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The Role of Design Competitions In Shaping Sydney's Public Realm



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Prof. Helen Lochhead

Prof. Helen Lochhead is an architect, landscape architect, and urbanist, who combines teaching, research, practice, and advisory roles. Her career has focused on the inception, planning, design, and delivery of complex multidisciplinary projects, ranging from a city-wide improvements program for Sydney to major urban regeneration and waterfront projects, both in Australia and the United States. She led the development of the 30-year plan for the transformation of Sydney's waterfront, and was instrumental in setting a new strategic vision for Sydney Harbour. Her projects have received numerous awards, including AIA Urban Design, AILA Urban Design, and Sustainability Awards.

Dr. Philip Oldfield

Philip Oldfield leads the Architecture + High Performance Technology stream in the MArch Program. Prior to UNSW, he was an Assistant Professor at the University of Nottingham, serving as Course Director of the MArch in Sustainable Tall Buildings – the world's only course and qualification dedicated to high-rise architecture. Dr. Oldfield is a British Science Association Media Fellow and author of the upcoming book *The Sustainable Tall Building: A Design Primer*.

Abstract

Since 2000, through the City of Sydney's Competitive Design Policy (CDP), the quality of major projects in the city has been improved significantly, mediating the competing tensions of public and private interest. The most successful of these developments demonstrate not only design excellence and technical innovation, but respond to the urban condition by contributing to the life of the city through the addition of new public spaces and program that enliven its fabric. This paper will profile recent tall building exemplars influenced by the City of Sydney CDP. In doing so, it suggests this policy has fostered greater design excellence in the creation of the public realm in major projects in the city. It seeks to demonstrate how these common spaces are fundamental to the vibrancy and success of high-density developments, highlighting that, despite their differences, these spaces share traits that can provide useful lessons for others.

Keywords: Architecture, Code Compliance, Ground Floor, Urban Planning, Public Space

Tall Buildings and the Public Realm: The Need for Generous Skyscrapers

We are constructing more towers in Australia than ever before. Fueled by growing city populations, increasing land costs and a general acceptance of higher densities, there has been a rapid and noticeable increase in tower completions in Australian cities in recent years (see Figure 1). This, understandably, has sparked considerable discussion and debate in the media, and elsewhere, about the impact that greater numbers of high-rises will have on our future cities.

However, while form and skyline are the primary *foci* of debate, the impact of tall buildings on the public realm at ground, and the pedestrian experience in, around, and through towers is even more important. High-rises are regularly accused of exacerbating local environmental conditions in the public realm, overshadowing streets and public spaces, creating wind tunnels and impacting the social life of streets by replacing diversity with monocultures. But it doesn't have to be this way. Correctly guided, building vertically can create higher densities and free up more space and volume for the public at the ground plane – the key place where the public can interact, experience

and occupy the building. It is the key place that most impacts the vibrancy of the city, the connectivity of its urban spaces and the quality of its streetscape. In sum, the way in which tall buildings meet the ground is as important, and even arguably more so, than how they meet the sky (Goettsch 2012). There is a need for more generosity in tall building public realm design at the ground plane – urbanistically, environmentally, and programmatically.

Sydney's "Competitive Design Policy": History, Control, and Impact

Sydney's first generation of tall buildings, emerging in the 1950s, took inspiration from the Miesian model of tower design proliferating at the time, with the skyscraper dominating as an object, and public space defined in open plazas at ground. While exemplary public realm did emerge from this period, most notably Harry Seidler's Australia Square (see Figure 2), many inferior examples led to disrupted streetscapes and the loss of historic city fabric and activated street fronts (Brown 2012). To rectify this, a new Development Control Plan (DCP) was enacted in 1996, with the primary objectives of reinforcing Central Sydney's definition of

CTBUH 2017 International Conference

Prof. Helen Lochhead will present this paper in Session 2A: *Urban Policy*, Monday 30 October at 11:15 a.m. **Dr. Phil Oldfield** will join the panel in Session 2H: *The Tall Australian Office Building: In Conversation*, at the same time.

