

# A framework for evaluating and improving design guidance & control

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The visual appearance of cities is no longer being left to chance as an increasing number of cities assess design attributes of new development proposals as part of regulatory processes. The emphasis placed on design control can largely be attributed to public dissatisfaction with the effects past unregulated change has had on streetscape appearances. Or can it? If people are dissatisfied, what are the streetscape attributes that design control should target in order that places can become more attractive to those who live, work and play there? The paper looks at aesthetic perception and evaluation.

The paper presents a brief summary of design review in the context of regulatory planning in the USA, Britain and New Zealand. It then presents the key concepts of environmental aesthetics, particularly those factors influencing perception of urban settings. A disconnection between research in this field and regulatory planning processes is highlighted, noting that this may be a factor in the failure of regulation to deliver likeable places. As design professions often base opinions on theories that are not empirically validated, their professional dogmas should be put to one side in order to make design control more effective. The paper argues that those responsible for design control must understand the preferences of the people and sets out a framework to inform further research in the field.

**Keywords:** environmental aesthetics, streetscape, design guidance, townscape.

## 1. Introduction

The appearance of cities is often found to confound the critics. “Why”, asks Layla Dawson, “does the Auckland CBD, situated in a stunning natural environment, have the appearance of a jumble of high-rise blocks” (Dawson 2010). A little further afield in Sydney, John Punter (2004) is critical of the poor quality built environment that still continues to be created in the post-WWII years. Sydney is a city that has succumbed to “spectacularly ordinary commercial development” during that period and he continues to comment that this ordinariness has only been excused by a discerning public because of its spectacular setting (p. 406). It seems that contemporary practices shaping towns and cities lead to poor outcomes with the impact of this made worse because of the inescapability of the built environment (Carmona and Tiesdell 2007). Even so, opinions that are critical of the visual characteristics of the built environment are not difficult to come by and a fundamental question to ask is whether it really matters.....is the visual quality of the built environment something to be concerned about?

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Addressing this question we can first consider that aesthetic perceptions of the built environment have been linked to mental and physical wellbeing. Poor urban environments can induce higher levels of emotional and psychological stress in people and have been shown to diminish faith and self-esteem (George and Campbell 2000; Pallasmaa 2001). On the other hand, aesthetically pleasing places can help generate, celebrate and sustain life through making a person feel more complete and satisfied (Porteous 1996; Dovey 2001). Arguing for greater coherency of built form, Smith connects aesthetic pleasure to natural selection processes. Studies have shown that sensory pleasure, including positive visual experience of one's environment, can raise levels of immunoglobulin, a key antibody that bolsters the human immune system thereby increasing chances of survival (Smith 2003 p. 95).

A second matter that establishes the relevance of the appearance of the built environment is financial. The visual qualities of the built environment can have tangible influence over property values, thereby directly affecting the financial well-being of those who own property or conduct a business in the area. It seems that visually attractive places are more sought after by the public, helping to increase demand and therefore economic values. Increasingly, the built environment is being used as a tool in the battle between cities for business investment, tourism and high-calibre workers (Carmona, Magalhaes et al. 2002; Cuthbert 2006). In recognition of this and because the market cannot be relied on to consistently deliver appropriate change to cities it becomes necessary for government intervention on behalf of those who must live with the consequences but do not otherwise have a say in the nature of those changes (Delafons 1994; Ellin 2006). Scheer (1994) explains that cities are motivated to review design outcomes in order to improve the quality of life for their citizens, promote vitality, protect property values and generally improve their appearance. George & Campbell (2000 p163) advise that "aesthetic controls are based on the belief that there is a collective good in their application greater than the sum of their cost to each individual".

