

An International Exchange

Abstract

Don Wilson was a provincial New Zealand Modernist architect who was also a Fulbright scholar. In 1958 he travelled to Chicago to study experimental building techniques at the Illinois Institute of Technology under the guidance of Mies van der Rohe.

This paper examines Don Wilson's architectural education and travel, his American scholarship and two of his most significant projects completed in Wanganui New Zealand immediately after he returned from his scholarship. The projects are his own house designed during the period of his research and travel and the Government Life Insurance office building. Both were designed and constructed at a time when post-war import restrictions on materials were still affecting construction in New Zealand.

The paper concludes with a consideration of the effects of his study and travel and the contribution Don Wilson's two projects make to the construction of New Zealand's histories of modern architecture. It argues the work constitutes an important part of a New Zealand engagement in international modernist discourse during the period.

Introduction

The city of Wanganui on the west coast of the North Island is one of the oldest European settlements in New Zealand. From its early days as a New Zealand Company settlement in 1840 to the late 1920s the town grew substantially, particularly in the period from 1890 onwards. The Depression of the 1930s hit Wanganui badly and it was not until the early 1950s, when wool prices rose at the time of the Korean War, that the city and its rural hinterland were able to enjoy a new era of prosperity and growth. This prosperity manifested itself in major building programmes as the Government's post-war restrictions on new buildings were lifted. The city's new movie theatre that opened in 1950 had to be built around the shell of a 1903 drapery store as permission was not available to demolish the old shop and start afresh; any new building materials that were available were required for essential infrastructure. By the mid 1950s, new buildings could be contemplated and in 1954 the City Council initiated an architectural competition for a new town hall to commemorate those who had served in the Second World War. In 1956 this competition for the War Memorial Hall was won by three young architects in London at the time - Newman, Smith and Greenhough - with "perhaps New Zealand's finest example of Modernist inspired public architecture"¹ and Wanganui took its first step

towards embracing modern architecture. By mid-1957, a million-pound building programme was under way in the city which had a population of nearly 30,000². As well as the War Memorial Hall, construction projects included three new schools, new hospital buildings, offices, shops and garages. In addition, a sports stadium and airport terminal and control tower had all been designed for the City Council by Gordon Smith and Geoffrey Newman, who by this time were practising in Auckland and Wanganui³. Other architects practising in Wanganui included Robert Talboys and Clifford Newton Hood, both of whom had set up practice after the First World War, and Don Wilson who was the new graduate on the local architectural scene.



Tingeys Building 1957, Victoria Avenue, Wanganui, Robert Tallboys Architect. Clark J and Walker P Looking for the Local p151, and Whanganui Regional Museum R G Talboys Collection A424 Accession Number 1805.62.1

Post-war Architectural Studies

Don Wilson studied engineering at Auckland University for a year in 1943 before joining the RNZAF as a navigator and serving in the Pacific. After the war he returned to his home town of Wanganui where he was awarded a rehabilitation bursary to study architecture by a committee including Robert Talboys. The bursary paid for four of his five years of study at Auckland University School of Architecture. Don began in 1946 as part of a large intake of students, most of whom were ex-servicemen. He recalls that several of these students had problems readjusting to post-war life and "were an embarrassment to the school⁴". The first year students were accommodated in a disused shipyard before transferring to the tin army huts at Hobson Park which also housed the School of Engineering. Resources were short, rationing was still in operation at the time and they couldn't even buy clothes except for army issue. During these rehabilitation years there was little architecture being built. There was a scarcity of building materials, particularly imported goods. Any materials that were available were rationed for public projects and infrastructure by the government.

Engineer Michael Faraday and immigrant architects Dr Richard Toy and Vernon Brown were lecturers and studio instructors at the Auckland School of Architecture at the time. Vernon Brown was influential as a charismatic teacher who was also a leading practitioner and an advocate for the creation of a particular New Zealand Modernism. He argued a functionalist position through his teaching and work. Brown designed and built distinctive single-pitch black creosoted wooden houses with cut-away white-walled patios and white windows. These designs were later suggested by Gordon Wilson to exemplify the characteristics of a New Zealand house and have been argued to be a New Zealand vernacular housing⁵.

