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**New International Selection**  
**Full Documentation Fiche 2003**

International working party for  
**documentation and conservation**

of buildings, sites and neighbourhoods of the  
**modern movement**

**composed by national/regional working party of: NEW ZEALAND**

0. Picture of building/ group of buildings/ urban scheme/ landscape/ garden



depicted item: Lyttelton Tunnel Administration Building  
source: Peter Beaven [taken by Pat Dolan, Mannering and Associates]  
date: 28 August 1964

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## **1. Identity of building/ group of buildings/ group of buildings/ landscape/ garden**

### **1.1 Data for identification**

current name: Lyttelton Tunnel Administration Building

former/original/variant name: Christchurch-Lyttelton Road Tunnel Authority Building/Lyttelton Tunnel Control Building

number(s) and name(s) of street(s): 1 Bridle Path Road, Heathcote Valley

town: Christchurch

province/state: Canterbury

post code: 8022 block: lot: Road Reserve. Part Lot 3 DP2907

country: New Zealand

national topographical grid reference: BX 24

current typology: TRC, COM (Transport and Communication, Commercial)

former/original/variant typology: TRC, ADM (Transport and Communication, Administration)

comments on typology: With the elimination of tolls for use of the Christchurch-Lyttelton Tunnel and the demise of the controlling authority the building use has changed from one dedicated solely to the administration and operation of the tunnel to tunnel operations and leased space used by small businesses in the former administrative section of the building.

### **1.2 Status of protection**

protected by: Listed as heritage item in Christchurch City Council City Plan; Registered as Historic Place by New Zealand Historic Places Trust

grade: CCC Group 3; NZHPT Register, category 1

date: CCC, May 1999; NZHPT, 14 May 2008

valid for: CCC, whole building; NZHPT excludes toll plaza canopy

remarks: The exclusion of the Toll Plaza canopy from the NZHPT registration was made after representations by the building owner, Transit New Zealand, the Crown Entity which also owns and operates the Christchurch-Lyttelton Tunnel and its associated roadway. The reason given by Transit New Zealand for not including the canopy in the registration is that it intends to demolish the canopy because it is an earthquake and operational risk. It should be noted that the Historic Places Trust has a policy of registering buildings as a whole, although this policy does not seem to have been applied in this instance.

### **1.3 Visually or functionally related building(s)/site(s)**

name(s) of surrounding area/building(s): Lyttelton Tunnel access motorway

visual relations: The building stands alongside the roadway and extends below the level of the road; the Toll Plaza canopy extends across the road perpendicular to the main building.

functional relations: The building is situated to allow observation of the road and the tunnel entry from the control room situated adjacent to the canopy. It also incorporates a garage for the vehicles used by tunnel control staff as well as administrative space for the former tunnel administration authority. It formerly provided facilities for the collection of tolls from traffic using the tunnel. In addition it incorporates facilities for staff who work in the building.

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other relations: The building stands at the Heathcote end of the Bridle Path, the foot path that crosses the Port Hills which separate the port of Lyttelton from the Canterbury Plains and the city of Christchurch. This track is of great historical importance as it was the route to Christchurch and the Canterbury Plains taken by the first British settlers to Canterbury during the early settlement period from 1850. The road tunnel is also associated with the Lyttelton Railway Tunnel, which was built in the 1860s.

## **2. History of building(s) etc.**

### **2.1 Chronology**

*Note if the dates are exactly known (e) or approximately estimated = circa (c) or (±)*

commission or competition date:

design period(s): 1962-63

start of site work: February 1963

completion/inauguration: May 1964

### **2.2 Summary of development**

commission brief: to provide accommodation for the administrative functions of the Christchurch-Lyttelton Road Tunnel Authority, including a board room and offices; to provide toll collection facilities for users of the tunnel; to provide office, control room and recreational facilities for operational staff, and garaging and maintenance facilities for tunnel control vehicles.

design brief: to provide a building that would be commensurate with the importance of the tunnel project as a major engineering achievement and as a new gateway to Christchurch and the Canterbury region, while also meeting the requirements of the commission brief.

building/construction: cast in-situ reinforced concrete frame; pre-cast reinforced concrete panels; copper roofing and timber frame and cladding to upper stair and penthouse.

completed situation: adjacent to State Highway 74 at the junction of Bridle Path Road and Tunnel Road (SH74)

original situation or character of site: lower slopes of the Port Hills at the head of the Heathcote Valley, covered in grass and tussock vegetation.

