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THE URBAN DESIGN PROCESS

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THE URBAN DESIGN PROCESS

This section addresses the urban design process. It identifies a generic process resulting from a review and analysis of the literature and documented practice in a number of fields and disciplines, including business and planning. This model is then tested against three case studies involving urban design and development projects of varying temporal and physical scales. We explore a regeneration project in Greater Manchester over two years, a 'repair and enhance' neighbourhood in Sheffield over 15 years, and an urban block in London over 20 years. At the same time, the cases are analysed to identify the degree to which sustainability is considered by the decision-makers and where appropriate tools and guidance are employed. This section concludes with a reconceptualisation of the urban design process based upon a revisit of the generic process and an analysis of the case study findings. This new process outlines stages for more sustainable decision-making as well as incorporating new concepts to be used in the process, e.g., sustainability tasks and sustainability reviews.

CHAPTER 1

THE URBAN DESIGN DECISION-MAKING PROCESS: DEFINITIONS AND ISSUES

Rachel Cooper, Christopher Boyko, Naomi Pemberton-Billing, Daniel Cadman

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Exmouth Market, London

This chapter opens with a discussion of urban design, offering a definition and describing its relatively recent proliferation, both in planning and as a discipline in its own right. The notion of process in relation to urban design will also be examined, illustrating the different stages and activities involved in the urban design decision-making process. Issues not addressed in the process will be investigated currently, particularly decision-makers, tools used in decision-making and sustainability. Finally, the urban design decision-making process will be shown as part of a larger life cycle for urban design, driven by a number of factors crucial to the development of 24-hour cities.

Urban design

Urban design can be viewed as a relatively new discipline: it was first mentioned in North America in the 1950s at Harvard University (Rowley, 1994). However, the practice of urban design is anything but new. Throughout civilisation, urban design has played an instrumental role in the creation of cityscapes, from Greek and Roman times until the present day (Greed & Roberts, 1998).

Historically in the UK urban design has been viewed separately from town planning and architecture. One outcome of this disciplinary division has been the development of schemes with no overall strategy to connect design with support services, shops, transport links and housing (Hall, 1998). Recent EU legislation and non-legislative guidance regarding urban sustainability (European Commission, 1993; Tewdwr-Jones & Williams, 2001), and the Planning and Compulsory Purchase Act 2004 (HMSO, 2004) aim to rectify these and other issues, resulting in a government drive towards a more holistic and interdisciplinary approach to design, planning and sustainability. Consideration of urban design throughout the lifetime of urban development projects is now perceived to be a vital ingredient in the creation of successful cities, and is central to improving urban design decision-making within the planning system (Office of the Deputy Prime Minister (ODPM), 2002).

Although urban design has been breaking new ground on the policy front, defining the term has been a more difficult endeavour. Urban design is multifaceted and complex, open to interpretation and extensive explanation (Moughtin *et al.*, 1995). Different groups, such as government, the private sector, researchers, academics and the community, have an interest in urban design and will consider it in their own terms and contexts (Rowley, 1994). Even the words 'urban' and 'design' are difficult to define, as context plays a large role in their interpretation. Nonetheless, there is some consensus about the basic elements of urban design.

Urban design is a multidimensional concept that reinforces physical transformation within the urban environment (Barnett, 1982; Rowley, 1994; Gosling, 2002). Physical transformation may be guided by a variety of principles. These principles include, but are not limited to, the following:

- Character: a sense of place and history, responding to and strengthening locally distinctive patterns in the built environment
- Continuity and enclosure: clarity of built and natural form, clearly distinguishing between public and private space
- Quality of the public realm: sense of well-being and amenity in public spaces and routes that are both lively and pleasant to use
- Ease of movement: ability to get to and through a space; permeability
- Legibility: ease of understanding in a space; a clear image of a space
- Adaptability: ability for a space to change easily
- Diversity: spaces with variety, allowing people to choose from different options (Commission for Architecture and the Built Environment (CABE), 2003).

In addition to physical transformation, urban design also considers the role that people play in cities throughout a 24-hour period. People shape urban design through their changing social, psychological, aesthetic, functional and emotional needs. People are also shaped by the design of cities, providing a myriad social, political and environmental reactions and responses to what they see, hear, smell, touch, feel, and experience there (Reekie, 1972; Greed & Roberts, 1998; CABE & DETR, 2000). Thus urban design is a holistic concept (Buchanan, 1988), as much about a transformation as it is about a reaction to, and an ongoing conversation with, the urban environment.

