



ACT Heritage Council

BACKGROUND INFORMATION OPEN SYSTEMS HOUSE (FORMER CHURCHILL HOUSE) (Block 10 Section 7 Braddon)

At its meeting of 5 April 2018 the ACT Heritage Council decided that Open Systems House (former Churchill House), Braddon, was not eligible for provisional registration. The information contained in this report was considered by the ACT Heritage Council in assessing the nomination for the former Churchill House against the heritage significance criteria outlined in s10 of the *Heritage Act 2004*.

The former Churchill House was designed by Robin Boyd between 1969 and 1970 with construction being completed by April of 1972. It was Boyd's last major commission when he died in 1971. The large commercial Brutalist design was a departure for Boyd who was known for his residential designs that were generally classed as 'Melbourne Regional' which feature light, simple and elegant designs.

The Winston Churchill Memorial Trust of Australia

The Winston Churchill Memorial Trust of Australia (the Trust) was established by a single major charity drive shortly after Winston Churchill's death in 1965. The drive raised over £2million and the Trust has been running off the profits of the investments made with that money. The Trust offers applicants from a wide range of backgrounds and occupations a travelling fellowship - an opportunity to travel abroad to participate in research. During the late 1960s the Trust decided to invest some of the initial capital funds in a new building, which "was considered to be a profitable investment by directors and advisors to the trust" (*The Canberra Times* 12 January 1972, p17).

The Trust, as noted in their Articles of Association, was founded with the intent to honour the memory of Sir Winston Churchill by awarding fellowships and raising money to fund those fellowships, which specifically included purchasing land and developing it to make it profitable. This was one of the main considerations in 1967 when the Trust started talking with the National Capital Development Commission (NCDC) to establish a national headquarters building in the ACT, which, as well as housing the Trust offices and display, library and conference areas, was also expected to produce rental income for the Trust.

Discussions between the Trust, the Department of the Interior (who were responsible for leasing land in the ACT) and the NCDC (who were responsible for site selection and building approvals) started in 1967 with some very preliminary enquiries. Initially, the Trust requested a position in Hobart Place in the city, hoping that the position would suit their goal of attracting tenants, however there were no places available and the NCDC favoured situating national headquarters along Northbourne Avenue.

The National Capital Development Commission (NCDC) and Northbourne Avenue

It was also at this time that the NCDC was formulating a civic design plan for Northbourne Avenue and Churchill House was the first private development to fit in between the NCDC building (the Braddon Offices on the corner with Wakefield Avenue) and the Gowrie Hostel (now Fenner Hall on the corner with Ipima Street).

From 1958 to 1989 the NCDC was responsible for the ACT's planning, development and construction. Following the establishment of the *Buildings (Design and Siting) Ordinance 1964*, the NCDC published policies in July 1967 and principles from 1968. These policies were guided by the National Capital Planning Committee (NCPC), which was a body of experts in architecture, engineering and planning, appointed to advise the NCDC (NCDC, 1970). Robin Boyd served on the NCPC from 1968 until his death in 1971, although his work in Canberra meant that he would often have to excuse himself from meetings due to a conflict of Interest, such as when Churchill House was discussed.

From its inception, the NCDC struggled with developing policy for Northbourne Avenue. Between 1967 and 1970 the NCDC progressed three phases of reconstruction for the avenue to improve traffic flow and beautify what had become the main entrance to the city from Sydney and Melbourne (NCDC Annual reports 1967-70). Major replanting was undertaken at this time.

The NCPC noted at the 53rd Meeting on 6-7 February 1964, "The Committee was informed that the Commission had been concerned for some time with the nature and scale of developments which might take place along the main

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avenues, and has now commenced a program of design work with a view to preparation of a set of criteria and standards which could be used as a reference point for future private enterprise and Government development proposals." Adelaide Avenue was the first of these to be developed with the Civic Design policy for Northbourne Avenue being finalised in early 1969 (NCDC meeting minutes 10 February 1969).

The Civic Design Policy for Northbourne Avenue, illustrated in plan CD.68/46B2 (Figure 1), was explained in a minute paper from Richard Clough to Mr Brooks on 29 May 1968, noting that a basic plan had been developed for the section between Wakefield Avenue and Ipima Street, "...to create a balance of building masses...whilst retaining the special significance of the buildings at Wakefield Avenue intersection. The first object has been achieved by siting two further nine-storey blocks; similar in height form and orientation to the Braddon Offices and the Gowrie Hostel, on either side of the road, with three-storey blocks of different form and orientation on the remaining sites. The second object has been achieved by setting back these buildings to the line up with Gowrie Hostel leaving the group at Wakefield Avenue to stand closer to the road." It was also noted that parking was to be on-ground behind the buildings with one space per 400sq.ft. gross.

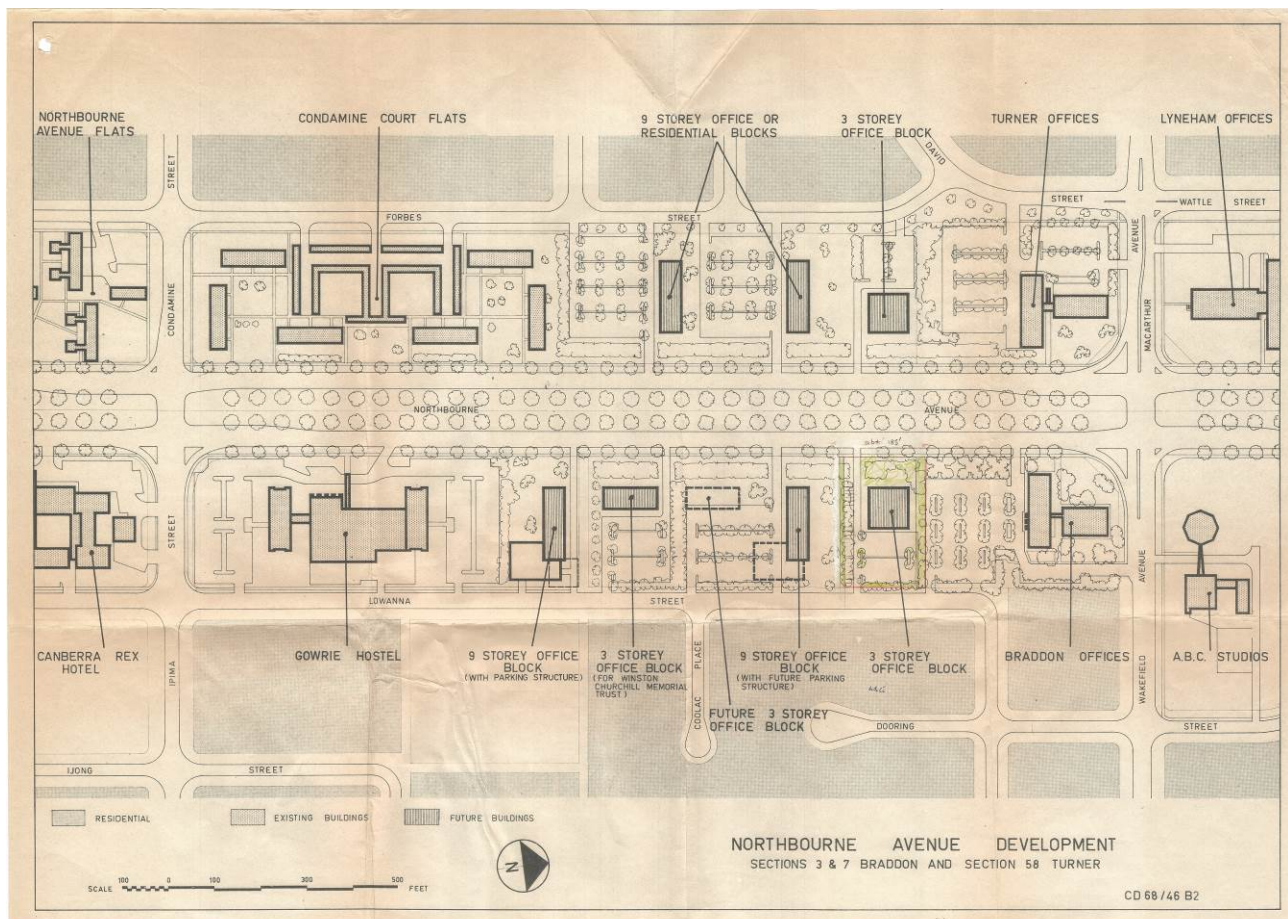


Figure 1 NCDC Plan CD.68/46B2 (NCDC file SP 2378 part 1) – the concept had not been formally accepted by the NCDC by the end of 1968 when Boyd started designing Churchill House, but it still formed the basis of planning.

An important aspect of the Civic Design Policy was an attempt to prevent Civic (City) spilling north along Northbourne Avenue. The NCDC identified zones of development: commercial leases would only be permitted north to Haig Park, with institutional and residential leases progressing north (Sparke, 1988:129-130). In November 1967, the NCPC recommended that new development along Northbourne Avenue should be low intensity special purpose leases for institutes and that development for commercial purposes be discouraged. It was noted that this would include disposition of pedestrian spaces, vehicle spaces, mandatory building elements to provide space definition, continuity, site coverage, facade height, scale, materials and colours, etc. The Former Churchill House was included as part of the institutional zone and would be adjacent to the taller NCDC headquarters at the Macarthur Avenue intersection (220 Northbourne Avenue), despite the initial request from the Trust to be located within the City.

