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Performance-Based Planning

Perspectives from the United States, Australia, and New Zealand

Douglas C. Baker, Neil G. Sipe, and Brendan J. Gleeson

Abstract

This article examines the application of performance-based planning at the local level in the United States, Australia, and New Zealand. A review of the literature finds that there have been few evaluations of performance-based planning, despite its being used by many governments. The authors provide a comparative review of the experiences of various jurisdictions in implementing this form of zoning and present observations on its relative strengths and weaknesses. Findings suggest that many of the jurisdictions that adopted performance-based planning subsequently abandoned it because of the heavy administrative burden required, and where performance methods survived, they were typically hybridized with traditional zoning. If performance-based approaches continue to be used, there is a need to better understand the administrative and implementation implications of this type of land use regulation.

Keywords: *performance-based planning; effects-based planning; flexible zoning*

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Performance-based land use regulation is increasingly being applied to the public sector as a means of increasing the efficiency and effectiveness of decision making. It has been used in the United States, Great Britain, New Zealand, Australia, and Nordic countries in an attempt to improve decision making in land use control, building regulation, and natural resource planning (Exner and Sawchuk 1996). Performance-based regulation is built upon the assumption that the impacts of land use are a function of intensity, or the physical characteristics and functions, rather than specific land uses themselves (such as commercial or residential). A potential development is assessed against predetermined standards (performance measurement) that set quantitative limits on acceptable levels of use. Thus, performance-based approaches are composed of two components: first, criteria that describe the desired end result, and second, methods to define standards used to measure the acceptable limits of impact to ensure the desired end result (such as noise impacts).

The primary objective of performance-based land use regulation is to tailor land uses to site characteristics. This type of regulation provides for greater discretion in terms of the land uses allowed while attempting to limit the impacts of those land uses through performance criteria. While traditional zoning tends to separate land uses, performance-based approaches allow better land use integration as long as performance criteria are met. A day care center, laundromat, and residential development can be integrated if they meet the set performance standards for that area.

Traditional Euclidean zoning separates land uses in a hierarchy based on land use type, dividing residential, commercial, and industrial land uses in prescriptive zones. Euclidean zoning has been actively criticized for its inflexible, narrow focus and “blunt” approach to land use. Arguments in favor of performance-based planning tend towards the other end of the scale. This type of decision making is supposed to be more flexible, require fewer regulations, speed up the approval process, and encourage a greater dialogue amongst stakeholders (Kendig 1980; Porter, Phillips, and Lassar 1988).

Since the early 1950s, performance standards have been employed in land use planning. It has been employed in industrial standards, building codes, design standards (new urbanism), zoning, and entire planning systems. We use the term “performance-based planning” to define the broader context of land use regulation focusing on

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zoning and planning outcomes, where results-based measurement is used at both the strategic and operational levels to attain desired outcomes.

Unlike many planning and growth management reforms, the move to a performance-based approach has had broad-based support. It has been encouraged by property developers because they see it as a means to reduce “red tape” in the development application process. Environmentalists also applaud performance-based approaches as a means to improve the environmental management and impacts of development.

The aims of this article are threefold: first, to provide an overview of performance-based planning and its evolution in a range of English speaking countries; second, to summarize the application of this planning method in land use regulation; and third, to identify, on the basis of comparative international analysis, general strengths and weaknesses of the performance based approach.

The application of performance-based planning began in the early 1970s in the United States at the local government level. New Zealand adopted performance-based standards at a national level in 1991, followed in 1997 by Queensland, Australia, at the state level. In both cases the adoption of performance-based planning was a part of a larger package of institutional reform. We briefly review case studies at the local level from each jurisdiction, first to demonstrate the application of this method in the United States, Australia, and New Zealand and second to review the implementation of performance-based planning at the local community level. The primary difference between the American and the antipodean examples is that in most of the U.S. case studies the adoption of performance-based land regulation was voluntary and experimental. In Queensland the implementation was mandated by state government to be enacted at the council level—and in many cases local planners were reluctant to integrate performance measures. In addition, the state government provided guidance and resources through personnel, manuals, and workshops to aid local government in the implementation of performance methods. Although we recognize that the institutional frameworks and planning practice are different between jurisdictions, our analysis suggests that there are common characteristics at the local level, some more prevalent in the case studies.

We believe that an analysis is relevant at this time because many jurisdictions—for example, in Canada (Leung and Harper 2000)—are considering adopting performance-based approaches as a means to increase efficiency in times of economic restraint. And yet there is little robust international evidence to assess the general claim in the policy literature that performance-based assessment is inherently more efficient than traditional prescriptive approaches. This critical

evaluation of performance-based planning provides both a theoretical and empirical contribution to the debate around efficiency and effectiveness in planning decision making.

► Performance-Based Planning in North America

This section provides a chronological overview of the scant literature on performance-based planning in the United States. It should be noted that much of this review is based on the practice-oriented literature or consultants’ reports. There has been little critical, empirically based evaluation of the method. This lack of evaluation was noted as early as 1980 by Kendig (1980, 287), who blamed the absence of research on this area on the academic community’s lack of interest. While a scattering of reports and sections of books deal generically with specific performance-based approaches, they do not offer a critical perspective of either the context or the application of this decision-making method. Furthermore, there has been little empirical attempt to measure the concrete impacts of performance-based decision making on real planning outcomes. The evaluations done by Jaffe (1993), Porter (1998), Leung and Harper (2000), and John A. Humphreys Associates (2002) were all based on qualitative assessments of expert opinion about impacts, rather than the impacts themselves.