This perspective enables us to form a working definition of urban design: *the dynamic art and process of designing, creating, making and managing spaces and places for people and with people in mind* (adapted from Rowley, 1994; CABE & DETR, 2000). The idea of urban design as a dynamic art and as a process is worth exploring further.

Urban design as a *dynamic art* refers to creativity and context, the latter being unique to each urban area. While urban design is seen as part of a wider national policy, and is reflected in guidance by national advisers to government (e.g., CABE), local authorities must be able to reinterpret these ideas to suit their local context (see Rogers & Power, 2000, for a description of context). The private sector and other local stakeholders (e.g., community residents) should also be able to bring their particular insights and experiences to each situation, helping to shape the specific urban design of an area (CABE & DETR, 2000). Community consultation within the planning system and local engagement with urban design are priorities that need to be addressed to facilitate the creation of lively and inspirational places that are safe, accessible, pleasant to use, human in scale and distinctive – in essence, a sustainable community (CABE & DETR, 2001; Carley *et al.*, 2001; ODPM, 2002, 2003, 2005a, 2005b, 2006; HMSO, 2004; CLG, 2006). The basis on

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which decisions from the community are made is indeed an art, however, as it combines local priorities, a 'gut feel' or tacit knowledge from the community and, in some cases, scientific evidence.

Urban design as a process refers to following a method, procedure or series of actions that lead to the accomplishment of a result (Atkin *et al.*, 2003; *Concise Oxford English Dictionary*, 2006). In general, processes are complex, non-linear and iterative (Rowley, 1994), involving a host of people, activities, feedback, issues, and trade-offs over time. Illustrating a generic procedure for urban design may help to bring a clearer understanding to the complexity. Through the development of a process map, important information can be gleaned about who should be involved in urban design projects, when they should be involved, what their roles should be, and what they need in order to make more informed decisions throughout the process. Process maps have been utilised in a number of industries (e.g., manufacturing and construction) to usefully illustrate the completion of an activity and the roles played by the people involved (Cooper *et al.*, 2005).

The urban design decision-making process

A well-mapped and understood urban design decision-making process has been recognised as providing an appropriate balance between creativity and procedure (Boyko *et al.*, 2005). Such a process gives structure to the design of cities, yet does not impose a strict set of criteria on decision-makers and stakeholders, which might remove originality, imagination and innovation from these environments. Moreover, the creation of a balance between creativity and procedure requires the collaboration of all individuals involved in the

St Marks Church, Finsbury, London





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Clerkenwell Green, London

process, each with their own specialist knowledge and contribution. Considering people's needs and requirements throughout the process serves to enhance the quality of urban design in terms of the places that are built, and the social, environmental and economic realities of those places (Pemberton-Billing, 2007).