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The Development of Churchill House

The Former Churchill House was developed alongside the civic design policies for Northbourne Avenue, which were being developed by the NCDC at the time. Churchill House was the first private development (the NCDC offices and the Gowrie Hostel predate it) that the civic design policies were tested against. The process of developing this building led to solidifying many of the policies, but this was mostly as a result of issues that arose such as parking policies and side and rear offsets. Designed in a refined Brutalist style, noted architectural historian and Boyd expert Professor Philip Goad regards it as “a rare, extant example of consistently applied design principles that were envisioned for the national capital in the 1960s” (pers. com., 2014); although this is in contrast to First Assistant Commissioner (Architecture) to the FAC(P) Robert Johnson’s minute paper from 4 March 1969 that Churchill House did not fit with their current Northbourne Avenue Civic Design Plan thinking, but that it should be accepted as a *fait accompli*.

On 20 March 1969, the Department of the Interior’s John Henry Marshall issued an internal minute paper that notes that the drawing provided by Boyd in the latest submission appeared considerably different to what was proposed initially and may not be consistent with the principles of a direct grant of lease to a national organisation – they were worried it was too commercial, particularly the restaurant, and that it was quite a lot larger than the initial discussions had suggested with the original being around 6,000sq ft, but the current design being around 30,000sq ft with the difference being made by expanding the lettable space.

The suggestion was that things had changed in the discussion between the Trust and the NCDC that the Dept. of the Interior were not privy to. This was indicative of the relationship between the NCDC, who approved plans and site selection, and the Department of the Interior, who were in charge of the actual leases, where the interrelated roles could cause tension between the two organisations. This came to a head in March-April 1969 in a series of letters and minutes in which the NCDC claimed they had done everything by the book and kept the Dept. informed at all times and that there was very little deviation from the original plan which had 6,000sq ft footprint that would extend to three storeys plus basement (i.e. ~24,000sq ft in total) and that the current 31,700sq ft plan was agreed in discussions with the architects to produce a better quality overall design; the Dept. of the Interior response was in the defensive and suggested that it was up to the NCDC to get their act together and do better to communicate any changes in siting and design that could impact on the issuing of a lease.

Dr Meddleton from the Trust responded to the Dept. of the Interior’s concerns noting that they planned to rent out the lettable space to other national organisations, that all profits were spent on scholarships and so should not be compared with other commercial ventures, and that the restaurant was more of a conference space with catering facilities (although this is contradicted by H. L. Westerman’s minute of 31 October 1968, where it was noted that Boyd had called and one of the discussion points was the inclusion of “...a high quality, elegant restaurant with only 30-40 seats”, which the NCDC did not object to, but suggested there would be other issues).

The NCDC Planning Committee had a meeting on 24 March 1969, in which it was suggested that the Trust may not be issued a lease based on the misunderstanding. Sir James Kirby from the Trust, on the same day, rang Mr Kingsland at the Dept. of the Interior “...breathing fire and brimstone...” to which NCDC Commissioner Overall suggested may be linked to Sir Osborne McCutcheon passing a note to Robin Boyd when he returned to the meeting (presumably having excused himself for having a conflict of interest). The matter ended up being dealt with by the Minister of Lands directly (which may have had something to do with the Prime Minister being a member of the Winston Churchill Memorial Trust Board)

The end result was that the negotiated lease, formally accepted on 24 October 1969, was for the purposes of the Trust and other national non-profit organisations and allowed up to 30% commercial leasing as long as it was not on the ground floor or selling goods on the premises. The special purposes clause caused the Trust difficulty in attracting tenants to the building and it was gradually relaxed over the years until December 1997 when it was struck out from the lease entirely, allowing the building to be fully commercial.

Robin Boyd

Robin Gerard Penleigh Boyd (1919-1971) was a nationally and internationally renowned architect. He was also widely published and appreciated as an architectural critic. In 1953 Robin Boyd, Roy Grounds and Frederick Romberg formed the practice of Grounds, Romberg and Boyd which became a leading architectural firm in Melbourne. The firm also practiced extensively in Canberra.

Although the three partners were prominent as individuals, the firm maintained a strong design unity. Some buildings revealed the hand of one or other of the architects, but in general the firm developed a corporate style, combining the

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philosophies of the trio and representing the advanced thinking of that era. They often worked or supervised on each other's projects. Their work was a distinctive Australian form of the International Style, then called Contemporary. (Clerehan, 1993)

Boyd joined the National Capital Planning Committee (NCPCC) in January 1968 as one of two architectural experts, the other being Professor Gordon Stephenson from Western Australia. Boyd and Stephenson were charged with creating a statement of civic design philosophy that would form the basis of the NCDC policies relating to the *Buildings (Design and Siting) Ordinance 1964*. These policies would guide the aesthetic, development principles and layout of buildings in the National Capital areas of Canberra.

Boyd had a prolific output of architectural designs, books and articles. He wrote over 700 articles for journals and newspapers, presented a TV series on Modernism and was the author of *Victorian Modern: 111 Years of modern Architecture in the State of Victoria, Australia* (1947); *Australia's Home: Its Origins, Builders and Occupiers* (1952); *The Australian Ugliness* (1960); *Kenzo Tange* (1962); *The Walls Around Us: The Story of Australian Architecture* (1962); *The Puzzle of Architecture* (1965); *New Directions in Japanese Architecture* (1968); *Living In Australia* (1970); and *The Great Australian Dream* (1972 posthumously). His architectural work is mostly known through his residential designs. He was known for his ability to design houses that would meet client needs, solve site problems and still retain architectural integrity. The designs were heavily influenced by the functional and international styles of architecture and became known as the Melbourne Regional style. It was light, simple and elegant and unmistakably modern. (*Architecture Today* 1972; Saunders 1972; and Serle 1995)

Boyd's residential designs that are registered on the ACT Heritage Register include:

- Manning Clark's House, 11 Tasmania Circle, Forrest (1952);
- Fenner House, 8 Monaro Crescent, Red Hill (1953); and
- Eltringham House, 12 Marawa Place, Aranda (1968-69).

He is also credited with the following designs in the ACT:

- Dr Hilary Roche House, Bedford Street, Deakin (1954);
- Zoology building ANU (1961);
- three houses in Vasey Crescent, Campbell (1961) (Grounds & Boyd);
- W G Verge House, 204 Monaro Crescent, Red Hill (1963);
- 204 Monaro Crescent, Red Hill (1964); and
- Zoology Building ANU (1963-8).

In the 1960s he started to move away from the glass box functionalism of the International and Melbourne Regional styles arguing that it had a limited range of expression and instead tried, somewhat unsuccessfully, to land large prestigious commissions for advanced high-rise buildings. He submitted many designs, but few were successful. Those that he did win tended to be of a more moderate size, such as the Menzies College at La Trobe University or Churchill House. Taylor (1990:80) notes that Boyd's interest in Brutalism was heavily influenced by his travels in Japan and he became known as the chief advocate in Australia for the "vigorous, concrete buildings of post-war Japan", but goes on to note that his own attempts at major Brutalist designs show "...a somewhat crude, unexpressive, Brutalist aesthetic. Boyd's later buildings are disappointing...". Commentary in architectural journals and works on Boyd focus on his residential designs and larger Melbourne-based buildings. References to Churchill House mention that he was working on it at the time of his death, and the most favourable account comes from Serle's 1995 biography that noted that it was the "only new work of any consequence" (p.308) and that tenders for "Boyd's innovative design for Churchill House were surprisingly low" (p.309). Raisebeck (2017) noted that, "...Boyd's works and writings from 1960-1967 depict a relatively consistent commitment to a universal modernism tempered through a regional lense...exemplified in the earlier Zoology building", while his later work demonstrates a stark change of focus and a less coherent whole with the different façades of Churchill House showing a different compositional treatment as a result of "...Boyd's experimental bent and abandonment of an integrated and universal modernism."

Boyd received the Royal Australian Institute of Architects Gold Medal in 1969 and was awarded a Commander of the Most Excellent Order of the British Empire (CBE) in 1971 for his services to architecture and government. In the same year he died suddenly from a stroke while recovering from an anaesthetic as part of treatment for an infection. As a result, his work on the Former Churchill House had to be completed by another architect, Bill Williams, who had been employed by Boyd to work on the project under the supervision of a more experienced architect, Neil Clerehan (who later designed the second storey of the north wing to replace the glass display pavilion). (Serle 1995)

Brutalist Design

Brutalism was considered an ethic rather than an aesthetic. The forms were an uncompromising, or brutally honest, reflection of the function they played and the materials used. Materials were respected much the same way as with traditional Japanese architecture, except using modern Western materials and aesthetics. This extended to respecting the properties of the material, such as the plastic formation of cast concrete with its strength and rigidity that come with its thick and solid moulded shapes. It was also an acknowledgement of the impact, the use and benefits, of modern mass production and engineering. The favoured material in Brutalist designs was off-form concrete, although brick and steel were also used. The favoured aesthetic was simple geometric shapes derived from function. Large, blank surfaces were used throughout. These elements would all come together to form a structure that has a level of monumentality due to its strong bold shapes and aggressive form (Apperly et al 1994; Banham 1966).

Many Brutalist buildings do not age well due to their use of large blank areas and uncompromising use of raw concrete leading to staining of exterior surfaces. The Brutalists often suffered from being at the forefront of modern materials and design without fully understanding their properties or how they would perform. The large external thermal mass of concrete could put a strain on building services and many decades after they were built, some buildings are even having to deal with 'concrete cancer' (Apperly et al 1994). However, one of the great benefits of a moulded finish to raw concrete is that it hides imperfections and weathers better than a flat surface, but it is also important to have an experienced and competent concreter who understands local conditions in order to achieve a consistent desired result (Architects' Journal, 1968:382, 390-393).

