

TAXONOMY OF DESIGN CONTROL TOOLS

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BİLGE SERİN

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Approval of the thesis:

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submitted by **BİLGE SERİN** in partial fulfillment of the requirements for the degree of **Master in Urban Design in City and Regional Planning Department, Middle East Technical University** by,

Prof. Dr. Canan Özgen
Dean, Graduate School of **Natural and Applied Sciences**

Prof. Dr. Melih Ersoy
Head of Department, **City and Regional Planning**

Assoc. Prof. Dr. Baykan GÜNAY
Supervisor, **City and Regional Planning Dept., METU**

Examining Committee Members:

Assoc. Prof. Dr. Adnan Barlas
City and Regional Planning Dept., METU

Assoc. Prof. Dr. Baykan Günay
City and Regional Planning Dept., METU

Assoc. Prof. Dr. Lale Özgenel
Architecture Dept., METU

Assist. Prof. Dr. Z. Müge Akkar Ercan
City and Regional Planning Dept., METU

Dr. Banu Aksel Gürün
Director, b.c. tasarım Ltd.

Date: 25.06.2010

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last name: Bilge Serin

Signature :

ABSTRACT

TAXONOMY OF DESIGN CONTROL TOOLS

SERİN, Bilge

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Design control is a relevant concept for any age and any context of urban development by use of many varying tools from highly prescriptive ones to flexible guidance in order to control design of urban space and places. Production of clear definitions and types for the tools is critical for effective use of the design tools to guide and code the urban design. Distinctive parameters for the definitions and types of the design control tools are scale of intervention, level of prescription and contents and component of the tool. In this thesis, design control tools including design guides, briefs, frameworks and design codes are analysed in terms of this parameters, in order to reach the aim of the thesis which is building taxonomy of design control tools and taxonomy of their contents and components by analysing contemporary design control tools.

Key Words: Design Control, Design Guidance, Design Coding

ÖZ

TASARIM KONTROL ARAÇLARI TAKSONOMİSİ

SERİN, Bilge

Yüksek Lisans, Şehir ve Bölge Planlama Bölümü, Kentsel Tasarım

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Tasarım kontrolü, kentsel mekân ve yerlerin tasarımını kontrol etmek amacıyla; katı kurallar koyan araçlardan esnek rehberlere kadar çeşitlenen araçları kullanan, kentsel gelişmenin her aşamasında ve bağlamında geçerli olan bir kavramdır. Bu araçlara kesin tanımlar getirmek ve tiplerini belirlemek, kentsel tasarımın yönlendirilmesinde ve kodlamasında araçların etkin kullanımı için kritiktir. Bu tanımlama ve tipler için belirleyici olan parametreler; müdahale ölçeği, kuralların tasarıma yaptığı müdahalenin tanımlılık seviyesi ve araçların içerik ve bileşenleridir. Bu çalışmada, kentsel tasarım araçları ile içerik ve bileşenlerinin taksonomilerinin, günümüz tasarım araçlarının analizi yoluyla üretilmesi amaçlanmıştır; bu amaçla; tasarım rehberleri, özetleri, çerçeveleri ve kodlarını içeren tasarım kontrol araçları, yukarıdaki parametreler bağlamında incelenmiştir.

Anahtar Keimeler: Tasarım Kontrolü, Tasarım Rehberliği, Tasarım Kodlaması

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To the “ultimate sophistication”, simplicity

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CHAPTER 1

INTRODUCTION

1.1 Aim of the Study

The use of planning control is common for every context of planning with different modes of design and development control. In order to accomplish the aim of producing liveable, perceivable, complete urban spaces and sense of place; developing effective, appropriate type of design control tools is critical and also one of the research points of urban design profession. Design control tools are tools which are used for “*designing cities without designing buildings*” with Barnett’s (1974, p. 29) words. The tools design the whole–part relationship between the components of urban form and the structure of design. The crucial point of design control tools is ‘designing the system of design instead of building the actual design schema’. In other words, the tools for design control have a common aim which is designing high quality urban spaces and production of places in an integrated point of view without designing the actual final design schema (Carmona, Marshall, & Stevens, 2006, p. 241). In this sense, design control tools are effective tools for designing cities.

Design control tools, by providing certain rules to follow, provide a consistent design language, while realizing the urban design. In this sense, Carmona, Marshall and Stevens (2006) make an analogue in language in order to express the characteristics of system of a design code. The analogy is based on the similarity of the vocabulary and grammar of a language with the code. As vocabulary and grammar are tools to built meaningful sentences by supporting writer while producing his/her own chapter; design control

tools support the creativity by being “a *limited number of components* [which] *may generate a multitude of permutations and final outcomes*” (Carmona et al., 2006, p. 240).

Although having certain common characteristics, *design control* is not homogeneous phenomena with single definite content. It consists of different approaches, types, categories, methods and implementations varying from static to dynamic or prescriptive to flexible ones. There always have been the different approaches and tools for urban design and planning, such as development of zoning regulations, development of different planning approaches or approaches for urban design, and different tools for implementation, regulation and control for development and design. Production of effective tools for future contexts depends on the analysis, understanding, and evaluation of these existing, contemporary tools. The aim of the thesis is clarifying the concepts and terms related to the contemporary design control by categorising the tools and their contents and components. The aim of clarification is originated from misconceptions of the concepts related to design control.

The research questions in order to fulfil the aim are:

- What are the design control tools?
- Which types of design tools can be defined?
- What are the contents and components of the tools?
- Which elements of urban space design control tools aim to intervene?
- What type of design control tools aims to intervene to which elements of urban space?

The questions constitute two research topics of the study: design control tools and contents & components of the tools. While the first two questions are about the definitions (of tools and types); following two questions are about contents & components of design control tools which are based on the spatial elements to control; and the last one is about the relationship of the two former groups.

The definitions of tools and determination of contents & components of the tools are related to which dimension of urban design the tools are dealing with. Thus, the tools, which the study focuses on, deal with the morphological and aesthetic dimensions of

urban design, so the study is. Günay (2006) defines space as in Figure 1.1. According to this conceptualisation, the focus of the study is on the morphology and spacescapes & aesthetics side of the circle of generation of places and languages.