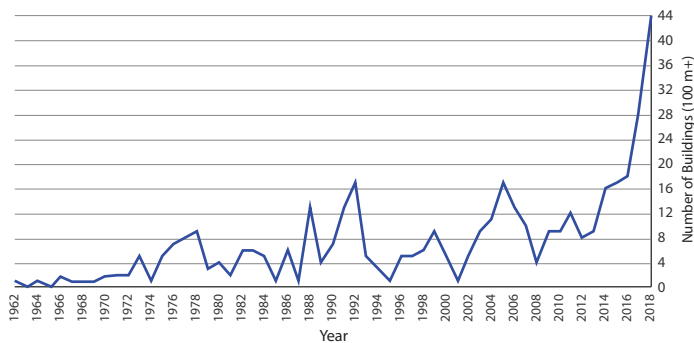


Figure 1. Building construction in Australia, 1960–2018, showing buildings 100 meters or higher. Source: CTBUH Skyscraper Center

streets and public spaces and improving the quality of public domain (City of Sydney 1996). Provisions focused on prescriptive moves such as mandating street wall podiums with heights between 20 and 45 meters, combined with setbacks in new towers, providing a continuation of streetscape at ground and mediating the impact of a tower's bulk on the public realm.

In the lead-up to the Sydney 2000 Olympics, with a new Independent Mayor and an agenda focused on quality urban design and livability, the City of Sydney underwent a significant shift in mind-set and regulation. This was in step with many cities where global competitiveness was increasingly being recognized as a combination of related agendas – new sustainability imperatives, revitalization and enhanced public realm – as a means to attract economic investment and growth (Punter 2007). Other motivations for policy reform also included an ambition to break the perceived dominance of a small number of large architectural firms that had monopolized the market and were no longer innovating. Additionally, there was the imperative to provide more certainty for developers through a more transparent and predictable two-stage approval process. Design competitions were seen as key to achieving these goals.

The major amendment to the City's Local Environment Plan (LEP) and DCP in 2000 saw the introduction of provisions that required all major development to undergo a competitive design process to demonstrate design excellence. This effectively means that no major public or private project can be granted approval until a minimum of three

different designs have been proposed and a jury has decided which is best. In no other city are such competitions mandated for public and private development through the statutory planning processes (Davidson et al. 2017). The triggers for a competitive design process are any one of three criteria: a building height over 55 meters, a site area over 1,500 square meters, and capital project value over AU\$100 million (US\$79 million), effectively meaning all tall buildings in central Sydney now go through this process. This codified and strengthened design excellence and the competitive processes, which were further strengthened with greater statutory force in a subsequent amendment in 2012.

Developer buy-in to the process is incentivized through a number of mechanisms. A two-stage process mitigates risk. The Stage 1 development application determines the building envelope and the key economic drivers of the development, total floor space, maximum height and parking, thus mitigating uncertainty and risk. The Stage 1 approval provides the framework and brief for the Stage 2 design competition, which then deals with the more detailed and public-interest considerations. Secondly, the process can also be waived if it does not have significant adverse impacts on adjoining development or the public realm. Lastly, a development bonus of up to a 10% increase, in either height or floor space, and a discount on the amount of heritage floor space that must be allocated to the site, is available for developments that participate in a competitive design process and demonstrate design excellence. This is intended to compensate developers for the

costs of holding a design competition, but also provides significant uplift in development value.

The overarching objective of the Competitive Design Policy (CDP) is to deliver the highest standard of architectural, urban, and landscape design (City of Sydney 2012). It aims to achieve this through a range of predictable considerations, such as land use and mix, setbacks, street frontage heights, bulk, massing and modulation of buildings. However, it also emphasizes public interest concerns, such as environmental impacts, ecologically sustainable design, and improvements to the public domain and pedestrian network, including excellence in landscape design. The emphasis on not only the design dividend, but the public benefit quotient defines this policy.

Since 2000, through more than 100 design excellence competitions, the quality of major developments in Sydney has improved significantly, mediating the competing tensions of public and private interests. For example, a recent study by UNSW colleagues of 25 projects subjected to the CDP process examined the quality of urban design outcomes, through qualitative analysis and semi-structured interviews with stakeholders. Interviewees said without exception that they believed CDP raised the general standard of urban design in the city. Analysis also shows that the CDP projects deliver significant public benefit at ground, including active ground-floor uses and through-site pedestrian access (Davidson et al. 2017).

