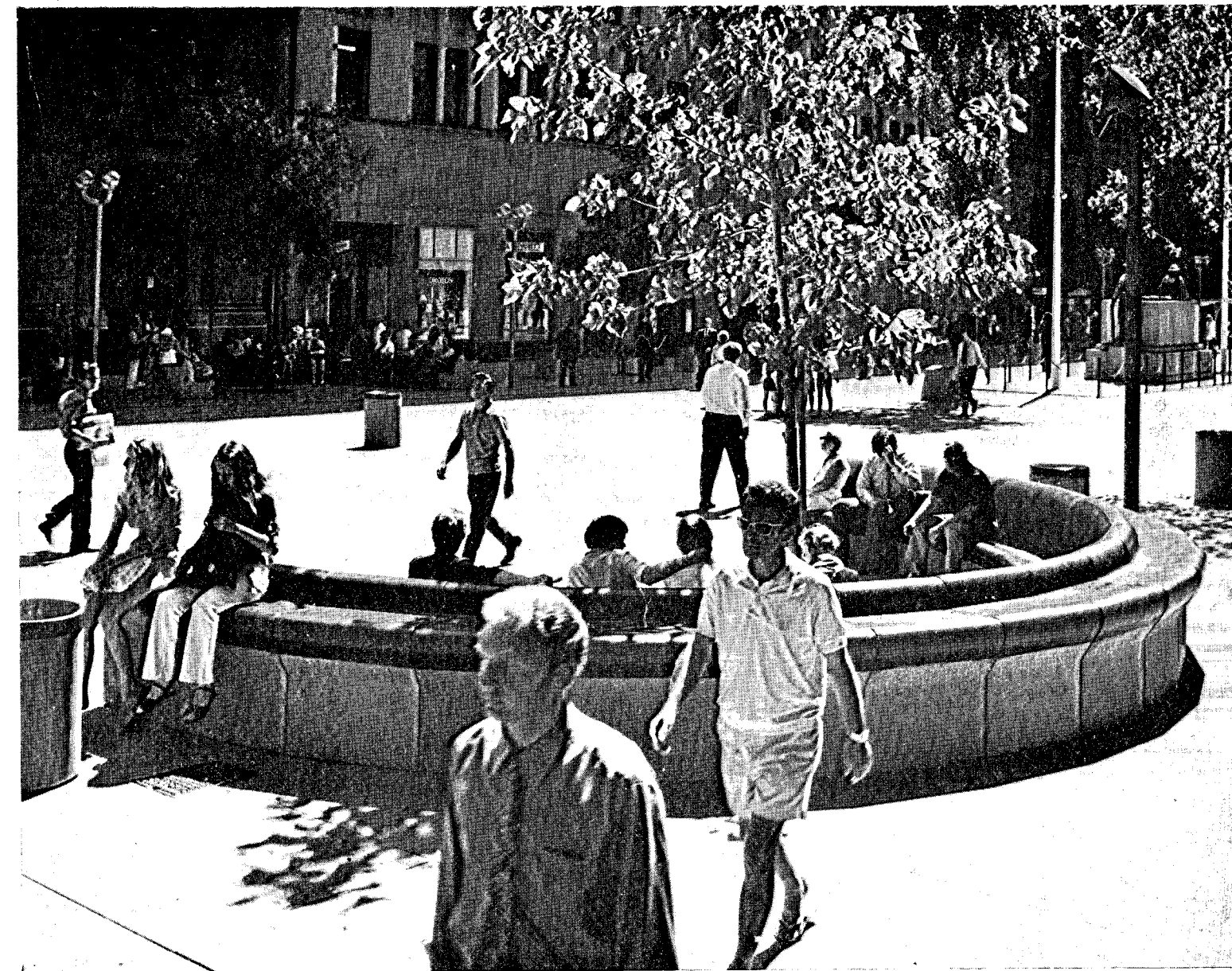


Colour and vitality is given by furniture, flower stands, kiosk and other fittings. Of particular interest is the seating which represents a complete rethink of seat design. It employs a two level, back-to-back arrangement, the upper level for casual resting and the lower level for 'armchair comfort' with a well-shaped profile. The 'bulky' appearance is complementary to the scale of the surrounding buildings. A detachable fiberglass seating area covers the precast concrete which is the basic material of the seats. Concrete was chosen because of its durability and weight as this avoids the necessity for it to be fixed to the paving and hence grants more flexibility to the use of the plaza. To facilitate moving the seats, a pair of slots are incorporated at the base level to accept the arms of a fork-lift truck.