Early attempts at implementing performance-based measurement can be found in industrial standards to control the negative impacts of industry. In 1951, O’Harrow proposed that performance standards could be adopted from building codes as a means to implement industrial zoning (O’Harrow 1951/1972). His argument was that traditional prescriptive zoning had not kept up with advances in factory design and technology and did not provide an adequate basis for mitigation of impacts. He identifies eleven fields where performance standards could be applied to industrial impacts such as noise, smoke, odor, and fire hazard. According to Salzenstein (1971, 1) a “few smaller communities had adopted performance standards as early as 1952,” but the implementation of industrial performance standards by Chicago in 1957 provided an impetus for other cities to take on this approach. The impacts commonly controlled by performance standards consist of noise, vibration, air pollution, radioactive radiation, glare, humidity, fire, and explosive hazards.

The American Society of Planning Officials (ASPO) report completed by Salzenstein in 1971 provides a comprehensive overview of designing industrial performance standards. The survey conducted in this report indicated that at the time, the primary problem faced by administrations attempting to implement performance standards consisted of monitoring: both inadequate technology and personnel to follow through

with assessing performance standards. Other issues consisted of administrative will, funding, and lack of specificity of standards.

Industrial performance standards tend to be commonplace in many zoning ordinances today. However, the translation of performance-based approaches to other land uses is less common. In an early response to O'Harrow's (1951/1972) work on industrial performance standards, Horack (1952/1972) suggested translating the industrial standards approach to commercial and residential land uses but cautioned that performance standards should be initially applied to "intrazone" restrictions such as height, bulk, and setbacks. He argued that "the factors necessary for adequate performance standards in zoning are much more complex than performance tests in building codes and thus there should be no optimism that zones will quickly be replaced" (p. 75).

Lane Kendig's (1980) *Performance Zoning* offers a comprehensive overview of the application of performance standards and advocates this method as an alternative to prescriptive zoning. His argument is that Euclidian zoning has failed at regulating land use because it allows a proliferation of zoning districts, it is administered as an ad hoc reaction to land development proposals, and low-density zoning acts as a holding pen for future development (pp. 9-10). Because of the changes to zoned areas over time by variances, conditional uses, special use permits, and planned developments, the result is that zoning is "less a legislative act and more a continuing process of ad hoc administrative decision" (p. 281).

Performance standards based on carrying capacity, threshold of safety, and environmental quality are proposed as a means to replace prescriptive (and permissive) zoning. The intent of this approach is to manage the community's development over an extended period of time to reduce the opportunity for discretionary action and eventual change to the landscape. According to Kendig (1980, 284), "There are several types of standards: those which require a considerable safety margin, those which allow a politically acceptable level of risk, and others which do not involve physical risk but rather establish a community's character." He cautions that each community must determine how detailed a study it can afford to supply that basis for any particular standard (p. 285).

Kendig's (1980) performance approach to zoning regulates the intensity of development on the basis of four variables: open space ratio, impervious surface ratio, floor area ratio, and density. For example, open space ratio refers specifically to the proportion of a site that remains undeveloped and is specifically designated as open space. The purpose of this variable is to protect environmentally sensitive areas and to preserve open space, often a measure of community character. Each variable is closely related to the design of a development,

and when combined, they are intended to evaluate the performance of development proposals. The objective is to specify developmental limits by calculating capacity on a site-by-site basis. Zoning districts are proposed as a means of defining the acceptable land uses based on function within a community. Examples of districts include wilderness districts, agricultural districts, and development districts. Each district has specific performance characteristics based on the four variables.

There are a variety of other approaches of establishing performance criteria. Examples include point systems for rating appropriate land uses; negotiated planned unit developments; land use compatibility assessments; and requirements for environmental, agricultural, or open space standards. Applications of performance standards have varied from the "pure form"—regulating the quality of development rather than the location—to hybrid systems that influence land use pattern (Porter 1998). The application of performance standards to zoning has been diverse and community-specific, with different success and failure stories.

In 1988, Porter, Phillips, and Lassar published *Flexible Zoning: How It Works* through the Urban Land Institute. The authors advocated the adoption of performance standards as a replacement for Euclidean zoning, using case studies of seven local governments as testimonies of the success of regulating land use with performance-based planning. Those local governments included Ft. Collins and Breckenridge, Colorado; Largo, Florida; Hardin County, Kentucky; Bath Charter Township, Michigan; Buckingham Township, Pennsylvania; and Duxbury, Massachusetts. Porter, Phillips, and Lassar develop criteria for evaluating flexible zoning systems composed of twenty-eight criteria under the three categories of Effect on the Approval Process, Effect on the Development Industry, and Effect on the Communities Goals. No quantitative analysis was performed using these criteria; however, the authors evaluated the case studies based on interviews with local officials. Their analyses of the cases studies indicated that the strength of this approach was in translating goals and objectives of the plan to actual development that reflects those goals, and the weakness centered on fashioning standards to measure the impacts of proposed developments. The authors found that the administrative effort (paperwork, staffing needs, and duration of the approval process) in implementing performance zoning was greater than traditional prescriptive planning.

A decade after *Flexible Zoning* (Porter, Phillips, and Lassar 1988), Porter (1998) provided a post hoc assessment of flexible zoning using some of the same local governments—Ft. Collins and Breckenridge, Colorado; Hardin County, Kentucky; and Largo, Florida. He also surveyed five other local governments that had implemented performance zoning—Flagstaff, Arizona; Lake County, Illinois; Pocatello, Idaho; Queen

Anne's County, Maryland; and Tallahassee/Leon County, Florida. Of these nine, only two retained their performance-based standards. Porter suggests that the need for certainty and assurance and the frustration of the complexity in administration were primary determinants in communities going back to prescriptive methods. His brief analysis is one of the few attempts to evaluate the outcomes of performance-based planning.