Importantly, the CDP process has raised urban design quality by redistributing



Figure 2. Australia Square, Sydney (1967). © Antony Wood

decision-making control and enabling a broad but non-prescriptive approach to the regulation of design excellence (Davidson et al. 2017). This has resulted in improved transparency in design procurement; a design culture that brings developers into contact with architects that they might never have otherwise worked with (including international firms); and design issues debated and assessed before the Development Application stage. All of this paved the way for streamlined development approvals, and public and private interests were mediated through the development process.

Case Studies: Meeting the Promise of Design Excellence in Sydney's Public Realm

Following are five high-rise case studies in Sydney's CBD that have been through the CDP process. In each, the authors feel the project has delivered, or is about to deliver, the promise of a high-quality public realm, to the significant benefit of the city.

1 Bligh Street (Ingenhoven Architects/ Architectus, 2011)

1 Bligh Street is the result of a design competition held in 2006 with a field of six entries. The collaboration between Australia-based Architectus and Germany-based Ingenhoven Architects was selected as the winner by a jury of six – three nominated by the City of Sydney and three by the developer Dexus Property Group (Brown 2012). The tower, completed in 2011, has received many plaudits, often for its response to climate and environment, with a double-skin façade and full-height central atrium providing natural ventilation and light to interior spaces (see Figure 3). However, it also excels at the ground plane, providing a generous public realm, tuned to Sydney's warm temperate climate.

The building's elliptical plan form evolved from its site – an intersection between O'Connell and Bent Streets. This shape maximizes the north-facing façade area, thus providing much of the floor space with views to Sydney's harbor. In addition, it opens up two public spaces on an otherwise tight



Figure 3. 1 Bligh Street – atrium. © HGEsch/Hennef

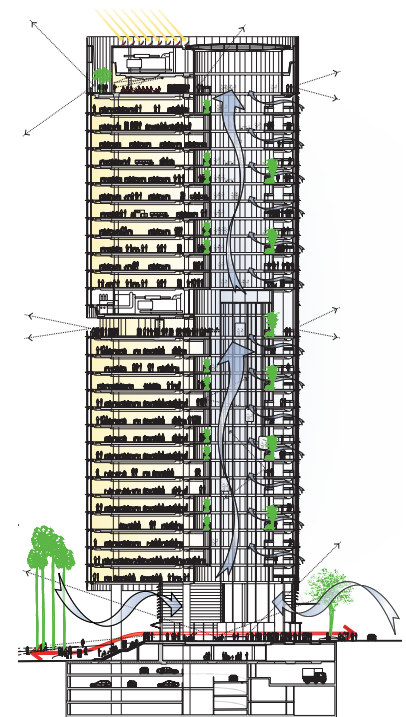


Figure 4. 1 Bligh Street – section. © Architectus



Figure 5. 1 Bligh Street – open stairs as public terraced seating. © HGEsch/Architectus

urban site (see Figure 4). To the south, on Bligh Street, a small pocket park is created, defined by a lush green wall and activated by a café kiosk. To the north, sweeping stone stairs bridge the site's 4.5-meter height difference and provide a main entrance to the building (see Figure 5). These have been designed to be as open as possible, with minimal handrails, thus creating a series of terraced seats that are hugely popular at lunchtime as a place to eat, read, or admire views of the city's historic sandstone buildings to the north. In winter, the stairs are bathed in direct sunlight, providing a space of warmth in cooler temperatures. In the summer, the projecting floor plates

above shade the stairs, protecting the seating from the summer heat.

The lobby itself is three stories high and surrounded by glazed louvers, allowing for cross and stack ventilation to cool the building's communal areas. Through-site pedestrian access is created, from north to south, with the 130-meter-high building atrium acting as a space of urban drama and excitement along the way, while also providing visual connectivity to the office floors above. Overall, the building provides an open and transparent public realm, one which displays both urban and environmental generosity.

