

that shows all the listed buildings and other buildings of historical or architectural significance. A description is also provided of all these different elements within the townscape. Although this method undoubtedly provides some understanding of place, it does not provide a replicable approach to defining, delineating and valuing townscape character.

As has been pointed out long ago (see, for example, Whitehand, 1981, pp. 142-4), urban morphological research provides an excellent basis from which to develop an approach to understanding and managing places. Unfortunately in the Netherlands, as in the UK, a lack of practical guidance and scant reference to the work of urban morphologists leads to variable, frequently unsatisfactory, approaches to the subject. There is a need for much more rigorous methodology, including in fieldwork. The basic groundwork exists in the research literature, including at an international level. As in the UK, the main problems lie at the interfaces between the various disciplines and professions.

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What happened to the backyard? The minimization of private open space in the Australian suburb

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It is not often that a dramatic change in urban form occurring throughout a large modern country can be observed within a period of less than 10 years. Nevertheless, this is what happened in suburban Australia during the 1990s. It has now been the subject of research (Hall, 2010).

Up until the end of the 1980s, nearly all suburban houses in Australia had large backyards by world standards (Head and Muir, 2007; Timms, 2006). The older type of suburban form is still characterized by backyards of at least 150 m², and they are commonly several times this figure. They generally have a practicable shape and significant

coverage of trees. Plot coverages by house footprints are generally 20-30 per cent with a maximum of 35-40 per cent.

However, in the early 1990s, a dramatic change in Australian suburban form began (Hall, 2007, 2008, 2010). During this period, the provision of large backyards in new construction ceased and the 35-40 per cent figure now represents the minimum, rather than the maximum, plot coverage. Although some properties may have backyards of 100 m² in area they are normally much smaller than this and are often less than 50 m². Moreover, the narrowness of the gap between the dwelling and the side



Figure 1. Part of the Brisbane suburb of Boondall. Note the older suburban form with large backyards on the left-hand side of the picture. In contrast, the housing scheme from the late 1990s on the right-hand side has minimal private space around the houses.

and rear boundaries of the plot frequently results in this area being in the form of a thin strip rather than a more useful square shape. This change has not been subtle or gradual in either space or time. Two distinct patterns of form are immediately apparent from even a cursory examination of aerial photographs (see, for example, Figure 1). The older areas are characterized by open yards and tree cover while, in the newer ones dwellings can be nearly roof-to-roof.

This change is not something that relates to the backyards alone. House and street design have also changed as part of the same process. There has been a trend towards deep, square house plans possessing large internal spaces with little natural light and ventilation. There is also a trend towards fewer and smaller windows. The narrow gap around single-storey houses is dominated by high opaque fences. The frontage is dominated by integral garages.

A common response to this trend is that it must be the result of smaller plot sizes. There is, indeed, a trend to smaller plot sizes in Australia but a closer examination of the data reveals that this is not the cause of the phenomenon. The evidence (Hall, 2010) suggests that it is the increase in the dwelling area, rather than the decrease in the plot area, that

has been driving the shrinkage of the backyard. There is no evidence that it has been brought about directly by policies of urban consolidation. The phenomenon is to be found at all plot sizes. Most significantly, it is to be found in lower-density outer suburbs located a considerable distance from city centres. Local policies and planning regulations have not explicitly required small backyards. However, there has been nothing in them to prevent the reduction in the size of private open space that has occurred. Requirements for gaps to the sides and rear of properties are generally 1-2 m and, where they exist, minimum standards for private open space are tiny compared to the areas of the pre-1990 backyards.

Why should this be seen as a problem? The answer is that the shrinkage of the backyard has reduced the amenity of the property in terms of outlook from the dwelling and facilities for outdoor recreation around the house, especially for young children. Moreover, the disadvantages go way beyond the lifestyles of the occupants. The consequent reduction in vegetation, especially tree cover, around the dwelling has led to a loss of biodiversity and an increase in run-off of storm water. The microclimate becomes hotter and this, in turn, requires more air-conditioning and

increased energy use. Moreover, it represents a permanent change in built form that cannot be corrected later.

Why, then, are people choosing to live in such houses? Data on social trends within Australia suggest (Shepanski and Diamond, 2007) that the reduction in backyard size has coincided exactly with a trend to substantially longer working hours amongst middle- and higher-income office workers. At the same time, the growth in the use of air-conditioning has not only allowed, but also encouraged, an indoor lifestyle. For people buying a suburban house, the focus has become one of investment in buildings. A particular house form that maximizes floor area at minimum cost has evolved in response. Little priority is now given to planted space around the house, as it is not seen as an investment. The dwelling is therefore extended over as much of the plot as is permitted. These last points remain, for the moment, hypotheses but the questions they raise are ones that cannot be ignored and demand further study and debate.

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'Our common future' in urban morphology

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The presentation of 'Our common future' by the Brundtland Commission in 1987 introduced a new perspective in the debate on cities. Coming out from an essentially environmental discourse, discussions on sustainability pointed to the ways in which development was degrading the environment and compromising heritage for future generations. In just one decade, the sustainability concept was widely incorporated in theory, research and, to a lesser extent, practice on the city. The then new challenge was the conversion of sustainable development into principles or standards of development practice, translating the concept 'on the ground'. A multitude of approaches started to be conceived aiming at developing the sustainability framework. Nevertheless, the implementation of a notion that was so broadly defined proved to be quite difficult.

The analysis of the literature produced throughout the last 2 decades reveals, indeed, a strange paradox. Although this new perspective on cities highlights the key role of territory and urban structure in the process of urban development, and

suggests the development of integrated approaches, it does not seem to include a sound morphological dimension. The reasons behind this paradox are many. On the one hand, disciplines that should be analysing and designing the city, notably urban planning, have been debating other issues. Batty (2010) states that within the world of planning cities are not viewed in terms of their physical or even their social layout or structure, but as ways of negotiating, resolving conflict, engendering development of various kinds through collaboration, and funding development. On the other hand, some critical points have been identified within urban morphology, notably in this journal: the practical difficulties in urban morphology of dealing with the physical scale and complexity of large cities and conurbations; the difficulties of comparing studies of urban form (Whitehand, 2009a) developed in different cultural settings (Conzen, 2009) or involving the use of different approaches (Kropf, 2009); the difficulties of both filling existing gaps in urban morphology and bridging boundaries between different fields of