

“The best bit is when you come in and they have just made the coffee”¹ : the Post Occupancy Evaluation of the National Archives Building

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The New Zealand National Archives employed active involvement of clients and staff at strategic stages in the development of its 'flagship' building near New Zealand's Parliament. Participation of these building users was undertaken to achieve cost savings and ensure that the building facilitated, not frustrated, organisational needs. This paper describes the five-year process from initial briefing to completion of the first stage and preparation of the second stage of development.

The participatory methods are drawn from a Post Occupancy Evaluation program, which includes structured interviews with groups of building users. The Post Occupancy Evaluation methods have been developed and used by evaluation specialists for many building types in New Zealand and Australia to enable customers, staff, managers and others to ensure that understandings about the qualities expected from buildings are identified and considered in design. The evaluation specialists involved with the New Zealand National Archives project developed recommendations for immediate and deferred improvements to the building.

This is a refereed article.

The move from the red light district to the government centre

New Zealand National Archives holds government's non-current records. The organisation was formerly located in the red light district of Wellington in two buildings with sundry additional storage spaces. Operating in a collection of inadequate buildings, two of which had public interfaces, led to duplication of work and much wasted time moving between them. Conditions were poor in the rented buildings with no environmental controls, water leaks on to archives and frequent security breaches outside the control of Archives. Staff leaving work were frequently accosted by night workers of the red light district.

In 1989 Archives bought the former Government Printing Office building. The building is a modernist print factory and office building constructed in the early 1960s and was well suited to Archives' needs with its heavy floor loading capacity and high stud height.² It is also located within one block of Parliament, the central railway station transport hub, the National Library and several other government department head offices. This central location was one of the critical factors in the decision to refurbish an existing building rather than build a new one, as it provided good access to public transport for visitors, close proximity to the

National Library with which Archives shares the majority of its research clients, and good access for Archives staff to central government clients. The limitations of existing finding aids meant that co-location of the collection and the public reading room would be essential if a reasonable public service was to be provided. The Government Printing Office building, with 17,500 square metres spread over six floors on a compact 5500m² site, would provide for such co-location for at least twenty years.

In terms of funding and public profile, National Archives has historically been something of a poor relation to the National Library and Museum of New Zealand. The new building was conceived as a flagship for Archives which would make something of an architectural statement about its status in comparison with these two institutions and its importance as 'the place where our civilisation recognises its past in perceiving its present.'³³ The architect was commissioned and commenced design with a very high level of staff involvement with regular meetings of small groups. Project objectives were discussed and staff participated in planning for most parts of the building. Research clients were also consulted to ensure that their needs and concerns were identified. As design progressed, the architectural doctrine of 'form follows function' was adhered to in the design, and the modernist design style of the original building respected in the changes.

The Archives' facilities comprise three principal zones. The archives' storage areas hold around 40 linear kilometres of textual material, the majority on 3.3 metre high mobile steel shelving. There are 444 A0-size 10-drawer plan cabinets for the storage of maps, plans and other large-format material which also run on the same mobile system as the textual shelving. Other specialised storage caters for rolled maps, the National Collection of War Art, and photographs and film. All the storage systems are designed and constructed to high earthquake resistant standards. The public area provides for reception, an audio-visual display area for new users, two reading rooms, the Register Room housing the indexes and registers of the nineteenth century correspondence system, two exhibition rooms, a large Training Room with full projection facilities, the Constitution Room where the Treaty of Waitangi and other significant documents are on permanent public display, a cafe, and the security control centre. The third zone comprises offices, staff work areas and meeting rooms and the staff library.

After extensive staff and user briefing meetings, the architect designed the interior

prior to the second stage of staff and user participation in early 1990. Staff reviewed the detailed interior design and some modifications were made in response to staff comments. After decades in unsatisfactory rented accommodation, each staff member had their own view of what the ideal archives building would be. There were tight budget considerations including the increased operating costs which would result from the new accommodation, as well as the high capital costs involved in refurbishing the building. The resulting design was a compromise between what the staff and users wanted, what was achievable in the existing building framework, and what was affordable.⁴

In late 1990 tenders were called for the main building contracts and the whole process compressed to minimise closure of Archives to three months. The building work was carried out from February 1991 and all staff occupied the building by November 1991.

The need for a Post Occupancy Evaluation

The move to the new building had a major effect on the activities of the organisation. New operational systems and procedures had been developed hand-in-hand with the new design. The higher profile of the new building was intended to increase reader numbers and public visits for exhibitions. During the design process Archives had forecast the impact that the new environment would have on many of its operations, but of course, not everything could be predicted. One thing which was known, however, was that a second stage of refurbishment would be required; Archives did not need to occupy the whole building initially, and almost half the floorspace was leased back to the former owner until 1996.