In 1993, Jaffe reassessed performance zoning literature from a legal perspective. He cautions that the application of performance-based zoning for residential purposes (compared to industrial) may face more legal challenges "because it is less directly related to its legitimate public purposes" (p. 6). In his commentary, he notes that performance based zoning approaches are neither simple nor elegant in their application. Despite this, he argues, performance zoning from a legal perspective remains a "regulatory enigma" because there is very little case law on the subject. Jaffe blames this failure of the *promise* of performance zoning—and the reason it has not been tested thoroughly in the courts—on political compromise and expediency.

In *Performance Standards for Growth Management*, Duerksen (1996) supports Jaffe's (1993) observations on the lack of case law. Duerksen predicts that the four main areas that could arise in case law involve (1) setting performance standards—ensuring that they are clear and precise; (2) economic impacts on landowners—do the regulations deprive a landowner of his or her economic use through cumulative impacts of performance standards? (3) margin of error and nonconforming uses—defining a cushion of error within the standards to build some toleration for changes of use and amending regulations; and (4) implementation—ensuring that there are adequate resources for administration and enforcement.

In Canada two reports were commissioned by the Canadian Mortgage and Housing Corporation (CMHC) to evaluate the status of performance-based planning for its appropriate application in Canada. The first study (Exner and Sawchuck 1996) examined whether the town of Morinville should adopt a performance-based planning model to streamline its development approval process. The authors recommended the town not adopt performance-based planning because (1) there were no examples of where performance-based planning was working well, (2) it can only be applied to new developments, and (3) the model is too unpredictable. The second CMHC report (Leung and Harper 2000), based on twenty-six informant interviews across three countries (United States, New Zealand, and Australia) concluded with a number of key lessons for Canadian communities. Among these are (1) the process should be a top-down voluntary approach—driven at the state or provincial level; (2) do not replace traditional

zoning systems, but rather use performance-based regulations in parallel with Euclidean zoning; (3) avoid complexity at all costs; and (4) accept the incremental nature of innovation.

A recent overview of performance-based planning was commissioned by the town of Breckenridge (John A. Humphreys Associates 2002) on how flexible/performance zoning has worked over the past twenty-five years in the United States. This assessment was to provide input to the town on the future of its planning system (see the following case description). The study concluded that, as of 2002, many of the jurisdictions that had originally applied performance standards had gone back to Euclidean zoning because (1) lack of land use guidelines resulting in community uncertainty, and (2) difficulties in explaining and applying complex performance based standards.

Local Government Applications of Performance-Based Planning

Table 1 provides a summary of the application of performance-based planning at the local government level in the United States. The examples have been selected from those discussed in the literature and provide a chronology of noteworthy applications.

Most of the application examples demonstrate that there has been a move away from "pure" performance-based approaches to a more generic process that includes traditional zoning practice. Hybrid models have evolved as a response to the strengths and weaknesses reviewed above. Porter's (1998, 2) observation that performance standards "have 'gone underground' but play an increasingly important role in guiding developments" is astute. For example, hybrids have evolved as (1) policy overlays and (2) performance standards within traditional zoning districts. Policy overlays provide direction for the constrained use of land (environmental standards, infrastructure requirements) or encouraging land development (brownfield redevelopment, enterprise zones). For example, Largo, Florida, implemented policy districts to selectively encourage redevelopment of declining areas within the city. Second, performance measures within tradition zoning districts simply apply performance-based standards to zones defining, for example, floor area ratios, impervious surface ratios, and other detailed performance measurement.

Form-based zoning also incorporates the use of performance standards. This approach to controlling the design of neighborhoods stems from the New Urbanism or neotraditional planning movement. Many of the form-based codes presently being developed are based on the Smart Code (for a discussion of the Smart Code, see Duany and Talen

Table 1.
Selected applications of performance-based planning in the United States.

	<i>Year Implemented</i>	<i>Key Points/Features</i>	<i>References</i>
Gay Head, Massachusetts	1972	Three-page ordinance drafted by Kevin Lynch and Philip Herr Set out two districts Special permits required for all commercial and industrial uses using eight performance criteria: erosion control, tree preservation, screening, trip generation, parking, excess pollution, storage of mobile structures, off-site impacts Adopted but never implemented Simple and elegant, yet incapable of being administered (Jaffe 1993, 9)	Jaffe (1993)
Gunnison County, Colorado	1977	Noted several problems with performance zoning: land use outcomes unpredictable; system is reactive—difficult to plan for infrastructure; adopted standards become outdated; and review process too complex and time-consuming Revised system in 1999 Currently use a combination of Euclidean and Performance zoning	Nellis and Richman (1998)
Breckenridge, Colorado	1978	Early adopter that remains committed to performance-based approach Periodically evaluated—last performed in 2003, which noted two problems: lack of architectural guidelines and need for a quantitative “crib” sheet	Breckenridge (Town of), Colorado (2003)
Ft. Collins, Colorado	1981	Pure performance-based system Allowed any land use in any area Revised system in 1997 due to mounting pressure from citizens and public officials on two issues: lack of certainty on what could be built and concern that system focused on project scale impact to the exclusion of community scale impacts	Porter (1998)
Pocatello, Idaho	1981	Moved away from performance-based approach in 1996 Concerns focused on difficulties with administration and in explaining the system to the public	Porter (1998)
Largo, Florida	1983	System based on Kendig (1980) model Revised their system prior to 1998 “because the city [is] almost completely developed and zoning regulations must address more site specific issues associated with redevelopment” (Porter 1998, 3)	Porter, Phillips, and Lassar (1988); Porter (1998)
Hardin County, Kentucky	1984	Recognized as a model for rural communities System focused on preservation of agricultural uses Allowed single-family houses and agricultural uses by right—all other uses assessed System dropped in 1994 after the county lost a lawsuit challenging the nonmapped policy plan and lack of assurance about development rights	Porter, Phillips, and Lassar (1988); Porter (1998)
Lake County, Illinois	1988	System changed in 1998 due to unpredictability of land use decisions	Porter (1998)
Tallahassee/Leon County, Florida	1992	System in place for only five years Change was prompted by neighborhoods that felt that compatibility issues were not being adequately addressed and small businesses that were unhappy with the time required to process development applications	Porter (1998); “Tallahassee’s performance zoning gives way to Euclid” (1997)