## **2. Regulatory planning**

Toward the end of the 19<sup>th</sup> century in Britain, town planning emerged as an intellectual response to the squalor and poverty that had developed during the Victorian period. Coinciding with visions of the new, ordered settlements proposed by Ebenezer Howard and others at the time, planning envisaged a bright future through progressive repair of existing settlements (Cherry 1974). Nevertheless it was the design of new extensions to existing towns that was addressed by the first Housing and Town Planning Act, written in 1909. Regulation was mainly directed at the design of new roads and to protect the amenity provided by open spaces. Changes to existing urbanised areas were not considered to be of consequence, as redevelopment of the scale and intensity necessary to affect existing character was not anticipated (Punter 1986). This assumption proved to be wrong and cities began to suffer from changes that were insensitive to local character. By 1925 local authorities were encouraged to write bylaws to help ensure preservation of buildings and neighbourhood character. There was certainly unease on both sides of design regulation, with local authorities concerned about the liability they might assume in censoring design and the architectural profession annoyed that planners, untrained in design, were given

scope to meddle with their designs. The RIBA successfully lobbied government to limit the scope of the regulatory process to preventing design outrages and those buildings that would be offensive to their surroundings (Punter and Carmona 1997). To assist councils in judging major developments and civic design projects the Royal Fine Art Commission was set up in 1924.

Whereas the British system of regulating design outcomes has evolved to allow local authorities considerable discretion, the American system has developed to provide individual landowners with certainty about what they can and cannot do on their land (Delafons 1994). This contrast reflects the different attitudes in these places toward the land and toward public space. Throughout recorded history American land has been surveyed, subdivided, sold and developed; it considered a commodity, to be owned and exploited by individual owners. Attempts to limit the ways in which land can be used have been met with resistance, not only by affected individuals but also by the courts (Scott 1969). Rights of the individual are one of the cornerstones of the American culture. This is an attitude that has not prevailed in Great Britain, at least to the extent that would cause widespread resistance to planning regulation.

It was not until early in the 20th century that the planning profession began to emerge, initially on the back of the *City Beautiful* movement. Establishing civic pride and place identity through careful planning of civic buildings and the spaces around them were a focus for planning during this period. Also at this time planning began to concern itself with the effects unregulated development was having on the quality of residential areas and the streets of cities (Scott 1969). Addressing the first, cities began to write bylaws limiting the areas in which certain harmful activities could take place. No longer was it acceptable to build factories and other industrial facilities in areas that were designated for residential use. This method of separating between activity areas has become the foundation for all city planning throughout the United States (Boyer 1983; Delafons 1994). Zoning was also used to prescribe development form by establishing maximum heights, requiring form to be stepped or limiting floor areas. Rules like these were attached to zoning regulations to help ensure adequate light and air could be enjoyed at street level. Although a blunt instrument, zoning effectively imposes an aesthetic outcome on American cities.

In terms of regulating design outcomes, zoning provides certainty to all participants. It was therefore seen to be an ideal method for regulating building form in light of the litigious nature of American society. Early legal challenges to zoning were easily dismissed and the method has regularly been upheld by the courts as a valid form of police authority (Boyer 1983; Fishman 2000). Then in the 1970s and in response to increasingly insensitive redevelopment in areas of rich visual character and insensitive changes [including demolition] of heritage buildings, local authorities began to implement discretionary design review alongside zoning in some areas. This much more problematic form of control has also been subjected to legal challenges and upheld in circumstances where design review is part of a comprehensive plan of action to improve the visual qualities of the city. The uptake of design review was very rapid and by 1990 Scheer (Scheer and Preiser 1994) found that 83% of all local authorities in the US had established such procedures in one form or another. Some cities established advisory panels comprising of lay and professional people. Early on, review was undertaken without clear assessment criteria, leading to claims of

subjectivity. As a consequence, most cities have now developed guidance that the land owners as well as the review panel can make use of. Despite this there remains a high level of anxiety and stress around the whole process of aesthetic regulation in the United States, revolving primarily around the issue of personal freedom.

Development of towns and cities in New Zealand followed plans drawn up well in advance of settlement that was led by various sponsoring agencies and government departments. Town planning was at the same time becoming established as a discipline and the plans of New Zealand cities were clearly influenced by British planning discourse revolving around health and wellbeing. In addition to enabling the land to be commodified for sale more easily, gridded street layouts provided easier access to open spaces within and around the settlements (Memon 1991; Hamer 1995). While the plans for settlements did not generally nominate land use activities or three-dimensional form, they did provide certainty around the layout of public spaces such as streets and parks. The certainty provided by plans for each settlement, coupled with societal attitudes that valued freedom of the individual and exploitation of the environment (Memon 1991), meant that regulatory town planning was slow to establish on these shores.