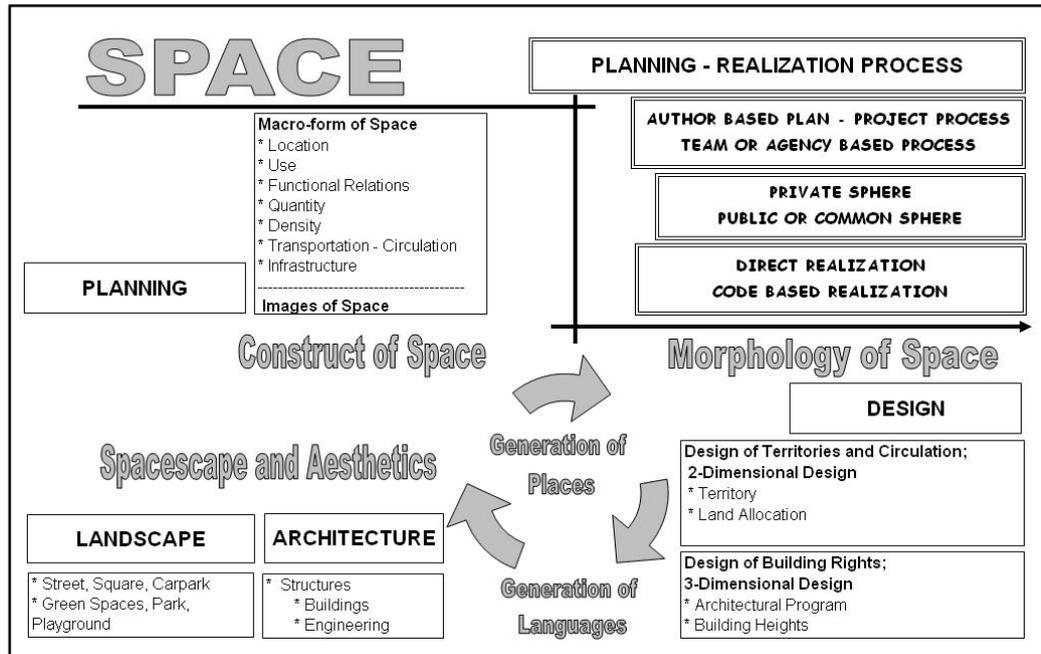


Figure 1.1 Space as Construct of Space, Morphology of Space, and Spacescapes and Aesthetics (Source: Günay, 2006, p. 20)

1.2 Method of the Study

In order to define the design control tool and to define the contents and components of the tools (to define elements of urban space design control tools aim to intervene), the classification is used as a systematic definitive method. It originates from the requirement of classification of components of a problem or situation for inquiry (Cuthbert, 2006). Widely used methods of classification are taxonomy and typology.

Although the two concepts sometimes used interchangeably, they are, indeed, different classification methods (Bailey, 1994; Cuthbert, 2006). Cuthbert (2006) differentiates the two methods in terms of their inner relationship between classes. While classes within taxonomy are not required to be in relation, for typology relationship is critical (Cuthbert, 2006). On the other hand, Bailey (1994) differentiates typology and taxonomy in terms of construction of the classification; while typology is conceptually constructed, taxonomy is constructed empirically. Thus, for the typology, firstly the multidimensional conceptual framework is developed and constructed, and then the types are produced according to this conceptual framework. On the other hand, *“taxonomy begins empirically, rather than conceptually, with the goal of classifying cases according to their measured similarity on observed variables.”* (Lewis-Beck, 1994, p. 5). To illustrate the typology, in Krier (2003)'s typology, intersection of street and square produces the types by determining the *conceptual* framework as central, off-center, lateral and oblique in one side; and one intersecting street, two intersecting streets, three intersecting streets, four and so on intersecting streets in other side. This study, on the other hand, is based on analysis of design control tools in order to determine the intervention of the tools to the urban space by classifying them according to their way of intervention to the components of urban space. Thus, it is not based on a pre-determined set of concepts, but based on analysis of the tools. Therefore, the method of the classification of the study is taxonomical rather than typological.

Carmona et al. (2006) state that, the **definition and use** of the design codes are determined by the **contents and components of code** (and the relation of codes to the other design policy and guidance tools (p. 222)). This postulate is also relevant for other types of design control tools and constitutes the base of the analysis method of the thesis. The classification is based on classifying the tools according to their level of prescription and scale of intervention, and contents and components. In this trilogy, the first two parameters are up to the third one. It is the the contents and components which determines the level of prescription and scale of intervention. The taxonomy is not solely based on the analysis of cases but analysis of contents and components of the tools by reviewing related descriptive literature. In total, the two analyses disclose the

contents and components, level of prescription and scale of intervention of the selected cases.

In order to provide systematic input for taxonomy of design control tools, another classification is built, which is taxonomy of contents and components of design control tools. Although this classification is close also to be typology with its relational context between the types defined, it is not enough to define the classification as a typology. In addition, it is built by *analysis* of contents of the design control tools, *empirically*, rather than being produced *conceptually*.

Taxonomy of design control tools built in this study is divided two parts. The taxonomy starts with general classification and description of the type of tools by dividing them groups according to their way of intervention to the urban space (direct/indirect design control tools) and their level of prescription (guidance, coding, standards). After such general division for the tools the study focuses on tools from UK design practice. This narrow down is done in order to focus on one particular system of design practice, and reason for selection of UK is its systematic the integration of design control tools to the planning system. It is the change that the UK planning system has been encountered for last two decades, which is the implementation of design control tools within a hierarchical the planning system and making urban design an entity for all scales of urban planning (Evans et al., 2007, p. 15). In other words, the cases are not single, separate examples, but they are taken place in a systematic integrated way and promoted by authorities. Therefore, the main reason to select the UK as a case is 'to inspect the design control tools from such a system that the tools are integrated hierarchically into'.

Tiesdell (2002) compares UK implementation of design guidance with US New Urbanist Charter and states that English examples of urban design guidance documents are parts of a nation-wide guidance system, on the other hand, US New Urbanist examples state out of formal planning process. (as cited in Carmona et al., 2006, p. 232).