The Former Churchill House has many of the stylistic indicators of the Brutalist style. The key indicators include strong shapes, boldly composed (the corner tower, sloping entry glazing and the wings extending either side of the tower); Sloping structural fin (the sloping entry glazing structure); large areas of blank wall (the end walls of the wings); and Off-form concrete (used throughout) (Apperly, et al 1994). While it does have some indicators in common with other styles, buildings are often not pure examples of styles and can display some hybridisation. None the less, it is common practice to indicate what appears to be the main style based on the weight of evidence, perhaps noting additional stylistic influences. The Former Churchill House is placed firmly in the Brutalist style, with an International style influence in the Corbussian window motif. Noting this, the building is still a more restrained example of the Brutalist style than some other examples.

Significant Brutalist style buildings in the ACT include:

- The Edmund Barton Building, Barton 1969-1974 (Commonwealth Heritage List);
- The Callam Offices, Phillip designed 1973, built 1977-1980 (ACT Heritage Register);
- The Cameron Offices, Belconnen 1970-1977 (Commonwealth Heritage List);
- The Carillon, Parkes 1967-1970 (Commonwealth Heritage List);
- The High Court of Australia, Parkes 1975-80 (National and Commonwealth Heritage Lists);
- The National Gallery of Australia, Parkes 1968 (competition) built 1972- (National and Commonwealth Heritage Lists);
- The School of Music, Acton 1976 (Commonwealth Heritage List);
- The University of Canberra Student Residence Group 2, Bruce 1973-1975 (ACT Heritage Register); and
- The Woden Valley Library and Phillip Health Centre, Phillip 1975-1976 (ACT Heritage Register).

The use of concrete as a finishing and structural material

The surface finish of concrete, i.e. colour and texture, is not just cosmetic (Lee, 1970:305) and Boyd used textured finishes on concrete as a way to soften the material, create a more diffused light, minimise the effect of the inevitable weathering of the material as well as a way to make up for the deficits of local concreting trades to produce a consistently smooth finish (Lee, 2017). The 1970 conference on concrete construction held in England did not have a favourable view of board marked concrete, particularly when the grain was pronounced and laid horizontally, going so far to say, "...heavily board-marked concrete was now generally out of favour, but it would be good to think they were right and that the last grimy lesson has been learned. There is still too much cast in-situ concrete which looks too much like rough-sawn garden fencing with a surface slurry of cement; it has the quality of neither timber nor concrete. Though aesthetic arguments can be advanced for expressing the process by which a material is produced, as well as expressing the inherent quality of the material itself, it is surprising that many designers have gone so far in falsifying the surface of concrete in order to achieve texture." (Lee, 1970:306).

The actual material used to make thermoplastic moulds will depend on their number and complexity, but are generally quite cheap if producing large numbers. The profiled or moulded surface of these sheets of plastics adds

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rigidity to them that aids in their use. The patterns used in the mould can vary widely, but the use of woods, particularly close-grained hardwoods, are ideal. "The essential feature of all methods of vacuum forming, whatever the mould material, is that the heat-softened plastic is forced onto the mould by evacuating the air trapped between the material and the mould. The moulded lining is then allowed to cool in contact with the mould, removed and trimmed." (Architects' Journal, 1968: Information Sheet 1575) This is then supported by formwork as the concrete is poured. Plastics produce a more consistent finish than could be achieved with wood directly and they are cheaper and easier over a large project. Board marked or profiled timber produces a medium to high quality finish that can be reused 4 to 7 times and is somewhat expensive due to the low reuse. Profiled thermoplastics produce a high quality finish and can be used, depending on the material use, over 60 times making it a more economical, but more importantly a more consistent finish (Architects' Journal, 1968: Information sheet AJ 1571); the solution of disposable single-use plastic moulds used on Churchill House (see discussion with Paul Couch below) was a cheaper method of using thermoplastics that also minimised labour costs associated with cleaning and preparing the moulds for reuse, but still resulted in the same consistent finish.

The Former Churchill House History and Description

The Trust asked Boyd to design a building that would accommodate their national office, allow for the display of works by previous Fellows, and would also act as an investment by leasing space to other tenants for a profit. Boyd's feasibility study offered five different schemes for the Trust to consider. The schemes, designated "a" through to "e" were variations on a square block containing the Trust and all rental space, a C-shape containing rental accommodation with the Trust enclosed in the central courtyard, or an L-shape with the trust in a separate but open building. All the variations on the schemes offered different frontages, plot ratios, building costs and return on investment for the trust to consider what their ultimate design would be. Dr Meddleton noted in a letter dated 22 April 1969 to the Department of the Interior that discussions with the NCDC were focused on schemes D and E with the Trust finally deciding to pursue scheme E with a larger floor space to make up for being further from the city centred than they had wanted.

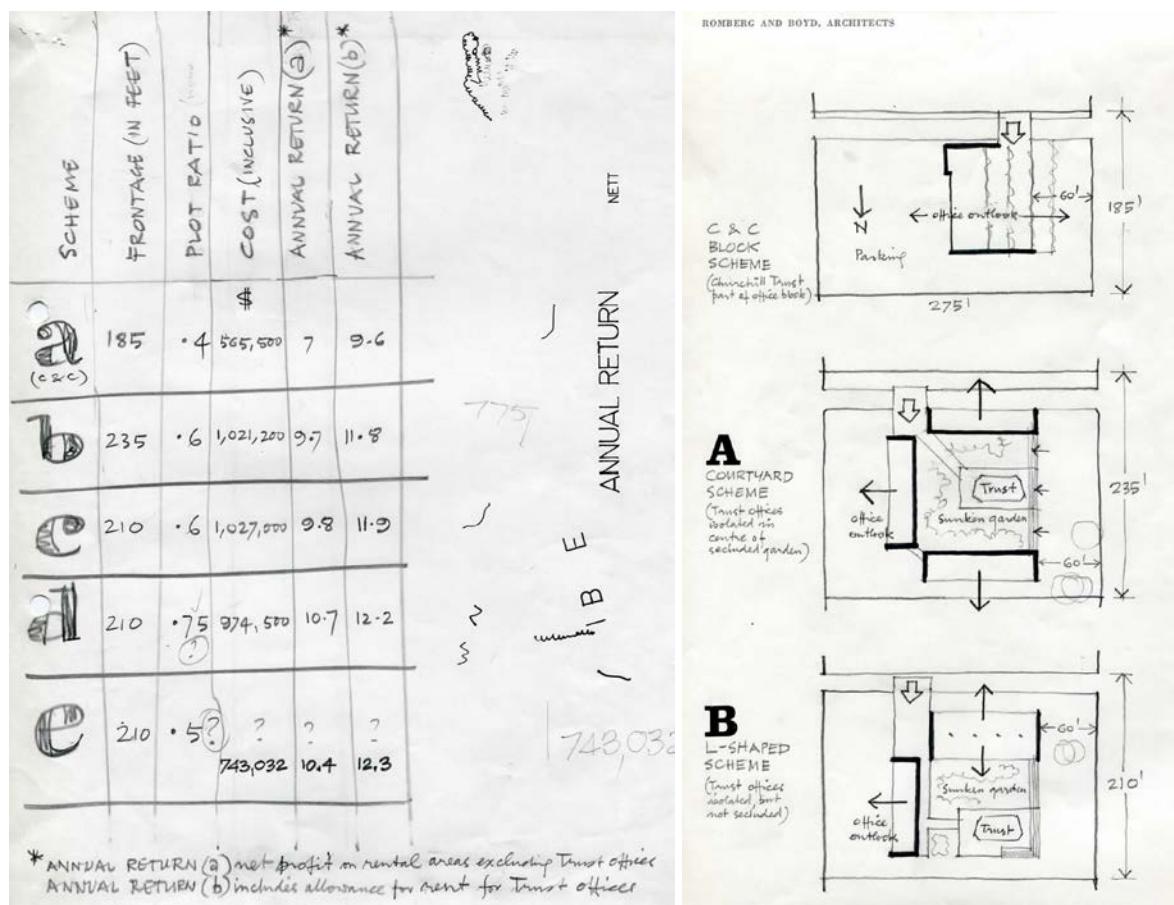


Figure 2 Boyd's hand-written draft table of the Churchill House scheme details and draft of the different scheme layouts

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Boyd's design split the building into three components. The first was the north wing which would house the Trust in a single storey, slightly below street level, technically a basement level, with a glass gallery on top. The gallery was designed to house the Fellows' works and would allow for viewing 24 hours a day with the addition of night lighting. The national president of the Trust at the time, Sir Robert Menzies, said "Churchill House will be a physical embodiment of what we have been trying to establish. It will become a tourist attraction" (*The Canberra Times* 20 April 1973 p3). The other components were split into the east and south wings which were almost identical buildings forming an 'L' shape with a services tower between them.

The east and south wings are rectangular concrete boxes with one long facade of Corbussian strip windows and the other long facade covered in vertical concrete sun control fins with thin vertical slit windows. The short end facades are off-form blank concrete walls. The buildings are joined by the services tower and foyers for each floor with a glass wall the full height of the building that is sloped above the ground floor.