During the period of Don Wilson's university study although there was little architectural work in wider practice there was emerging polemic and publication. Overseas publications such as *The Architectural Review*, *the Architectural Record* and *Architectural Forum* were available and influential⁶. New Zealand publications such as *Home and Building* and *The Journal of the NZIA* also included work of European and American modernists and there was a steady output of New Zealand architectural publications⁷. There was also a modernist influence from the work of the emigré European architects practising within the Department of Housing under the direction of Gordon Wilson. Within the school there was also an emerging polemic from "the little band who called themselves in various combinations, The Architectural Group, Group Architects, and Group Construction⁸". The Group were students who were described by David Mitchell as a group of young fire brands and by Don Wilson as "local hot heads"⁹. They focused on local issues of economy, "practising and building their work while still at University"¹⁰, and forging a New Zealand modernist architectural identity. This consisted of economic low-pitched timber houses and, later in Wellington, a strain of flat-roofed post and beam construction houses.

Don was just as frustrated as members of the Group but his focus was more international. He recalls there was nowhere to practise or experiment. He felt he was "stuck in a shell waiting to burst"¹¹. He spent his holidays working in the Auckland office of the Department of Housing and in the Wanganui office and Wellington Office of the Ministry of Works where he trained under Frederick H Newman. He was attracted towards an architecture based on the potential of new materials and construction techniques and working through function. His attention was focused away from New Zealand towards America where steel and glass were being used to create a more refined international modernism.

Early Practice



Wanganui Girls College, Wanganui Education Board. Wanganui Constructs 1961 p75

After University, Don worked with the Ministry of Works in Wanganui. He then became assistant chief architect with the Wanganui Education Board whose focus was the provision of new classrooms and school houses for primary schools coping with the post-war baby boom. While at the Education Board helped to plan the new Wanganui Girls' College, the first part of which was completed in 1952. By 1954 Don had set up his own practice with his office initially run by family members.

It was a difficult time to be in provincial private practice in New Zealand. Governmental restrictions on building in the post-war period meant provincial architects were really only involved in repair work. Houses had to be small and were built with traditional methods. It was very difficult to get materials and most material that was available was of low quality, especially timber. Don Wilson was later involved in establishing the first NZ standards for grading timber quality. No steel or glass was made in New Zealand. Glass came from England, small steel sections came from Australia and structural steel sections from Germany and England. Limited hardware was available and some very ordinary sanitary ware. There were import restrictions on most materials an innovative young architect might want to use. Schools, hospitals and civic buildings were the priority - to rebuild the nation's infrastructure after the depression. The Ministry of Works did most of the public and more interesting work and the major cities had the priority for new work. Other places were left with little if anything happening. It was a heartbreaking situation for a young architect starting out in business.

Don's first commissions included houses, especially in the country as sheep farmers had money for the first time in 20 years. He also designed the Reliance Tyre Company showroom in 1955¹² and a church for his old Anglican parish in 1956 which was "one of the cheapest buildings imaginable"¹³. In mid-1957 he employed the young English architect Eddie Belchambers as his assistant. Eddie had trained in Nottingham and had recently immigrated to work for the Ministry of Works in

Wanganui. He was familiar with European modernism through his education and direct contact. He was an adept design architect who was also a beautiful draughtsman and an expert at perspective drawing. Eddie recalls that the only decent job in the office when he started was a new woolshed for the Metekingis, a prominent local Maori family. Don and Eddie worked together on plans for Raetihi Borough Council for a new Council Chambers and Fire Station, presented by Don to councillors in this small high-country town not long before embarking on his travel scholarship in July 1958¹⁴.



Reliance Tyre and Rubber Co building, 1955, D.A Wilson Architect. Clark J and Walker P, Looking for the Local p150

In February 1956 the design by recent graduate architects Newman, Smith and Greenhough had been accepted for the proposed Wanganui War Memorial Hall. This was a major new public project attracting extensive fundraising and publicity. This one project set a local context receptive to the architecture of international modernism and to the capabilities of young architects. Earlier in mid 1955 the government architect Gordon Wilson had reviewed an ambitious brief by Government Life Insurance for a proposed new office building in Wanganui to accommodate the burgeoning government service sector¹⁵. By early 1957 Don Wilson had been appointed as the architect to design this new office building on a corner site in the city's main street. Don designed a modernist reinforced concrete shearwall building with glass curtain wall facades. The first design¹⁶ appears to be influenced by the design for Plischke and Firth's Massey House of 1951-1957 probably from the initial perspective drawing of the design for Massey House¹⁷. Don's design had curtain walls of similar proportioning framed by an expressed thin concrete perimeter frame similar to the Massey House design.