One argument of having different systems of design control is having countries with different legal and regulations systems. Punter (2007) discusses the effect of differences between regulatory systems that *“Any international consideration of the design dimension of planning must commence with some discussion of the differences between regulatory and discretionary planning systems.”* (Punter, 2007, p. 167). He discusses the two systems, regulatory and discretionary planning systems, with reference to Booth (1995), thus, the assertion is the difference between systems is originated from different legal systems (Punter, 2007, p. 167). While the former is based on administrative law, relevant for Continental Europe and North America; the latter is based on common law, relevant for Britain and Ireland (Paneria, Castex, & Depalue, 2004; Punter, 2007). Regulatory systems provide certainty, while discretionary system provides flexibility and cause uncertainty.

Each country is addressing these design issues in different ways, through different legal and administrative frameworks, with different systems of planning and building control, and in different physical contexts with different development regimes. Each is struggling with similar problems. (Punter, 1999, p. 2)

Solutions to the similar problems are, as mentioned, context-dependent for countries with different governmental, administrative, legal frameworks and systems of planning. Therefore, it is not possible to import one specific method from a contextual framework to another. Such an effort may bring whereof problems to more severe conditions (Punter, 1999, p. 2). Punter (1999) puts emphasis on this critical situation. On the other hand, he states that by keeping in mind the risk of importing one system of control to other context,

a number of exponents of cross-comparative research have suggested that significant practical benefits might be forthcoming from the study of other regulatory systems if the differences in the systems are acknowledged and appropriate adjustments made in the application of ideas. (Punter, 1999, p. 3).

As Punter (1999) affirms, researching tools from other systems of regulation beneficial, if differences of systems are accepted and adjustments are made.

In addition; Punter (2007) states that the two systems of design control have been converging to each other. The reason of this convergence is attempts to overcome problems of design quality originated from their degree of flexibility. While administrative regulatory system is criticized to be less flexible, the discretionary system is criticized as being indefinite. The distance between two systems has been shortened in terms of design control processes by adding design review system to regulatory one and by adding design guidance system to discretionary one. (Punter, 2007, p. 168)

The thesis aims to provide a base for the discussions in Turkey related to the methods of planning and design such as 'how planning system can be more effective' and 'what kind of tools can be implemented / integrated to the existing system'. Although legislative systems of Turkey and UK are quite different, while former is belong to the first group, the latter belong to second; as mentioned above, it is not an obstacle to analyse a design control system belong to a different regulatory perspective in order to provide input for planning system from other regulatory perspective.

Thus, cases from UK design control system are selected. Twelve number of urban design control documents adopted in UK are analyzed. The cases selected from different types of design control tools: three from Design Control Framework-aimed Design Guidance which are 'By Design: Urban Design In The Planning System: Towards Better Practice', 'Urban Design Compendium 1' and 'Urban Design Compendium 2: Delivering Quality Places'; two from District-aimed Design Guidance which are 'Nottingham City Centre Design Guide' and 'Oldham and Rochdale Urban Design Guide'; three from Place-aimed Design Guidance which are 'Southampton City Centre Urban Design Strategy', 'Havant Town Centre Urban Design Framework' and 'Urban Design Framework for Stratford-upon-Avon'; one from Topic-aimed Design Guidance which is 'London Borough of Richmond upon Thames Public Space Design Guide'; and three from Design Coding which are 'Upton Design Code', 'Design Code for the Rotherham Town Centre River Corridor' and 'Walker Riverside Design Code'.

1.3 Structure of the Thesis

The thesis has a gradual structure, starting from the theory of design to content and components of design control: design theory of whole and parts, definitions of urban design, dimensions of urban design, procedures of urban design, design and development control, design control in history, approaches for design control, tools for design control, tools for design control in UK, analysis of contents and components of design control tools.

Chapter 2 consists of four main sections which are whole and parts, form and style, contents and components, and urban design. Firstly, relationship of whole and part in design theory is discussed in terms of Gestalt theory of whole and part, Arnheim's concept of center by comparing to Alexander's approach to whole, parts and center. The whole and parts relationship is discussed in terms of structure, concept of center, order, dynamicity, form and process. This discussion is crucial for design control tools as tools to design urban space without designing the whole and the parts directly, but drawing the structure instead. Secondly, relationship of form and style to design control tool is discussed. Thirdly, contents and components, which are important concepts for the thesis, are discussed in a descriptive way. Lastly, urban design is discussed in terms of debates of definitions of urban design, dimensions of urban design, and Lang's typology of urban design. The chapter does not present a comprehensive discussion for the topics, but presents selected theoretical discussions relevant for design control.

Chapter 3 has three main sections which are design control in history, contemporary approaches and critiques for design control tools; and concept of design control. Firstly, design control tools from different ages of urban development are analysed starting from Hammurabi code to public health acts. The method is selecting cases from ages of historical development which are important for development of design control. Secondly, contemporary approaches and critiques for design control tools are discussed. Firstly, for understanding contemporary approaches; modernism, imageability, new urbanism are discussed comparatively; then, new urbanism and typomorphology are discussed as contemporary approaches for design control. Secondly, highlighted sets of

critiques to the use of design control tools from literature are discussed. Thirdly, design control is discussed in terms of concept of control as static and dynamic approaches to design and development control, the need for design control, the collaboration and professional participation in design control processes.

Chapter 4 consists of taxonomy of design control tools with four main sections, which are direct design control tools, indirect design control tools, taxonomy of direct design control tools for UK; and taxonomy of contents and components of direct design control tools.

Chapter 5 is the analysis chapter consisting the twelve cases elected from different types of design control. The analysis is based on the disclosing the contents and components of the documents and assigning the types of them.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1 Whole & Parts

Roughly, by a complex system I mean one made up of a **large number of parts that interact in a non-simple way**. In such systems, **the whole is more than the sum of the parts, not in an ultimate, metaphysical sense, but in the important pragmatic sense** that, given the properties of the parts and the laws of their interaction, it is not a trivial matter to infer the properties of the whole.

Herbert A. Simon (1962) (quoted in Batty, 2005)

The aim of the section is to draw theoretical framework for the thesis. In order to build the connection between the design theory and the practice, the discussions are built in connection with the correspondence of theoretical concept to the design control practice. The concepts related to relationship of whole & parts; namely, structure, relationship, concept of 'center', order & balance, form, process and 'variety with harmony'; are discussed in terms of their meaning for design control tools.