After operating the building for two and a half years, Archives commissioned a Post Occupancy Evaluation to review systematically the strengths and weaknesses of the building with regard to archives operations. Various activities had changed considerably since moving to the building, and there had been a major increase in visitor numbers.

Archives sought to achieve dialogue about the interaction of staff and customers with their building and equipment in such a way that both operations and building issues could be negotiated together to reach optimal solutions. Archives found

the interviews particularly valuable because they were conducted in the space that was the subject of review. The Building Manager's experience has been that building defect reports are often best resolved by discussion with the occupants in the space itself so that all the issues relating to the problem can be identified and possible solutions reviewed. Solutions to problems, or even completely new ideas, can come from watching users interact with their environment.⁵ On some occasions discussions led Archives to make procedural changes or implement staff training as a preferred option to making building changes.

Post Occupancy Evaluation was a way of structuring issues, problems and opportunities. It ensured that staff focused on problems holistically rather than attacking them on a piecemeal basis. The Post Occupancy Evaluation also had to incorporate consideration of the final stage of redevelopment after the tenant moved out. This final stage provided an opportunity to fine-tune previous development work to best facilitate current conditions as well as forecast requirements resulting from the final stage.

Principles and assumptions of Post Occupancy Evaluation

The Post Occupancy Evaluation method is based on the following principles and assumptions:⁶

- All people are competent to evaluate and contribute to decisions about buildings. Building users are rarely involved in design of their buildings yet they are the ones who know best about how the buildings are used.
- Managers, property managers and architects are better informed by Post Occupancy Evaluation which enables them to provide buildings with features better suited to the requirements of building users.
- Organisations and their use of buildings are assumed to be interdependent; changes in one generally have an impact on the other.
- Accountability is a cornerstone of organisations. We make the assumption that people in all parts of an organisation are accountable to one another and Post Occupancy Evaluation is used as a forum to review building performance.

At National Archives, a participatory Post Occupancy Evaluation enabled the staff and the users to identify problems in a structured way, and to know that their views were being heard, recorded, and would be considered for action. The evaluation gave management an opportunity to identify problems that were genuine physical problems with the building, and to separate them from operational problems, organisational problems and general grumbles. It also gave Archives a chance to clarify how operational procedures had been affected by the internal layout, and the logistics of working in such a large building.

The Post Occupancy Evaluation of public facilities at National Archives

The Post Occupancy Evaluation focused on the public facilities on the ground floor, because staff had previously identified this area as having the most problems and opportunities. Specialist Post Occupancy Evaluation consultants Chris Watson and Duncan Joiner conducted evaluation interviews. They facilitated touring walk-through interviews with seven groups of staff and clients. Each group comprised approximately five participants and was observed by the Archives Building Manager. Interviews incorporated an introduction, walk-through and structured review meeting, and were recorded using hand written notes, sound tape recordings and photographs. The interviews took place during normal working hours so that business operations could be observed within the building environment.

The participants were grouped according to their roles in the use of the building; thus there was a group of research clients; three groups of staff (senior managers being grouped separately from staff, and archivists separately from administration and support staff); a facilities group incorporating building management staff and external contractors; and two groups of non-research clients intended to cover appraisal and government loans clients, tour group operators, and hire facilities users. Unfortunately there was a poor turnout in these latter groups. Unusually, the POE consultants were themselves the original architects for the 1991 refurbishment. Had this not been the case, it would have been appropriate for the original architects to join one of the participant groups.⁷ As it was, Joiner and Watson faced the major challenge of remaining objective while facilitating the process and undoubtedly received the most comprehensive user feedback on their design work that they had ever experienced!

Follow-up activities

Recommendations developed from the Post Occupancy Evaluation were classified into various stages, including several for immediate action and others for specified longer-term action. The recommendations referred mostly to building changes but also included building operation such as changes in cleaning contracts, and lighting of Constitutional documents. Other recommendations involved minor issues such as seating arrangements in the foyer cafe, restoration of the reception counter and installation of power sockets in the Register Room for clients who use portable computers.

Many of the physical problems which had loomed large in the minds of staff and users were relatively easy to fix. For example, there had been a dramatic and unforeseen increase in the number of researchers with portable computers for which they sought electrical supply. None of the reading and finding aids rooms had been planned to cope with such a high demand, and researchers were starting to cause safety problems by arriving equipped with double plugs and extension cords. Installation of additional power points in appropriate locations was carried out quickly and easily and future developments were accommodated by ensuring the cable ducting used would be able to cater for possible future data cabling needs.