### **2.3 Relevant persons/organisations**

original owner(s)/patron(s): Christchurch-Lyttelton Road Tunnel Authority

architect(s): Peter Beaven

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landscape/garden designer(s):

other designer(s):

consulting engineer(s): William Lovell-Smith

building contractor(s): John Calder Ltd

## **2.4 Other persons or events associated with the building(s)/site**

name(s):

association:

event(s):

period:

## **2.5 Summary of important changes after completion**

type of change: removal of toll booths after the elimination of tolls in 1979; progressive removal of the original furniture designed by Peter Beaven for the use of the Tunnel authority and staff; relocation of internal partitions to accommodate changes of use; replacement of some window frames to original design but allowing for double glazing. (2004)

date(s): various, including 1979 & 2004

circumstances/ reasons for change: cessation of toll collection; response to changing use and maintenance requirements

effects of changes: Removal of tollbooths is significant; loss of furniture is significant; replacement of window frames and repositioning of internal partitions largely minor.

persons/organisations involved: Transit New Zealand; consultation with NZHPT

## **3. Description of building(s) etc.**

### **3.1 Site/building character**

*Summarize main character and give notes on surviving site/building(s)/part(s) of area.*

*If a site: principle features and zones of influence; main elements in spatial composition.*

*If a building: main features, construction and materials.*

The building was constructed using a cast in-situ reinforced concrete frame of square columns and paired beams. The upper level of the building is clad in outward-sloping pre-cast concrete panels to create a distinctive tub-like shape to this level. There is a central

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staircase consisting of pre-cast elements with over scaled timber handrails. Above the stair is a timber framed and copper-sheathed canopy with a monopitch roof. Adjacent to this, and situated on the upper roof deck, is a timber-framed and copper-clad tea and recreational space for tunnel operations staff. The monopitch roof of this room is the reverse of that over the stair. On the lower level the reinforced concrete frame is exposed. The parking garage, which extends the building to the east, has a roof supported on post-tensioned, laminated timber beams. The toll plaza canopy, which extends from the centre of the building to the west, is a reinforced concrete shell vault of folded and ribbed elements. It is supported on slender, reinforced concrete columns at both ends and by steel posts at its centre.

### **3.2 Current use**

of whole building/site: Operational control of the Christchurch-Lyttelton Tunnel; office and workspace for small businesses.

of principal components (*if applicable*):

comments: The continued use of significant parts of the building to control Tunnel operations allows the original purpose of the building to be understood and has minimised changes to these areas. The leasing of the former administrative spaces to small businesses servicing electronic equipment has meant that the character of these spaces has been lost or, at best, significantly compromised. A more sympathetic use would allow much of this internal character to be recovered.

### **3.3 Present (physical) condition**

of whole building/site: The overall condition of the building is good, reflecting the generous budget available for its construction and the high quality of materials employed. Concern has been expressed that the toll plaza canopy does not meet current seismic codes, but the structure remains in sound condition and is in no danger of structural failure from normal loads. The building has been regularly maintained to an adequate standard but would benefit from more regular cleaning, particularly of the central, open stair.

of principal components (*if applicable*):

of other elements (*if applicable*):

of surrounding area (*if applicable*): the immediate surroundings of the building were bare at the time of construction but this has changed significantly as a result of the development of planting, primarily New Zealand natives, in the immediate vicinity of the building. The building would be better appreciated if some judicious thinning of this vegetation was undertaken.

comments:

### **3.4 Note(s) on context, indicating potential developments**

*Indicate, if known, potential developments relevant for the conservation/threats of the building/site*

The main threat to the building, apart from incremental minor changes to meet, for example, changes to safety codes, is the potential loss of the toll plaza canopy. Although structurally this is a distinct entity from the administration building, it is integral to the overall composition of the building and relates the building to its site and also to its original function.