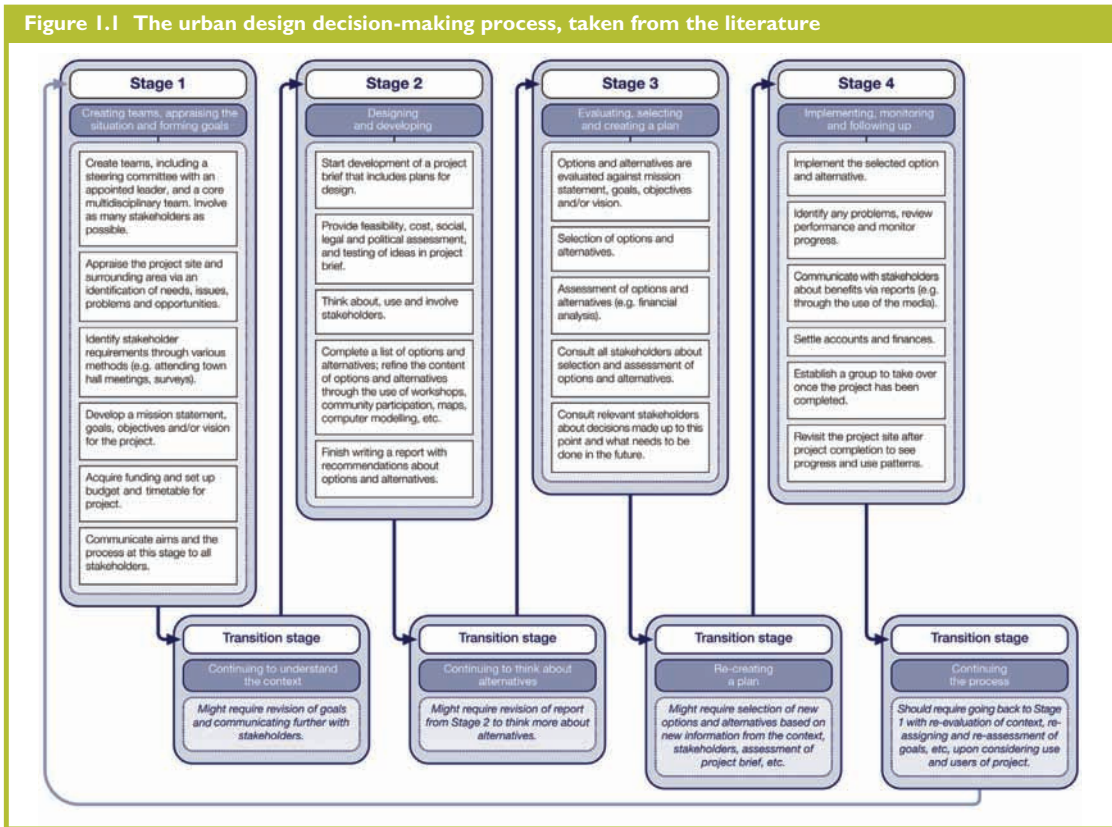
In the past – and arguably, the present – decision-making processes existed primarily within planning and stemmed from a rationalist perspective, relying on the so-called precision of 'hard' or objective data, such as mathematical models and economic formulae (for examples of rational processes see Lindblom, 1959; Etzioni, 1968; Faludi, 1973, 1987). From this perspective, information given by different groups, such as local residents, was often seen as too subjective or 'soft' (e.g., anecdotal accounts), and therefore was considered less appropriate for the planning process. As a result, qualitative information often risked being discarded outright in favour of quantitative data (Green, 1996). Thus planning was viewed as a dominant – yet still passive – decision-making process, with issues of urban design being largely ignored because of its emphasis on design as 'art'. However, planning 'mistakes', for example Pruitt Igoe in St Louis, Missouri, served as a wake-up call for planners to consider alternative ways of approaching the planning process.¹

An alternative to the dominant decision-making process for planning is an urban design decision-making process (Rowland, 1995) that gives greater credence to the 'softer' qualities and contexts of cities – as well as to the relationships between such qualities and contexts – while also incorporating 'hard' data into decision-making. The value of this less traditional approach is that stakeholders have more opportunities to become involved in the process (Boyko *et al.*, 2005). To date, however, little work has taken place that investigates the urban design decision-making process holistically. The remainder of this chapter outlines this process in the context of creating urban sustainability for the 24-hour city.

The urban design decision-making process in greater detail

To understand why urban design is a fundamental part of 24-hour cities, it is necessary to recognise the underlying framework and process (Cook, 1980). It is not enough to examine the outcomes of urban design and ponder why things have happened. The process through which decision-makers and stakeholders arrive at their decisions also must be comprehended so that 'mistakes' such as Pruitt Igoe can be minimised (Rowley, 1994; Kagioglou *et al.*, 1998).

A comprehensive review of processes from a variety of disciplines and professions, including architecture (RIBA, 1999), business (Smith and Jackson, 2000), manufacturing, construction and engineering (Woodhead, 2000; Austin *et al.*, 2001; Cooper *et al.*, 2005), non-governmental organisations (English Partnerships, 2000; Heritage Lottery Fund, 2000), planning (Nelessen, 1994; Bressi, 1995; Wates, 1996, 1998; Okubo, 2000; Roberts, 2003) and urban design (Rowland, 1995; Biddulph, 1997; Canadian Institute of Planners, 2000) (see also Macmillan *et*



Source: Boyko et al. (2005)

al., 2002) was undertaken to ascertain the types of stages and activities found within processes. These processes consist of a range of stages, from as few as three (see Woodhead, 2000; Roberts, 2003; Cooper et al., 2005) to as many as 12 (see RIBA, 1999). The average number of process stages was between four and five. The review found that a precise process for urban design decision-making does not exist. However, there were substantial overlaps between the different disciplines' and professions' conceptualisations of their processes, allowing a hybrid or generic decision-making process to be created that focused on urban design. Figure 1.1 illustrates the stages and activities within this urban design decision-making process, which can be structured into four discrete stages, with four linking or transition stages.

