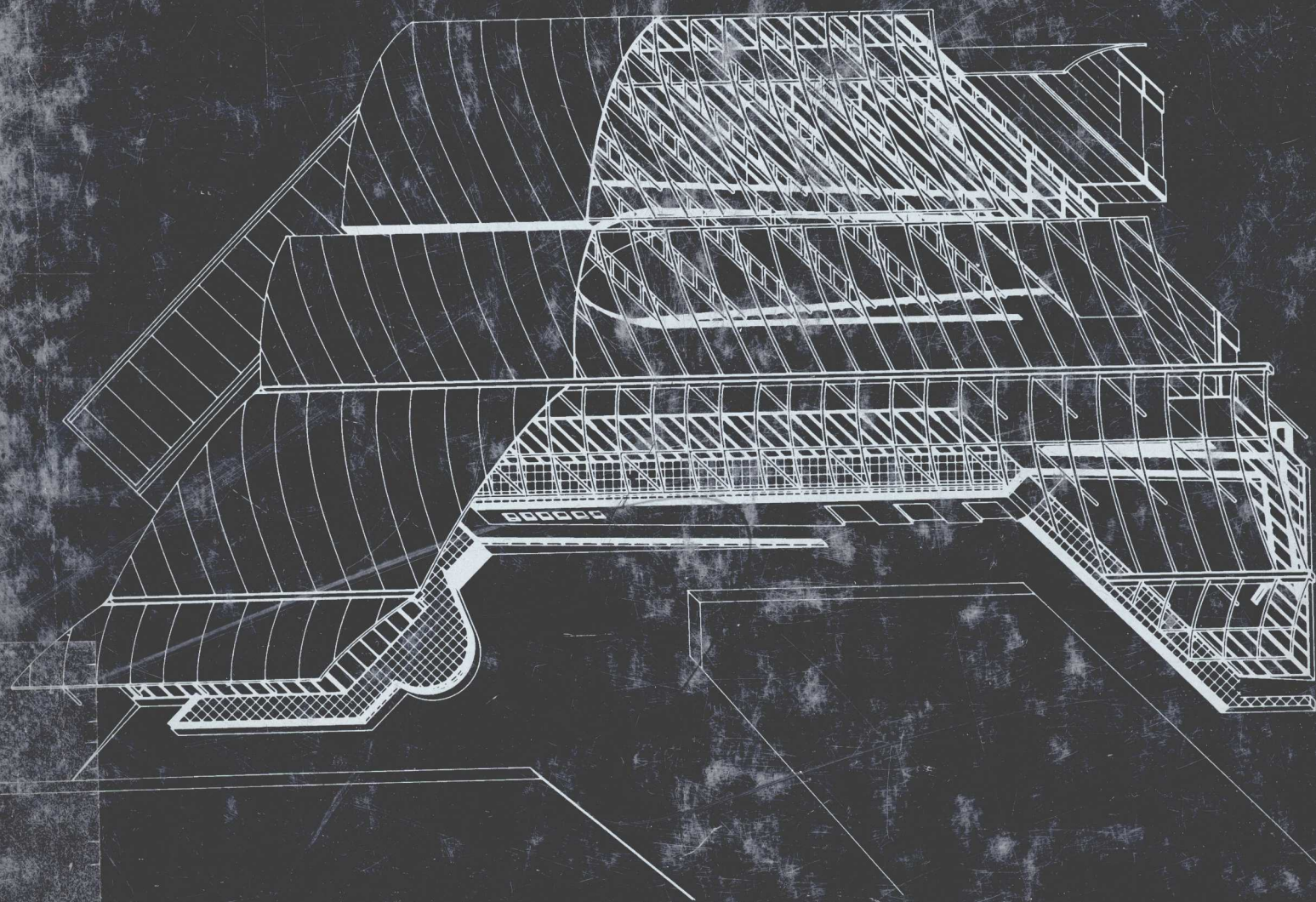


菲利浦·考克斯 及其建筑设计事务所

当代世界建筑经典精选
Selected and Current Works

COX ARCHITECTS



世界图书出版公司

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Published jointly in Australia in 1997 by
The Images Publishing Group Pty Ltd
Craftsman House

The Images Publishing Group Pty Ltd
ACN 059 734 431
6 Bastow Place, Mulgrave, Victoria 3170
Telephone (61 3) 9561 5544 Facsimile (61 3) 9561 4860

Craftsman House
Tower A, Level 1
112 Talavera Road, North Ryde, NSW 2113

First published 1994 by The Images Publishing Group
Second edition 1997

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National Library of Australia Cataloguing-in-Publication Data

Cox architects: selected and current works.