The building wings surround and look onto a sunken, landscaped courtyard. The courtyard contains a rectangular pond along the eastern side with planted green space in the centre containing mature trees and a paved area along the western side of the courtyard. A shallow embankment planted with shrubbery leads down to the courtyard from the driveway fronting Northbourne Avenue. The landscaping around the building and in the courtyard has matured well, the large areas of thick greenery acting as a foil to the harsh concrete of the building.

There are some issues with the original finish of the building. Throughout the off-form finish there are a large number of surface air voids, or 'bugholes', that are a common problem with precast concrete, at the time often associated with poorly prepared formwork lining or insufficient vibration, particularly with vertical in-situ cast concrete; however the effect of the bugholes is minimised by the selection of a textured surface. Additionally, the design of the east and south facades suffers from the horizontal precast wall panels not aligning with the glazing panels and the glazing having different panel widths between floors, although this effect is minimised by somewhat by the alignment of the windows being centralised so that the misalignments are mirrored on each end.

The building has undergone several key changes since it opened in 1972:

- loss of the glass gallery and erection of north wing second storey (1980) – the exposed gallery was not well suited for its purpose and resulted in sun and heat damage to many of the works that were displayed within. The Trust contracted Neil Clerehan + Associates Pty Ltd, Neil Clerehan having worked on the original design under Boyd and involved in completing the building after Boyd's death, to design a replacement second storey office space at the start of 1980. The Fyshwick based builders Kell and Rigby Ltd were contracted to demolish the gallery and erect a second storey of office space in its place in a sympathetic design to the existing first storey;
- air-conditioning units added to outside of the south wing - large unsympathetic air-conditioning units have been installed externally on the second storey southern facade of the south wing; and
- the Churchill statue was installed then moved (installed 1985; moved post-1992) – the fibreglass replica of the Winston Churchill statue by Robert Ivor Jones was brought to Australia for the 1975 David Jones 'Best of Britain' exhibit in Sydney and then donated to the Trust in 1983. Following some restoration work, it was placed in the courtyard garden of the Former Churchill House in 1985. The statue was moved to the corner of Balmain Crescent and Liversidge Street in Acton sometime after 1992 when the Trust sold the building and moved to a new location within the ANU campus.

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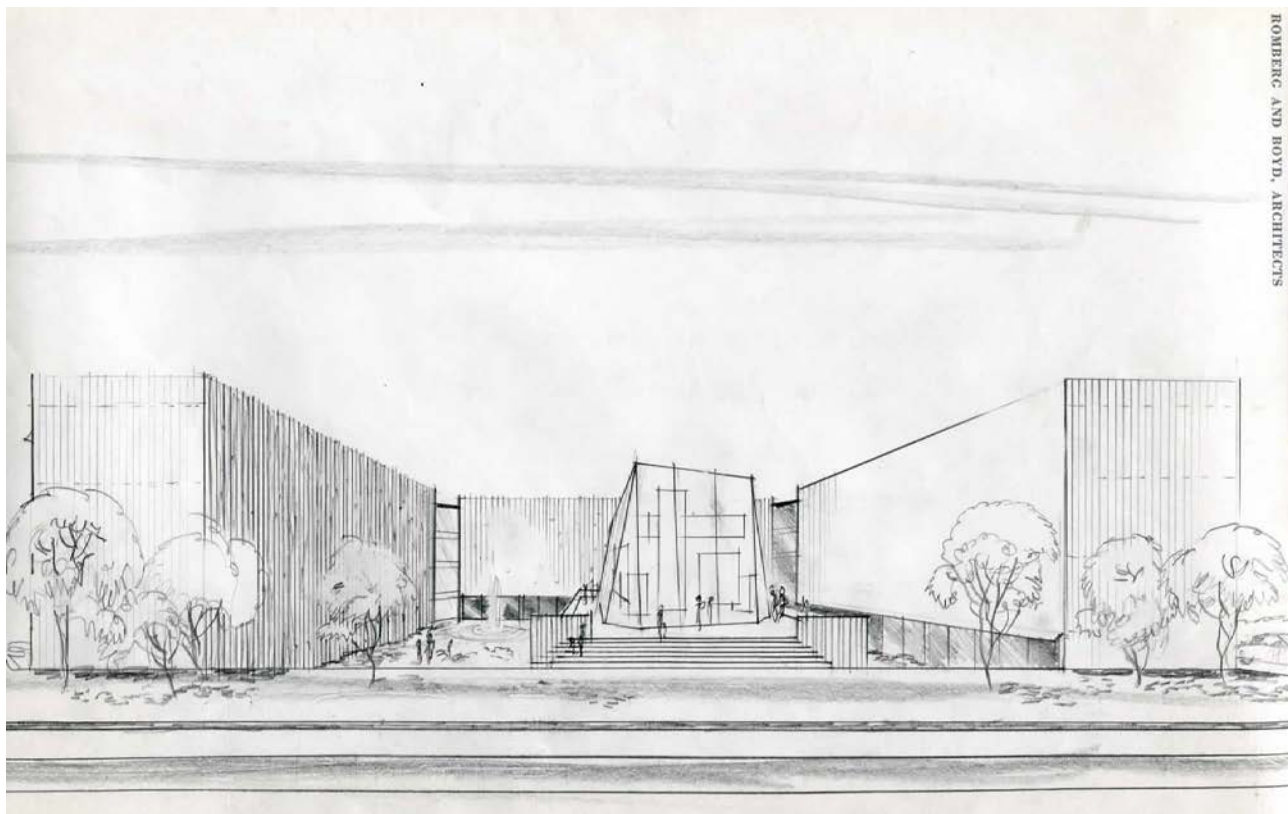


Figure 3 Boyd's concept sketch for the C-shape scheme c.1968 showing the general form of the design was well established.

Current Academic Opinion

The Former Churchill House has in the past been neglected in published academic research, however several current scholars have expressed the opinion that it is an important part of Boyd's body of work. These opinions have not necessarily been expressed in terms that are compatible with the assessment process of the *Heritage Act 2004*, nor are they based on a comparative assessment of relevant examples or supported by documentary evidence; however they are indicative of possible future research outcomes. The Council notes the scholars' views about the significance of The Former Churchill House but will make its own assessment of the heritage significance of the place in accordance with the requirements of the *Heritage Act 2004*.

Senior Lecturer in Architecture at the University of Canberra Ann Cleary, who has studied The Former Churchill House in depth, has noted that, "From my academic and professional perspective the hung concrete fins and support structure are the significant and innovative part of the C[hurchill] H[ouse] design that would be the most critical to protect. The fins define the rhythm of the facade on to the courtyard as a unique architectural device particular to C[hurchill] H[ouse] they articulate and mediate the direct sun penetration into the spaces behind but also provide a cohesive and distinctive Brutalist expression of light, depth and shadow differently to the large plane abutments of other Brutalist examples in Canberra if not elsewhere. These two facades to the north and west are still in original condition and establish the spatial scale and enclosure to the central garden courtyard" (Cleary, A. 12 March 2014 pers. comm.)

Professor Philip Goad, an authority on modern Australian architecture and Boyd expert, is of the opinion that The Former Churchill House is a significant building, noting, "Churchill House (1970-2) is an exemplar of the form of late Modern architecture, often loosely termed Brutalism that was promoted from the late 1960s by the National Capital Development Commission... It is the largest, most public and most complex of works designed for Canberra by the noted Australian architect and critic Robin Boyd (1919-1071)...[and] its image and style are a direct reflection of the views Boyd held and promoted through his involvement as a member of the National Capital Planning Committee from 1968. This special sub-committee was charged especially with design review of NCDC commissions across the capital territory. From his very first meeting in January 1968, Boyd was to have significant impact, when he and Professor Gordon Stephenson were charged with updating and formalizing a document that would guide the aesthetic and development principles of the buildings and layout of Canberra's Central Area. It was this document that formalized the decision that all new buildings in the Parliamentary Area should be white (later amended to white or

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near white), copper for any visible roofs or landscaped roof terraces, and a structural/expressive module based on the 24 foot module of the National Library of Australia (later modified). It was a decision that would determine the general appearance of all later buildings in Canberra's Central Area, including buildings such as Harry Seidler's Trade Group Offices, Edwards, Madigan, Torzillo and Briggs' High Court of Australia, and the eventual building of the National Gallery of Australia, buildings which could be described as falling under the descriptive mantle of 'Brutalism'. True to his principles, Boyd, when finally commissioned to undertake a new building in Canberra, followed the NCPC principles, which he'd advocated and had begun the rule for any new building in Northbourne Avenue.... Boyd's design is a sophisticated interpretation of the design themes he advocated. The almost-white, off-form reinforced concrete building includes a north and west-facing wall of sun-breaking concrete fins hovering above a glazed ground level. These façades are unusually delicate in scale and appearance given the material choice of concrete. These two intact façades enclose a landscaped courtyard, complete with reflecting pool. Together these two elements - building and garden - are intrinsic to Boyd's scheme that any new public building in Canberra defer to an overriding conception of buildings harmoniously related to landscape. It is a rare, extant example of consistently applied design principles that were envisioned for the national capital in the 1960s. While functional certain elements of Boyd's design such as the glazed book prism were removed, the current integrity of Churchill House does not detract from its significance." (Goad, P. 12 March 2014 pers. comm.)