The process and stages can be explained as follows:
A generic urban design decision-making process model

Stage 1: Creating teams, appraising the situation and forming goals.

The objective for this stage is to prepare for an urban design project. Here a number of activities occur, including the formation and establishment of teams, the appraisal of the project site and its surrounding context, the determination of goals, objectives, mission statements and/or visions for the project, the identification of stakeholders, the securing of funding, and the creation of timetables. These activities do not need to be followed in any specific order; they may take place concurrently; and they may change over the lifetime of the urban development project if and when this stage is revisited.

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Wardour Street, Soho, London

Stage 2: Designing and developing.

The main activity here is the creation of design options and alternatives for the urban development project. This activity is based on a project design brief, an assessment and testing of ideas in the project brief, and feedback from stakeholders. Design options and alternatives are also informed by the context appraisal undertaken in Stage 1.

Stage 3: Evaluating, selecting and creating a plan.

This stage responds to the outputs from Stage 2 by evaluating the design options and alternatives. The goals from Stage 1 and the brief in Stage 2 are utilised to evaluate the designs. Once chosen, the selected option will be assessed again; stakeholders will be consulted on this decision, giving feedback where necessary; and the urban development project will be reviewed and detailed, in preparation for construction.

Stage 4: Implementing, monitoring and following up.

The urban development project will be built via the construction process. Once built, the urban development project will be monitored for

problems by a group who will be established to manage the project in the future. Accounts will also be settled between the various stakeholders in the project (e.g., architects, engineers).

At the end of each stage are transition stages: 'Continuing to understand the context', 'Continuing to think about alternatives', 'Re-creating a plan' and 'Continuing the process'. The transition stages represent 'soft gates' for decision-makers to review their actions and plan their next steps (Kagioglou *et al.*, 1998). By placing them at the end of each stage, the transition stages also underpin the iterative nature of processes. That is, decision-makers may need to revise actions from a previous stage before moving to the next stage. Keeping the process iterative illustrates that decision-making also involves reflection before proceeding. It ensures the urban development project does not finish when it is built, but continues to be monitored and assessed throughout the project's lifetime.

The above urban design decision-making process identifies a number of key stages and activities within those stages that decision-makers and stakeholders could follow when undertaking an urban development project. However, this process has been developed from existing literature and guidelines, and therefore fails to cover the details

required to implement the ideas in practice (e.g., the lack of information about decision-makers, the identification of tools used in decision-making, and how sustainability is brought into the process). If such a process is to be applied, these details must be clarified. Indeed, if we look at defining decision-making in urban design, we find that little or no information is provided about the specific roles of the different people involved at each stage in the urban design decision-making process (Boyko *et al.*, 2005). It is crucial to understand these roles, as they may distinguish people's influences on the process and how those influences can lead to decisions being made. Thus it is very important to try to capture this information, both within each stage and throughout the process.

In addition to the lack of information about decision-makers, there is little knowledge about the kinds of tools used to undertake the various activities within each of the stages. Some of the activities, for example identifying stakeholder requirements via town hall meetings or surveys in Stage 1, are described in both the urban design literature and more generic literature on surveys and market research, providing suggestions on how to carry out the activities. Coinciding with the recent emphasis on stakeholder involvement in planning and sustainable communities (ODPM, 2002, 2003, 2004a, 2004b, 2005a, 2005b), numerous tools for engagement and consultation are being used by decision-makers to ensure participation in the urban design decision-making process. Many community-based and participatory planning exercises use hand-drawn maps, tracing paper, felt-tip pens and flip charts as a way of involving stakeholders without the confusion of complex, technological jargon (Wates, 1996, 1998). Holding locally based workshops and focus groups, performing outreach, and having well-



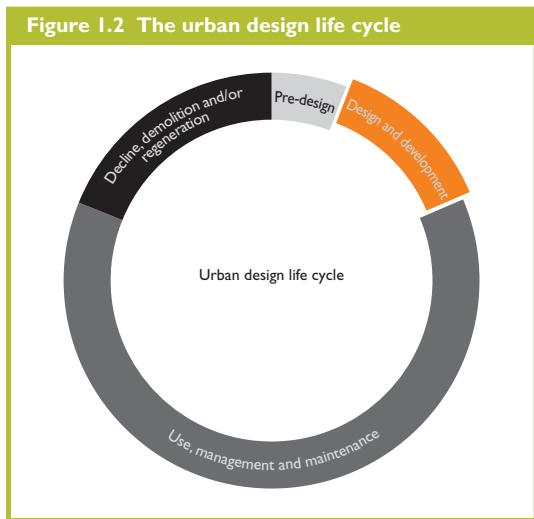
Homes for Change, Hulme, Manchester

trained facilitators at consultation events helps to promote stakeholder involvement across a wide selection of people (ODPM, 2004a).