2002), which sets development standards for elements such as frontage types, building placement, types of open spaces, and street types. Spatial pattern, building form, and use/density are emphasized in the design of codes. Duany and Talen (2002, 1452) refer to this approach as prescriptive—where “codes are designed to encourage a certain type and quality of development as opposed to simply restricting what can be built.” Similar to our observations above, they note that the success of implementing codes is dependant on being comprehensive (for example, embracing all the development standards), simple (not too difficult to administer), and technically worded (use legally defensible technical measurement).

► Performance-Based Planning in New Zealand

The Resource Management Act (RMA) of New Zealand came into effect in 1991 and had a dramatic impact on the conduct of planning in that country. In the late 1980s, New Zealand’s national government decided that it needed to modernize public administration in an effort to become more internationally competitive (Spiller 2003). Key themes in the rationalization of legal and policy systems that followed were “efficiency,” “flexibility,” and cost competitiveness. Powerful corporate lobbies, notably the Business Roundtable, urged reformist governments of the late 1980s and 1990s to slash “red tape” and to reduce transaction costs of regulatory compliance for the private sector.

One part of this public sector rationalization program effort was a reform of the land use planning system (Memon and Gleeson 1995). There were calls for change from the development community, which alleged that

- local planning schemes were too inflexible,
- the public’s role in the decision-making process was too strong, and
- approvals took too long because multiple consents had to be obtained from various government departments.

The indigenous and environmental communities were also unhappy with the system because

- there was inadequate recognition of environmental and indigenous values relative to economic considerations,
- the high cost of hearings,
- lack of access to information, and
- excessive discretionary powers accorded to government bureaucrats (Memon and Gleeson 1995).

Finally, most political organizations were by the late 1980s critical of the planning system. A reformist Labour government in the late 1980s began the process of change to the planning apparatus, emphasizing environmental, cultural, and

administrative improvements. The subsequent conservative National Party administration of the early 1990s changed the reform emphasis to focus on deregulation of planning controls and enhanced administrative flexibility (Grundy and Gleeson 1996).

The RMA, which was introduced by the National Party government in 1991, contained elements of the previous government’s progressive agenda—notably in stating sustainability and cultural sensitivity as key aims—but also did much to weaken the regulatory hold of planning. A great administrative and legal rationalization was achieved, with the RMA supplanting some fourteen different legislative acts regulating natural resources.

The RMA, in concert with radical reform of the legislative and administrative structure of local and regional governance, achieved the following changes:

- Foremost was the move away from prescriptive zoning to a performance based approach. The government was interested in getting the most effective form of regulation which they believed could be accomplished with effects based (performance) planning
- Movement toward improved management of natural and physical resources, with little consideration for the social content of the sustainability equation
- Reduction in the number of local governments from one thousand to one hundred
- Establishment of fourteen regional councils based on catchment boundaries
- Reformed rules of standing so that any group or individual could be heard in planning matters
- Enhanced respect for the rights of indigenous peoples
- Reform of state agencies so that conservation and commercial functions were not housed within one agency

It should be noted that the RMA paid little or no explicit attention to urban areas. In fact the word “urban” is not even mentioned in the legislation (Memon and Gleeson 1995).

While there is some variation in how the RMA has been implemented at the local (district) level, most of the plans follow a similar format. The Mackenzie District¹ Plan is used to illustrate district-level implementation of the RMA. The following example tracks the residential development component of the plan. Two main resource management issues were identified in the plan. Issue 1 deals with maintaining the pleasantness and amenity of residential areas, and issue 2 involves nonresidential activities in residential areas. Issue 1 has two associated objectives: amenity and nonresidential activities. For the amenity objective, there are three related policies: bulk and location of buildings, density and scale, and activities. The details of the density and scale policy are provided in Table 2, which is excerpted from the Mackenzie District Plan. The language included in the policy suggests a performance-based

Table 2.
Mackenzie, New Zealand, District Plan: Residential issues, objectives, and policies.

Issue 1—Maintaining the Pleasantness and Amenity of Residential Areas

Residential Policy—Objective 1 Amenity

- Maintenance of the pleasantness, amenity, and safety of residential areas and maintenance and protection of the surrounding natural and physical environment.

Residential Policy 1B—Density and Scale

- To enable land in residential areas to be used efficiently while maintaining ample open space and the existing scale and medium density of these areas.

Explanation and Reasons

- The activities and buildings occurring on individual sites in an area contribute to the general amenity of the area. Generally, people living in residential areas in Mackenzie District wish to maintain the current medium density and scale of the residential areas, with ample open space around buildings.