Professor Goad followed up his commentary in a letter dated 23 October 2017 noting that, "It demonstrates Boyd's intention to minimize material use through inventive and experimental construction techniques, especially as they related to concrete construction. These included the experimental use of disposable plastic formwork moulds, understood to be the first of their kind in Australia at the time. These plastic moulds, inspired by Arnotts biscuit packet casings, were designed to reproduce economically the more conventional timber graining pattern achieved by expensive sandblasted Oregon timber forms that wasted timber in reuse and did not achieve consistent outcomes in terms of quality. Boyd's invention ensured excellent and consistent quality throughout in terms of the timber graining, which was his tactic to soften the appearance of the white concrete, especially on the exposed interior walls, and east and south façades. Also included in the construction were the clever precast concrete L-shaped 'planks' that formed an integral wall and external sunshade system and inside the building, tilt-slab construction was used for some internal partitions. Boyd also adopted sophisticated yet daringly simply glass and neoprene gasket detailing, based on automobile windscreen details, for all glazing."

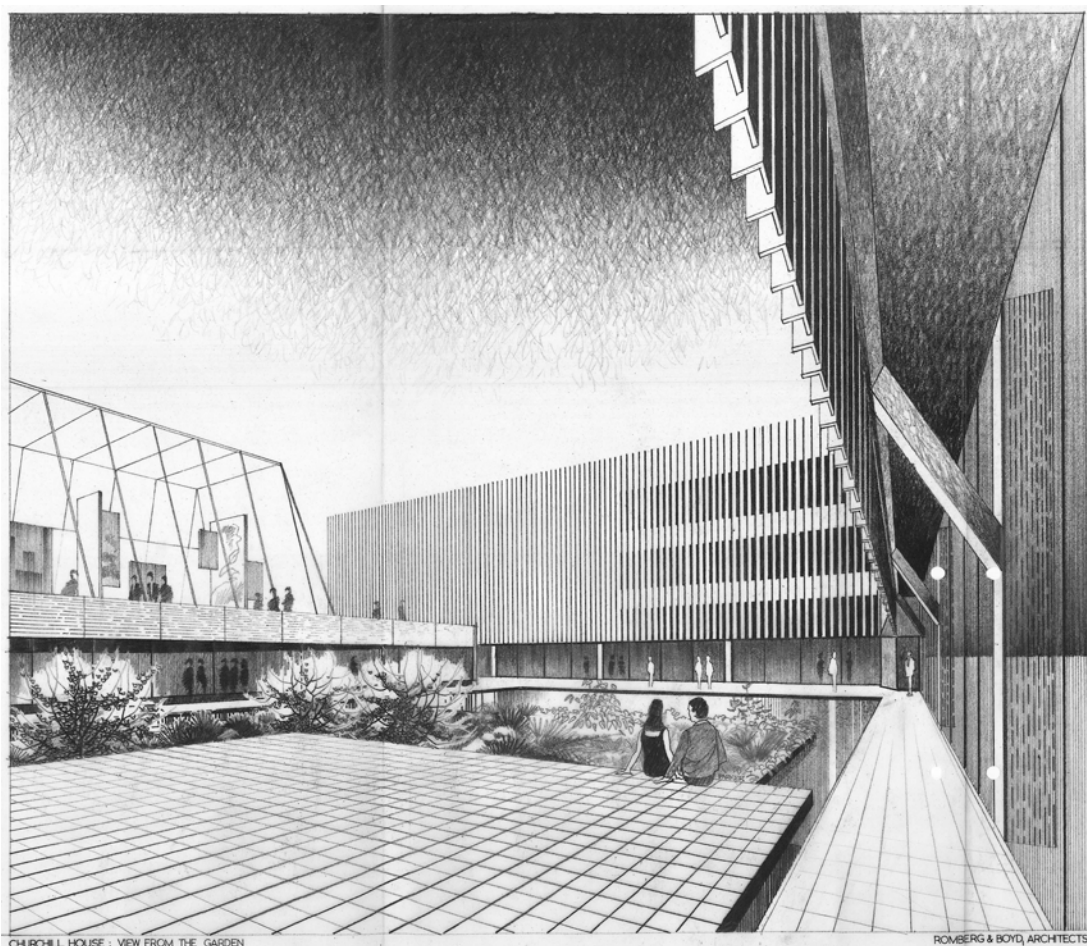


Figure 4 Churchill House perspective sketch c.1969

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The following is an edited report based on personal communication between Paul Couch (former employee of Boyd who worked on Churchill House) and Tony Lee (Boyd Foundation) passed on to the Council on 23 October 2017.

Churchill House reflected Robin's desire to eliminate any materials, details or building trades/processes which were un-necessary. The building could be described as an example of 'Elimination-ism'. The building was conceived primarily as a concrete and glass building. All other materials were to be avoided and eliminated where possible.

At the time this building was designed, concrete was still seen as a structural material rather than a finishing material used to clad and form the building facings. In Churchill house concrete is used for all of the primary structural components: ground slabs, intermediate floor slabs, and structural columns, but it is also used for external and internal walls. The north wall of the East Wing offices and west wall (facing Northbourne Avenue) of the South Wing offices were poured in-situ. Precast spandrel wall panels were used for the east wall of East Wing offices and south wall of South Wing offices. Vertical precast 'L-shaped' concrete panels were designed as sunscreens for the office windows – the west wall of the East Wing offices and north wall of the South Wing offices) looking into the courtyard. The internal walls for offices and meeting rooms in the Churchill Trust wing were formed using concrete tilt panels poured on site. In all these installations the concrete was retained as the finished surface.

To achieve a good/consistent smooth off-form concrete finish (al la Tadao Ando) was considered by Robin to be beyond the capabilities of local tradesmen. He also thought it to be a bit harsh and wanted to tone-down or soften the concrete look into something that was a bit more organic and workable. In previous projects – McCaughey Court (Ormond College, Melbourne. 1965/6) and the Mark's House (Mt Martha. 1969) sand blasted oregon timber had been used for the concrete formwork to achieve a controlled but soft finish. The sand blasted timber formwork was not ideal as the timbers could only be re-used a limited number of times (the maximum uses achieved at McCaughey Court was seven) and the concrete projections created by the timber grain were very fine, indiscriminate and were often broken off when removing the formwork. Whilst the tender and working drawings for Churchill House indicated a similar sand blasted oregon timber off-form finish for all external exposed concrete, discussions between the builder (Mainline Constructions) and Paul Couch developed an alternative, quicker, more controlled/consistent, more satisfactory i.e. deeper undulations in the concrete surface and cheaper process. Plastic forms used by Arnotts to protect individual biscuits when packaged was provided inspiration to prepare a mould and plastic formwork. A master mould was prepared from which multiple plastic disposable forms were made. Each of these forms was used once, they w[ere] pliable so that they could be peeled from the concrete without damaging the rough formations. This proved to be much cheaper and resulted in a softer but repeatable and controlled concrete finish as desired by Boyd.

The glazing details used at Churchill House were developed by Paul Couch to achieve Robin's desire for a simple, frugal, minimal window detail that was easy to install, disappeared between the concrete walls, sunscreen 'Planks' and spandrel panels i.e. it did not appear as a visible third element. The detail was derived from automotive windscreen glazing techniques. All window glass was held in flexible 'H-section' neoprene gaskets which were inserted into pre-formed recesses in the concrete panel, spandrel and sunscreens. At the time Churchill House was designed the availability of aluminium window glazing sections were not as widespread as today and any components that were readily available were relatively expensive. This gasket detail eliminated the need for window frames and the glass appears to be set directly into the concrete and reduced cost considerably. A suite of details were developed which allowed similar details to be used in the concrete office sections of the building as well as in the glazed display pavilion." The images below show that a steel section was anchored to the concrete and fixed with Celastic (a formable semi-rigid material) or Thiokol (a polymer sealant) and masonry anchors and the glazing was then fixed to the section of metal jutting out.

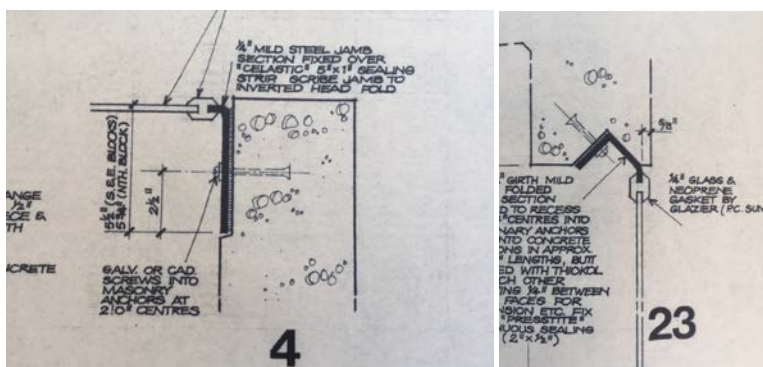


Figure 5 Details of glazing construction drawings

Background Information – Open Systems House (former Churchill House)

Boyd was acutely aware of the need for sun screening to Australian buildings, but was very uncomfortable with adding another element into the design of a building façade. In previous buildings he had tried to detail minimal sunscreens that were quite unobtrusive, detail horizontal sunscreens using materials that were used elsewhere in the building or provide sunscreens by overhanging roof and upper floors. At Churchill House he experimented with a totally different approach. One that totally integrated the sun screens into the building cladding, while at the same time attempted to address the deficiencies of traditional horizontal sun shading – how to manage the low projecting early morning east and late afternoon west sun. Boyd's solution was to design vertical 'L-shaped' concrete pre-fabricated panels which he called 'Planks' which were fixed to the ends of the concrete floor slabs. These 'L-shaped' Planks formed the building cladding and window frames as well as sun screens to the office elevations overlooking the courtyard garden.

