

Adelaide Oval test



It's not just cricket!

Century-old Adelaide Oval is renowned as the home of cricket heroes. But cricket isn't all the splendid grounds are famous for. Completed in time for the 2003 World Rugby Cup, Adelaide Oval now has a new look. On show to sporting fans around the world are three stunning new Grandstands and a storage bunker featuring work by Adelaide precast concrete manufacturer SA Precast and Perth manufacturer Delta Corporation.

Located on the eastern side of picturesque Adelaide Oval, the two Chappell Stands and the Clem Hill Stand have vastly improved the amenity of the ground to the general public and to SACA members. Based on a 'country carnival' fairground atmosphere, the design approach for the redevelopment uses expressive colour and forms through use of banners, flags and sails, set on both off-form and architecturally finished precast structures.

The seating plats for the two Chappell Stands sit on twelve very impressive large sandblasted precast beams. Designed to withstand the axial load which is introduced through the back outrigger to the tiers supporting the roof structure, each beam weighs in excess of 31 tonnes. Each grandstand houses a tensioned fabric roof structure, between structural steel primary supports. A vertical cable at the front

Precast manufacturer

Delta Corporation

Principal Contractor

Builder/head contractor

Architect

May & Russell Architects

Engineer

AWT

www.nationalprecast.com.au



of the stands resists uplift wind pressures on the roof structure and mitigates dynamic response.

The beams were cast flat on a prestressed concrete base with steel shutters. With six of the beams being heavily reinforced with a 200mm by 200mm slot along the top, the beams required specialist design. Given the enormity of the beams, lifting and positioning posed a challenge. The beams were transported to site on a special heavy trailer, sitting horizontal in the frame during transport. On arrival one end was marginally lifted, a support pin removed, and then one end of the beam was dropped down into an inclined position. From there, the mobile crane was rigged to lift the precast beams into their final position over the starter bars from the precast columns below (refer Diagrams 1 and 2). The procedure worked very smoothly, confirming that in the hands of capable people, precast concrete erection poses no obstacle to the achievement of a magnificent result.

The Clem Hill Stand, otherwise known as the 'South Mound' Stand, includes two primary suspended hollowcore floors, being the mezzanine floor within a storage bunker and the platform level floor beneath the fabric roof. Precast concrete retaining walls have been erected along three faces of the bunker. The 'North Mound' storage bunker comprises a single suspended hollowcore floor at the platform level, which will accommodate future terracing.

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