Implementation Methods

- Building coverage
- Family flats
- Height of buildings
- Residential density
- Setback from boundaries, roads, and neighbors
- Site size

Environmental Results Anticipated

- Low-scale residential development allowing for views to be enjoyed
- Low-scale nonresidential development that is in keeping with residential activity
- Maintenance of existing medium residential density with sites being dominated by open space rather than buildings, providing the opportunity for tree and garden planting around buildings.
- Efficient use of land in residential areas.

Source: Adapted from the Mackenzie District Plan 2004.

approach, particularly with respect to the “Environmental Results Anticipated.” However, this policy, along with all others in the plan, is implemented through a series of residential codes. The relevant residential codes for this policy are provided in Table 3. It is apparent that when moving from the policies to the implementing codes, the performance-based approach has been lost. The residential codes in this case are no different than those that could be found in most prescriptive-based plans. It should also be noted that this is not an isolated example as many of the other district plans use a similar approach.

Assessment of the RMA

What can be concluded after a decade of the RMA? Grundy and Gleeson (1996) argue that New Zealand’s transition to performance-based planning inflated, not reduced, transaction and compliance costs for developers and administrative costs for the public sector. They noted a rising tide of alarm amidst local and regional government about the level of human and technical resourcing needed to support “effects-

based” assessment of development proposals. It was clear that these resources were in short supply, which made many local and regional governments dependent upon high-cost external (usually private consultant) administrative input. In the longer term, a broader skill base would be necessary amongst council technical staff to undertake comprehensive and legally robust development control. The traditional land use planner would need to be joined by a range of officers with environmental and cultural analysis skills, and it was, therefore, unlikely that such a system would be more cost-effective, at least on administrative grounds, than its prescriptive predecessor. Spiller (2003, 100) suggests that “a case can be made that the RMA was too far ahead of its time, too far ahead of NZ’s institutional capabilities and too far ahead of the skill sets of practicing planners.” A recently released study by Ericksen et al. (2004, 283) suggests “New Zealand’s brave new world under the RMA has not eventuated.”

This is similar to the experience in the United States, where there have been few pure performance-based planning systems. The most common approach has been to combine performance-based planning with traditional prescriptive planning. Spiller (2003, 101) concludes that “plans and consents

Table 3.
Mackenzie, New Zealand, District Plan: Residential codes for zones 1 and 2.

3.1	Permitted Activities Any residential activity which complies with the following standards:
3.1.1.a	Residential Density Minimum net area of a site for each residential unit shall be 360m ² exclusive of access
3.1.1.b	Building Coverage Maximum building coverage of the net area of any site shall be 40 percent
3.1.1.c	Height of Buildings Buildings shall not project beyond a building envelope constructed by a recession line from point above internal and road boundaries as set out in Appendix H In Lake Tekapo, the midpoint of each section of wall or roof of buildings and the midpoint of building extensions shall not project above recession lines as shown in Appendix H The maximum height of any building shall not exceed 8m
3.1.1.d	Setback from Boundaries The minimum building setback from all net site area boundaries shall be 2m except that: Accessory buildings for residential activities, other than buildings used for the housing of animals, may be located within the setback from internal boundaries where the total length of walls within the setback do not exceed 7.5m and do not contain any windows Where an internal boundary of a site immediately adjoins an access or port of an access which is owned or partly owned with that site or has a registered right of way over it in favor of that site, the minimum building set back from that internal boundary shall be reduced to 1m

Source: Adapted from the Mackenzie District Plan 2004.

may be dressed up in the new rhetoric of the RMA, but most practitioners—planners, elected representative and the judiciary—are still struggling to find ways of implementing the ‘effects based’ and ‘sustainability’ concepts embedded in the legislation.”

► Performance-Based Planning in Australia

From the 1970s, strong reform currents emerged within the Australian planning system, originating both in social scientific scholarship and in critical policy discussions. The well embedded “town and country” planning regime that Australia, like most Commonwealth countries, had inherited from Britain in various stages during the twentieth century came in for sustained criticism (Gleeson and Low 2000; Hamnett and Freestone 2000). The objects of critique were varied but included the following criticisms of Australian planning: the absence of ecological values, overly technocratic and excessively rational processes that made little room for community values and diversity, and administrative inflexibility and inefficiency. These criticisms resonated strongly and generally within Commonwealth planning systems and helped to generate the transition in many national and regional jurisdictions to a new “environmental planning” paradigm, reflected for example, in

the New South Wales (NSW) Environmental and Planning Assessment Act 1979 and New Zealand’s Resource Management Act 1991 (Gleeson and Memon 1997).

In Australia, an administrative critique emerged from policy and scholarly debates and tended to echo, whilst not necessarily replicating, long-standing—if predictable—criticisms of planning regulation from the development and construction sectors (e.g., see Troy 1976). A signal moment was the publication by the planning commentators, Patterson, Yencken, and Gunn of the influential report, *A Mansion or No House*, in 1976. Importantly, this critique of planning, by planning practitioners and commentators, was prepared for the influential development lobby, the Urban Development Institute of Australia, a body that had long been critical of built environment regulation. In this “moment” the emerging frustration of planning practitioners and commentators with ineffectual administrative and regulatory systems, converged with the well-entrenched complaints amongst industry and development lobbies about the costs of planning and building controls. Patterson, Yencken, and Gunn (1976) were not antithetical to regulation per se—some industry and development lobbies certainly were (see Troy 1976)—but were concerned about the consequences of inflexible and “overprescriptive” planning controls for equity and built environment quality. Overly prescriptive standards were held to artificially ration the

supply of land and housing and stifle the ability of designers, builders, and developers to deliver creative buildings and environments.