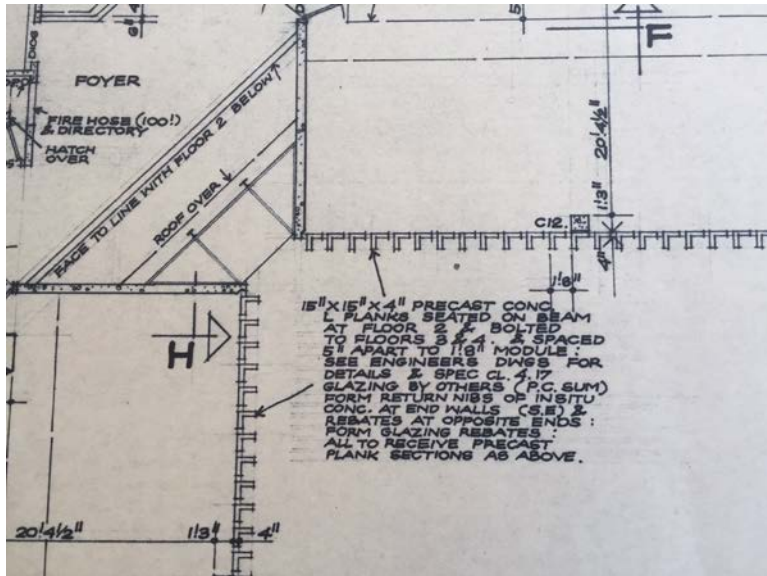


Figure 6 Plan detail showing 'Plank' arrangement on office wing walls overlooking courtyard

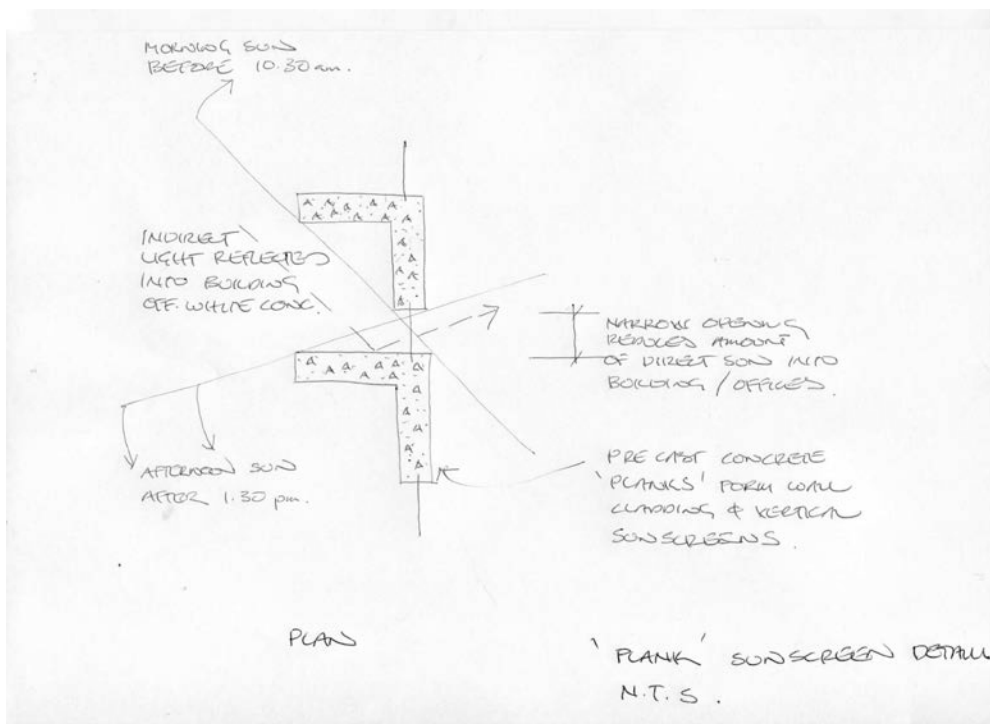


Figure 7 Paul Couch sketch explaining how 'Planks' were intended to function as sunscreens

While the design and use of the 'Planks' was intended to control the heat of the sun entering the building, the 'L-shaped' form of the 'Planks' was conceived to reflect light off the projecting legs of the 'Planks' so that the general level of natural light in the building was maintained.

Background Information – Open Systems House (former Churchill House)

The Planks were designed to be installed on the first floor and above. Sun screening to the larger ground floor windows was provided by stepping the façade back behind the line of the projecting first floor above, as well as hanging the Planks below the level of the first floor above.

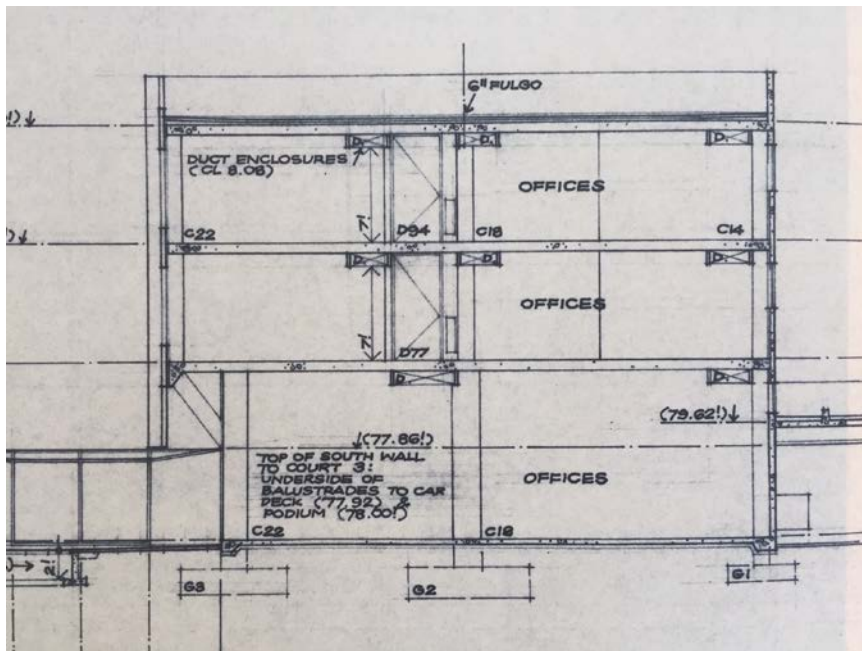


Figure 8 East West section through East Office wing showing 'Planks' hanging below level of first floor to provide sun screening to ground floor level floor to ceiling windows

Physical condition and integrity

An external visual site inspection from the public realm on 12 November 2013 by the ACT Heritage showed the place to be in good condition. There was evidence of some staining on the external concrete finishes and some external modifications such as the air-conditioning units on the south facade of the south wing and some minor plastic conduit on the north facade of the east wing. Also of note is the north wing which has had its glass gallery replaced by a new second storey, although the new storey is in a sympathetic design to the existing first storey. Despite the loss of the building's most unique feature, the glass gallery, the place remains relatively intact.

The owners of the building noted in January 2018 the following issues with the physical condition of the place:

- The design of the place is not effective at sun control as the east façade of the east wing has no sun control to manage the morning sun and the south façade of the south building has the same issue with the afternoon sun;
- The concrete 'planks' that form the north façade of the south wing and the west façade of the east wing make it difficult to regulate temperature as they transmit heat into the building in summer, but also draw it out in winter;
- The 'planks' also have issues with water-tightness between joints as well as the vertical slit windows;
- The thin glazing throughout exacerbates heat transfer, particularly on the lower floor facing the pond where the large expanse of glass causes the most problems;
- Issues with thermal stress and movement in the windows and frames has caused several to break and there is an unwillingness of modern glaziers to work with the existing system so that new frames have been installed in several areas to replace glass sheets on the lower floor;
- The eight inch thick reinforced concrete slab roof causes heat transfer issues and has issues with water-tightness;
- There is a lack of insulation which exacerbates heat transfer issues;

Background Information – Open Systems House (former Churchill House)

- The ceiling height is 2.4m in the upper floors, which is considered the minimum height for office spaces, but within this the ducting and lighting also has to be contained, which also exacerbates the climate control issues by restricting the reasonable sizing of the air-conditioning ducting;
- The upper deck of the carpark has slipped and will require repairs;
- There are safety issues with
 - placement of electrical switchboards
 - fire egress through the main electrical switchboard room
 - rooftop parapet height is too low for safety standards (hence why the rooftop terrace garden was never developed)