While the use of non-technical tools is a viable option for consultation exercises, some tools to aid decision-making are more computer-based, and help users to visualise or identify areas on spatial maps. Figures, graphs, three-dimensional representations and contextual information can be created and layered using geographical information systems and other visual graphics packages found on computers (e.g., photo-editing software and computer-aided design). Other tools are Internet-based, allowing decision-makers to understand the planning process in which they will be working. For example, in 2004 ODPM created Planning and Regulatory Services Online (PARSOL), which gives local authorities access to e-planning and e-regulation services (ODPM, 2004a). Many local authorities also have an electronic public access system for planning applications, which allows anyone with an Internet connection to see what applications for development have been submitted. Many of these tools and their uses are illustrated in subsequent chapters.

Additionally, policy documents produced by national, regional and local governments concerning planning, urban design and sustainability issues are tools used by local authority planning departments to inform and substantiate planning and design decisions (e.g., HMSO, 2004). Non-governmental

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Source: Andrew B. Wootton

organisations, such as CABI and English Partnerships, also produce guidance to support government policy (e.g., CABI and DETR, 2001). These documents include planning briefs, histories of an area, photographic essays, written reports from commissioned surveys, questionnaires and studies (e.g., a feasibility study of a proposed urban development project). Decision-makers can use this latter set of documents to help understand the context of an urban development project.

A final set of 'tools' reflects the human-centred nature of decision-making, and includes understanding personality traits, interpersonal skills and the types of feelings that are desired in order to foster a good working team and a smooth-running process. These 'tools' are valuable in the decision-making process, yet are often overlooked because they are not as tangible as, for example, a computer program to visualise a new building, or a survey. Nonetheless, as with all tools, it is important to have the appropriate skills to use them, as well as to understand when to use tools in the process, and with whom.

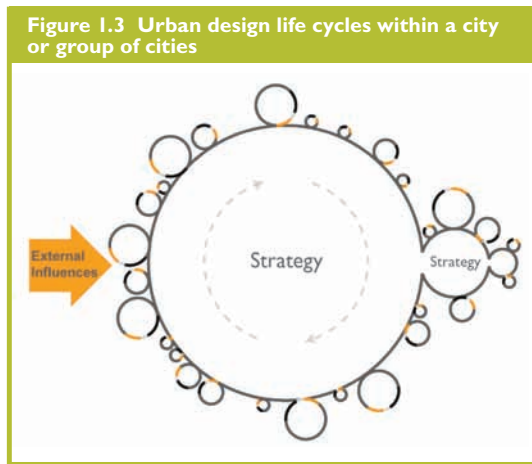
Aside from tools, the process of urban design decision-making in the twenty-first century needs to include aspects of the myriad issues facing 24-hour cities, including sustainability (Thomas, 2003). However, the generic urban design decision-making process presented above is based on earlier processes, none of which mentions or considers sustainability at any of its stages. The process necessitates a holistic and interdisciplinary scope, and a temporal, long-term focus to ensure that decision-makers incorporate social, economic and environmental sustainability issues into their decisions. As sustainability is a significant part of well-designed places (CABI & DETR, 2000, 2001; ODPM, 2002, 2003, 2005a, 2005b, 2006; HMSO, 2004; CLG, 2006), greater efforts need to be made to illustrate how and where in the process sustainability should be considered, and who should consider it (Boyko *et al.*, 2005).

The urban design decision-making process within the urban design life cycle

The urban design decision-making process described above does not exist in a vacuum. It is part of a larger life cycle for urban development projects, consisting of four stages (see Figure 1.2):

- pre-design
- design and development
- use, management and maintenance
- decline, demolition and/or regeneration.