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## 4. Evaluation

*Give the scientific reasons for selection for DOCOMOMO documentation*

### ***Intrinsic value***

#### **4.1 technical evaluation:**

The building's use of fair-faced, reinforced concrete, both cast in situ and pre-cast, is characteristic of post-World War II modernism as a whole, but is also especially characteristic of the architecture of Christchurch and Canterbury during the late 1950s and 1960s. This phase of New Zealand's post war architecture was recognised nationally as demonstrating the potential of these materials for structural innovation. The engineer, William (Bill) Lovell-Smith was one of the most creative of a group of Christchurch based engineers who developed, in conjunction with architects such as Peter Beaven and Warren and Mahoney, sophisticated seismic resistant structures employing reinforced concrete. These innovations were linked to related research being carried out at the School of Engineering at the University of Canterbury. The use of laminated timber beams to span large spaces was also innovative technology at this time, as was the application of steel post tensioning to timber structural elements.

#### **4.2. social evaluation:**

The construction of the Christchurch-Lyttelton Road Tunnel was one of the largest and most significant engineering projects to be carried out in New Zealand during the post-war period and the Tunnel Authority administration building is an essential, and the most visible, part of this project. The tunnel established a long-anticipated road link between the Port of Lyttelton and Christchurch, establishing a major point of entry to the city and the Canterbury Plains.

#### **4.3. cultural and aesthetic evaluation:**

The Christchurch–Lyttelton Road Tunnel Authority Building was intended to express the importance of the project for which it provided the administrative and operational hub. Additionally it is a building that symbolises the point of entry to the city of Christchurch and the Canterbury plains from the port of Lyttelton. Beyond these symbolic functions it serves as a metaphorical 'ship' for all those residents of Canterbury who cannot claim a connection with the privileged 'First Four Ships' associated with the founding of the Canterbury Settlement in 1850. The boat-like form of the Tunnel building, 'moored' alongside the roadway, introduces an element of sculptural, symbolic and expressive meaning into New Zealand architecture that was significantly new. This metaphorical dimension, part of the architect's original intention, has now become part of the mythology of the building.

In formal terms the building draws on the example of Le Corbusier's post-war works, but more specifically on the work of his Japanese followers, in particular Kunio Mayekawa. The powerfully expressive use of reinforced concrete (a general characteristic of buildings of the Christchurch School of architecture of the late 1950s and 1960s) is, at least in part, a response to the abundance of the raw materials for concrete in Canterbury, a plain that was formed from alluvial gravels washed down from the Southern Alps, which form the central spine of New Zealand's South Island. However the use of paired concrete beams, also seen in the work of Japanese architects such as Mayekawa, is also a reference to the tradition of timber building that is as important to New Zealand's architectural history as it is to Japan's.

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## **Comparative significance**

### **4.4 canonical status (local, national, international)**

The Tunnel Building was immediately recognised as a major contribution to New Zealand architecture, and was published in the New Zealand Institute of Architect's *Journal* only months after it was completed. Responding to the building, the critic Peter Middleton commented on man's need 'to put up buildings to symbolise ... the myths he uses to mediate between himself and reality. Something of this kind would, perhaps, explain this towering edifice of symbols, and perhaps justify its monumentality.' (*NZIA Journal*, December 1964, pp.343-344.) Within an architectural culture that celebrates utility and restraint, Beaven's design is virtually unique in New Zealand in its monumentalisation of a relatively mundane programme.