Within this theoretical framework, design control tools are defined as tools to design the whole-part relationship between the components of urban form. The tools define the *structure and configuration* of components of urban space by defining their productive relationship between the parts and the whole system.

2.1.1 Structure of Whole and Part

“Design is not just what it looks like and feels like. Design is how it works.”
Steve Jobs

The quotation from Steve Jobs who is the co-founder of Apple Computers, then chief executive of Pixar Animation Studios, presents one basic point of discussion of design which is ‘form and structure’. Structure is the system that puts the parts of an entire system together as a whole, in other words, structure is *“the arrangement of and relations between the parts or elements of something complex”* (Soanes & Stevenson , 2005a), in this context, structure is defined as *“how it works”*. Arnheim (1992) defines the interrelationship between the structure, parts and whole as:

The structure of the whole, certainly of dominant importance, is influenced by the parts, which in turn depend on the whole as to their shapes and interrelations. Neither the whole nor the parts are primary constants, primordial executives of influence. Rather, all components from the whole to the smallest detail exert their modifying effect, while they are being modified (Arnheim, 1966). **Within the local boundaries, which organize complex gestalten, subordinated structures create their own smaller gestalten, dependent though they remain on their surroundings** (s. 203).

In this context, *design code* is the ‘structure’ of the relevant design and *the contents and components* of design control tools defined in the study are *‘the parts of the whole’*. Thus, the base of the analysis of the study is the contents and components of design control tools, which is based on the simple postulate of Gestalt theory *‘the whole is more than the sum of its parts’*:

There are wholes, the behaviour of which is not determined by that of their individual elements, but where the part-processes are themselves determined by the intrinsic nature of whole. (Wertheimer, 2002, p. 2)

“According to Wertheimer, Gestalten are integrated, articulated structures or systems within which the constituent parts are in dynamic interrelations with each other and with the whole.” (B. King, 2009, p. 155). Therefore, the relationship between the part and the whole is not one way relation, but it is productive vertical and horizontal relationships

supported and produced by both sides being the whole and the part. Thus, the relationship itself, parts and the whole produce the productive system which is structure.

One point that is required to be clarified is what kind of system approach this is. Arnheim (1992) states difference between the system of gestalt and the system of *'the functioning of machines'*. According to Arnheim (1992) *"interaction in a gestalt context is the very opposite of the functioning of machines"* (s. 203). While for gestalt context parts and whole have an interactive, productive relationship, the system of *'functioning of machines'* is over-pre-determined. (Arnheim, 1992, p. 203)

The difference between the machine and the system of centers is that the *'centers'* have the productive power to form the whole while the machine is over-pre-determined by the whole, not based on the constitution of centers. Within the process of production of space in terms of design control tools, the aim is to produce a whole structure consisting of elements which are more than single elements of space. For instance, a street, which is defined as content of design control tool, is more than sum of buildings, road, pedestrian way, pavement, and façade; all elements of street together produce the *'street'*. Therefore, design control tools are considered in this study not static regulatory machinery tools, but productive systems for design of urban built environment.

2.1.2 Relation of Whole and Parts

Koffka (1963) puts forward the proposal of *"the whole is more than the sum of its parts"* to the discussion of *'relationship'*: *"It is more correct to say that the whole is something else than the sum of its parts, because summing is a meaningless procedure, whereas the whole-part relationship is meaningful."* (p. 176). In this context the point is the *'relation'* and the *'meaning'*. The feature that produces the meaning of the whole is the relationship of whole and its parts. Arnheim (1969) points out the importance of relation, and, mentions the role of relation as *"Relation, then, far from leaving the related items untouched, works as a condition of the total context of which the items are parts and produces changes that are in keeping with structure of the context."* (p. 62).

2.1.3 Whole, Part and the Concept of 'Center'

Arnheim brings the discussions of the whole, the part, and the relation further by proposing concept of 'centers' and 'format'; that, related to the productive relationship, Arnheim proposes "simple system of perceptual centers generating dynamics between them, and bounded by various formats" (Verstegen, 2005, p. 4). According to Verstegen (2005) , **the whole, the part, composition and 'the center'** discussions of Arnheim for Gestalt theory are "depending on the scale of magnitude, **grouping elements from below we may arrive at the whole work as a center, or we may subdivide from above to the elements, which then become centers in their own right.**" (p. 30) and "**the problem of composition is therefore how these centers of energy** [centers of perceptual energy and attraction] **can meaningfully interact.**" (p. 29). In other words, the parts have their own inner balance and order, *a whole*, in relation with the composition produced by the relation between these parts which constitute the whole.

In the context of design control tools, contents of design codes or guides that the code or guide aiming to control are *centers* that have their inner balance and order, in addition, by being in an upper order they produce the *bigger center*, the coded or guided urban built environment.

Like sculpted objects, I shall treat **buildings as centers**. ... And one can go in and explore **the sub centers of a facade, or interior, or plan**. (Verstegen, 2005, p. 52)

In this context, Arnheim defines objects as perceptual 'centers' which interact with each other and the 'format' which is the frame of reference for these relative centers. It corresponds to the concept of 'frame of reference' of Gestalt theory. Format itself also can be considered as a comprehensive perceptual *center* in a relative context. (Verstegen, 2005, pp. 29,31)

In the context of design control tools, 'the concept of centers' that Arnheim proposes corresponds to the contents and components of design codes and 'the concept of

format' is the frame of reference of these contents and components interact with each other. For the contents and components of design control tools, the 'concept of center' of Arnheim is adaptive rather than 'concept of part'. Thus, the 'concept of center' defines orderly wholes that have the productive power to produce a more consistent, balanced greater whole. To illustrate, for a design code, streets as a content of the design code defines a center and urban block is another center, with other content and components of the code, these centers together produce the whole.

'The Wholeness', 'Centers' and 'Structure' According To Alexander

Alexander (2002) also proposes the concepts of '*the wholeness*', '*centers*' and '*structure*' from a different point of view. Alexander (2002) defines the 'wholeness' through the '*wholeness of the world*' by defining every part as a whole belonging to a larger whole, and, by stating "*the **wholeness** of any portion of the world is this system of larger and smaller **centers**, in their connection and overlap.*" (pp. 90-91).