2nd ed
Bibliography.
Includes index.
ISBN 1 875498 78 8
(The Images Publishing Group Pty Ltd)
Master Architect Series ISSN 1320 7253
(The Images Publishing Group Pty Ltd)

ISBN 90 5703 74 16 (Craftsman House)

1. Cox, Philip, 1939-. 2. Cox Architects. 3.
Architecture, Modern - 20th century - Australia. 4.
Architecture, Australian. 5. Architects - Australia. I.
Craftsman House. II. Title. (Series : Master architect
series).

720.92

Edited by Stephen Dobney
Designed by The Graphic Image Studio Pty Ltd,
Mulgrave, Australia

Printed by Everbest Printing in Nansha, Panyu, China

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Introduction

An Essay

By Philip Cox & Michael Rayner

The work of Cox Architects covers a wider ambit than possibly any other practice in Australia. It represents 30 years of architecture, beginning with domestic projects designed at the height of the Sydney School, a movement which perhaps created the only collectively identifiable contemporary architecture yet to emerge in Australia. This architecture sought to create a spirit of design relevant to the country and its regional influences. Many of its architects, however, floundered in direction and the “school” dissipated. Throughout our lifespan, we have steadfastly maintained the promotion of Australian design, while constantly pursuing new attitudes and techniques to achieve that aim.

Our method for sustaining contemporary relevance is to persistently review and understand the history of the country’s architecture. Barely 200 years old, it has been subjected to many influences, firstly from Britain, then America, then internationalism generally. A better understanding of Aboriginal cultural history and closer ties with Australia’s Asian neighbours are now being fostered. Australia, like many countries, is becoming increasingly multicultural; however, the cultural forces which shape our society have to adapt to a land distinct from any other in climate, geography and history. The Australian continent is a vast island of dramatically varied terrains, each demanding widely divergent solutions which lend themselves to innovation and improvisation.

The roots of the architecture illustrated in this book are in the environment, both natural and built, and in the Australian vernacular. The early woolsheds and barns, while being directly responsive to their function, the landscape and the climate, were remarkably innovative in form and they nearly always expressed their structure. Our architecture is an intuitive response to this unpedigreed architecture, recognisable as having an innate spirit of place and the potential for evolving into a contemporary architecture of enormous spirit and vitality. We have often reinterpreted it to respond to contemporary and urban contexts, to newly available technologies and to emerging issues, but a constant course has been steered toward solving problems of design in a direct and honest manner with poetic qualities derived from structure and envelope rather than from applique.

Ours was one of the first practices in Australia to embrace the relevance of the vernacular. We endeavoured to translate its romantic qualities into a more human architecture than was generally prevalent in the early 1960s, our earlier buildings being rather more direct interpretations than the later.

The C.B. Alexander Agricultural College at Tocal perhaps epitomises this quest. It is a brick and timber structure reflecting many aspects of earlier precedents—craftsmanship, open additive planning, structural expression and repetition, use of indigenous materials, and harmony with the landscape. It is, we believe, an architecture which has stood the test of time, remaining relevant some 30 years later.

One of the most satisfying pursuits has been in steel structures. As with the use of timber, there has also been a characteristic Australian tradition in the use of steel, in the early wind devices, prefabricated sheds and water towers. They tended to have an extraordinary skeletal quality, using minimal steel structure, and most were simply clad in corrugated iron. When we began using steel, we felt that its versatility and expressive qualities had not been fully explored in contemporary Australian architecture.

The National Athletics Stadium in Canberra and its associated National Indoor Sports and Training Centre were the first of our schemes to explore the minimalist use of steel. In the stadium, we endeavoured to create the effect of a roof hovering over the landscape using masts and cables to lighten the structure in a way not possible with timber supports. For the Sports and Training Centre, we used great sentinel steel columns and supported the roof on cables slung between them. In both buildings, there is a delight in seeing the structural forces at work, clearly displayed, yet with a grace and ease belying their complexity.

These projects were in many ways catalysts for later schemes in which other potentials of steel have been explored. Despite its hardness, steel is surprisingly malleable and we found that we could easily mould, sculpt and carve out forms to reflect or express a particular context. The cascading vaults of the National Maritime Museum, for instance, are dramatically different from the skeletal frames suspending the Sydney Exhibition Centre, yet both are designed to convey maritime themes while reflecting the industrial context of Pyrmont. The National Tennis Centre's emblem is its movable steel roof, but our main objective was to reflect the neighbouring skeletal building peaks such as on the Victorian Arts Centre, the city towers and the lighting stanchions of the Melbourne Cricket Ground. One of the most exciting explorations into the possibilities of steel has been for the Museum of New Zealand competition of 1988, where the materials and forms were used to resolve immediate relationships and to create metaphors for less tangible connections, especially those relevant to Maori culture.