From this time, a chorus of concern about “overly prescriptive” planning emerged within the main currents of Australian planning itself, including the national and divisional journals of the Planning Institute of Australia and in a variety of scholarly and policy publications. Inspired by the U.S. antecedents, many Australian commentators and professionals began to advocate a shift from supposedly prescriptive planning controls toward performance-based mechanisms.

The performance assessment agenda strengthened during the 1980s and overlapped with, and was reinforced by, the broader policy reform currents in Australian government at all levels emerging from the so-called New Public Management approaches. These emphasized, *inter alia*, administrative flexibility and outcomes-focused regulation. In the decades since, virtually no element of Australia’s planning and building controls has been untouched by the performance reform agenda, which has been an important thread in the transformation of state/territory policies, legislation, and controls relating to the built environment. The reform agenda was registered powerfully at the national level through the promulgation of the new national building code and the Australian Model Code for Residential Development, which both were based on performance standards.

The transition to performance-based planning has not been uncontested. Throughout the past few decades, a countercritique has argued that the performance-based approach is flawed and unlikely in practice to achieve the benefits that its proponents have claimed for it. Troy (2000) argues that the shift to performance planning and building regulation has “lowered the standard” of built environment regulation and thereby heightened the possibilities for risky and poor standard development. His argument, echoed in Gleeson and Low (2000), is that the performance approach tended to reinforce the general climate and consequences of neoliberal reform in the Australian public sector during the 1980s and 1990s, which emphasized deregulation and a general withdrawal of the public sector from many areas of economy and society.

The Integrated Planning Act in Queensland

At the state/territory level, arguably the most thoroughgoing example of transition to performance based planning was achieved in Queensland with the introduction of the Integrated Planning Act (IPA) in 1997. This act promoted the use of performance-based controls in planning and which

removed the power of local authorities to proscribe any form of development. The IPA legislation was based on New Zealand’s Resource Management Act (England 1999). The rationale for planning reform was based on a desire to move away from a regulatory approach to one where impacts are assessed against desired outcomes. In addition, there was a desire to streamline the development approval process, to provide greater certainty in the development process, and to provide more attention to ecological sustainability. The purpose of the legislation was to seek to achieve ecological sustainability through coordinating and integrating planning and managing the process of development and the effects of development on the environment (IPA section 1.2.1).

The IPA schemes at the strategic level contain desired environmental outcomes (DEOs) as a high-level and shorthand expression of what key community aspirations are being sought. Performance measures determine how the DEOs are to be achieved, including specific planning provisions, performance criteria, as well as lower-level environmental outcomes where appropriate. The “performance-based” policy environment of an IPA planning scheme is hierarchical, with the DEOs setting out the highest-order outcomes that the local government desires to achieve through the planning scheme. The DEOs operate as goal statements and form the foundation for all of the scheme’s provisions. DEOs are generally formulated in planning schemes around themes such as ecological and natural resources, economic development, cultural heritage, and the built environment. Depending on the remaining structure of the scheme (which, for example, probably identifies specific localities and/or zones within the local government area), there may also be a small number of subsidiary DEO’s that are specific to the objectives of a particular locality or zone.

Scheme measures are the means by which DEOs are achieved through the provisions of a planning scheme. These measures fall into three broad groups: maps, assessment tables, and codes. It is at the code level where the detailed assessment criteria for a stated purpose or type of development is identified and applied. Performance measures are integrated into each code that set standards defining how development must perform to achieve the required outcomes identified as performance criteria. Additional conditions of approval (depending on the particular nature, circumstances, and location of the development proposal) can also be imposed to offset particular negative impacts. Alternatively, a proposal may be declined because the required standards cannot be achieved even with the application of conditions. Development proposals, however, still need to be consistent with and satisfy the higher-level DEOs, as well as any other requirements of the planning scheme.

Table 4.
Atherton Shire, Queensland: Desired environmental outcome for “settlement pattern.”

An orderly, cohesive, and legible pattern of development is established that

1. is consistent with the Far North Queensland (FNQ) Regional Plan;
2. promotes and facilitates growth in urban areas to achieve an efficient use of land and infrastructure whilst maintaining a high standard of amenity;
3. minimizes the loss and prevents the fragmentation of Good Quality Agricultural Land;
4. accommodates rural residential living in preferred locations;
5. results in development being sympathetic to the physical, landscape, and social settings;
6. recognizes the function of the town of Atherton as the regional centers of the Atherton Tablelands;
7. reinforces the hierarchy of business centers in the Shire; and
8. provides opportunities for industry to expand in appropriate locations to broaden the Shire’s economic base.

Source: Atherton Shire Planning Scheme, 2002.

For example, it may be possible to obtain approval for a home business in a residential zone where the DEO defines detached residential dwellings, if the code performance requirements and the “effects” of the activity in terms of traffic generation, noise, hours of operation, and bulk and location of the building can be demonstrated to be no different to that of a residential activity. A larger-scale business such as a confectionary store or gas station which, while not being prohibited, would clearly find it very difficult to satisfy the code requirements for a residential zone in a merit-based assessment process.

While there is a great deal of variation in how performance-based planning has been implemented at the local government level in Queensland, the following example from Atherton Shire² is useful in understanding the IPA approach. The first part of the plan sets out the future vision for the shire through a series of DEOs. For Atherton, the DEOs encompass economic development, settlement patterns, community development and quality of life, natural and culture resources, and infrastructure. Councils across Queensland have implemented DEOs in planning schemes that tend to have generic similarities but have unique community applications. The example for Atherton Shire follows “residential development” through the various components of the plan. The DEO that relates to residential development is “settlement pattern.” This DEO is provided in Table 4 and is taken from the Atherton Shire Planning Scheme.