Urban design decisions are often focused on the second stage of the urban design life cycle, 'Design and development'. However, this stage is influenced by the activities that occur in the pre-design stage, 'Creating teams, appraising the situation and forming goals', and impacts on the activities that take place in the latter two stages, 'Evaluating, selecting and creating



Source: Andrew B. Wootton

a plan' and 'Implementing, monitoring and following up' (see Figure 1.1). Furthermore, within 24-hour cities, several urban design life cycles will be occurring simultaneously. However, each life cycle may be at a different stage. Indeed, the life cycles do not progress in isolation. They are influencing, and are influenced by, the other life cycles, thus affecting the overall shape, look and feel of an area.

An example from one of our case study areas, the Devonshire Quarter in Sheffield (see Chapter 2), illustrates the dynamics of the urban design life cycle. A neighbourhood park called Devonshire Green has been experiencing decline as of late, as maintenance has not been kept up, there are not many people in the park during the day, and the area is perceived as unsafe at night (decline, demolition and/or regeneration). Next to the park is the Forum, a thriving café and restaurant complex with outdoor seating. It is used in the afternoons and evenings, and is managed by a competent team of professionals (use, management and maintenance). On the other side of the park is a relatively new, mixed-use development scheme called West One (design and development). The development, which is only now fully tenanted on the ground floor, includes public space, retail and roof gardens for its tenants to use.

The owners of the Forum have been speaking with the local authority to improve the park. In response, the local authority has been strategising with local residents and businesses about how to bring new amenities to the park, and link the new public spaces in West One with the park.²

Within a city or group of cities, many urban design life cycles are progressing at any one time (see Figure 1.3). There are many external influences on these life cycles, and one of the most important is government strategy, from the national, to the regional and local levels. Local government not only interprets national and regional policy about planning, urban design, sustainability and so forth; it also creates its own policy to suit local contexts. Thus both top-down and bottom-up approaches are utilised in driving the urban design life cycles.

Additional externalities play a role in influencing urban design life cycles. These external influences include the state of the economy, political will and pressure, funding, private-sector control over development, and popular sentiment about design. Depending on the city, one or more of the external influences will play a large role in the development of 24-hour cities. In a city that is struggling to become more economically independent from its neighbours, for example, local government may encourage *laissez-faire* development through its planning policies. Thus a combination of political will and a private sector with a lot of power over what it would like to develop may heavily influence the urban design of that city, and the progression of the urban design life cycles.

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Royce Court, Hulme, Manchester

A significant internal influence on urban design life cycles is scale. Scale, in this sense, refers both to the spatial size and magnitude of urban development projects and to the temporality associated with how long the urban design life cycle lasts. Although not always the case, larger-scale projects may take a long time to complete – evolving from ‘Pre-design’ to ‘Use, management and maintenance’ quite slowly – because of the multitude of decision-makers, stakeholders and issues to consider. If a project has the capacity to impact on a large group of people, such as the regeneration of Central Salford in Greater Manchester, then it is likely there will be much debate about its appropriateness by a range of stakeholders. In contrast, smaller-scale projects, such as the addition of an outdoor terrace on the Forum building in the Devonshire Quarter in Sheffield, may take less time to progress through the first three stages of the urban design life cycle, and require less discussion amongst stakeholders. Thus it is important for decision-makers to understand the issues surrounding scale, as these issues will influence how smoothly the urban design life cycle progresses, and the time it takes to move from one stage of the life cycle to the next.

Scale is a crucial concept, not only for the urban design life cycle but also for the *VivaCity2020* project in general. Through a discussion of the research undertaken on this project, many of the chapters within the rest of this book focus on different spatial scales, from the micro (e.g., Brewhouse Yard, Clerkenwell, London) to the macro (e.g., Central Salford, Greater Manchester). Temporal dimensions also are explored in the research. For example, the three urban design decision-making processes that were mapped in the case studies cover different periods of time, from two years – Central Salford in Greater Manchester – to 20 years – the Devonshire Quarter in Sheffield (see Chapter 2). This differential focus on spatial scales and temporal dimensions helps us to identify the connections and impacts between coexisting urban developments in an area regarding urban design and sustainability and the decision-making processes that are occurring simultaneously. Scale and dimension also help us to understand that decision-makers and stakeholders may be part of many different urban development projects in the same area, and therefore provide important input into urban design decision-making.

Summary

We have shown, then, that urban design is both a dynamic art and a process. We have developed a generic urban design decision-making process based on that which exists in the literature and in practice guidelines. We have found that this process tends to be prescriptive yet vague on a number of issues, including the details and definitions of decision-makers and their roles, the vast and diverse array of tools available to aid decision-making, and the inclusion of sustainability. Finally, we have discussed

the urban design decision-making process as it sits within the urban design life cycle and in the context of influences such as the economy, government policy and scale.