Another project that became a catalyst for later work, and in a sense epitomised our pursuit of contemporary indigenous idiom, was Yulara Tourist Resort at Uluru (Ayers Rock). Located in the desert heart of the country, remote from other population centres and from conventional services, this project required qualities of improvisation for which Australians have a recognised reputation. The ingredients were there to create a characteristic Australian town physically, socially and culturally.

Yulara differs from archetypal Australian towns which traditionally are main street towns accessible by vehicle. The township of Yulara winds gently through a serpentine valley between sand dune ridges, with movement between components being entirely pedestrian. The design elements respond to the prevailing conditions, with solar collectors over much of the roofscape providing energy to the town, and double layers of fabric membrane cooling internal spaces. Hypar-shaped tent structures, developed for protecting pedestrian ways, are simple shade devices recalling early lightweight shelters.

The project reinforced a number of concerns which we had considered important for many years. These included the need for energy conservation, for landscape and colour to reflect immediate context, for preservation of natural landscape, and for the integration of art and architecture. Colour is used to particular advantage at Yulara: for example, the reds and ochres of the desert are used on walls and bases to camouflage their presence but are graded from dark to light towards the roofscapes where stark white sail structures reflect the cumulo-nimbus cloud formations characteristic over Ayers Rock.

Yulara reinforced the practice's reputation for being able to handle large projects in both master planning and architecture. It has an urban structure, a resonance with the landscape, and it involves innovation and originality. The principles used to form Yulara can be seen in the Sea Cities projects for Kuwait, a series of "urban" islands interspersed with mangrove islands which filter the water and generate natural ecosystems. These islands are created by excavating the mudflats spilled out by the Tigris and Euphrates rivers. The effect is that of a "green" city contrasting with the desert interior, using ecology that once existed in the Persian Gulf.

Throughout the world, existing cities are simultaneously re-evaluating how far development should spread. Many cities are losing their historic identity as previously separated urban centres merge to form amorphous conurbations. In Australia, were it not for national parks, Sydney, Newcastle and Wollongong would undoubtedly merge, and in Brisbane, the Gold Coast and Sunshine Coast have already spread to join the metropolitan area. Inner urban renewal has become the late 20th century focus, even though we are now witnessing some poor outcomes overseas, especially where congested traffic and transport remain unrelieved. In Sydney the Pyrmont renewal project, following Darling Harbour's revitalisation, and in Brisbane the Newstead Teneriffe urban renewal project, are major initiatives with which our practice is involved. Both are planned as identifiable urban communities rather than as mere extensions of city centres. While principally intended to revitalise inner urban fringe areas through residential activity, emphasis is placed upon retaining existing landscape and historic fabric, much of the latter being converted for retail, employment and educational facilities serving the precincts.

The housing projects illustrated in this book represent a variety of explorations into appropriate forms and relationships, a key objective being to "de-institutionalise" public housing. A selection of both private and public urban housing is illustrated, showing little distinction between them. The primary emphases are on the definitions of private and communal space, the interface with the public street, and the opportunity for individual self-expression by the occupants. Part of our search is for forms and symbols with which people already identify and which they value, sometimes at the expense of our own predilections.

There is a difference in designing individual houses, although many issues such as context and environment remain important. Working directly with clients and eventual occupiers provides us with the opportunity of fulfilling those aspirations most important to them, and it is one of the reasons that we maintain a regular contingent of this type of work. A considerable degree of experimentation is also undertaken, sometimes as a precursor to other large projects, in other cases in relation to theories being developed.

One of our current important projects involves the Sydney 2000 Olympic Games venues. Our present involvement includes the sports facilities master plan, the aquatic centre for swimming events and the support stadium for the major athletics venue. These projects are genuine tests of ingenuity since the site, Sydney's old abandoned abattoirs in the middle of the city's western suburbs, offers little environmental encouragement. Our proposal re-creates a rural Australian landscape which typically comprised undulating, meandering hills and long, winding tracks. This character is repeated by moulding the flattish expanse into a series of serpentine berms and pathways in patterns reminiscent of traditional Aboriginal dream trails, in a deliberate attempt to convey to the rest of the world qualities that are inherent in Australian culture and environment.

Although large, the buildings are submerged within the topography so that only the roofscapes are apparent from beyond the immediate site. Steel structure is used in as light a filigree as possible, so that the roofs appear to hover over, and seem unconnected to, their bases. While the landscape itself is an abstraction of typical regional geography, these buildings are intended to convey broader national themes about the relationship of architecture and landscape.