Government Life Building Wanganui, 1957 (Completed 1964) D A Wilson Architect. Clark J and Walker P Looking for the Local p143.

The Chicago Influence

Prompted by the need for further research to assist with the technical demands of this significant commission and his own technological modern interests, Don Wilson investigated a study trip to the States. Despite the distance, time and cost of travel, New Zealand architects of all eras have taken a grand tour to Europe and America to study architecture and have been influenced by their direct contact with great works of architecture. Don wanted to learn about different methods of construction, particularly about building in steel. He was also interested in studying town planning perhaps as a result of the recent establishment of the Department of Town Planning at Auckland University. He applied for a travel grant under the Fulbright programme to study in Chicago at the Illinois Institute of Technology under Bauhaus-trained Mies van der Rohe who was the recognised master of steel construction at the time. The Fulbright programme had been established in the USA in 1946 to enable educational and cultural exchanges to "increase the chance that nations will learn at last to live in peace and friendship"¹⁸. The Illinois Institute of Technology in Chicago was literally Mies van der Rohe's school. He taught there and its architecture was designed by him.

Soon after arrival for graduate study at the School of Architectural Design and Town Planning at IIT in September 1958, Don found the intellectual order and pace of the Bauhaus training style and education to be out of step with his aspirations and the short time frame available for his scholarship. He considered that the IIT graduate school cohort were equivalent to third year students at Auckland and was disappointed to find that Mies van der Rohe was hardly ever teaching. Mies's

practice was at the height of its late production working on projects such as the Seagram building in New York which was completed that year. Don recalled that Mies was "a thinker, but casual"¹⁹. Don proposed an alternative programme of study for the second half of his scholarship. He would travel to see the work of leading architects, their offices, assess their business methods, the buildings they had designed, their construction techniques and model-making.

Don joined forces with a Tasmanian architect colleague who was on a Commonwealth scholarship and together they travelled extensively through 41 states, into Canada and through 10 Mexican provinces where the use of mosaics by local architects was of interest. Don visited as much significant architecture as he could in the time available including the United Nations Headquarters building, Lever House and the Seagram building in New York. He also visited as many architect's offices as he could, including those of Walter Gropius in Boston, Mies van der Rohe in Chicago and those of Minoru Yamasaki and Eero Saarinen. He also visited Taliesin West, Frank Lloyd Wright's school. He particularly liked Wright's early work. "His timber work was exquisite" with strong Japanese influences. The jointing and relationship between the wood and brick or stone work was particularly good. With later buildings, eg the Guggenheim Museum in New York, Don felt Wright had not achieved the finishes he had intended in the completed building. He also recalled the infamous typist's chairs in the Johnson Wax building - the three-legged creations that tipped up if the women did not sit up straight all the time.

Don commented that some of the guys he met "were not so wonderful, really. They would pay to get their work featured in magazines"²⁰ and Don felt that the architecture often did not live up to its image in the *Architectural Record* or *Architectural Forum*. New methods of construction were what interested Don, especially Mies van der Rohe's steel work. In Chicago he studied in Crown Hall and visited Mies's architecture. He found some aspects of buildings were a practical failure. He believed that in one of Mies's early curtain wall buildings, the Lakeshore drive apartments were fine looking buildings, but that the steel structure had too much deflection in the upper levels. As a result "it swayed in the wind and made people sea sick"²¹.