The next chapter will compare the generic urban design decision-making process and knowledge against three in-depth case studies undertaken as part of the VivaCity2020 project. These case studies highlight decision-making processes from urban development projects in three UK urban areas: Greater Manchester, Sheffield and the Clerkenwell area of London. Each case study is used to address and focus upon the context, the methods, the tools and the process that occurred. The urban design decision-making processes are mapped and the decision-makers identified alongside the tools used and the degree to which sustainability is both implicitly and explicitly discussed and incorporated into decision-making. The process for each case study is compared with the generic urban design decision-making process described in this chapter, which will then be used to inform the development of a new process, described in Chapter 3.

References

- Atkin, B., Borgbrant, J. & Josephson, P.-E. (eds) (2003) *Conclusions*. In *Construction process improvement*, pp. 292–298. Oxford: Blackwell Science.
- Austin, S., Steele, J., Macmillan, S., Kirby, P. & Spence, R. (2001) Mapping the conceptual design activity of interdisciplinary teams. *Design Studies*, **22** (3), 211–232.
- Barnett, J. (1982) *An introduction to urban design*. New York: Harper & Row.
- Biddulph, M. (1997) An urban design process for large development sites. *Town and Country Planning*, **66**, 202–204.
- Boyko, C.T., Cooper, R. & Davey, C. (2005) Sustainability and the urban design process. *Engineering Sustainability*, **158** (E53), 119–125.
- Bressi, T. (1995) The real thing? We're getting there. *Planning*, **61** (7), 16–21.
- Buchanan, P. (1988) What city? A plea for place in the public realm. *Architectural Review*, **184** (1101), 31–41.
- CABE (2003) *The Councillor's guide to urban design*. London: CABE.
- CABE & DETR (2000) *By design. Urban design in the planning system: Towards better practice*. London: Thomas Telford.
- CABE & DETR (2001) *The value of urban design*. London: Thomas Telford.
- Canadian Institute of Planners (2000) The urban design process. Retrieved 24 June 2004 from http://www.cip-icu.ca/English/aboutplan/ud_proce.htm.
- Carley, M., Jenkins, P. & Smith, H. (2001) *Urban development and civil society: The role of communities in sustainable cities*. London: Earthscan.
- CLG (2006) *Strong and prosperous communities: The local government White Paper*. London: TSO.
- Concise Oxford English Dictionary* (2005) Definition of the word 'process'. *Concise Oxford English Dictionary*, p. 1144. Oxford: Oxford University Press.
- Cook, R.S. (1980) *Zoning for downtown urban design: How cities control development*. Lexington, MA: Lexington Books.
- Cooper, R., Aouad, G., Lee, A., Wu, S., Fleming, A. & Kagioglou, M. (2005) *Process management in design and construction*. Oxford: Blackwell.
- English Partnerships (2000) *Urban design compendium*. London: English Partnerships.
- Etzioni, A. (1968) *The active society*. London: Collier-Macmillan.
- European Commission (1993) *White Paper on growth, competitiveness, and employment: The challenges and ways forward into the 21st century*. Brussels: European Commission.
- Faludi, A. (1973) *Planning theory*. Oxford: Pergamon Press.
- Faludi, A. (1987) *A decision-centered view of environmental planning. Interventions and responses*. Harlow: Longman.
- Garvin, A. (1996) *The American city: What works, what doesn't*. New York: McGraw-Hill.
- Gosling, D. (2002) *The evolution of American urban design*. New York: Wiley & Sons.
- Greed, C. & Roberts, M. (1998) *Introducing urban design: Interventions and responses*. Harlow: Longman.
- Green, S.D. (1996) A metaphorical analysis of client organizations and the briefing process. *Construction Management and Economics*, **14**, 155–164.
- Hall, P. (1998) *Cities in civilization*. New York: Pantheon.
- Heritage Lottery Fund (2000) *Building projects: Your role in achieving quality and value*. London: Heritage Lottery Fund.

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HMSO (2004) *Planning and Compulsory Purchase Act 2004*. London: TSO.

Kagioglou, M., Cooper, R., Aouad, G., Hinks, J., Sexton, M. & Sheath, D.M. (1998) *A generic guide to the design and construction process protocol*. Salford: University of Salford.

Lindblom, C.E. (1959) The science of muddling through. *Public Administration Review*, **19**, 79–88.