The means of implementing the DEOs is through the Development Measures section of the plan. It provides specific plan objectives as well as development codes for meeting those objectives. For residential land uses, there are two objectives, which are shown in Table 5 along with the associated assessment criteria.

Ultimately, these objectives are implemented with development codes. The Atherton Shire Plan (p. 65) states,

Development codes included in this planning scheme have been developed using a performance based system rather than a prescriptive one. As a result of this approach land use and development can achieve desired performance in a variety of ways. The adopted system offers an opportunity for diversity and choice and provides flexibility to respond to community needs and preferences, and changes in approaches and technology.

There are a range of codes relevant to residential development; however, those under the General Residential Code dealing with height and design are most relevant. These are shown in Table 6. While it is true that the development codes have performance criteria (as shown in Table 6 in the left-hand column), they also show prescriptive “acceptable solutions” in the right-hand column. While more research needs to be done on this issue, the experience with IPA plans to date suggests that planners and developers rely heavily on the “acceptable solutions” to the exclusion of the performance criteria (Wypych, Sipe, and Baker 2005).

Assessment of the IPA

What can be concluded after five years of IPA? As many local governments are still drafting their plans, it may be too soon to judge the success of IPA. However, England (1999), Baker (1999), and Hopewell (2002) have raised a number of issues—many of which are similar to the experiences in the United States and New Zealand. In an attempt to address implementation problems at the local plan level, the Queensland Department of Local Government and Planning (DLGP) commissioned a review selected draft IPA planning schemes (see C & B Group 2003). The focus of this work was primarily on plan drafting as the plans had not yet been adopted or implemented. The study concluded that “there are indeed a number of basic statutory and drafting deficiencies

Table 5.
Atherton Shire, Queensland: Residential objectives.

Residential Objective 1

To protect residential areas from the intrusion of incompatible land uses and built forms.

Assessment Criteria

- a. If the proposal is for a nonresidential use, the proposal
 - is compatible with the scale, intensity, and built form of the residential area
 - is consistent with the hierarchy of centers described in the Structure Plan
 - provides local services to the residential population in the vicinity of the site (e.g., a child care center or a place of worship)
 - provides for low-impact and low-intensity employment opportunity (e.g., home-based businesses)
 - involves health care and related community services having a functional nexus with the Atherton Hospital precinct
 - demonstrates it will not cause unacceptable adverse impact on residential amenity
- b. In considering any proposal for nonresidential development in or adjacent to a residential area, Council will have regard for the likely impacts of this proposal upon the character and amenity of the residential area. To avoid any loss of residential character or amenity, the proposal must
 - utilize building materials that complement the character of the residential area
 - incorporate careful design and siting of buildings to ensure that the exposure of existing residences to incompatible activities is minimal
 - incorporate landscaping and screening in the case of commercial or industrial uses
 - incorporate adequate separation and buffers in the case of intensive agriculture or industry

Residential Objective 2

To encourage a range of residential accommodation and subdivision types that serve the needs of the Shire's changing demographic structure.

Assessment Criteria

Whether the proposal:

- is compatible with the preferred form of housing as expressed in the Atherton District Plan
 - is compatible with the most common form of housing in the locality
 - provides desirable living conditions and, in the case for multiple dwellings, retirement units, small lot housing, caravan parks, and mobile home parks, is located to provide convenient access to shops, schools, community facilities, and recreation facilities
 - will not have a detrimental effect on the amenity of established housing
-

Source: Atherton Shire Planning Scheme, 2002.

that are reasonably common across a number of the draft IPA schemes reviewed" (C & B Group 2003, 1). A dominant theme in the evaluation was the drafting of the codes that set performance standards. Among the deficiencies identified were the following: codes were not vertically integrated with policy statements (DEOs), codes lacked specificity and were not comprehensive enough to provide for performance outcomes, and codes often were inconsistent at various levels and within elements of the codes (purpose statement, performance criteria, acceptable solutions). Thus, the drafting of well-integrated performance standards remains a difficult task for many local planning departments. In addition, many of the planning schemes reviewed by the authors (for example Bundaberg) have retained zoning maps and overlays to define uses. Again, this is an example of where performance standards have been blended with prescriptive zones.

Similar to the conclusions noted by Spiller (2003) for New Zealand's RMA, Wypych (2003) argues that

the interim conclusion is that there is a perceived reluctance by practitioners to depart from the comfort of the "tried and tested" methods and the "well trodden" precedents of traditional planning and development assessment procedures. Whilst there may be a professed interest in the benefits of an "effects" and "performance based" planning system . . . the evidence to date suggests a much longer time period coupled with demonstrated experiences will be needed before full commitment to this form of planning will occur in Queensland. (p. 17)

These and other concerns have been echoed by commentators involved with Queensland's IPA (see England 2003; Moon 1998; Baker 1999; Hopewell 2002). Their observations include the large administrative burden the performance-based system placed on smaller councils that lacked resources to implement a code-based planning scheme. Even in local governments where resourcing was substantial, the impact of the new system affected planner burnout—with considerable turnover in development assessment departments.

Table 6.
Atherton Shire, Queensland: Residential development codes.