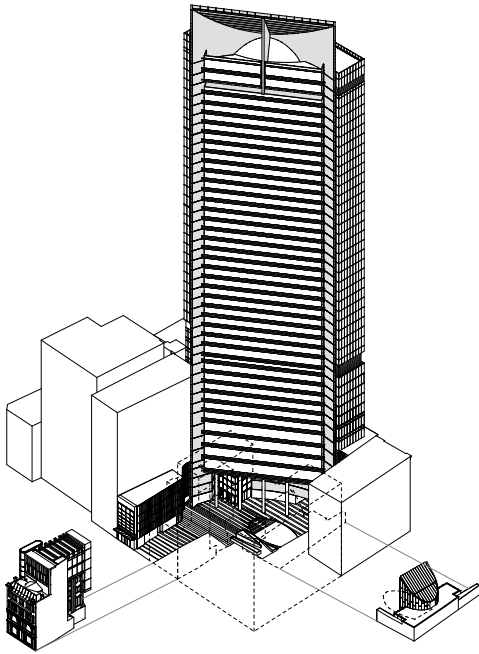


Figure 6. Liberty Place – axonometric of ANZ Tower and public realm at base © FJMT

ANZ Tower (FJMT, 2013)

The Sydney architectural firm FJMT was awarded this landmark project after winning a City of Sydney Competition. Completed in 2013, this 43-story development includes more than 72,000 square meters of premium-grade office space, retail, and parking; and, with a 5-Green Star rating, also demonstrates sustainability credentials (see Figure 6). Situated mid-block between Castlereagh and Pitt Streets in Sydney's shopping district, the site is located in a previously run-down part of the city. The amalgamated site had little to distinguish it, other than an existing heritage building. This was used to anchor a new public space and pedestrian street, connecting the adjoining streets and reinvigorating the precinct with a

continuous flow of pedestrian movement and vibrant café culture.

The design addresses the particular site conditions with a nuanced response, shaping a street wall, tower, and skyline profile, which creates a unique architectural form. The podium complements the existing streetscape. Layered sandstone and precast street-wall elements relate to the neighboring heritage-listed Sydney School of Arts (on Pitt Street), Mirvac Trust building, and Great Synagogue (both on Castlereagh Street), while the sheer glass tower relates to the contemporary Sydney skyline.

Equally nuanced is the approach to the ground plane, which introduces a considered sequence of spaces between the streets, negotiating a change in level via a grand internal public staircase and tower lobby to a new public space – Liberty Place – that not only engages the refurbished heritage-listed Legion House, but captures the lunchtime sun along the new frontage of

“A total of 23,715 historic artifacts were recovered from the EY Centre site during excavation, and some of these are exhibited in display cases along the staircase that descends into the pocket park.”

outdoor cafés and restaurants along this pedestrian street (see Figure 7). The quality of materials, street furniture and finishes in these spaces reinforce a serious commitment to the public realm, making Liberty Place a significant and valued addition to both Sydney's skyline and public domain.

The EY Centre (FJMT, 2017)

The EY Centre's fluid form and dynamic timber façade may have grabbed many a headline (Oldfield 2017), but its response to site, history, and public realm is where the design really excels. The outcome of a competition won by FJMT in 2012, the building is located on the western edge of a block of land bounded by Alfred, Pitt, Daley, and George Streets, adjacent to Circular Quay. The site is complex, and irregular, with the EY Centre challenged to mediate three urban scales; that of the new tower, the mid-rise surrounding streetscape, and the more intimate historic public “laneways” that criss-cross through the site. It does so by locating a 10-story block along George Street, maintaining a strong street edge. This gently folds into the site at ground, drawing pedestrians into a sunken west-facing pocket park, activated by a café pavilion that rises like a geological structure out of a granite staircase. The tower's mass is not hidden; instead it is lifted above this public space on flying structural braces that provide a sense of drama to the space below (see Figures 8 and 9). Despite a tight site, the design also provides significant permeability; two public cut-throughs are provided, activating the laneway network beyond, and strengthening much needed east-west pedestrian links south of Circular Quay.



Figure 7. A pedestrian laneway at Liberty Place, leading from Castlereagh St. to Pitt St., with the heritage Legion House at right and the ANZ Tower beyond. © Andrew Chung



Figure 8. EY Centre – sunken pocket park underneath.
© Brett Boardman



Figure 9. The EY Centre neatly and elegantly fits into tight surroundings. © Gareth Hayman