Macmillan, S., Steele, J., Kirby, P., Spence, R. & Austin, S. (2002) Mapping the design process during the conceptual phase of building projects. *Engineering, Construction and Architectural Management*, **9** (3), 174–180.

Moughtin, C., Oc, T. & Tiesdell, S. (1995) *Urban design: Ornament and decoration*. Oxford: Butterworth.

Nelessen, A.C. (1994) *Visions for a new American dream: Process, principles, and an ordinance to plan and design small communities* (2nd edn). Chicago: Planners Press.

ODPM (2002) *Sustainable communities: Delivering through planning*. London: ODPM.

ODPM (2003) *Sustainable communities: Building for the future*. London: ODPM.

ODPM (2004a) PARSOL: Planning and Regulatory Services Online. Available (15 April 2005) http://www.parsol.gov.uk/planning_services.html.

ODPM (2004b) *Diversity and planning: Research report on planning policies and practice*. London: ODPM.

ODPM (2005a) *Planning policy statement 1: Delivering sustainable development*. London: ODPM.

ODPM (2005b) *Sustainable communities: People, places and prosperity*. London: ODPM.

ODPM (2006) *The Office of the Deputy Prime Minister's Sustainable Development Action Plan. Securing the future: Delivering UK sustainable development strategy*. London: TSO.

Okubo, D. (2000) *The community visioning and strategic planning handbook*. Denver, CO: National Civic League Press. Retrieved 20 July 2005 from <http://www.ncl.org/publications/online/VSPHandbook.pdf>.

Pemberton-Billing, I. (2007) *How do regional towns and cities make sustainable urban design?* Unpublished doctoral thesis proposal, Lancaster University, Lancaster, England.

Reekie, R.F. (1972) *Design in the built environment*. London: Edward Arnold.

RIBA (1999) *RIBA plan of work*. London: RIBA.

Roberts, M.B. (2003) *Making the vision concrete: Implementation of downtown redevelopment plans created through a visioning process*. Unpublished doctoral dissertation proposal, University of California, Irvine, California.

Rogers, R. & Power, A. (2000) *Cities for a small country*. London: Faber & Faber.

Rowland, J. (1995) The urban design process. *Urban Design Quarterly*, **56**. Retrieved 14 July 2004 from <http://www.rudi.net/bookshelf/ej/udq/56/udp.cfm>.



Skateboard area, Queens Walk, London

Rowley, A. (1994) Definitions of urban design: the nature and concerns of urban design. *Planning Practice and Research*, **9** (3), 179–198.

Smith, J. & Jackson, N. (2000) Strategic needs analysis: its role in brief development. *Facilities*, **18** (13/14), 502–512.

Tewdwr-Jones, M. & Williams, R.H. (2001). *The European dimension of planning*. London: Spon Press.

Thomas, R. (2003) *Sustainable urban design: An environmental approach*. London: Spon Press.

Wates, N. (1996) A community process. *Urban Design Quarterly*, **58** (Supplement). Retrieved 14 July 2004 from <http://www.rudi.net/bookshelf/ej/udq/58conf/cp.cfm>.

Wates, N. (1998) Process planning session. *Urban Design Quarterly*, **67** (Special report: Involving Local Communities in Urban Design). Retrieved 14 July 2004 from http://www.rudi.net/bookshelf/ej/udq/67_report/method_10.cfm.

Woodhead, R.M. (2000) Investigation of the early stages of project formulation. *Facilities*, **18** (13/14), 524–534.

¹Pruitt Igoe was a 2762-unit public housing development consisting of 33 eleven-storey tower blocks. Completed in 1954, the development was demolished by the local authority in 1972 owing to poor design and construction, variable tenant selection procedures, erroneous fiscal policies, and improper management and maintenance practices (Garvin, 1996).

²Each of the urban design decision-making case study areas presented in Chapter 2 characterises different stages of the urban design life cycle. For the Devonshire Quarter in Sheffield, the area straddles the 'Design and development' and 'Use, management and maintenance' stages because of the new development occurring in the area and the use and management of existing city spaces. The Brewhouse Yard in Clerkenwell, London, is an example of a completely developed urban area that is in the 'Use, management and maintenance' stage. Finally, Central Salford in Greater Manchester is an example of an urban area that is being regenerated; as such, it spans both the 'Decline, demolition and/or regeneration' stage and the 'Pre-design' stage of its urban design life cycle.