Many problems turned out to be operational or organisational rather than physical and were referred back to the appropriate groups for action. Some problems were physical, but needed organisational change as part of the solution. For example, a major way-finding problem existed on the ground floor, with visitors unable to find their way from the main foyer around the existing structures of a stairwell and lift-shaft to the reading room. A reception counter had originally been installed, but without funding for a receptionist, was unused and eventually removed. Existing staffing resources were rearranged to provide for a receptionist, the reception counter was restored, and improvements were made to signage with the result that new visitors are no longer to be found wandering forlornly. Several perceived problems needed to be solved by explaining the reasons behind certain physical arrangements to staff so that they could accept them and adjust work patterns around them: a wall which interfered with traffic circulation, but which couldn't be removed because it contained earthquake bracing, for example.

Post Occupancy Evaluation report structure

Post Occupancy Evaluation reports should be made openly available to all participants. They generally include recommendations in four categories. The first category includes actions and work recommended to be undertaken in the building within six months. These changes generally include minor improvements to buildings such as way-finding, signage, cleaning and maintenance issues.

The second category covers work recommended within five years of the Post Occupancy Evaluation where there is developing, but non-urgent, need to make changes. In the Archives project this was an opportunity to flag potential improvements to be carried out in the second stage of refurbishment.

In the third category there are recommendations for research, design or management studies to solve complex problems or conflicts between procedure and design. A fourth category, which was not used in the National Archives evaluation, would provide findings which could be generalised for the benefit of owners/occupiers of similar buildings.⁸

Benefits of the participatory approach

A participatory approach such as that provided by Post Occupancy Evaluation was essential in the redevelopment of the National Archives building. Archives *are* their buildings - they cannot function without a building, and the function and the edifice are inextricably linked in the minds of their users.⁹ Operations, usability and public profiles are significantly affected by the building that the archives occupies. The users of the building must therefore determine success or failure of the building, and its consequent effect on the organisation. They are the only people who can say with certainty how the building affects them in their work.

For National Archives, the briefing and design process for the refurbishment of the new building had involved a very high level of staff and user consultation. It was logical to continue this in the evaluation prior to planning the second stage of development.

The evaluation identified a range of significant problems in the main public

area. This provided the knowledge that the second stage would be more than just bringing the previously tenanted areas up to the same standard as the rest of the building; major re-work would be required in the public area. As the second stage of the building would probably be the only opportunity to obtain the necessary capital for the work, this early knowledge has been invaluable. Other benefits have been the opportunity for staff and users to contribute their views - to know that they are helping to improve the building where they spend their working day. Questionnaires about the Post Occupancy Evaluation process show that staff appreciated the participation. Participants have an opportunity to understand the strengths and weaknesses of the building, and to develop a sense of ownership over the building and its operation.

Staff are able to influence the facilities to ensure that they have an environment which facilitates their best work. However, management must accept from the outset that the evaluation review report may very well contain awkward operational and organisational issues that arise during the walk-through interviews. National Archives was well-prepared for this, as management had discovered during the design phase that the opportunity to talk to outside consultants had something of a cathartic effect on staff, and architects and project managers had been on the receiving end of a staggering amount of information about National Archives' internal politics and personalities!

Post Occupancy Evaluation is beneficial for public relations as it works towards ensuring that clients are being well served. Not all client problems can be solved; much of what clients perceive as problems are in fact a lack of understanding on their part of the guiding principles of the archives profession. The best solution to a problem may not be one which risks compromising archival principles but one where archivists take the opportunity to educate their clients. The clients benefit from such education, and also from feeling that their concerns are being listened to, and where possible, remedied. Archives also benefits from the opportunity to see the organisation through the eyes of the users.

Benefits of Post Occupancy Evaluation

Post Occupancy Evaluation achieves four major benefits for the people with interests in the subject buildings. Fine-tuning of completed buildings can be

planned as building users identify where any changes in operations have occurred since the design. Priorities for expenditure can be set and also there can be agreement about using buildings in ways that are more effective.

Quality management practices are supported by Post Occupancy Evaluation because it focuses on people's stated needs and makes these explicit. Accountability to internal boards, management and staff is achieved and external accountability to the Audit Office, Treasury, Government and the wider community also provided for. Post Occupancy Evaluation enhances authority because it enables diverse opinions about buildings to be recognised and managed.