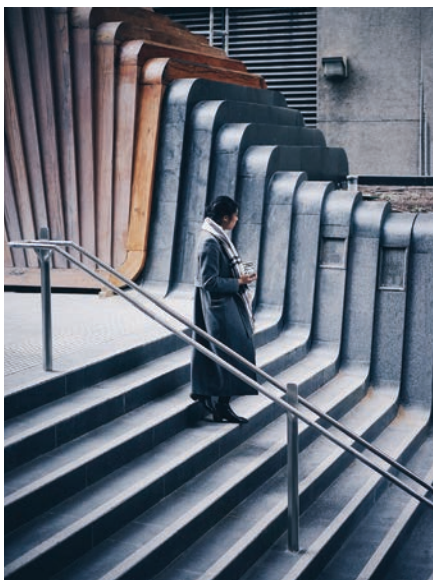


Figure 10. EY Centre – exhibition of historic artifacts.
© Demas Rusli/FJMT

Intelligent use of materials also contributes towards a quality public realm, and, in particular, the celebration of the site's rich history. The original edge of Sydney's shoreline, from the 18th century, runs through the site, and this is referenced in a brass inlay stretching across the plaza and lobby. The site would have been home to rocky sandstone outcrops, along with a forest of trees lining the shore. This is echoed in the design through an undulating timber canopy, projecting up to five meters, protecting the street below. Sandstone, quarried in the site's excavation, clads the lower levels of the core, and is celebrated in the lobby as the backing for an art piece by Judy Watson. A total of 23,715 historic artifacts were recovered from the site during excavation, and some of these are exhibited in display cases along the staircase that descends into the pocket park (see Figure 10). These include personal and household items, such as a metal comb and a bone toothbrush (GML Heritage 2017). Overall, the project is one that contributes to Sydney's public realm at many scales, from its form and massing, down to showcasing these historic objects.

60 Martin Place (HASSELL, 2019)

Designed by HASSELL and currently under construction, this project is located on Martin Place, Sydney's premier public space. Some of the city's most established institutional headquarters are housed here behind imposing and somewhat impenetrable stone edifices. In contrast, 60 Martin Place relates to its context in a much more responsive manner, inviting in the public, both visually and physically.

The Development Control Plan (DCP) and reference design for the site stipulated significant constraints, mandating that the development should not increase the overshadowing of Martin Place, thus constraining the building massing and skyline profile. However, the adjacent heritage listed St. Stephen's Church also provided an opportunity. The developer was able to purchase and transfer unused floor space which was realized in the design as a feature stepped cantilever that used a portion of the air rights.

Acknowledging these development parameters, the fundamental design concept was to give back to the city at a number of levels. Through a clever sculpting of the tower form, the lower floors are tapered to give the church more breathing space (see Figure 11). Recognizing the architectural attributes of the church, the five lower floors of the tower are connected via an imposing glazed public atrium to reveal its side wall (see Figure 12). This architectural gesture blurs the boundaries between the interior and exterior spaces, creating a generous light-filled public room. The space is enlivened with indoor and outdoor cafés, restaurants and event spaces, and a public thoroughfare connected to the subway that will no doubt be active day and night.

While the civic scale and qualities of the atrium are the defining feature of this development, the exterior of the building contributes equally to the city with a sandstone-clad podium that respects the form, scale and materiality of its neighbors, a faceted glazed tower that responds to the skyline and landscaped terraces at the upper levels that maximize views and provide additional amenity for the tenants.

Sustainability initiatives include a 6-Green Star rating, achieved through a high-performance building envelope, a partly



Figure 11. 60 Martin Place – its sculptural form provides breathing space above St. Stephen's Church. © HASSELL

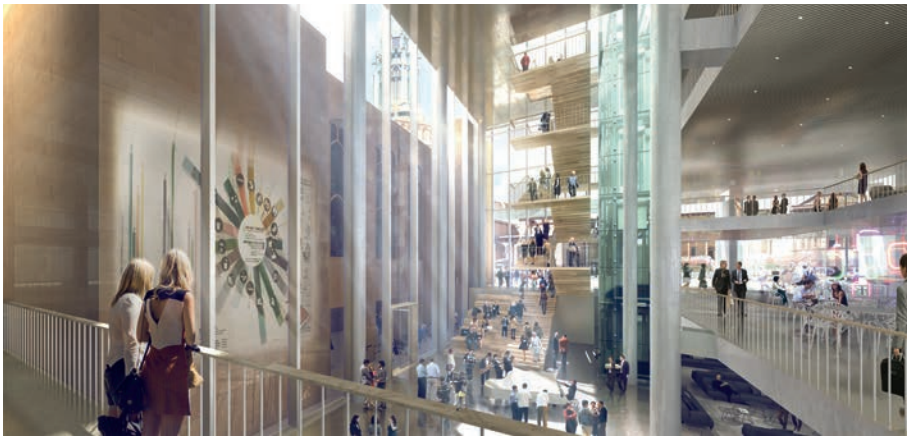


Figure 12. 60 Martin Place's public atrium opens up to the adjacent St. Stephen Church. © Doug and Wolf/HASSELL



Figure 13. Wynyard Place's George Street entrance, showing permeability at ground level. © Make

self-shading faceted northern façade and “end-of-trip” facilities to support cyclists and joggers working at 60 Martin Place; all of which add up to a development that is good for the city on many grounds.