Nevertheless, by 1926 the government had passed the Town Planning Act, which required all towns and cities to develop plans by which land use in their jurisdictions could be regulated. The plans were based on Euclidean zoning, adopting methods used in the United States. Miller (2002) attributes the growing enthusiasm for town planning during this period to the many civic beautifying associations that had established around the country. Many extended their activities beyond tree planting to lobby local authorities for enhanced planning control and to arrange design competitions for key projects. However, despite having good legislation to work with, town planning was not delivering visually attractive or functionally sound cities according to some critics. Martin (1949) considered that this was in large part due to the general public's lack of discernment regarding matters of design. He also argued that there was a shortage of town planners with the necessary skills to design and regulate for a coherent built environment.

The New Zealand planning regulation context changed dramatically with adoption of the Resource Management Act in 1991. That RMA, which weaves town planning legislation in with laws governing use of water and other natural resources, provides comprehensive high level guidance on management of the country's resources (Jackson and Dixon 2007; Higgins 2010; Miller 2011). The RMA has its roots in a period of economic liberalisation and was written to support a performance-based planning approach, contrasting with the inflexible and prescriptive planning paradigm it replaced (Baker, Sipe et al. 2006). There is a substantial literature on planning, and to a lesser extent urban design, in the aftermath of the RMA. Hunt (2008) and Higgins (2010) express the widely held view that planning around urban development has not been well served by the RMA largely because of its focus on the biophysical realm, its emphasis on measuring effects rather than the nature and scale of development and that it is overly reliant on market forces to determine appropriate development. Despite the potential for performance-based planning to emerge local authorities have in large part fallen back to fixed rules as the basis against which proposals are judged (Baker, Sipe et al. 2006). This has led to design issues being marginalised in the

vast majority of planning decisions because, where building form and location are controlled by clear standards, local authorities do not believe it is their role to comment on aesthetic matters (Hunt 2008).

### 3. Environmental aesthetics

It has been noted that the environment does affect people's physical and mental wellbeing and that they make choices on the basis of aesthetic value. However, there is also an idea rooted deeply in our society and promoted extensively by those who are critical of design review that aesthetic judgement is entirely subjective and so it is difficult to agree on notions of beauty (Scheer 1994; Taylor 1994). If this is true then the very idea that aesthetic outcomes could be effectively controlled for the benefit of a wide segment of the population is fraught. Fortunately the field of **environmental aesthetics** can help us to understand widely held notions of beauty. Cuthbert (2006) suggests that an aesthetically pleasing experience is one that provides pleasurable sensory experiences, a pleasing perceptual structure and pleasurable symbolic associations. Aesthetic experience can therefore be conceptualised over three levels; sensory perception, cognition and meaning. Following social science and psychology methodologies, a number of studies have been carried out since the 1960s examining people's perceptions and judgments of their environments as well as to confirm the validity of theories explaining the processes of perception (Nasar 1988, Stamps 2000). Using mapping techniques developed by Lynch (1960) in his classical study of people's mental images of cities and survey techniques, Nasar consulted residents and visitors in two American cities. He set out to identify general characteristics of 'likeable' places. Key factors that influence likability are naturalness, openness, upkeep, historical significance and order. Critics observe that this research simply confirms what most people would assume (Chapman 1999) but others also see this as its strength. Empirical research findings such as Nasar's provide confidence to regulators when preparing design guidelines.