Don believed his stay in Chicago "helped to change his life"²². Architecturally, his eyes were opened to the potentials of prefabrication, technology, construction techniques and of modern planning. From his time spent at International House in

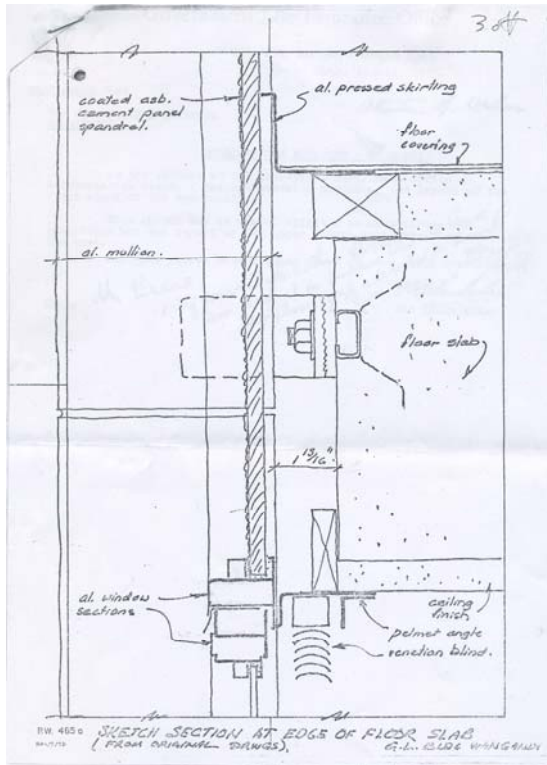
Chicago, he also gained a deeper understanding of people from different religious and cultural backgrounds which would direct his later career course.

Return to New Zealand

When he returned to Wanganui in March 1959, Don voiced his opinions on town planning, having spent some time studying plans for new housing and redevelopment in Detroit, Philadelphia and Boston. He told the *Wanganui Herald* "What impresses is the courageous manner in which town planners go about things. They adopt a positive attitude and refuse to let anything, absolutely anything, stand in their way.²³"

Government Life Building

He was soon busy developing the design and documentation of the new office block for Government Life Insurance which had gained approvals to proceed during his time away. There was significant development of the design of the building including detailed replanning to increase efficiency and create light, unbroken workspaces. Rentable floor areas were maximised by reducing the extent of circulation space and internal structure. There was an additional floor added to the building height and the glass curtain wall design was developed. Don maintains that it was the first true curtain wall building designed in New Zealand. The curtain wall design is significant because unlike Plisckhe's Massey House and Stephenson and Turner's Shell House it has no internal horizontal concrete spandrel panels between and above the floors inside the glass curtain wall. The imperatives for the Government Life building curtain wall design were increased planning functionality and a pure modern aesthetic. The removal of the spandrel looked uncluttered and modern and also increased the lettable floor space. Fire rating between floors was accommodated by specially coated coloured asbestos sheets designed to an abstract pattern and glazed into the prefabricated aluminium sections and flashings of the curtain wall with the glass. The design depended on sealants to glaze the glass and panels into aluminium channels. There were several other aspects of the architecture considered technically significant when the building finally opened in July 1963. It is founded on 12m deep prestressed piles and utilises a waffle slab system to reduce upper floor to floor heights and transfer loads to the end shearwalls. It had a lightweight steel framed roof and curtain wall skin, and had ducted floor services within a topping slab allowing flexibility of reticulation and the use of electronically controlled heated flooring cables. It was also an early use of electronic lifts and demountable office partitions²⁴.



Curtain Wall Detail as Floor Slab with no spandrel. Government Buildings, Wanganui - Government Life insurance Building 1932-1936 [AAQB W4073 105/ 24/1184 2] Archives New Zealand The Department of Internal Affairs Te Tari Taiwhenua.

Contracts were let in April 1960 but construction was protracted due to delays caused by technical problems with the supply of imported steel and glass. It was an early use of deformed steel reinforcing rods for the pile caps and although all the reinforcing had the required test certificates, the reinforcing bars were found to snap when Don had them bent and re-straightened on site. The steel was rejected as being too brittle causing a temporary halt to the project. It took time for the DSIR and eventually the Australian research laboratories to find the cause of the problem. Too much nitrogen had been passed over the steel as catalyst during its manufacture in Belgium. World steel testing standards were changed as a result of the identification of this problem. When the problem was eventually resolved the pile cap reinforcing had to be replaced causing further delays. There were also delays in the supply of other imported materials such as glass and sealants for the curtain walls. These delays were compounded when the glass was supplied in the wrong sizes. Pilkingtons supplied new replacement glass but there was further delay while it was manufactured and shipped to New Zealand. Construction was finally completed in July 1963 having taken nearly three years. The design was technologically adventurous and had pushed the local construction industry to its practical limits.