Firstly, for the concept of 'wholeness', according to Alexander, the perceived elements are required to be understood via their wholes. Alexander (2002) discusses the "part-whole paradox" (p. 84) which he defines as "*the wholeness is made up of parts or the parts are created by the wholeness*" and he concludes that the parts are mostly created by the wholes (p. 84). He uses the example of "Portraiture by Matisse" to illustrate his approach to the wholeness. (p. 96)

Alexander (2002) asserts that Matisse, by changing the *features* of his self-portraits (nose, chin), claims that all of the portraits as being *wholes* reflect Matisse, even if the features changed (Figure 2.1). Thus, the idea of the example is *the character of the whole depends to the whole, not the parts*. (p. 97)

In addition, Alexander (2002) exemplifies the conceptualization of '*wholeness*' in terms of built environment as:

A view of the building as a whole means that we see it as part of an extended and **undivided continuum**. It is not an isolated fragment in itself, but part of the world which includes the gardens, walls, trees, streets beyond its boundaries, and other buildings beyond those. And it contains

many wholes within it – also unbounded and continuous in their connections. **Above all, the whole is unbroken and undivided.** (p. 80)

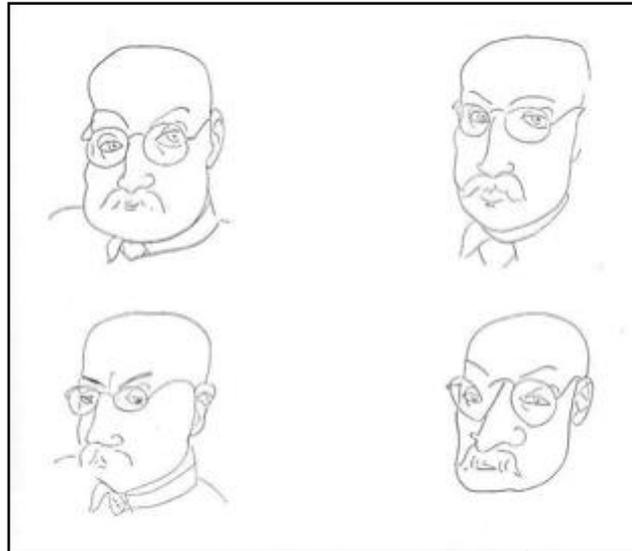


Figure 2.1 Self-portraits of Matisse with different features, according to Alexander, parts are different; the perception of the whole is the same. (Source: Alexander, 2002, p. 97)

Secondly, for the concept of ‘centers’, Alexander (2002) defines the term center to “*identify an organized zone of space – that is to say, distinct set of points in space, which, because of its internal coherence, and because of its relation to its context, exhibits centeredness, forms a local zone of relative centeredness with respect to the other parts of space.*” (p. 84). He asserts the term of *center* instead of the term *part*, because, according to him, actually any part of a whole is itself a whole within a greater whole (Alexander, 2002, p. 84).

When we understand what wholeness is really like as a structure, we see that in most cases it is the wholeness which creates its parts. The center is not made from parts. Rather, it would be more true to say that most of the

parts are created by the wholeness. They settle out from the wholeness, and are created by all of it. (Alexander, 2002, p. 86)

On the other hand, he prefers to call the elements of a greater whole and 'the whole' *centers* rather than 'wholes'. Because, according to him, while *center* defines an attachment to a greater whole, the term *whole* may connote an isolated object (Alexander, 2002, pp. 84-85). Thus, centers are not isolated units in space, but in interaction. He defines this interaction as "*centers helping each other*" (Alexander, 2002, p. 114).

Thirdly, the concept of 'structure', according to Alexander (2002), is the structure of whole which is *induced* from whole. The configuration of the **centers** is depended on the **structure of that particular whole**: "*Thus it is clear that the wholeness is a structure of great subtlety which is induced in the whole. It cannot easily be predicted from the parts, and it is useless to think of it as a relationship "among the parts".*" (Alexander, 2002, p. 86). The structure is formed by the system of centers, their interaction (helping), and continuity in the whole world (Alexander, 2002, p. 116). In addition, the structure is also in relation with the density and intensity of centers (Alexander, 2002, p. 110) .

Alexander (2002) uses stream-whirlpool metaphor in order to exemplify his understanding of whole-part relationship. He asserts that there is the stream as the *whole*, but the perceived *center* is the whirlpool.

Although approach of Alexander seems having similarities with Arnheim's with their use of the similar concepts, their bases for the production of whole-part relationship are distinct. The difference between two approaches is that while Arnheim's is based on 'the whole constituted by the parts interacting within productive relationship'; Alexander's asserts that 'it is the whole that creates its parts'.

In the context of design control tools, the former approach by its emphasis on productive vertical and horizontal relationship between parts and wholes rather than explaining parts depending on whole is more appropriate for relationship between content and components of design control tools and the tools itself. Because design control tools, in this study, are defined as tools that produces whole by defining the

parts, relationship between parts and general framework leading parts to produce the meaningful whole. Defining the parts through whole, on the other hand, as in the latter approach, considering design control tools, results in ignoring the transformative, productive effect of parts within the whole.

2.1.4 Order of Whole and Parts

Design codes or guides are general productive frameworks and productive sets of relations for physical product of urban space, which produces the **order**. Günay (2007) mentions the concept of **order** in gestalt theory that Koffka states;

‘structural organization, rather than individual sensory elements’ to which the organism responded. Following this claim, Koffka endeavoured to reconcile gestalt with scientific thinking ... The first category is **order**. ‘When you come to life you find order and that means a new agency that directs the workings of inorganic nature, giving aim and direction and thereby order to its blind impulses’ (Koffka, 1935, 9). (p. 94)

Koffka(1963) states that the order originates from the organisation of parts of the whole. It is organization itself which produces the order in that system (p. 174). In addition, Versteegen (2005) states the relationship between **the order and the balance** in terms of art objects, that:

When something purports to be an art object, it has to fulfil special functions. The artistic theme has to be exemplarily ordered. Then and only then can it be said to be an example of structural order. Thus, balance is absolutely required if they are to attain the status as art objects. ... Works of art require balance because they require finality to be valid statements on the human condition. (p. 28)

In the context of design control tools, order is based on the system which design control tools code or guide. Thus, they are defined as the tools that guide the architects or designers for a part of particular design according to this order and support to construct balance.