Several previously unpublished works are illustrated here which we believe maintain our philosophies but explore new directions in design. These include the Brisbane and Cairns convention centres in Queensland. Their difference in form, both from each other and from their Sydney equivalent, also demonstrates our concern for designing to context. A number of similarly exciting projects are occurring in Western Australia, Victoria and South-East Asia. They include large-scale master planning, the work at Joondalup City Centre near Perth, and the Singapore Telecommunications Tower.

For us, Australia has an irrepressible identity. It is the world's largest island country and from the air, the undulating waves which roll into its eastern seaboard from the Pacific Ocean seem to continue across the interior in the red sand dunes, before re-emerging in the Indian Ocean westwards. The diversity of the country's environments is apparent from south to north—the cool rainforests and rugged terrain of Tasmania, the dramatic and rugged coastline of Victoria, the savanna lands and seemingly endless ranges lining the east coast, the brutal and sparse desert interior mysteriously pockmarked by huge rocks and canyons, and the humid sweltering tropics through Queensland and the north, are all distinctive.

Our contention is that the culture of a people reflects the character of the landscape. The vernacular architecture of the last century well illustrates this point as it not only adapted itself to different regions but reflected its inhabitants' lifestyles. The veranda, or perimeter space around buildings, for example, has become symbolic of the Australian character. The landscape and climate, alien to the early settlers, generated qualities of personal character for which Australians are renowned and are repeatedly described in both historic and contemporary literature. No doubt some viewing this book will see an extraordinary diversity of form and character; others, hopefully, will see a thread woven through the work demonstrating a rapport between the natural and the built environment. Consistently, we search for solutions that are both pragmatic and poetic, and which advance the art of architecture.

Selected and Current Works

Public and Commercial Buildings



- 14 Sydney Exhibition Centre
- 20 Australian National Maritime Museum
- 26 Sydney Aquarium
- 30 1 Pacific Highway
- 32 Australian Pavilion
- 34 The Cornerstone
- 36 Joan Sutherland Performing Arts Centre
- 38 Westralia Square
- 40 Gloucester Street Offices
- 42 Museum of New Zealand
- 46 Joondalup Rail Station
- 50 Brisbane Convention and Exhibition Centre
- 54 Singapore Telecommunications Tower
- 56 Cairns Convention Centre

Sydney Exhibition Centre

Design/Completion 1985/1988

Darling Harbour, Sydney, New South Wales

Darling Harbour Authority/Leighton

Constructions

25,000 square metres plus 1,000 car spaces

Concrete base and steel superstructure, steel cladding panels and glazing

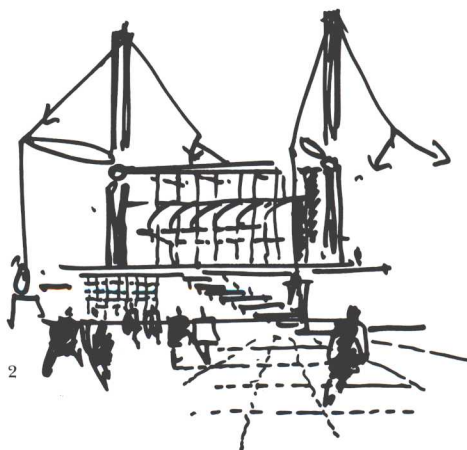
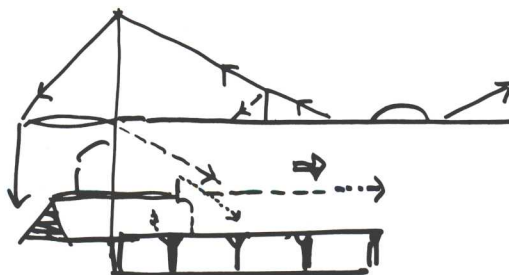
The Sydney Exhibition Centre was the first major exhibition centre to be built in Australia and it comprises five interconnected halls, each of 5,000 square metres. It is one of three public buildings undertaken by the practice in the Darling Harbour Redevelopment Area adjacent to Sydney's central business district and constructed to celebrate Australia's 1988 Bicentenary.

The concept for the centre principally arose from four objectives. The first was to continue the tradition of structurally innovative exhibition centres dating back to Joseph Paxton's steel, wood and glass Crystal Palace in London. The second was to establish an integral relationship with a new park stretched along one frontage. Thirdly, it sought to convey a distinctive maritime theme conducive to a historic harbour port, and finally it needed to achieve 100 metre spans without resulting in a massively scaled edifice.