This left its architect frustrated at what he considered to be an out-of-touch New Zealand building industry.



Government Life Building from Guyton Street 2007. Photograph by Author.

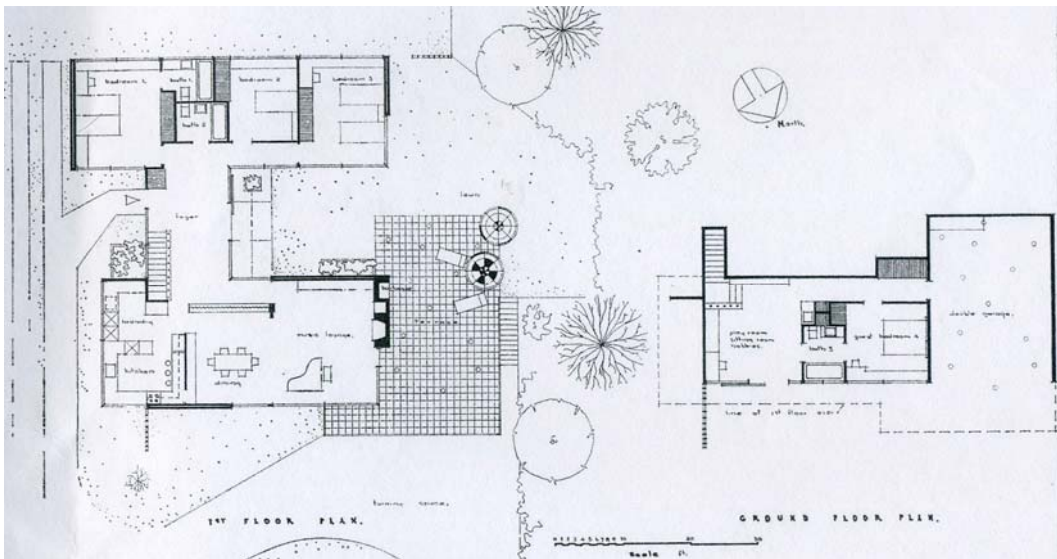
The Wilson House

During his time in America Don designed a house for his family to be built on his section at 59 Great North Road on St John's Hill. He was keen to progress the project and developed the design and construction documentation in the months after his return home. Construction started in late 1959 and the house was completed in June 1960. The house was designed as two rectangular pavilions linked by a "breezeway" entry foyer. One of the pavilions is elevated over a recessed study, guest suite and large garage area that also forms part of an expansive cantilevered terrace to the living areas. The house is conceived and detailed as linked pure rectangular steel framed pavilions on concrete floor slabs. The international influence is evident in the clarity of the design and is particularly apparent in the elevation drawings of the house where it appears to be influenced by American precedents such as Philip Johnson's Glass House. Don described his overall design intention "as creating a free flow with the site so that where ever you are within the house you are not limited by a wall²⁵". The house was also technically adventurous, adapting the limited materials available in New Zealand to a clear intent. Steel channels were originally designed as a roof frame and rectangular hollow sections as a series of exposed posts. The floor slabs taper to thin edges.

The slab depth varies to provide additional thickness where it is structurally required. Ventilation is by adjustable louvres and sliding doors within purpose designed timber window joinery directly glazed between the steel posts. A tiled abstract mural is incorporated within the composition of the front elevation and other artwork details by the architect are incorporated within the design as discrete but integral elements.



Wilson House Wanganui 2007. Photograph by Author.