2.1.5 Form and Process

The process of production of form gains more importance contemporarily. Design control tools are tools for guiding the process of the production of the form in addition to being delivery tools for urban design. On addition to the relevancy for design control tools, process is a relevant discussion point for other branches of design.

Eisl (2005) analyses the works of Paul Klee, German painter from Bauhaus School, in terms of Gestalt in his works. According to Eisl (2005),

for him [Paul Klee] gestalt meant **'the way that leads to form'**, with an **emphasis on the path rather than the form itself**. ... Klee's approach to form and the art making **process** was **dynamic**; for example, he spoke of an **apple "from blossom to fruit"**. To him form was genesis, growth, essence. Klee distinguished between "form as movement, as action, as active form being good", while by contrast "form as immobility, as an end, passive, finished form is bad, is death" (Eisl, 2005)

Klee mentions two sides of production of form: **the way that leads form** and **the process that produces form**. For 'the process that produces form', he defines the apple as **"apple from blossom to fruit"**. In this context, design considers its form production process. For **"the way that leads to form"**, design coding or guidance is, within this perspective, 'defining the way which leads to the form'. Like he puts the **"emphasis on the path rather than the form itself"**, design codes or guides defines the path rather than dictates the final form of the urban space.

2.1.6 Variety and Unity

Klee produced the patterns of Wertheimer in his works, one of which notable example is Blue night. (B. King, 2009) The two examples in the Figure 2.2 are the examples which **"use a similar vocabulary of lines, shapes, and tones of colours that suggest a harmonised struggle among its elements"** by having a set of laws of Gestalt (Eisl, 2005).



Figure 2.2 *Blue Night*, 1937, Paul Klee

Kleinode, 1937, Paul Klee

(Source: Eisl, 2005)

With the definition of Carmona et al. (2006), “*multitude of permutations and final outcomes*” (p. 240), design codes, in a wider context, design control tools; serves to have ‘variety with harmony’ which is one of the main input for quality in urban built environment. In this context, design control is tool for delivering quality with ‘variety with harmony’ for urban space where development is constructed by more than one designer or developer

To sum up, in this study, design control tools are defined as tools **to control and build whole – parts relationships for urban space**. Therefore, drawing the theoretical framework for design control tools is crucial for stating the rationale of the tools. Thus, they are defined as the tools that are structures used to produce the ordered, balanced built space with its inner balanced centers, by defining the rules of unity that has the ability to produce multiple variable forms as final design schemas. The relationship between its contents/components and the general schema is integrated, productive relationship: while defining the general rule and system, it is required to give parts opportunity to contribute the final form and to system itself.

2.2 Form & Style

In addition to the discussions of whole parts relationship, second relevant discussion for design control tools is the discussion of style. Carmona et al. (2006) mentions that “coding is not necessarily about stylistic concerns -traditional or otherwise” (p. 225). They criticize the claims that associates coding (as on tools of design control) with a particular style, neo-traditional style architecture and a particular approach, New Urbanism (Carmona et al., 2006, p. 225). In this sense, design control is style-independent and style neutral. On the other hand, CABE (2005) mentions that although they are style-independent and can be style neutral; design control tools are capable of imposing any particular style to urban design (p. 8). Imposing style or not, is a matter of choice and a matter of approach of design team designing the design control.

Conceived as a public space network, such structures [layout and configuration of block] open up possibilities and –in conjunction with basic typologies/ codes/ rules about physical parameters– can provide coherence and ‘good’ urban form, **without necessarily being deterministic about architectural form or content.** (Carmona, Heath, Oc, & Tiesdell, 2003, pp. 80-81)

Carmona et al. (2003) mentions that urban design is not “a question of architectural style” (p. 164). Furthermore, it is required to be avoided to discuss successful places in terms of their architectural design. On the other hand, it is required to be stated that architectural style *can* also be considered as an entity for urban design (Carmona et al., 2003, p. 164). However, it is a phenomenon that should be avoided in order not to be too prescriptive in design control tools.

In addition to the risk of being too prescriptive, Lang (2005) states the risk of being delusional. He stresses on the deep-down order of the elements of space, here structure; instead of superficial unity provided by architectural style. In other words, Lang, points out the phenomenon of pseudo-order which originates from architectural style. In this context, in terms of design control, design control is designing the “underlying system” of unity; structure, not concern about the delusional one.

To sum up, architectural style is an entity that should be handled cautiously in design control tools. Thus, this study approaches design control tools as style-independent tools which has also ability to code architectural style. However, coding the architectural style brings two important risks which are to be avoided: being unnecessarily prescriptive and even oppressive; and creating pseudo - visual order. Therefore, imposing particular architectural styles should be avoided.

2.3 Contents & Components

In addition to the discussions of whole - parts relationship, third relevant discussion for design control tools is the discussion of contents and components of the tool in terms of part whole relationship. First one, contents is "*what is contained in something*" (Abate , 1999). Second one, component is "a part or element of a larger whole". (Soanes & Stevenson , 2005b) As in the analogue of language with the code that Carmona et al. (2006) build, contents and components, and related concepts like form, style is the discussion points for literary works. The terms *content and component* are related to 'what' is said while *form and style* is related to 'how' it is said (Baldick, 2008). In this context, *contents and components* for design control tools are related to what are controlled and produced by the document as components and elements of urban space; while *form and style* are related to 'how' the content and components under the control of design control tool are produced. Therefore, form is the product of its structure and contents and components which is the product of "*a multitude of permutations and final outcomes*" (Carmona et al., 2006, p. 240). As a result of this productive connection, contents and components, and the design of their composition, in this context, design of design control tool, gains importance. It is the structure of space that is produced by the design control by controlling the contents and the components of a perceivable whole.

2.4 Urban Design

The theoretical discussions lead the consideration from general design theory to more specific field, urban design. In this section, debates of the definition of urban design, dimensions of urban design and types of urban design are discussed in terms of design control. Firstly, debates of the definition of urban design are discussed within the definitions of Madanipour (1996). In order to focus on debates related to design control tools, three debates related to definition of urban design is selected as 'Product vs. Process', 'Scale of Urban Design', and 'Visual or Spatial Emphases of Urban Design'. Secondly, dimensions of urban design are discussed in terms of Carmona, Heath, Oc and Tiesdell (2003)'s categorisation. As it is mentioned in Figure 1.1, the framework of this thesis is based on "morphology of space" (Günay, 2006, p. 20) and also dealing with "spacescapes and aesthetics" (Günay, 2006, p. 20). Therefore, in order to focus on the dimension which design control tools dealing with, morphological and visual-aesthetic dimensions are specifically discussed.