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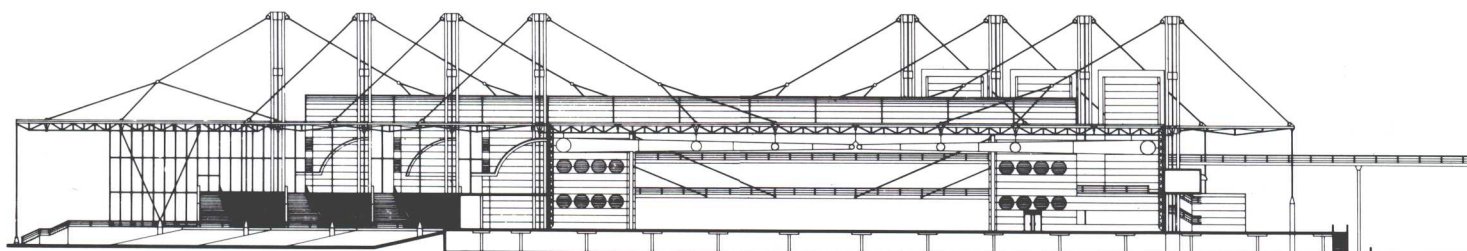


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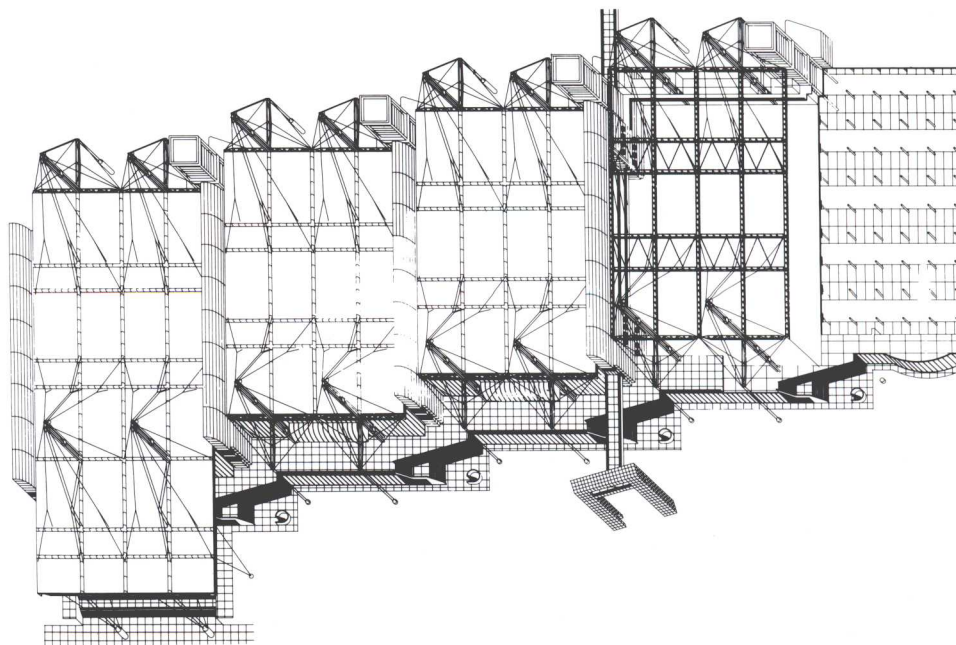
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- 1 Aerial view
- 2 Preliminary sketches
- 3 End elevation
- 4 View across gardens

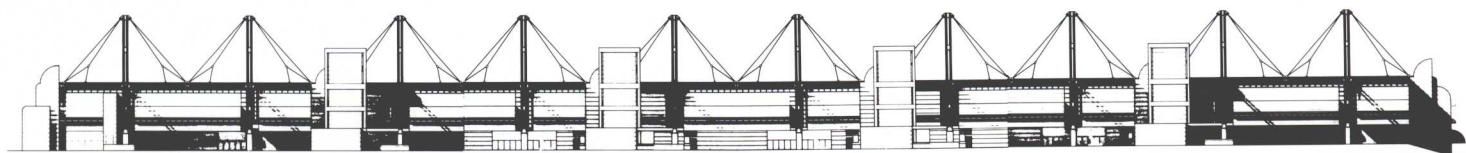


These objectives were met by a continuous mast and cable structure, proving to be economical and also allowing a low horizontal scale to be developed.

A characteristic aspect of the centre is the staggering of the halls, which both articulates the park face and makes more efficient use of the structure. The total project, from design concept to completion, took only 32 months.



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