The seats form semi-circles with a 20 ft. (6 m) internal diameter, each seat comprising a 10° segment approximately 2 ft. (0.6 m) long. This gives a flowing arrangement to the seats and forms a series of alcoves restricting the impact of pedestrian flow about persons seated in them.

The results show that with some forethought existing roadway areas can be adapted as pedestrian plazas at modest cost without interfering with existing services and utilities. In the case of Martin Place, the total cost was in the vicinity of \$400,000, the paving accounting for some \$250,000 of this sum.

Photographs Staff Photographer

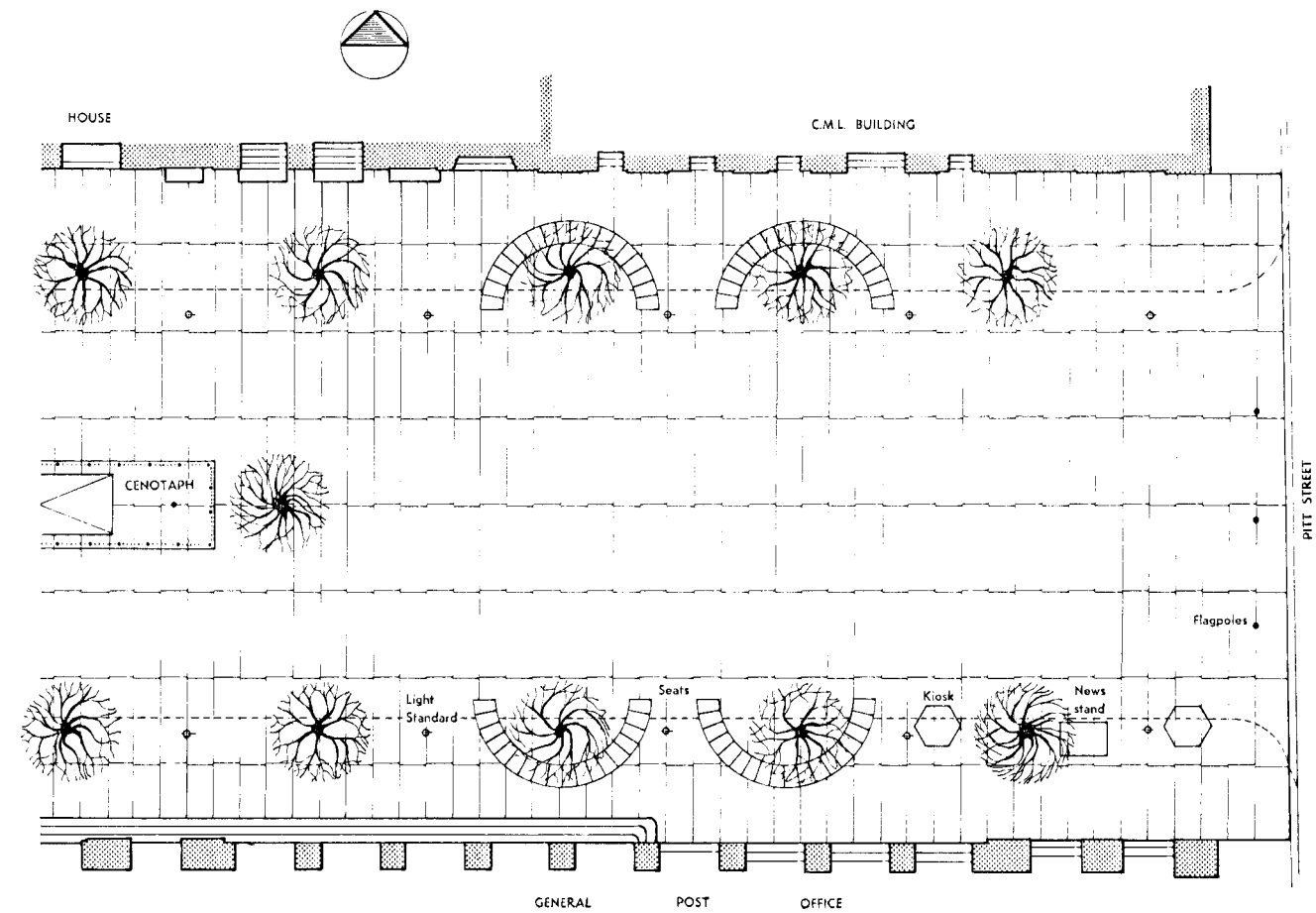
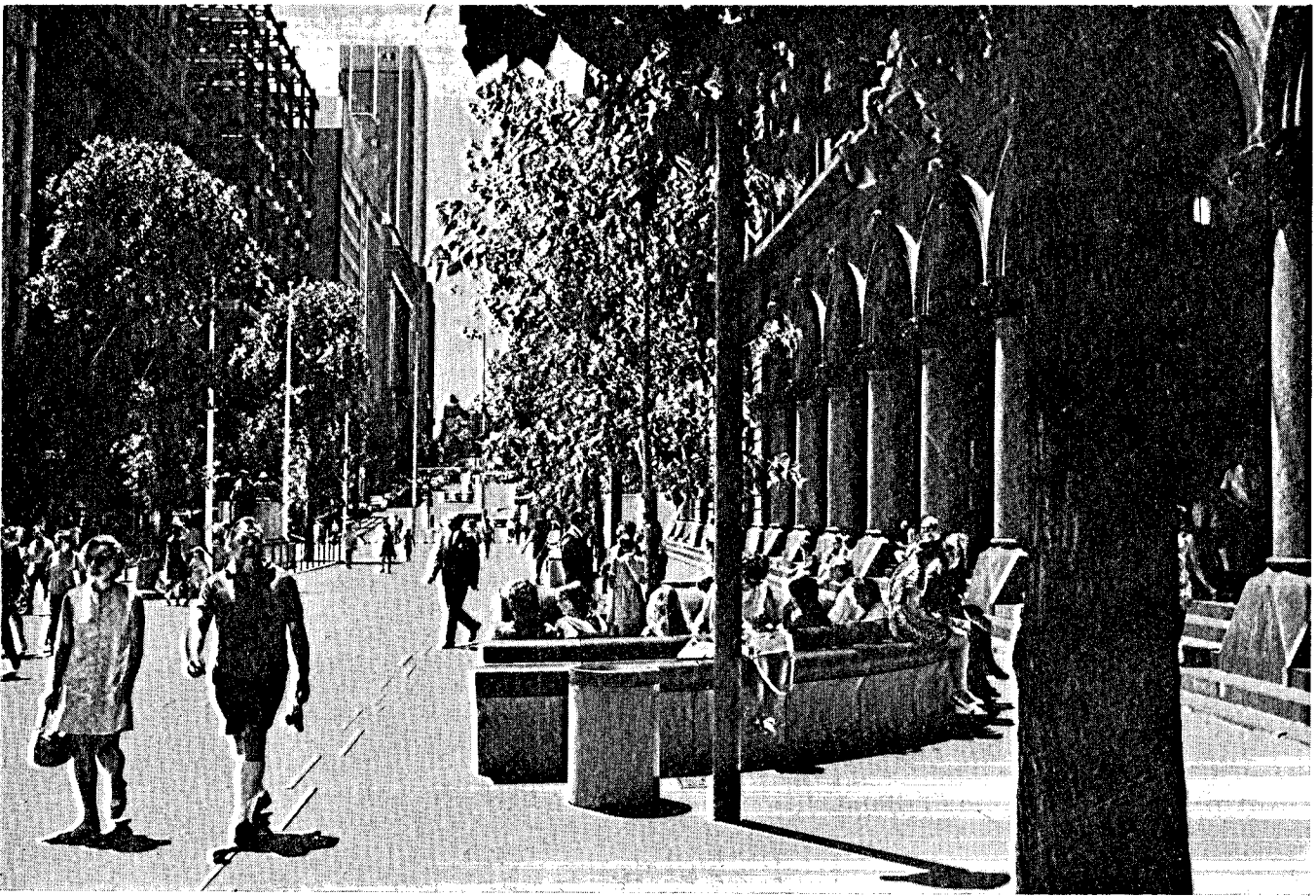
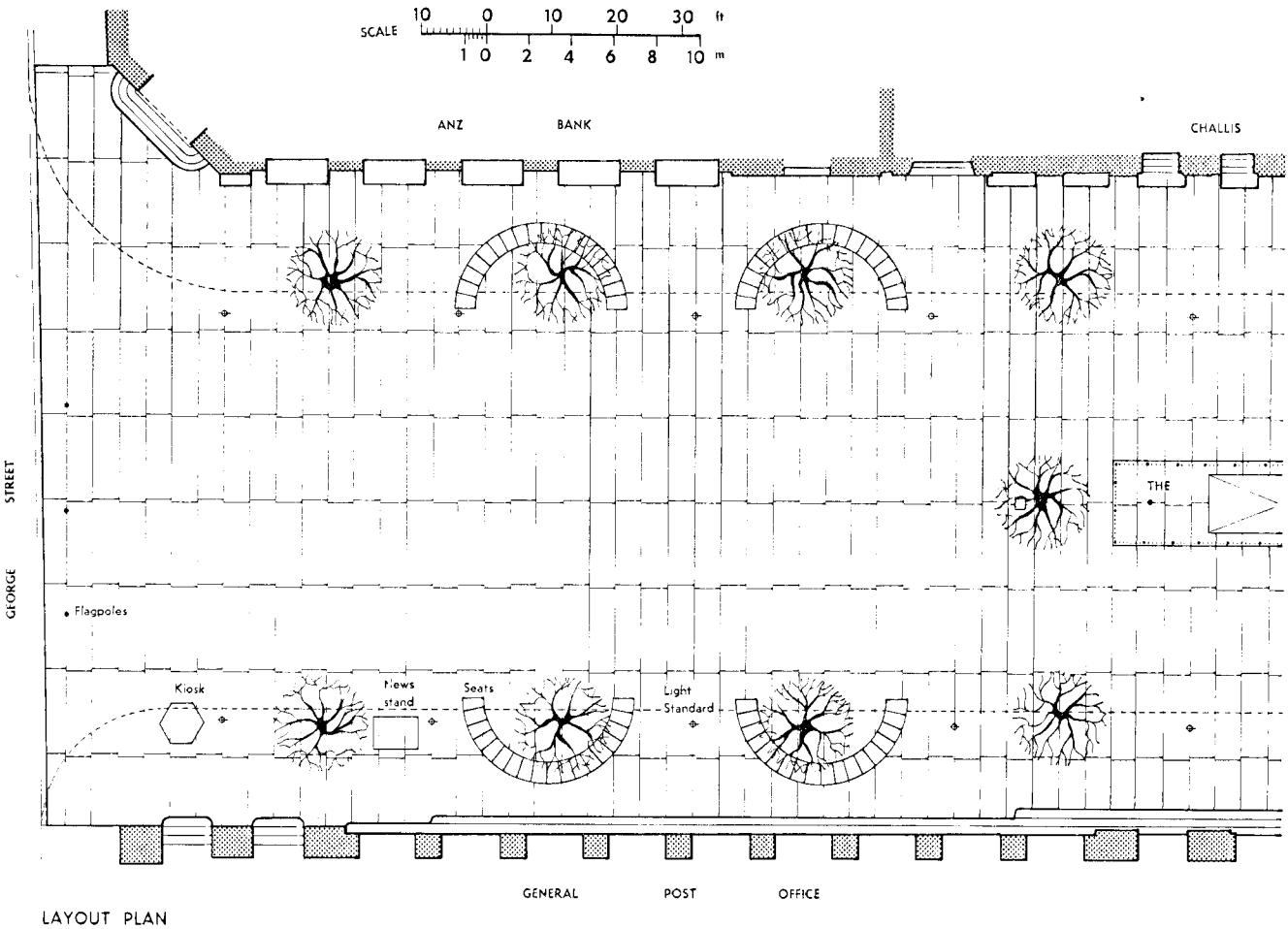


