



URBAN RENEWAL - THE CITY CENTRE

5th Year Design - Professor Steffen Lehmann

Adaptive reuse, heritage conservation, extension of an existing complex:

Three empty warehouses in the CBD - a new type of public place?

Site:

Three existing warehouses in the CBD context.

Project Scenario: (check heritage register)

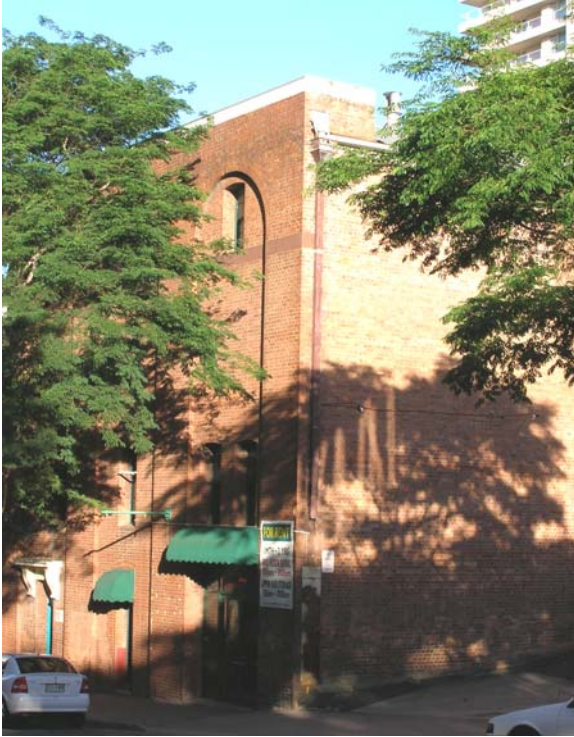
In 1859 Brisbane became the capital of the self-governing colony of Queensland. The surviving warehouses were built in the 19th-century, probably during the 1880s economic boom, their brick facades have been retained and are preserved. However, reasonable proposals for change of the facades may be negotiated, if convincing and if respectful of the existing structure and historical context.

The location is coined by its closeness to Parliament House, the opposite high rise building, and the slope of the street.

Adapting a New Function

Task: A dialogue with the historical structure

- draw a precise documentation of the existing structures (this is best a combined team exercise);
- develop & write your own, appropriate public brief and develop a position and argument;
- design & insert the public function(s), turn it into something exciting, where the existing structure obtains a new, convincing re-usage;
- increase the existing volume by 50% (significant increase of the volume and floor area); there is limited possibility to increase the footprint, but much potential for new internal levels/mezzanines to be inserted, and adding floors on the top;
- develop the notions of 'void' and 'insertion';
- consider: idea, scale, composition of new + old, material, climate/daylight, circulation;
- visual representation: draw an illustration which shows both, the inside and the outside, at the same time.



An innovative use of remaining heritage buildings is crucial for the city. Tadashi Kawamata's installation, Mexico-City

Urban renewal and appreciation of the existing, historical structures.
The U-shaped building complex forms an upper terrace, like a raised courtyard on level 1.

imagining – representing – testing.

Design process through sketches and quick study models.
How is your internal spatial configuration connected with the outside?
Which strategy: RAUMPLAN (Loos) or *plan libre* (Le Corbusier)?
How is it built? skin + structure = building body

Building within: A House within the House...

Think of Enric Miralles' new secondary school, inserted in an old factory in Barcelona (1984); or Oswald Matthias Ungers' new museum inserted into an old villa in Frankfurt (1983); or Renzo Piano's conversion of the former Fiat Factory into a cultural centre in Torino (1984-96).

New ideas for urban renewal?

Robustness and extendability: The middle part is lower, and acts like a frame or pedestal.

The Design Studio will continue its explorations and preoccupation from previous years, with: identity and memory in architecture; urban renewal; inner-city constructed landscapes.
The Design Studio fosters an appreciation of all scales, large (urban) and small (object-like).

The first project will be a short, warming-up exercise. This project will require a relatively high resolution of design detail. The second project will be the main project, on a larger, conceptual scale.

'Design has got to be inventive and seductive'. Oscar Niemeyer

Working method:

In Week 1, you will need to register and document the existing structures, and drawn elevations, sections and plans of the three warehouses.

Start with conceptual diagrams to introduce your urban strategy, site analysis and observations, to build up an argument. An early working model showing the larger context is necessary to enable an immediate test of the individual proposals and response to the site conditions and topography. Therefore, small scale organisational diagrams and working models (physical or CAD-based) are required in the early stage.