SITE PLAN

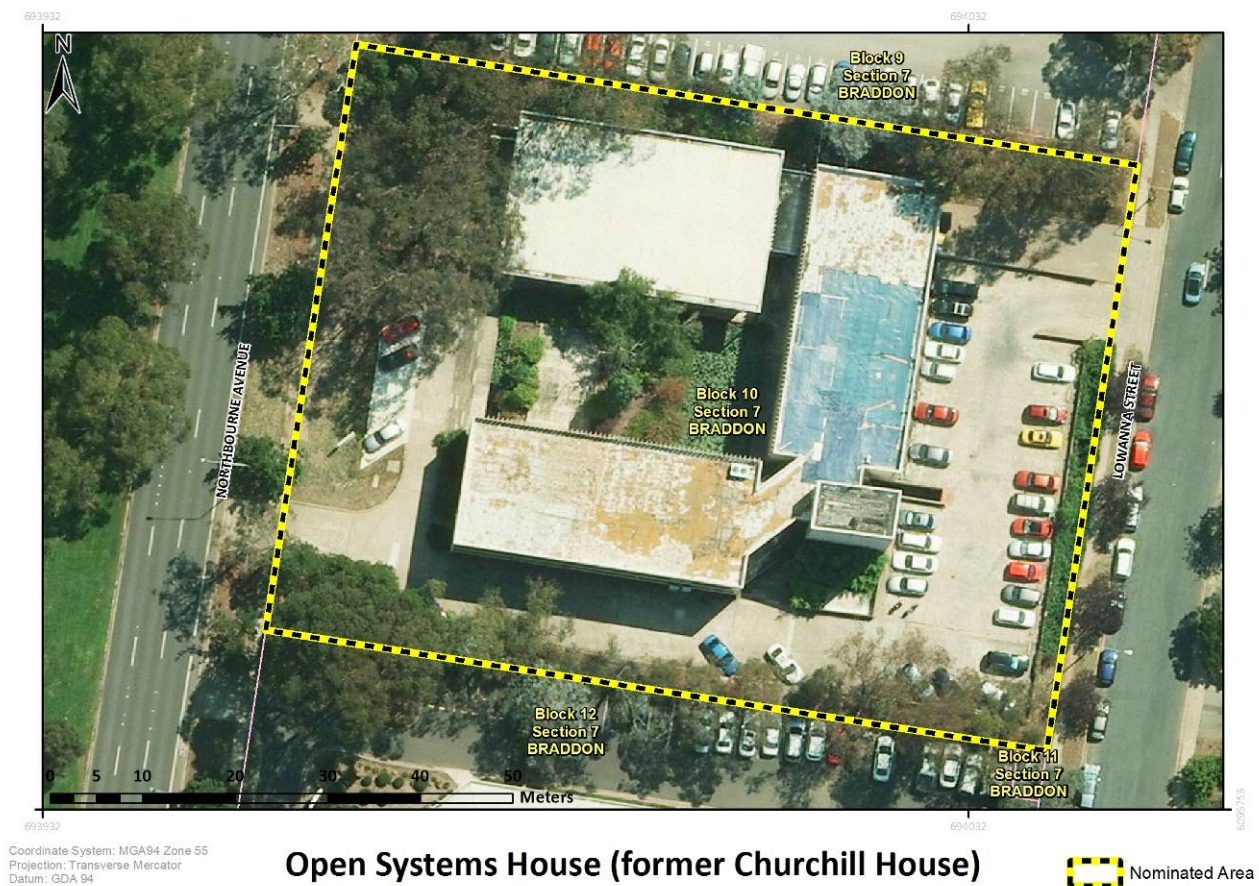


Image 1. Open Systems House (former Churchill House), nominated area boundary.

Background Information – Open Systems House (former Churchill House)

IMAGES

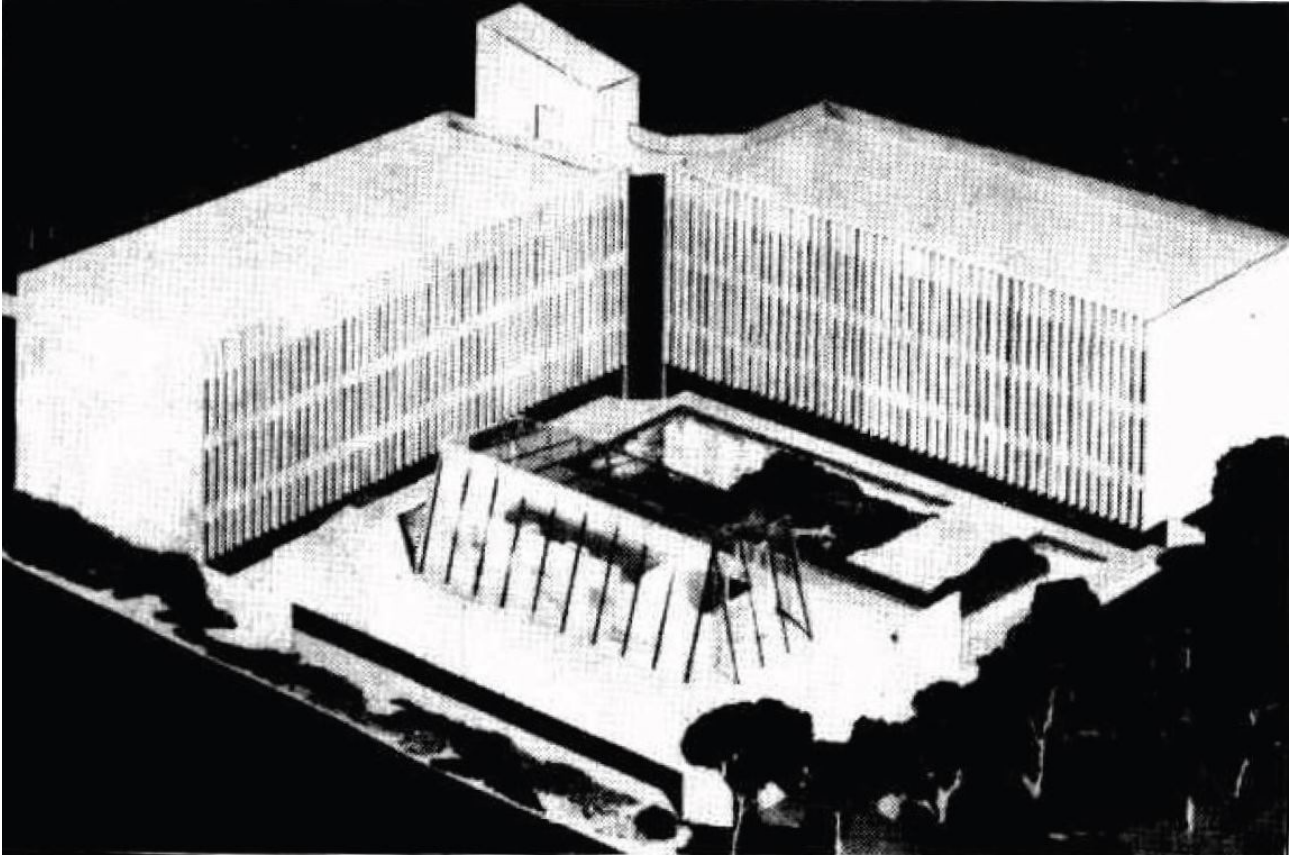


Image 2. Open Systems House (former Churchill House) model showing gallery c.1970. (*The Canberra Times* 20 April 1970 p3)



Image 3. Open Systems House (former Churchill House) north wing. (ACT Heritage 2013)



Image 4. Open Systems House (former Churchill House) south wing. (ACT Heritage 2013)

Background Information – Open Systems House (former Churchill House)



Image 5. Open Systems House (former Churchill House) south wing. (ACT Heritage 2013)



Image 6. Open Systems House (former Churchill House) east wing. (ACT Heritage 2013)

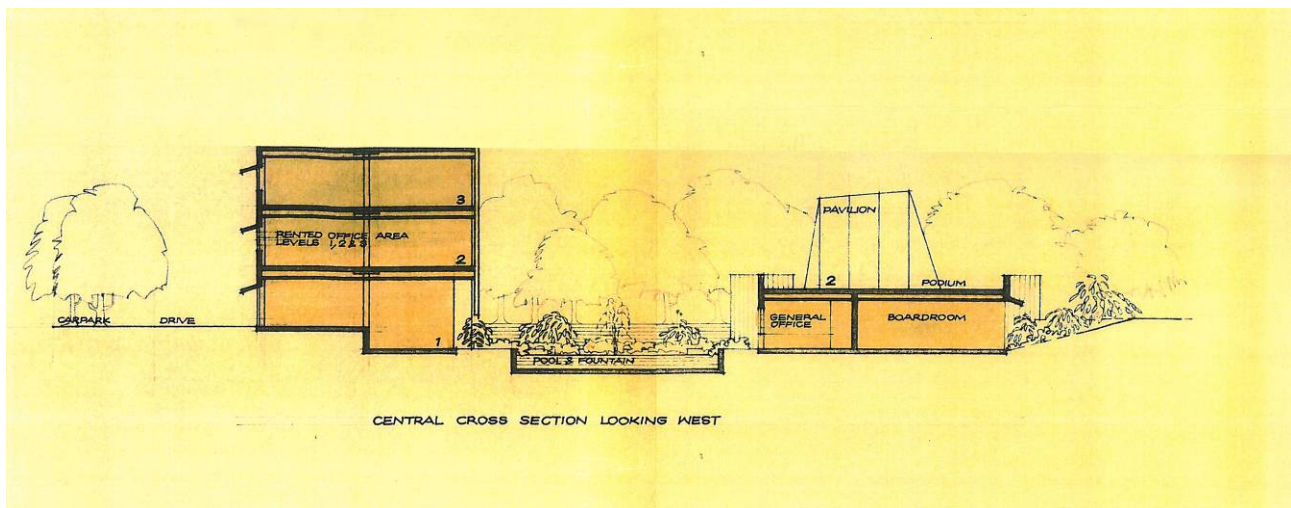


Image 7 Boyd's original drawings of Churchill House – Central cross-section looking west (courtesy of Ann Cleary)