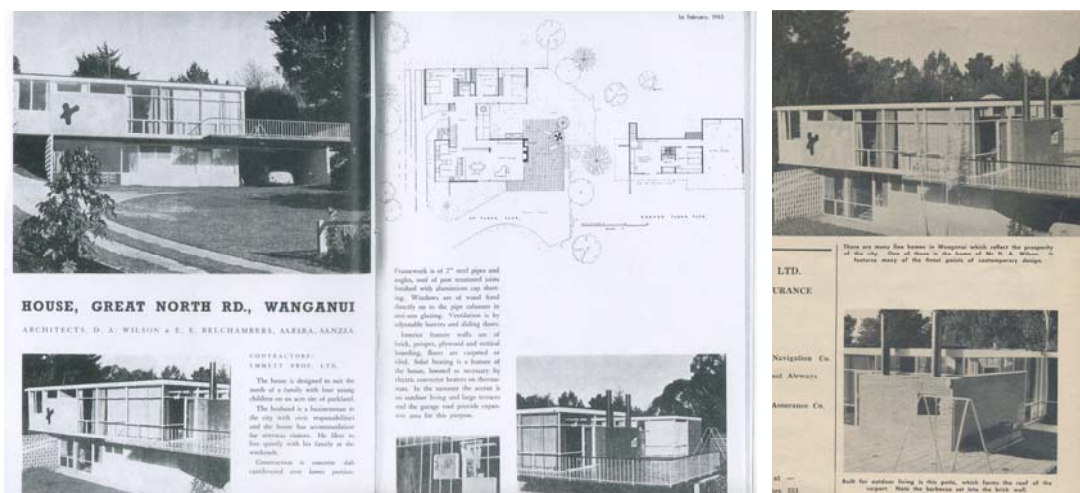


Floor Plans as reproduced in NZ Home and Building 1st Feb 1962

The house is open planned with overlapping spaces separated by a series of carefully designed screens. Materials such as corrugated perspex, plywood and brick are used in a direct 'honest' way. Recessed slot pockets within the flat ceiling are provided for sliding door tracks and perimeter window coverings. The outdoor living terrace has a built-in barbeque beside and integral with the brickwork of the internal fireplace. The terrace also has an integral random pattern of circular glass block inserts within the slab to light the garage below. Construction of the whole house was tricky because it was what Don described as "New Think"²⁶ where the elements of the project had been designed from scratch and were expressed as a part of the design. Many of the materials and how they were constructed were new to the tradesmen on site.

He faced even stricter import restrictions for materials supply than on public projects such as the Government Life project, and had to adapt to the non-availability of imported materials. He used 50mm pipes and pairs of angles to the corners as exposed steel posts. He replaced the steel designed roof beams with long span post tensioned composite roof beams made from timber and shaped steel rods with threaded ends. Don recalls that he brought back from America the Schlage door locks for the house that were not then obtainable in NZ. He had to have two separate import licences for the door handles and the locks – even though the handles incorporated the locks. When back in New Zealand he was asked where he got the money to import these goods? His response was that he had saved the money when in America by going without breakfasts!

The house created considerable local interest when under construction and completed. There was a local cultural climate receptive to the new and intrigued by one of the first local manifestations of international modernism. The house was published in *New Zealand Home and Building*²⁷ and was the only single house published in the 90-page magazine *Wanganui Constructs*²⁸. Don remembers Vernon Brown and Michael Faraday from the Auckland School of Architecture visiting the house²⁹



NZ Home and Building 1st Feb 1962, and Wanganui Constructs Oct 1961, p71

Later Career

Don Wilson went on to practice in New Zealand until 1970 and with Eddie Belchambers was responsible for several other significant modernist projects with long gestation periods including the Whanganui Regional Museum extensions and the City Council Chambers both completed in 1968.

The Government Life building like other early curtain wall buildings has had major leak problems over its life and these have still not been adequately addressed.

The frustrations of realising innovative architecture in New Zealand at the time and the hard reality of practice in the provinces after the boom of the 1960s, as well as his international experiences in Chicago, lead Don to decide that he wanted a change of career. He considered that he was "trying to do things here before their time. An architect is a very odd bod. He is an artist in one way - paints a picture of what he wants to create in his mind, then has to convert that to straight lines, conforming to building codes, then hand it over to the builder. Buildings don't always finish as your dream. An architect is really an unsatisfied artist. The architect loses control along the way, having to change the plans from being artistic to practical."³⁰

From 1965 Don took on advisory roles with overseas aid and development agencies holding positions with the UN technical advisory service, the Asian Development Bank, the World Refugee Service and the World Council of Churches. He became multilingual and worked all round the world consulting on the development of major projects.