Martin Place Pedestrian Precinct

Martin Place Pedestrian Precinct

Existing roadway area converted to a pedestrian precinct leaving all services, including drainage, intact and accessible, by use of precast suspended paving slabs.

Location — Between Pitt Street and George Street.
Client — Sydney City Council.
Architects — Clarke Gizzard Pty. Ltd.
Engineers — City Engineers Department.
Street Furniture Design — Nielsen Design Associates.
Precaster — Melocco Bros. Pty. Ltd. — paving slabs.
Fabbrostone Pty. Ltd. — Street furniture.
Main Contractor — Loveridge & Hudson Pty. Ltd. (A Unit of Bluemetal Industries).



The achievement of the Sydney City Council in developing Martin Place as a traffic-free plaza is to be applauded and represents a further triumph for the pedestrian in the city. The Plaza — approximately 380 ft. x 100 ft. (116 m x 30.5 m) extends for a block from George to Pitt Streets and is bounded on the south side by the G.P.O. with its full length colonnade, and on the North side by similar mellow stone buildings. The project is significant because it has shown how these facilities can be provided at a reasonable cost by utilising an existing roadway area.

The typical slabs were cast in steel forms in banks of five while there was one special form for non-typical slabs. The ¾ in. (19 mm) topping layer, containing crushed pink Tarana granite, was placed in the mould first with the structural concrete being placed some 30 minutes later. A 6 hour overnight steam curing completed the 24 hour production cycle. Upon removal from the forms the faces of the slabs were honed and acid etched resulting in a uniform, coloured, non-slip surface.

The construction procedure commenced with marking out the positions of the bearing pads with saw cuts on the road surface and excavation to the road base level. At first precast bearing pads were employed but these experienced cracking due to uneven bearing. Insitu pads of 3,000 p.s.i. (20.7 MPa) concrete were then used. The slabs were laid on a mortar levelling bed with a 6 in. (152 mm) staggered end pattern and ¼ in. (6.4 mm) gap all round. Handling of the slabs was by a rubber tyred mobile crane with an adjustable spreader beam.

Particular problems that had to be faced before any real design work could be commenced included the question of the effect of traffic flows, requirements of the various authorities regarding access to the existing utilities and provision for their future development, drainage, access to the adjacent buildings by the fire brigade and the preservation of a sense of traditional reverence in the vicinity of the cenotaph which is located in the centre of the area.

The solution adopted for the paving is ingenious as it overcomes effectively the problems of access to utilities and drainage. The paving slabs are precast and supported above the roadway on small concrete pads. There is a ¼ in. (6.4 mm) gap between adjoining slabs on all sides. This enables the slabs to be removed for maintenance of services and allows for the individual drainage of each slab. The run-off is then carried away by the existing road drainage system which is left intact below the paving.

The paving extends from building alignment to building alignment and to the gutter line of George and Pitt Streets where stone kerbs matching the existing kerbs are used.

Tree trunks are sleeved through circular openings in the slab, infilled with iron grate surrounds which are expendable as the trunk diameter increases. Lighting is by a pleasantly designed lighting standard which is making its appearance in several similar applications in Sydney.

A typical paving slab is 12 ft. 11¼ in. x 3 ft. 11¼ in. x 6¾ in. (4 m x 1.2 m x 171 mm), comprised of a 6 in. (152 mm) structural slab and a ¾ in. (19 mm) topping. The thickness is controlled by the requirement that fire engines and ladder trucks must be able to traverse the paving involving loads of the order of 23,000 lb. on a 12 in. square bearing area (3,425 kg. per 100 mm sq.). There are two layers of reinforcement in the slabs with 1¼ in. (32 mm) clear cover, while the structural concrete has a minimum F'c of 5,000 p.s.i. (34.5 MPa). Cast into each slab are 4 lifting ferrules of the polypropylene type with a 1 in. (25 mm) diameter bronze ferrule cap at the surface.

The treatment of the Cenotaph is noteworthy for its restraint and simplicity. A raised surround matching the paving slabs is surmounted by a removable loose chain barrier.