### **4.5 historic and reference values:**

The individuality of the Tunnel Building has meant that it has had almost no direct influence on subsequent New Zealand architecture. As an important example of an architectural philosophy that transcended the narrow interpretation of Modern Movement thinking that is as embodied in the slogan, 'form follows function', however, it was extremely influential. Along with John Scott's near contemporaneous Futuna Chapel in Wellington, the Tunnel Building demonstrated that the vocabulary of Modernism could be expanded to incorporate rich veins of meaning and expression.

## **5. Documentation**

### **5.1 archives/written records/correspondence etc. (state location/ address):**

Planning and Strategy Unit, Urban Design and Heritage Unit files, Christchurch City Council, Hereford Street, Christchurch

Lyttelton Tunnel Building File, New Zealand Historic Places Trust, Southern Regional Office, Hereford Street, Christchurch

### **5.2 principal publications (in chronological order):**

Administration Building: Christchurch-Lyttelton Road Tunnel Authority, *NZIA Journal*, December 1964, 31, no 11, pp.334-341

Peter Middleton, 'Christchurch Architecture Reconsidered', *NZIA Journal*, December 1964, pp.343-344

Administration Building and Toll Plaza, *Home and Building*, June 1965, pp. 69-71

Peter Beaven, South Island Architecture, *Royal Institute of British Architects Journal*, 74, no. 9, September 1967, pp. 375-382

John Stacpoole & Peter Beaven, *New Zealand Art: Architecture 1840-1970*. Wellington, 1972, p. 93

Peter Shaw, *New Zealand Architecture from Polynesian Beginnings to 1990*, Auckland 1991, pp. 172-172

Adrienne Dempsey, Christchurch-Lyttelton Road Tunnel Administration Building, in I.J. Lochhead, ed., *Peter Beaven Architect: Buildings and Projects*. Christchurch 1995, pp. 3-4

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I J. Lochhead, 'Cast in Concrete: Modernism in Canterbury Architecture, 1950-1970'. '50 Years of Modernity in Australasia: 1920-1950'. *Papers of the Twelfth Annual Conference of the Society of Architectural Historians, Australia and New Zealand*. Desley Luscombe, ed. Sydney, 1995: 93-103

Charles Walker, ed., *Exquisite Apart: 100 Years of New Zealand Architecture*. Auckland 2005, p.96

Lyttelton Road Tunnel Administration Building, The Register, New Zealand Historic Places Trust, 2008.  
Available at [www.historic.org.nz/Register/ListingDetail.asp?RID=7746&rm=Full&sm=](http://www.historic.org.nz/Register/ListingDetail.asp?RID=7746&rm=Full&sm=)

### **5.3 visual material (state location/ address)**

original visual records/drawings/photographs/others:

Architectural drawings, Peter Beaven Collection, University of Canterbury Architectural Archives,  
Macmillan Brown Library, University of Canterbury, Christchurch

Patrick Dolan, photographer, for Mannering and Associates, 4 x5 format black and white photographic  
negatives held by Peter Beaven, Architect, Canterbury Provincial Council Buildings, Durham Street,  
Christchurch

recent photographs and survey drawings:

film/video/other sources:

### **5.4 list documents included in supplementary dossier**

## **6. Fiche report**

name of reporter: Ian Lochhead

address: Art History & Theory, School of Humanities, University of Canterbury, Christchurch

telephone: +64 3 3642987 ex 8239 fax: e-mail: [ian.lochhead@canterbury.ac.nz](mailto:ian.lochhead@canterbury.ac.nz)

date of report: 17 August 2009, amended following peer review by John Wilson

### **examination by DOCOMOMO national/regional section**

approval by wp co-ordinator/registers correspondent (name): Dr Ann McEwan

sign and date: 3 April 2012

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### **examination by DOCOMOMO ISC/R**

name of ISC member in charge of the evaluation:

comment(s):

sign and date:

ISC/R approval:

date:

wp/ref. no.:

NAI ref. no.:

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