Displacement – Interpenetration – Cantilever

'Material properties and surface can generate a mood'. Jeff Kipnis, 2000

- How can we create Identity and Memory with architecture?

This question could well be applied to the ongoing discourse about cultural identity in architecture.

The Design Studio will serve as a platform to discuss the issues of Memory and Heritage / Conservation in architecture in a wider framework.

The students are asked to investigate and consider notions such as:

- Contextualism and De-Contextualism, in relation to the site context. We first need to understand what is the reality of the place. Sometimes, architecture should not integrate, but should make a contribution to the context;
- Symmetry and Asymmetry, in relation to plan, elevation, and section;
- Public Space and Monumentality; eg. What is the appropriate size of entry to such a new public facility, to access the ensemble? How do you articulate a main entry?
- Differentiation between 'served and servant spaces' (Louis Kahn) - this refers also to front and back of house, static and non-static spaces, being clearly readable in plan; eg. spaces for assembly opposed to spaces for circulation, or for contemplation;
- Comprehending the site, its topological condition, and engaging with it through placement.



Craftsmanship, materials, and technology

'Buildings are usually made piece by piece. However, architecture is more than just putting things together. You move from the general to the detail, and then from the detail to the general. It's a double process.'
Renzo Piano, 2006

Inserting a new architectural element into the courtyard of the State Library
(Architects Donovan-Hill, Dec. 2005)

There will be a particular focus on:

- Accuracy of representation of the existing structures and clarity of site analysis;
- Appropriateness of drawing technique: does it communicate the idea well?
- Is the architectural idea and the selected public brief convincing and well designed?
- Does the new project contribute to an enhancement of context and urban renewal?
- Is it likely that the visitor would have an intensive experience of spatial quality?
- How has provision of daylight inside the building been addressed (eg. lightwell)?
- Do the drawings show good knowledge of materials and their application?
- Creating curiosity: Has the project an elegant form?
- Is there a seamless connection with the old, or is there contrast?

'The drawing pen is a knife, with which the architect cuts through the building.'

Marco Frascari, 2004



5year old kids building architectural models,
Queensland Art Gallery, Dec. 2005 (installation by Olafur Eliasson)

digital – non-standard

Computers have helped to make many of today's truly innovative projects buildable. Today, the modernist idea of **separation between skin and structure is reversed**: composite materials and monocoque structures aim to combine both towards a smooth surface.

'Architects used to draw what they could build, and build what they could draw. This has now changed.'

Bill Mitchell, MIT Media_Lab, 2001

A working method (according to Kas Oosterhuis, TU Delft, 2005)

1. Building Body

New geometrical complex constructs are possible, where most constituting elements are specifically developed for that body. The modern building body is no longer based on repetition but on smooth interaction between unique components. Building

types are undergoing changes in response to social or technical changes; new public building types are emerging (eg. the Mediatheque, or the Internet-Café). What is the next new public type?

2. Powerlines

The building body is like a shaped container, a flexible box that is shaped by a set of curvilinear powerlines. The powerlines describe the path of development of the body, the folding lines in the surface of the volume, and the trajectories of the users navigating through the building body.

3. File to Factory (F2F) digital fabrication

There are entirely new ways for the common sequence of: design-manufacturing-assembly. While the powerlines describe the exterior condition of the building body, the strategy of programming the 'point cloud' organises the reference points of the 3D-model inside the volume of the building body. These reference points are directly translated into nodes of construction, specifications for the cutting machines of the steel and glass manufacturers.

Folds, Bodies, and Blobs: complex, non-linear systems

The forerunners of such innovative experiments were architects like: Antonio Gaudi, Frederick Kiesler, Eero Saarinen, Erich Mendelsohn, Buckminster Fuller, Archigram, Cedric Price, Frei Otto, John Lautner, Peter Eisenman, COOP Himmelblau, Peter Cook, Herzog De Meuron, and Frank Gehry, as well as the automobile, ship building and aero industry.

