodates a range of functions, exhibits and activities. It focuses on the dramatic views southeast to Lake Burley Griffin and the city of Canberra, and opens to the north and south to the sweep of the Event Terrace.”
The Village Centre is available for hire from 4 pm daily for events with up to 500 guests seated and 900 guests standing. For enquiries, call Ginger Catering 02 6130 0170, email: info@gingercatering.com.au

THE EXPOSED TIMBER BEAMS
Internally, the unique timber structure combines a low environmental impact with forms inspired by the leaves and trees in the surrounding forests. The timber frame uses laminated Tasmanian oak from sustainably managed plantations and contains over 3,000 unique structural members, cut to shape from computer models, test fitted in factories in Tasmania and then erected on site.

All ten massive curved beams in the ceiling are of different lengths, and 73 solid timber struts form the key structural elements of the dome. The longest beam is 56 metres long and 12 metres high.

MATERIALS AND SYSTEMS
Mortared and gabion stone walls: Built by Stonemad stone masons using stone from nearby Wee Jasper, the stone is rapidly-cooled, olivine basalt from shallow lava flows about 25 million years ago.

Roof: More than 2,000 square metres of pure zinc sheeting, using traditional hand-formed standing seam joints provide a durable roof, interlinked with double glazed roof panels.

Roof and window glass: Double glazed sealed units with high performance solar glass and a low emissivity coating provide good natural light but reflect summer heat on the outside while retaining winter warmth on the inside of the building.

Ceiling sound insulation: Special acoustic fabric finished panels.

Floor: Honed and sealed concrete.

Cooling and air conditioning system: Extensive natural ventilation complemented by under floor hydronic heating and low-energy air conditioning.

ENERGY AND WATER EFFICIENCY
The choice of timber reduces embodied energy by nearly 90% compared to steelwork. The stone walls also have a low energy profile. Low energy lighting and mechanical systems are used throughout.
**Water system:** All water is captured from roof tops, stored in a 90,000 litre underground tank, then recycled for toilet flushing and plant watering.

**GLASS PANELS IN THE CUTTING**
The etched glass panels in the stone gabion walls lining the entrance to the Village Centre were designed by David Lancashire Design. The etchings and text on the panels tell the story of plant evolution and the formation of coal seams.

**THE MARGARET WHITLAM PAVILION**
Designed by architects Tonkin Zulaikha Greer, the Margaret Whitlam Pavilion provides sweeping views of the lake, city and surrounding mountains. The Margaret Whitlam Pavilion was built by Manteena Pty Ltd.

The Margaret Whitlam Pavilion is available for hire seven days a week for events with up to 80 guests seated and 100 guests standing. For more information, please contact Ginger Catering on 02 6130 0170, email: info@gingercatering.com.au

**MATERIALS AND SYSTEMS**
The structure is an innovative pre-fabricated arrangement of steel beams and insulating composite panels, clad externally in zinc, matching the ribbed roof of the Village Centre to the north. The limed plywood lining and the use of hardwood elements highlights the value of trees as sources of material. The space has been extensively modelled for acoustics, suiting amplified and natural voice and music.

- **Steel Structure:** Steel portal frames with composite panels. **Roof:** Pure zinc sheet, hand formed standing seam joints. **Ceiling:** Perforated acoustic-lined plywood, hoop pine veneer with limewash.
- **Windows and door glazing:** Double glazed sealed units with high performance solar glass and a low emissivity coating. **Floor:** Honed and sealed in-situ concrete.

**ENERGY AND WATER EFFICIENCY**
**Cooling and air conditioning system:** Extensive natural ventilation complemented by under floor hydronic heating and low-energy airconditioning. **Water system:** All water is captured from the roof, stored in a 90,000 litre underground tank, then recycled for toilet flushing and plant watering.
POD PLAYGROUND

Designed by Taylor Cullity Lethlean Landscape Architects, Pod Playground uses the idea of seeds as the beginning of life in the forest. Pod Playground houses giant acorns floating in the sky and enormous banksia cones nestled on the ground. A large net fort, nest swings, music-making instruments and a musical bridge offer creative learning experiences.

The playground is designed to create wonder, imagination and enchantment and to encourage activity and spontaneity in play.