Wynyard Place (Make/Architectus, 2019)

Currently under construction in Sydney's CBD, Wynyard Place consists of a 27-story office tower adjacent to a redeveloped Wynyard Station – one of the busiest transit hubs in the city. The development also includes restoration of Shell House and 285 George Street, vibrant retail, a revitalized Wynyard Lane, and a major upgrade to Wynyard Station's George Street entrance. The design is the result of an international design competition held by Brookfield in September 2013, which saw entries from five competing firms. The winning scheme was by Make, in conjunction with Architectus. What distinguished their design was the approach towards the shaping of the public

realm at the station, and especially the move to suspend the bulk of the lift core above the ground-floor realm, opening up the station concourse below (see Figure 13). Ken Shuttleworth, founder of Make, describes this move as being vital to the design's identity – “I think it's one of the reasons we won the project,” he said (Oldfield 2016).

The result is an open, and permeable public realm at the base of the tower, providing physical and visual connections through the site between George Street to the east and Wynyard Park to the west, while integrating restored heritage buildings Shell House and 285 George Street (see Figure 14). The design, according to Shuttleworth, “pulls Wynyard Park right into – and almost under – the building, so that it almost feels like the gardens extend through the project. It's a big public gesture” (Oldfield 2016). ■



Figure 14. Wynyard Place – aerial view showing connection to Wynyard Park. The historic Shell House, part of the project, is at left. © Brookfield

References

- BROWN, R. 2012. “High-Rise Sydney.” In *Best Highrises 2012/2013: The International High-Rise Award 2012*, edited by: Michaela Busenkell & Peter Cachola Schmal, 22–25. Munich: Edition Detail.
- CITY OF SYDNEY. 2011. *Central Sydney Development Control Plan 1996 (Amendment No. 20)*. Sydney: City of Sydney. Accessed August 2017. http://www.cityofsydney.nsw.gov.au/_data/assets/pdf_file/0005/119345/dcp1996_consolidated-may2011_Part2.pdf
- CITY OF SYDNEY. 2012. “Sydney Local Environment Plan 2012 – 6.21 Design Excellence.” Accessed August 2017. <https://www.legislation.nsw.gov.au/#/view/EPI/2012/628/part6/div4>.
- DAVISON, G.; FREESTONE, R.; HU, R. & BAKER, S. 2017. “The Impacts of Mandatory Design Competitions on Urban Design Quality in Sydney, Australia.” *Journal of Urban Design*: 1–21. <http://dx.doi.org/10.1080/13574809.2017.1337497>.
- GML HERITAGE. 2017. “Stories of 200 George Street.” Accessed August 2017. <http://www.gml.com.au/stories-of-200-george-street/>.
- GOETTSCHE, J. 2012. “How Tall Buildings Meet the Ground is as Important as How They Meet the Sky.” In *Asia Ascending: Age of the Sustainable Skyscraper. Proceedings of the CTBUH 9th World Congress, Shanghai, China, 19–21 September 2012*, edited by: Antony Wood, Timothy Johnson & Guo-Qiang Li, 360–67. Chicago: CTBUH
- OLDFIELD, P. 2016. “Ken Shuttleworth: Venturing into Sydney.” *Architecture Australia*, September 20, 2016. <http://architectureau.com/articles/ken-shuttleworth-venturing-into-sydney/>.
- OLDFIELD, P. 2017. “The EY Centre.” *Architecture Australia*, July/August 2017: 78–86.
- PUNTER, J. 2007. “Developing Urban Design as Public Policy: Best Practice Principles for Design Review and Development Management.” *Journal of Urban Design*, 12(2): 167–202. <http://dx.doi.org/10.1080/13574800701306195>.