See the work of the following innovative architects, pushing digital technology today:

- Kas Oosterhuis ONL www.osterhuis.nl
- Lars Spuybraek NOX www.noxarch.nl
- Mark Goulthorpe dECOi www.decoi.org
- Hani Rashid ASYMPTOTE www.asymptote.net/#
- Greg Lynn FORM www.glform.com
- Neil Denari www.nmda-inc.com
- Mark Burry SIAL @ RMIT www.sial.rmit.edu.au
- Cecil Balmond, NLSO a@ PENNUni www.arup.com
- Zaha Hadid www.zaha-hadid.com
- Peter Wilson www.bolles-wilson.com
- MVRDV www.mvrdv.nl
- UN Studio Ben van Berkel www.unstudio.com
- Kazuyo Sejima SANAA www.sanaa.co.jp
- Foreign Office Architects FOA www.f-o-a.net
- Jakob + Macfarlane www.jakobmacfarlane.com
- Bollinger + Grohmann www.bollinger-grohmann.de

Heritage Aspects:

The existing buildings are to be modified in order to conform to the present requirements for a public building: spatial, formal, structural, functional and social.

A brief statement detailing the proposal's contribution to, or impact on, the heritage significance of the site and structures will be required as part of your Design Statement.

Suggested brief:

total approx. 8,000sqm

Create a public place, where people come together.

- Theatrette, a space for assembly (with fixed raked seating for min. 150 persons, 200sqm), with multi-media facilities, screen for large digital projection, a pre-function foyer, and easy access to reception for events and functions, all within a new spatial sequence of spaces, possibly at roof level; 350sqm
- A spa with health centre and fitness club 4,000sqm
- A café with a small kitchen and an outdoor area (eg. in a courtyard) 200sqm
- Rental offices (with separate access) 3,000sqm
- Delivery area with storage and garbage store, with easy access from the street

The commercial offices require a separate, discrete entrance. This part is probably best located on the top, on two or three new levels, with a ground floor lobby, lift and fire egress stairs.

Examples:

Study **Carlo Scarpa's** adaptive reuse of a palazzo in Venice: 'Querini Stampalia', 1963

And more recent examples from **Norman Foster & Partners**: conversions of existing buildings, such as: The Royal Academy of Arts, London (1991), The Reichstag, Berlin (1999), The British Museum, London (2000).

Lebbeus Woods: his series of drawings illustrating parasite objects inhabiting existing structures ('Radical Reconstruction').

How to get started?

1. Finding-out Phase:

- Site analysis of the urban context, and documentation of existing buildings;
- understanding the existing building;
- Develop your own brief; identify solutions that work 'with' the buildings and not 'against' it;
- Design Statement: Write a short text outlining your main strategies, concept and idea (max. half page);
- develop first abstract ideas for the entire site / edge situation / public place / insertion of new (object) into old;
- present urban analysis and initial ideas; diagrams; view connections;
- Start to discuss your proposal and concept at early stage with your tutor.

2. Speculation: Ideas Generation Phase **imagining + representing**

- site and 'place-making': conceptual/urban diagrams based on the site analysis, showing your interventions
- site plan in colour, in scale 1:200 / 250 (showing: built volumes, circulation, pathway system, level changes, shading structures, planting, car parking, extension of decks, etc.); new openings in the façade?
- Draw an illustration that shows both – inside + outside – at the same time
- Develop abstract ideas for the placement of a volume(s). First ideas about tectonics / materiality / climate / ritual for gathering and assembly
- solution of parking / disabled access
- space: interior – exterior – openings in walls: context-specific strategies
- build a site / context model in scale 1:200 or 100; first: early working model; more accurate model in timber, scale 1:100

3. Ideas Development and Ideas Evaluation Phase: testing + representing

- 'form-giving': identify your top priorities and design intent
- solution of functional requirements
- spatial qualities; what are the qualities of the walls, floors? How do you ensure good daylight inside?
- design development in scales 1:100 / 1:50 / 1:20 (section)
- detailed plans, sections, elevations in 1:100 / 1:50 / 1:20 (whatever appropriate)
- model of the building in scale 1:100 (alternatively: three images 3-D that illustrate the building in the context)
- Overall communication of your architectural design project
- deliver a great presentation; illustrate the possible future

Approaches to Teaching and Learning:

We will illustrate the very diverse range of responses 'good architecture' can bring to the same task. An architecture that searches for essence and structures rather than stylistic affects.

To help in the evolution of an independent approach, the unit will meet each week to review work, with weekly in-class reviews (pin-ups) of the project work. Special focus is given to the development of the work in the early stage and the inclusion of comments on the work from the previous week. You will be issued with a tutorial Feedback Sheet to record weekly discussions. This feedback is formative and tutorial attendance will be part of the overall assessment. Visiting critics will be invited to contribute to the Studio.