Porteous (1996) offers a useful and comprehensive outline of environmental aesthetics, which he structures into four separate paradigms. *Humanists* approach their study of landscapes in a historically traditional manner, contemplating and seeking universal truths intuitively. *Activists* are extremely passionate about the environment but lack adequate rigour in their arguments, therefore lacking in credibility. In Porteous' view of environmental aesthetics the *Activist* group is aligned most closely with the public. *Experimentalists* are scientists and they seek evidence for the way people perceive and experience their environments, often linking perception with behaviour in their approaches. *Experimentalists* are however only interested in the answers to questions and not necessarily in how these answers might be used in a more practical sense. Porteous argues that *Planners* approach environmental aesthetics with the rigour of the *Experimentalists* but seek to give this information greater relevance by using it to manage, design and make policy toward enhancing and improving the perceived quality of urban and natural landscapes. Porteous (1996) is troubled by the failure of the three parties around whom environmental aesthetics revolves, the general public (*Activists*), researchers (*Humanists* and *Experimentalists*) and *Planners*, to coordinate their efforts in order to influence development driven change toward aesthetically pleasing outcomes. The key to solving this problem is to increase public

participation in aesthetic planning, a goal that will largely be fostered through environmental education (Porteous 1996 p240).

#### 4. Design Review

A number of methods of regulating and controlling aesthetic outcomes of urban development have been developed and operate successfully in different parts of the world. Punter (2007) notes that design review practices are either regulatory or discretionary. Regulatory (also referred to as administrative) systems are an add-on to zoning controls, where design outcomes are controlled by rules and objective measures. Examples of this are maximum height limits, prescriptions for location of buildings in relation to boundaries and floor area ratios. These systems provide high levels of certainty to all parties and regulation is able to be conducted through largely administrative functions, reducing local authority resourcing needs. However, they are also criticised for being coarse in nature with a tendency toward monotonous environments, where all projects are built to the prescribed limits (Delafons 1994; Madanipour 1996).

Discretionary systems are more ‘pragmatic’ as they allow regulation to refer to the immediate setting and other variable factors that cannot be accounted for in most rules based regimes. The more successful discretionary systems, in terms of meeting the needs of different stakeholders, are informed by design guidelines or briefs that provide both a target for designers and a reference for those assessing the proposal (Nasar and Grannis 1999). While discretionary systems often do allow local conditions to be taken into account they are often criticised by the development industry and by designers for their arbitrariness (Scheer 1994).

Over the past 30 years there has been a tendency for regulatory design control to become more discretionary to create scope for development design quality to be scrutinised more closely. Likewise, design guidance informing discretionary systems has become more prescriptive in response to calls for more certainty around the process for applicants. In short, design control systems appear to be converging as they are modified to include both discretionary and regulatory characteristics (Punter 2007).

**Table 1: The cases for and against design review**

Case for	Case against
Raises the standard of development by ensuring more thought goes into its design Prevents ‘outrages’ Encourages designer to stand up to client Can provide a bridge between lay and professional tastes –depending on methods Seeks to improve quality of life	Impedes the quality of building design Merely cosmetic Encourages imitation Bureaucratic baggage Lacks fair predictability Violates property rights Violates freedom of speech

The underlying aim of design review is that regulation will lead to a better built environment for all. However, it is not a field without controversy. Scholars, design practitioners and

regulators have identified the key areas of controversy to be that it creates inefficiencies in the development process, is redundant in a free market economy, that it stifles freedom of expression and that really excellent design outcomes are a casualty of a process that favours continuity (Habe 1989; Scheer and Preiser 1994). Table 1 sets out the various promises of design review against the challenges the process must overcome if it is to achieve all that is promised.

An extensive US study, reported to an international symposium on design review, found planners and members of the public to be reasonably satisfied with design review, calling only for improvements to the process through refinement of guidelines and greater autonomy to decision makers. Architects, on the other hand, were largely dissatisfied (Scheer 1994). In 1990, about the same time as Scheer was doing her analysis, Schuster (1997) surveyed members of the Boston Architectural Society. One of his key findings was the “markedly positive” view architects have of design review. Schuster confronted the discrepancies between the two surveys and found that Scheer had widely circulated a memo through the American Institute of Architects, inviting responses. Hers does not appear to have been an impartial survey and Schuster comments that individual architects who have particularly negative views were more likely to make the effort to respond. Although the jury is still out on the opinion architects have of design review, it seems an increasing number of local authorities include consideration of design as part of development control (Scheer 1994).