Briefing for renovations of buildings can benefit from systematic consultation of building users as it has in the New Zealand National Archives project. Improvements in design are possible by using evaluation to identify strengths for repetition and identifying weaknesses so that they are not repeated. Reliability of briefing information is improved because of the wide range of consultation in Post Occupancy Evaluation. Relationships with staff and public are maintained by consulting them about the building and recording their findings for consideration in future building projects. Often participants have expressed appreciation that they were asked for their views and that these were seriously considered. The building delivery process can also be reviewed and issues such as consultant selection and contract conditions addressed.

Cost saving is achieved by better targeting of expenditure to user needs and Post Occupancy Evaluation methods speed up briefing time and reduce delays and costs from having to revisit earlier decisions.

Conclusion

Archives' adoption of a strong customer focus makes systematic collection of this diversity of opinion about building requirements necessary. Post Occupancy Evaluation provides a systematic assessment method for the design and production of a new building. Without such an assessment the building process would proceed in isolation from systematic feedback from the people who the building is intended to accommodate and serve.

The Archives Post Occupancy Evaluation program complements technical audits as measured by predetermined standards or individual assessors' criteria and focuses on the use of buildings as seen by their users. The principle that building users - rather than only technical experts - should participate in evaluation of their building is extended into the method which enables them to set the agenda. This is done by using the spatial experience of the touring walk-through interview as the stimulus for participant comment. In this way Post Occupancy Evaluation provides auditors with a review mechanism, and senior managers and designers with feedback information. It empowers building users to influence fine tuning building changes, the way the building is used and the design of future buildings.

Endnotes

- ¹ Comment from participant quoted in the unpublished 1994 report on the Post Occupancy Evaluation of National Archives - a reference to the public coffee bar in the entrance foyer of Archives.
- ² New Zealand's National Archives is not the first archives to be attracted by the heavy floor loadings of a former printing factory. The Greater London Record Office moved into a former printing works in 1983.
- ³ Jean Favier comments on the symbolism of archives buildings in his Foreword to Michel Duchein's *Archive Buildings and Equipment*, ICA Handbooks Series, Vol. 6, Munich, 1988, p. 16
- ⁴ The significant compromises related to allocation of space and priorities for spending. With insufficient space available in the first stage of the refurbishment, film came off the worst, with adequate space for the storage of film, but almost none for repair work and viewing. Makeshift areas have since been found on the ground and 2nd floors - the archives themselves are stored two floors below ground level, and the Film Archivist is in almost perpetual motion. With hindsight, some of the deferred maintenance issues which existed when the building was purchased could have been given greater priority, perhaps, than some of the 'status' items like artwork. The commissioned artworks decorating the ground floor make a stunning impact, but they don't keep the rain out - and neither does the roof.
- ⁵ Dorothy Leonard and Jeffrey Rayport explore this idea in their concept of 'empathic design' for the development of new products in 'Spark Innovation Through Empathic Design', *Harvard Business Review*, Nov-Dec 1997.
- ⁶ A standard international primer on POE is *Post-Occupancy Evaluation*, Wolfgang Preiser et al, Van Nostrand Reinhold, New York, 1988. A New Zealand viewpoint is provided by *User Participation in Building Design and Management : a generic approach to building evaluation*, David Kernohan, John Gray, John Daish with Duncan Joiner, Butterworth Heineman, Oxford, 1992.

- ⁷ Appropriate, but unlikely. A 1990 poll of the membership of the American Institute of Architects showed that the next-to-last pursued competency of architects was “Perform post-occupancy evaluations” - cited in *How Buildings Learn : What happens after they're built*, Stewart Brand, Viking Penguin, New York, 1994.

New Zealand architects are beginning to show an interest in POE - even so, of the 403 architectural firms listed in the 1998 NZIA *Directory of Accredited Practices*, only 65 offer POE as a specialist service. See ‘Architects [98] - The New Zealand Institute of Architects Directory of Accredited Practices’, *Architecture New Zealand*, January/February 1998. Neither of the two university Schools of Architecture appear to offer any in-depth teaching on the subject.

- ⁸ Derek Ballantyne noted the benefits of his informal POEs of a variety of North American and European institutions as part of the planning process for the new National Archives of Canada building:

Most useful in the tour of many archives was the openness of staff about the problems that had been encountered, and the various design solutions that had not worked. This frank assessment of buildings was a most valuable tool in assessing the requirements that were defined for the new Archives building. Having the ability to make reference to what we saw, what worked, and what did not, gives us a tremendous advantage for the new Archives buildings.

Derek Ballantyne, ‘Planning New Facilities: Building from Experience’, *The Archivist*, Vol. 19, No. 2

- ⁹ It is not insignificant that the word ‘archives’ means both the building and the material stored within. The name of National Archives’ Wellington building is, quite simply, ‘Archives’.