Thirdly, types of urban design are discussed in order to state the use of design control tools in which type of urban design, and whether it is effective for every type of urban design. Thus, the types are discussed in terms of Lang's Typology of Procedures and Products of Urban Design. Lang (2005) categorizes urban designs according to procedures that they are produced, types of product, and states the design paradigms that they belong to in order to typify an urban design. In Lang's typology the procedures are more determinant factor (p. 57). Lang (2005) states deficiency of urban design literature as in literature the focus is mostly to the products of urban design and design paradigms/approaches rather than procedures of producing the products. Therefore, by its emphasis on the procedures, Lang's typology matches the emphasis of the thesis on the tools for producing urban design.

2.4.1 Debates of the Definition of Urban Design

The debates about the definition of urban design are not itself the case of the study; on the other hand, the related debates of design control tools are discussed in this section.

Madanipour (1996) states current areas of debate related to definition urban design as in three groups; areas of debate related to definition urban design about the product, about the product and process, and about the process.

According to Madanipour (1996), areas of debate related to definition urban design about the product are:

“the **scale** of urban fabric which urban design addresses,
the **visual or spatial** emphases of urban design,
the **spatial or social** emphases of urban design,” (p. 93)

areas of debate related to definition urban design about the **product and process** are:

“the relationship between **process and product** in the city design,” (p. 93)

areas of debate related to definition urban design about the **process**:

“the relationship between different **professionals** and **their activities**
the **public or private sector** affiliation of urban design,
the design as an **objective-rational** or **expressive-subjective** process.”
(Madanipour, 1996, p. 93).

The debates about the relationship of process and product in terms of urban design, the scale in terms of urban design and the visual or spatial emphases of urban design are selected as related areas of discussions for design control tools for the study considering the theoretical framework drawn former section.

First one is the product and process. As it is mentioned former section, Klee defines design with **the process producing the form** by use of the example of “**apple from blossom to fruit**”, which summarizes the debate of process and product in design: apple is not just the apple, but apple is a complete conceptual being including the process of “*from blossom to fruit*”. More specifically, Madanipour (1996) discusses design, process and product in terms of urban design as: “*A more precise way of putting it may be as follows: urban design is a process that deals with shaping urban space, and as such it is interested in both the process of this shaping and the spaces it helps to shape*” (pp. 104-105) . In other words, urban design itself is defined by Madanipour (1996) as the process dealing with product the product itself. Thus, Madanipour (1996) addresses the term

'urban design' as the term that includes both the process and the product: while **the urban** corresponds to *the product*, **the design** corresponds to *the process* (pp. 104-105).

Both product and process of design are topics for design control tools. Therefore, it is critical to consider the product and process of urban design for design control tools. The tools deal with *how to organise the design process* and *how to organise the components of design*.

Second one is the scale of urban design. Madanipour (1996) defines two scales as two different types of urban design as macro-urban design and micro-urban design, "*with different concerns and foci*" (p. 96). In this sense, macro-urban design is "*the design of cities and settlements has focused on the broad issues of organization of space and functions*", on the other hand, "*micro-urban design has concentrated on the public face of architecture, on public space in parts of the cities, and more detailed considerations of design at that scale*" (p. 94).

Defining urban design for both macro and micro scales, is important issue for design control tools, because the problem of reduction of urban design to micro scale design originated from the limited consideration of scales of urban design. On the other hand, design control tools are tools relevant tools for both macro and micro scales. They also are required to be considered for both scales in order to produce an integrated consistent design approach. Thus, it is critical to comprehend urban design for multi-scales in every scale of planning system to injecting design in every of which scales. In this perspective, examples for design control tools for macro scales of urban design are city guides, or neighbourhood guides and design control tool for micro scale is design code. On the other hand, there are tools for design control which controls the principles and methods for urban design for broader scales which are national or regional guides and guidance for guidance tools like urban design compendiums. In this sense, three scaled urban design is more appropriate for considering both urban design and design control tools: macro-scale for national-regional guidance, design policy, and guidance for guidance; meso-scale for city, area and district based guides; and micro scale for site specific, architectural guides and design codes.

Third one is the debate about visual or spatial emphases of urban design. Madanipour (1996) criticizes the reduction of urban design to visual or aesthetic design rather than spatial design. It is to be considered that visual qualities of urban design are one part of spatial qualities (p. 101). The debate is relevant for design control tools, because the reduction of urban design to the visual emphases is resulted in reduction of design control to the aesthetic control, which is very critical for design control. The distinction between the approaches determines whether the design control aims to produce spatial value or aiming to upgrading existing urban space in terms of aesthetic values.

2.4.2 Dimensions of Urban Design

Carmona et al. (2003) propose six dimensions of urban design as morphological dimension, perceptual dimension, social dimension, visual dimension, functional dimension, and temporal dimension. These dimensions are overlapped, interacting to each other and have a co-productive relationship within the production of space (Carmona et al., 2003). While it is obvious that all six dimensions are determinants for the production of urban design, this study focuses on morphological and visual-aesthetic dimensions in terms of contents and components of design control.

First one, morphological dimension of urban design is, in a simple definition, layout and configuration of urban form (Carmona et al., 2003, p. 61). It consists of building structures, street and block patterns, plot patterns, and squares (Carmona et al., 2003). Street patterns are defined by Carmona et al. (2003) as '*cadastral (street) patterns as the layout of urban blocks and street network*', that is integrated pattern of street and block structures. As one of the elements of urban space, streets are structural inputs with urban blocks for production of urban form; on the other hand, urban blocks are defining elements for street network. Thus produces street-block integrated pattern. Carmona et al. (2003) define integrated pattern as "*the layout and configuration of urban block structure is important both in determining the pattern of movement and in setting parameters for subsequent development.*" (Carmona et al., 2003, p. 80). Designing layout and configuration of urban block in relation to the design control are

also inputs for production of urban space without designing the architectural entities (Carmona et al., 2003, p. 80).