Our goal is to help students to start 'thinking like an architect' in the sense in which we understand that term, and to help in applying this way of thinking when designing. Therefore, architecture is understood as an assembly of formally related parts whose relations with each other are not arbitrary. To develop compositional skills, we intend to introduce strategies to a) interpret works of other architects as compositions, and b) develop students' own compositional skills.

The intention of the unit is to guide students to a point where they start to enjoy designing because they trust their own judgement and possess the confidence on which this trust depends. It is expected that in this project, students will apply their basic understanding of architectural vocabulary and be developing a language of their own.

Tutorial Groups:

The tutors will facilitate tutorial groups of approximately 10-12 students. Please ensure that you attend all tutorial sessions and discuss the progress of your work with your respective tutor. Two tutorial groups might be combined for Interim and Final Crit, so that each student will be exposed to the input and guidance of at least two tutors / guests during the Crits. The students are expected to do their own research in the library that links together historical knowledge, contemporary thought, current critical analysis and creative actions.

The Urban Dimension



Berlin Study trip 2005: Urban infill.
A new building inserted between two existing ones

General Reading

As 5th Year Architecture student, you should be familiar with most of the following sources:

- ALEXANDER, Christopher, and H. Neis, A. Anninou: *A New Theory of Urban Design*. Oxford University Press, London and New York, 1987
- BACON, Edmund: *Design of Cities*, T&H, London, 1967 / 1975
- BANHAM, Reyner: *Theory and Design in the First Machine Age*, Oxford, 1962
- BANHAM, Reyner: *Architecture of the well-tempered environment*. Architectural Press, London, 1969
- BYARD, Paul Spencer: *The Architecture of Additions – Design and Regulations*, W.W.Norton & Co., 2005
- CONRADS, Ulrich: "Programs and Manifestoes on 20th-century architecture", The MIT Press, Cambridge, 1964/1970
- CURTIS, William J.: "Modern Architecture since 1900", London 1982
- FONATTI, Franco: 'Elementare Gestaltungsprinzipien in der Architektur', Akademie der bildend. Kuenste, Wien, 1982
- FLORIDA, Richard: *The Rise of the Creative Class*, Basic Books, New York, 2002
- FRAMPTON, Kenneth: 'Towards a Critical Regionalism. Six points for an Architecture of Resistance' in: Foster, Hal (Ed.): 'The Anti-Aesthetic', New York, 1983. And in: 'Modern Architecture: A Critical History'; London: Thames and Hudson, 1983
- FRAMPTON, Kenneth: 'Studies in Tectonic Culture. The Poetics of Construction in 19th and 20th Century Architecture'; Cambridge: MIT Press, 1995
- FROMONOT, Françoise: 'Glenn Murcutt. Works and Projects', T&H, London, 1995
- GANDELSONAS, Mario: *The Urban Text*, MIT Press, Cambridge, 1991
- GEUZE, Adriaan and West 8: 'Landschapsarchitectuur' Catalogue SRM Foundation, Rotterdam, 1995
- GIDDENS, Anthony: 'Runaway World'; London, 1999
- GIEDION, Sigfried: 'Space, Time and Architecture', Cambridge: Harvard University Press, 1941
- HALL, Peter: *Cities of Tomorrow: an intellectual history of urban planning and design in the 20th century*, Blackwell, Oxford, 1996
- HOLSTON, James: *The Modernist City*, University of Chicago Press, Chicago, 1989
- KIENAST, Dieter: 'Kienast Vogt: Parks and Cemeteries', 2002
- KOSTOF, Spiro: *The City shaped. Urban Patterns and Meanings through History*, 1991; and *The City assembled. The Elements of Urban Form through History*, 1992; both: Thames & Hudson, London
- KRIER, Rob: *Town Spaces*, Birkhaeuser, Berlin, 2003
- KUBLER, George: *The Shape of Time*, Yale Press, New Haven, 1962
- LEHMANN, Steffen (Ed.): 'The City, the River and a Public Building. Architecture as Composition', QUT Publication, Brisbane, 2004
- LEHMANN, Steffen (Ed.): 'Absolutely Public. Crossover: Art and Architecture', Images Publishing, Melbourne, 2005
- LYALL, Sutherland: 'Designing the new Landscape', T&H, London, 1991
- LYNCH, Kevin: *Good City Form*, MIT Press, Cambridge, 1981
- LYNCH, Kevin: *The Image of the City Form*, MIT Press, Cambridge, 1960
- MAXWELL, Robert: "Approaching the Void: Can the Tragic appear in Architecture". In: *Architectural Design* No. 70, *The Tragic in Architecture*, London, 2000, p. 8-14
- MVRDV: *Meta City Data Town*, 010 Publishers, Rotterdam, 1999
- NORBERG-SCHULZ, Christian: "Genius Loci: Towards a Phenomenology of Architecture". New York: Rizzoli, 1980
- OCKMAN, Joan: "Architecture Culture 1943-1968. A Documentary Anthology", New York 1993
- PEREZ-GOMEZ, A.: *Architecture and the Crisis of Modern Science*, MIT Press, Cambridge, 1983
- ROGERS, Richard: *London as it could be*, F&F, London, 1986
- ROSSI, Aldo: *L'Architettura della Citta*, Marsilio Editori, Padua, 1966 (1982 English edition)
- ROWE, Colin and Koetter, Fred: *Collage City*, MIT Press, Cambridge, 1978
- RUDOLFSKY, Bernard: 'Architecture without Architects': New York: The Museum of Modern Art, 1964
- SAMUELS, Robert; and Prasad, Deo (Eds.): *Global Warming and the Built Environment*. E & FN Spon, London, 1994
- SITTE, Camillo: *City Planning According to Artistic Principles (1889)*. Collins and Collins, Random House, New York, 1965
- STEELE, James: *Sustainable architecture. Principles, paradigms and case studies*. McGraw-Hill, New York, 1997
- TZONIS, Alexander, and LEFAIVRE, Liane: 'Critical Regionalism. Architecture and Identity in a Globalized World'; Munich: Prestel Verlag, 2003
- WALKER, Peter: "Minimalist Gardens", 1997
- WESTON, Richard: "Plans, Sections and Elevations: Key Buildings of the 20th Century", 2004
- WOODS, Lebbeus: *Radical Reconstruction*, Princeton Architectural Press, New York, 1997
- ZEISEL, John: *Inquiry by Design*, MIT Press, Cambridge, 1983