To improve the processes and the outcomes (products) of aesthetic review as it is currently administered in local government development regulation, a number of challenges outlined in the literature must be confronted. Design review is time consuming and expensive, it is easy to manipulate through persuasion and it is administered by overworked and inexperienced staff. Scheer (1994) identifies these as issues that plague the process but which are easy to solve. By that, she insinuates that they can be resolved with the addition of financial or human resources, through education and with by ensuring the process is adequately audited for political involvement. She proceeds to identify problems that are more difficult to diffuse, as they generally represent matters that exist as tensions between competing social, political or legal forces. The first of these is *power* and the question of who makes the key decisions. Scheer points to the law and notes that it is only those who are expert in the field that are authorised to make key decisions or to judge. She argues that design review is the only field in which lay (or those not specifically trained in design) people are left to rule over professionals directly in their areas of expertise.

*Freedom* to express oneself through the built environment is another matter that troubles design review. Concerns about freedom in the design review process are triggered by societal values aligned with property ownership in many places, particularly in the ‘new world’ countries. Nevertheless, the courts have consistently upheld the ability of local government to control this right, provided it comes through a comprehensive process aimed at improving the quality of the built environment (Lai 1994).

Punter (2007) incorporates these criteria into a comprehensive framework for design review and development management (Table 2). The twelve principles are grouped under four headings; community vision, design planning and zoning, substantive design principles and

due process. The principles under the first heading aim to capture the views of the community as a step in generating a comprehensive view to guide development and control. The community vision becomes the reference for all decisions. Secondly, three principles inform development of a suitable process that includes incentives as well as requirements necessary to regulate for high quality design outcomes. The next three principles address the nature of the relationship between the comprehensive plan and the development industry charged with implementing it. Punter argues that the relationship should be pluralistic and not overbearing in order to allow creative solutions to emerge. Under the final heading four principles address issues of fairness in administering the design control regime.