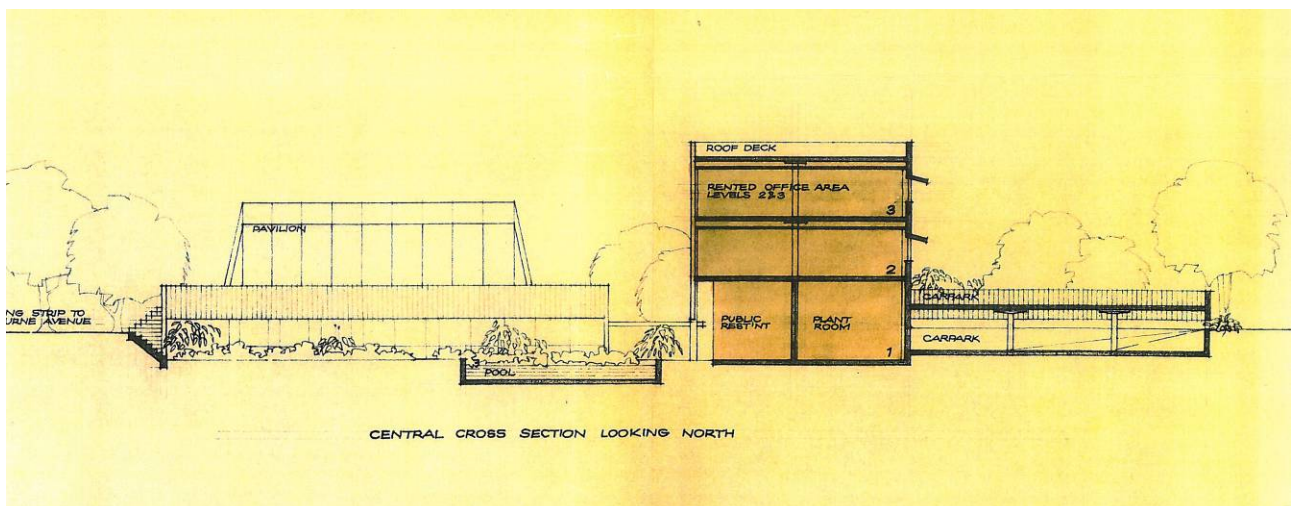


Image 8 Boyd's original drawings of Churchill House – Central cross-section looking north (courtesy of Ann Cleary)

Background Information – Open Systems House (former Churchill House)

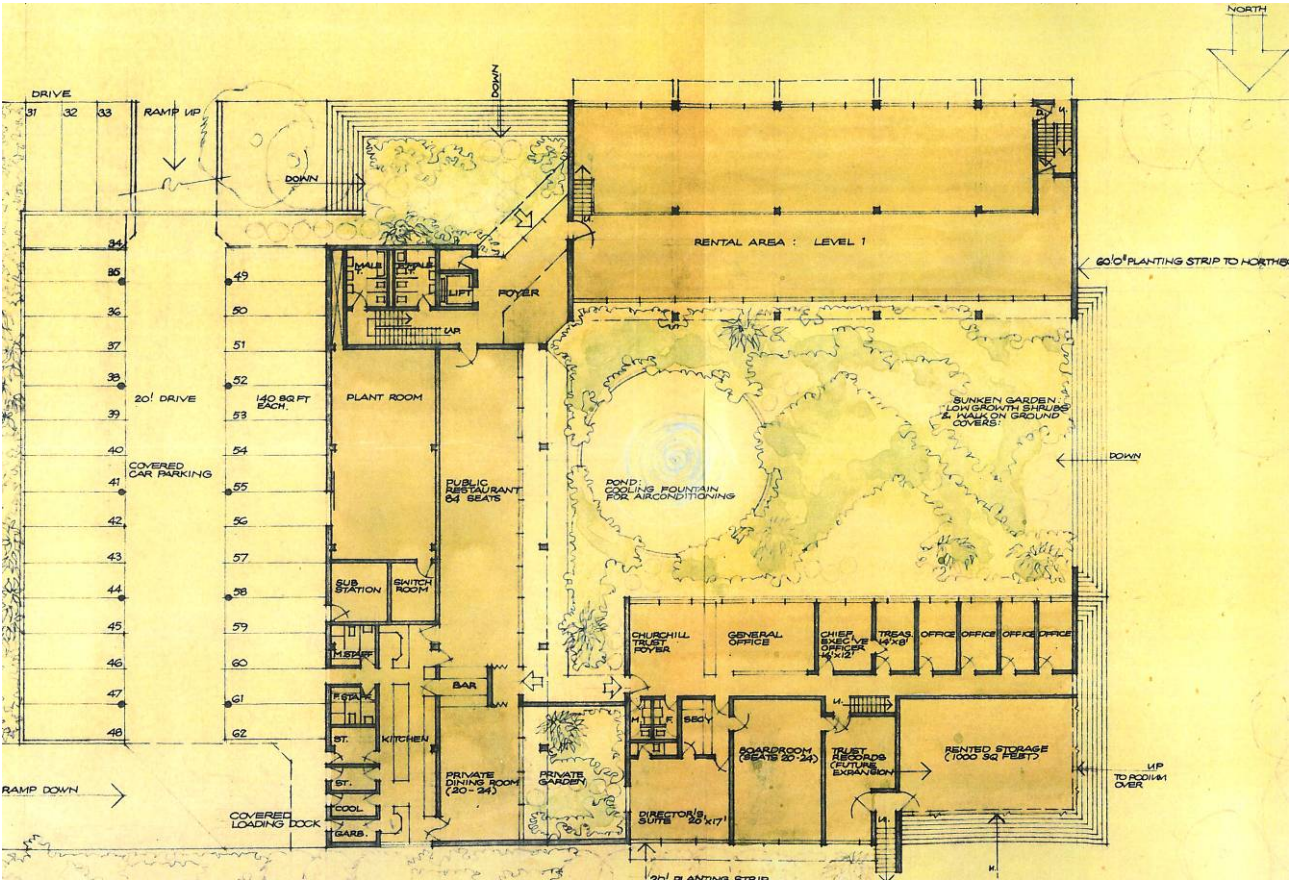


Image 9 Boyd’s original drawings of Churchill House – first floor plan (courtesy of Ann Cleary)

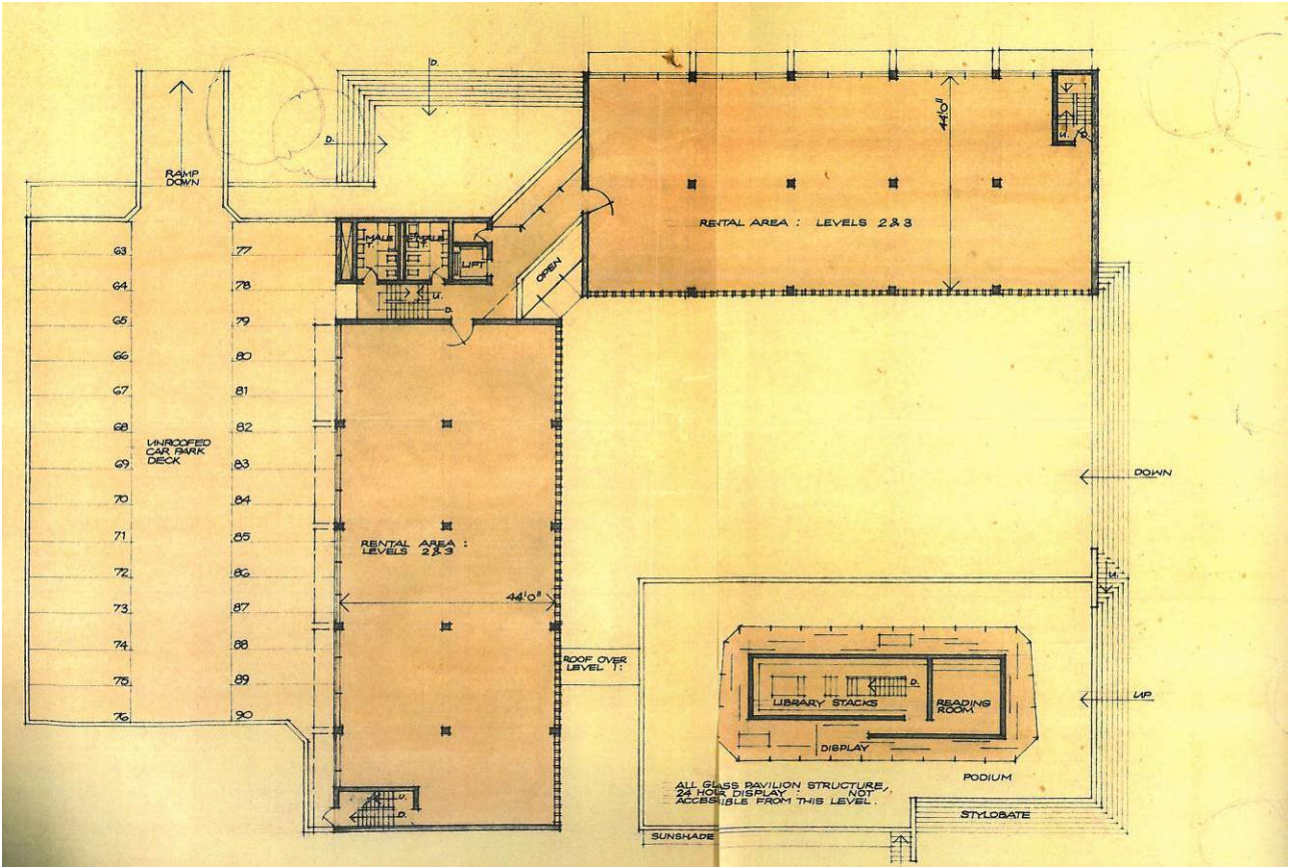


Image 10 Boyd’s original drawings of Churchill House – second floor plan (courtesy of Ann Cleary)

Background Information – Open Systems House (former Churchill House)

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