Web site for architecture students: www.archinect.com and www.greatbuildings.com

Architecture info web site: www.archined.nl/ (switch to English)

Brisbane's Living Heritage: www.brisbanelivingheritage.org

Adaptations - new uses for old buildings

Further important Reading:

Finding viable use for redundant buildings, refer to:

KINCAID, David: *Adapting Buildings for Changing Uses. Guidelines for Change of Use Refurbishment*, Spon Press, London, 2002

This useful book discusses the refurbishment of buildings to enable them to be used for purposes different to those originally intended. The building stock may be vacant, underutilised or inappropriate for contemporary use; the possible strategy may be to modify, partially extend, and adapt to a totally new type of use.

Three other good books on re-use of buildings are:

LATHAM, Derek: *Creative Re-use of Buildings, Volume I and II*, Donhead Bath Press, Bath, 2000

and

ROBERT, Philippe: *Adaptations. New Uses for Old Buildings*, Princeton Architectural Press, New York, 1989

and

POWELL, K.: *Architecture Reborn – The Conversion and Reconstruction of Old Buildings*, L. King Publishing, London, 1999

A catalyst to the regeneration of the surrounding area

Identify the advantages of retaining old buildings in the city. What are the benefits of retaining characterful heritage architecture to the community, eg. cultural values?

'The history of towns and cities is the story of their successive layers, and of the additions which bear testimony to each succeeding age. The greatest architects have reconsidered the buildings of their predecessors and have re-arranged them or reiterated pre-existing architectural themes. Antonio Gaudi himself, the originality of whose architecture is widely acknowledged, remodelled an existing building to produce the Casa Battlo in Barcelona.'

Philippe Robert

The appeal and aesthetic appreciation of older buildings can be very strong (esp. industrial buildings and warehouses), but it is also a challenge to understand the character of the heritage-listed buildings. The aim is to work with the building, with its given structural grid and materiality, and to clearly show what is new and what is old. It is more than just conversion or rehabilitation of a building, or continued use.

'Creative re-use is a process that harnesses the energy and quality of the original building, even if not of special architectural or historic interest, and combines this with the new energy and activity that the new use brings.'

Derek Latham

Remember: Old buildings are valuable energy resources, and offer economic advantages. It makes sense to slow down our consumption and make better use of what we already have. Furthermore, when appropriate new uses are found for old buildings, this can act as a catalyst to the regeneration of the surrounding area, demonstrating that vacant old structures can become forces for renewal and hope.

Two recent good examples for this:

- Richard Francis-Jones, extension to The Mint, Sydney (2005);
- Robert Morris-Nunn, IXL redevelopment of a warehouse and hotel, Hobart (2005).