**Table 2: Principles for Progressive Design Review**

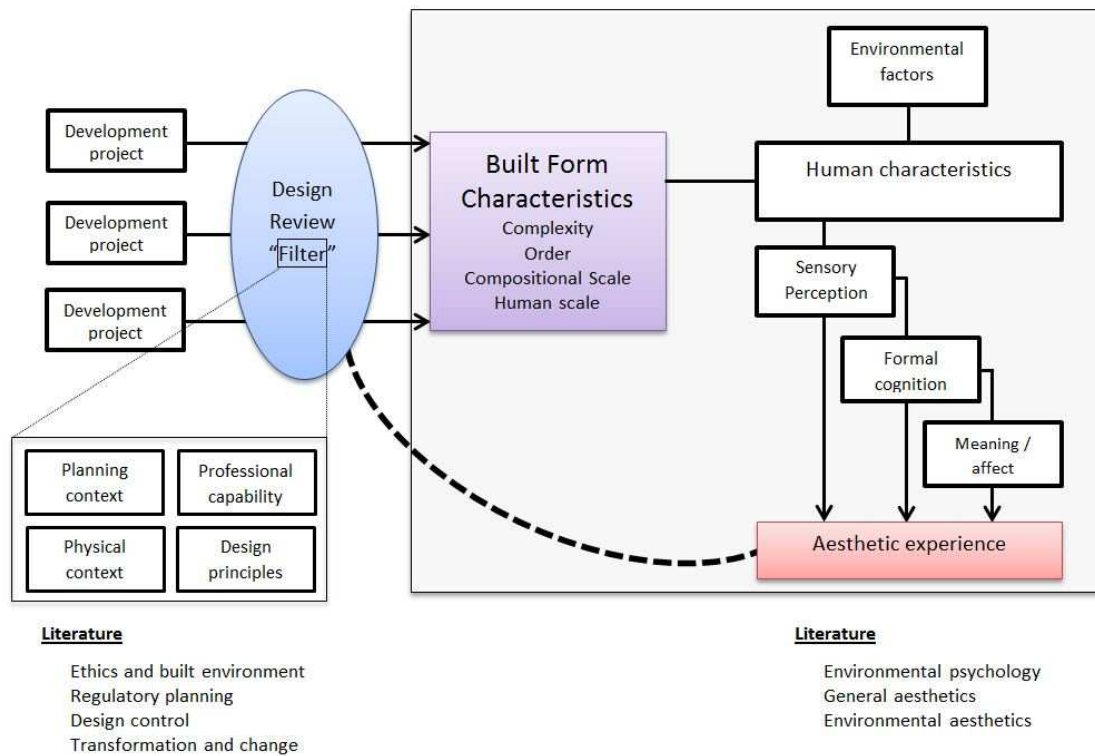
Source: Punter 2007

<p><b>Community vision</b></p> <ol style="list-style-type: none"> <li>1. Committing to a comprehensive and coordinated vision of environmental beauty and design</li> <li>2. Developing and monitoring an urban design plan with community and development industry support and periodic review</li> </ol> <p><b>Design Planning and Zoning</b></p> <ol style="list-style-type: none"> <li>3. Harnessing the broadest range of actors and instruments (tax subsidies, land acquisition) to promote better design</li> <li>4. Mitigating the exclusionary effects of control strategies and urban design regulation</li> <li>5. Integrating zoning into planning and addressing the limitations of zoning</li> </ol> <p><b>Broad, Substantive Design Principles</b></p> <ol style="list-style-type: none"> <li>6. Maintaining a commitment to urban design that goes well beyond elevations and aesthetics to embrace amenity, accessibility, community, vitality and sustainability</li> <li>7. Basing guidelines on generic design principles and contextual analysis and articulating desired and mandatory outcomes.</li> <li>8. Not attempting to control all aspects of community design but accommodating organic spontaneity, vitality, innovation, pluralism: not over-prescriptive.</li> </ol> <p><b>Due Process</b></p> <ol style="list-style-type: none"> <li>9. Identifying clear <i>a priori</i> roles for urban design intervention</li> <li>10. Establishing proper administrative procedures with written opinions to manage administrative discretion, and with appropriate appeal mechanisms.</li> <li>11. Implementing an efficient, constructive and effective permitting process</li> <li>12. Providing appropriate design skills and expertise to support the review process.</li> </ol>
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## 5. Analytical framework

Research that monitors the effectiveness of design review responds to recommendations made by Porteous (1996), Punter & Carmona (1997) and others. By understanding people's perceptions of a place that has been transformed through a number of discrete projects it is possible to determine the success of the design review *filter*. Figure 1 describes a relationship between the factors that might influence the characteristics of the setting that is to be evaluated. Gjerde (2011) provides an outline of the factors that influence aesthetic perception and experience of the city, the bottom half of the diagram. Above this, the design review process can be envisaged as a filter, where regulation influences the shape and form of the built form through the design principles on which it is based, the capabilities of those making decisions, the legal and planning contexts as well as the physical context that will receive the development proposal. All twelve of Punter's (2007) principles of design review can be seen to be provided for in the framework. A key influence on the design review process is the community's vision for its future. The built environment is fixed in the centre of the framework, it results through the efforts of individual property owners to (re)develop their sites and those charged with regulating to help ensure the outcomes are not skewed





**Figure 1: Diagram of the conceptual framework for the research.**

through private interests. The same environment provides a catalyst for aesthetic evaluation following a process made known through environmental aesthetics.

## 6. Conclusion

There are good reasons to make efforts to improve the aesthetic quality of the built environment. Visual qualities of the environment have a bearing on people's physical and mental as well as their financial well-being. Increasingly, local government politicians and managers recognise the importance of the built environment in attracting visitors and high-calibre workers to their settlements. Despite these imperatives there is considerable evidence to suggest that new development does not lead to environments of such a standard as the public wants and deserves. Design review, as part of a comprehensive planning regulation regime, has been widely used to confront market forces in an effort to improve the visual quality of the built environment.

The paper has developed a framework for evaluating the effectiveness of design review tools and processes. To generate the framework the paper has traversed literature in the fields of environmental aesthetics, design review and the history of regulation, aiming to understand motivations and other background in the United States, Britain and New Zealand. Further research, making use of the framework to understand the effectiveness of different design review processes in different contexts, is called for to improve the basis on which design outcomes are regulated.

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