Conclusions

The influences of the American education and travel are evident in Don Wilson's work. For Don, like Mies van der Rohe, technology and architecture were closely related. In the Government Life building, Mies van der Rohe's influence is particularly clear resulting in an architecture derived from a clarity of organisation and economy. He worked from material through function towards a creative architectural expression. In both projects there is a particularly clear articulation of the building skin as being separate to the skeletal frame. The curtain wall is clear of the structure. The structure is optimised and expressed. New materials, technologies and techniques are embraced and explored in these projects. Importantly the precedents for these works are international. The influences in these projects are not pure. They are critical and mixed. Don Wilson was not so much following the American masters but learning from them and adapting what he had learnt to local conditions. The results are two significant pieces of New Zealand modernist architecture. They are significant because they are an example of the direct exchange with American modernism. The work shows that some New Zealand architects of the period were sceptical of the idea of a New Zealand identity in architecture and were still convinced by the future potential of the international modern. These New Zealand trained architects absorbed international modern influences and tested these in a New Zealand setting. With projects by other contemporary New Zealand architects such as Newman, Smith and Greenhough, and the later Wanganui City Council Chambers and offices these two Don Wilson projects demonstrate the strong international thread within the New Zealand modern.

¹ Charles Walker(Ed), '1961 Gold Medal Award citation Newman, Smith & Greenhough, Wanganui War Memorial', *Exquisite Apart: 100 years of Architecture in New Zealand* Auckland: NZIA/Balasoglou Books, 2005.

² 'Buildings valued at million pounds being erected or planned for erection soon', *Wanganui Chronicle*, 24 July 1957.

³ *Wanganui Chronicle*, 23 July 1957 also *New Zealand Home and Building* 1st February 1962 p56.

⁴ Don Wilson: Conservation with Mark Southcombe and Wendy Pettigrew, 13 May 2006.

⁵ Justine Clark and Paul Walker, *Looking for the Local: Architecture and the New Zealand Modern* Wellington: Victoria University Press, 2000 p47.

⁶ Justine Clark and Paul Walker, *Looking for the Local* op cit, p16.

⁷ Justine Clark and Paul Walker, *Looking for the Local* op cit, p12.

⁸ David Mitchell and Gillian Chaplin, *The Elegant Shed: New Zealand Architecture since 1945* Auckland: Oxford University Press, 1984, p31.

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- ⁹ Don Wilson: op cit.
- ¹⁰ Don Wilson: op cit.
- ¹¹ Don Wilson: op cit.
- ¹² Justine Clark and Paul Walker, *Looking for the Local*, pg150.
- ¹³ Don Wilson: Conversation with Wendy Pettigrew, 23 July 2006.
- ¹⁴ 'New Council Chambers and Fire Station for Raetihi', *Wanganui Chronicle*, 25 July 1958.
- ¹⁵ Correspondence with the government architect Gordon Wilson. Government Life Insurance Office file, AAQB W4073 15 24/1184/Pt2, Archives New Zealand, Wellington.
- ¹⁶ Justine Clark and Paul Walker, *Looking for the Local* op cit, p142.
- ¹⁷ August Sarnitz and Eva B Ottillinger *Ernst Plischke, Modern Architecture for the New World*, Munich: Prestel, 2004, p195.
- ¹⁸ www.fulbright.org.nz accessed 12 November 2015.
- ¹⁹ Don Wilson: Conversation with Wendy Pettigrew, 23 July 2004.
- ²⁰ Don Wilson: Conversation with Mark Southcombe and Wendy Pettigrew, 13 May 2006.
- ²¹ Don Wilson: Conversation with Wendy Pettigrew, 31 May 2007.
- ²² Don Wilson" Conversation with Wendy Pettigrew, 23 July 2004.
- ²³ 'Architect speaks of courage', *Wanganui Herald*, 31 March 1959.
- ²⁴ *Wanganui Chronicle*, 8 July 1963 p9.
- ²⁵ Don Wilson: Conversation with Mark Southcombe and Wendy Pettigrew, 13 May 2006.
- ²⁶ Don Wilson: Conversation with Mark Southcombe and Wendy Pettigrew, 13 May 2006.
- ²⁷ *New Zealand Home and Building* 1st Feb 1962 p61-62.
- ²⁸ Fred C Symes, ed. 'Wanganui Constructs', supplement to *Contracting and Construction*, Oct 1961, p71.
- ²⁹ Vernon Brown had earlier designed the Harper House built at 151 Great North Road in 1951, but would have had other architectural reasons to visit the city with the War Memorial Hall project opened two months before Don Wilson's House was finished.
- ³⁰ Don Wilson: Conversation with Wendy Pettigrew, 23 July 2006.