<i>Performance Criteria</i>	<i>Acceptable Solutions</i>
Height of dwelling houses The height of dwelling houses is compatible with established housing.	Dwelling houses do not exceed three stories in height.
Design of dwelling houses on lots smaller than 600m², duplex units, or multiple residential units Dwelling houses on lots less than 600m ² comply with the performance criteria contained in Section 1.4 (Design Elements A and B) of the Queensland Residential Design Guidelines (QRDG). All forms of duplex units and multiple residential A2 units comply with the performance criteria contained in Section 1.4 (Design Elements A and B) of Part 2 of the QRDG. Integrated development containing two or more dwelling houses complies with the performance criteria contained in Section 1.4 (Design Elements A and B) of Part 3 of the QRDG. To ensure that a lot is of sufficient size to accommodate multiple residential units and duplex units and that the built form and scale of buildings are complementary to the scale of the existing or preferred built form (as expressed in the relevant District Plan and Planning Areas) of the locality. The scale of duplex units and multiple residential units complements existing built form and preferred character and visual amenity of residential areas.	There is no acceptable solution prescribed. There is no acceptable solution prescribed. There is no acceptable solution prescribed. The minimum lot size for duplex units is 800m ² . The minimum lot size for multiple residential units is 1,000m ² . In all other areas the minimum lot size for multiple residential units is 1,200m ² . Multiple residential units and duplex units are developed on lots with a frontage of at least 20m. Duplex unit and multiple residential unit buildings and associated structures do not exceed three stories in height and site cover does not exceed 40 percent.

Source: Atherton Shire Planning Scheme, 2002.

► Conclusion

Based on the literature review and case studies, we evaluated performance-based planning on a three-stage model of the planning process (plan formulation, plan administration, and plan outcomes). This three-stage model is used to group observations about the successes and failures of performance-based planning in the jurisdictions reviewed.

Plan Formulation

1. Lack of certainty in the implementation phase: a new process caused administration, residents, and developers problems in the initial phases of planning—the very certainty that Euclidian zoning guaranteed participants was seen as lacking when performance standards were put in place. This problem was noted in most of the U.S. applications including Gunnison County, Ft. Collins, Largo, Hardin County, Lake County, and Tallahassee/Leon County.
2. Translation of goals and objectives into place—with development reflecting the goals—provides one of the primary strengths and appeal of performance planning. The link-

age of goals and objectives is well articulated with defined standards.

Plan Administration

3. Administration of the process was a serious problem in several case studies. A new way of regulating planning provided a steep learning curve for, again, all parties. In Queensland, the limited capacity of the planning profession to quickly respond to major reform was seen as an impediment to change (Wypych 2003), administrative funding and political will (Jaffe 1993), and in New Zealand it is well documented (Spiller 2003) that there was “too much too soon” (this after thirteen years). A new regulatory process was also difficult to implement. For example, the point system in Gunnison and Hardin County was added to deal with the lack of a comprehensive vision. Locational guidance systems evolved to deal with the lack of a master plan. Last, the timelines required to implement new development was not the vision of “fast-tracking” that developers and planners had hoped for. Rather, the process became bogged down as a result of personnel, poor referral processes (Queensland), and poor regulatory guidelines (Gunnison County regulations now total 475 pages).
4. The administrative activity required to implement performance-based standards compared to traditional develop-

ment assessment may not be any greater in the longer term. Administrative time and effort can be spent on continuous turmoil over zoning changes (certainly one of the criticisms of Euclidean zoning) or under performance standards, which provide better design control and flexible responses to special demands of the site.

Planning Outcomes

5. Performance planning was criticized in several cases as being project rather than community oriented—in other words, performance systems did well in terms of site-specific projects but failed as a medium to articulate community or comprehensive plans. The approach was reported to measure individual impacts forgoing the cumulative impacts of many small projects. Related to this was that the performance-based approaches lacked context with respect to the overall community plan or vision for the community. Paradoxically, the Gunnison experience suggested that performance planning became too reactive and that piecemeal decisions were again not serving the overall vision of the community. Thus performance-based planning fell into the reactionary trap that Euclidean zoning has widely criticized for supporting.
6. Technical requirements—performance standards are difficult to formulate and implement. Gunnison County found that technical requirements to update standards were onerous for a community of their size. Even in Queensland, with the support of the state government, the technical requirements for development assessment is proving to be an impediment to implementing standards.

Jaffe (1993) writes that performance zoning is a “wonderfully seductive landuse control technique” for planners. He concludes its “attraction springs from our love of rationality, a passion embedded in planning history” (p. 9). Perhaps this is why performance-based approaches keep reappearing in different forms—somehow planners cannot resist its promise and appeal. Yet very few “pure” performance-based approaches have survived the trenches.

We have found that performance-based planning faces significant challenges in implementing *flexibility* when many of the actors (this includes developers and the community) call for *predictability*. Second, *consistency* of application within the context of the community plan forced prescriptive zones and guidelines to be imposed on open performance standards to group land uses. Third, the *complexity* of developing, applying, and maintaining performance standards has resulted in the process becoming more time-consuming and costly than the systems that they replaced.

The lack of both an informed literature and a set of critical empirically based analyses, accompanied by the proliferation of this type of planning, is a testament to Porter’s (1998) claim. The seduction of performance-based planning still remains. We can only speculate that nations, regions, states, and

communities that still want to adopt this approach (for example, British Columbia is presently embarking on a results-based planning code for the entire province) are not aware of past experiences, or they believe that the experiences do not apply to them.

The purpose of our investigation has been, first, to complement the dialogue on this type of land use planning, and second, to deal with the literature gap that has existed in the field. It is our contention that evaluation-based research needs to be directed to measure the effectiveness of performance-based approaches and to assess how, and under what conditions, performance measurement can be applied to planning practice. The evolution of hybrid models of performance and prescriptive planning also provides instruction on how these methods of planning might complement each other to provide relative strengths from each system.

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► Notes

1. The Mackenzie District is located in the central part of New Zealand’s South Island and in 2001 had a population of 3,717.
2. Atherton Shire is located in north Queensland and had a 2001 population of 10,500.

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