Second one, visual-aesthetic dimension, defines urban space regarding aesthetic entities of streets and squares, and approach of Townscape. Additional elements of visual-aesthetic dimension are hard and soft landscapes (floorscape as pavements and landscaped floor space, street furniture, soft landscaping and urban architectural elements (Carmona et al., 2003).

Design control tools, in this study, are considered as tools to control morphological and visual-aesthetic dimensions of design within the production process of urban space. They are the tools which control over the morphological and visual-aesthetic parts of the design in order to produce the whole schema.

2.4.3 Typology of Urban Design

In addition to the relevant discussions of design control tools with debates related to definition of urban design and dimensions of urban design, the discussion related to types of urban design is also required for use of design control tools.

Typologies in urban design are related to structure, function and form (Cuthbert, 2006). Lang (2005) defines type for his typology of procedures and products of urban design as *“A type, as understood here, is a construct of a product or a process that serves as a generic model of a way of thinking”* (p. 42) and defines typology as *“the study and theory of types and of classification systems”*, basically *“a classification system”* (p. 43). Any typology is required to be simple, clear, to cover variables and constancies (Lang, 2005, p. 43).

Lang (2005) constructs a typology for procedures and products of urban design according to *“the **procedure that is followed** and/or **the degree of control** that a designer, as an individual or as a team, has over the creation of a product”* (p.27). In other words, he defines the types according to process that leads to the product and to control of designer over the procedure that leads to the product. Discussion of

procedures of urban design from such a perspective is an important issue for design control tools in terms of defining relevancy of design control tools according to the types.

The types of the typology are **total urban design**, **all-of-a-piece urban design**, **piece-by-piece urban design** and **plug-in urban design** (Lang, 2005, pp. 27-28).

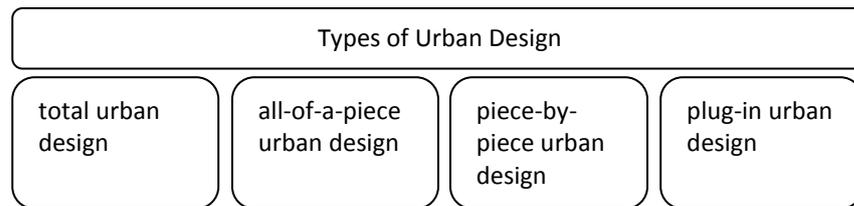


Figure 2. 3 Lang's Types of Urban Design (Produced from Lang, 2005)

First of four, **total urban design**, is the type of urban design “*where the urban designer is part of the development team that carries a scheme through from inception to completion*” (Lang, 2005, p. 27); in other words, urban designer is the part of the development and design team in all phases of development from the very beginning of the project to the implementation phase by controlling total development and design. This type of design requires having a design team which consists of related professions of the field such as architects, urban designers, planners, landscape architects, transportation engineers, etc. The scale of this type of urban design varies from extensions of cities, new towns to parcel-based designs (Lang, 2005, p. 28).

Second of four, **all-of-a-piece urban design**, is the type of urban design “*where the urban design team devises a master plan and sets the parameters within which a number of developers work on components of the overall project*” (Lang, 2005, p. 27); in other words, overall design guidance schema and rules are designed by a design team

and more than one developer produces the actual design according to these rules. It is the type that the study concentrates on, which is implemented for multi-developer, multi-designer, and mostly multi-phased urban development of which property is belong

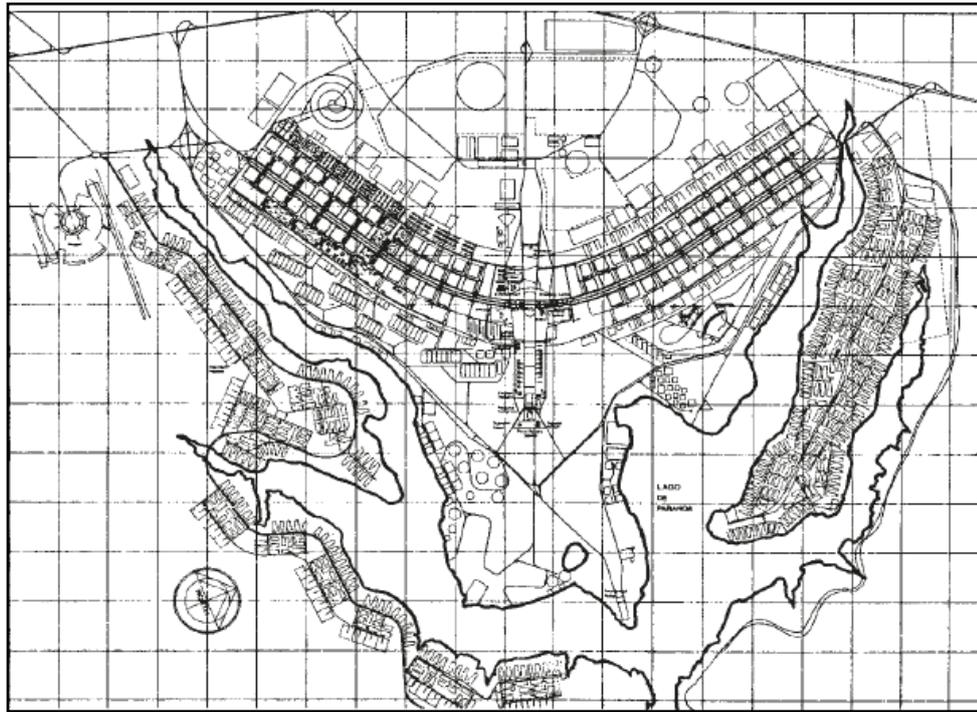


Figure 2.4 Plan of Brasilia (Source: Lang, 2005, p. 29)

to more than one property owner. For such a multi-partner design it is not possible to implement a design approach like total urban design (Lang, 2005).

‘All-of-a-piece urban design’ ... involves creating a **vision** for a city or one of its precincts and capturing that **image in a conceptual design**. The conceptual design is then **divided into parcels of land each of which is developed and designed by different people** in accordance with a set of **design guidelines, or directives** (Lang, 2005, p. 148).

For all-of-a-piece urban design process (which is demonstrated in Figure 2.5 in detail), design process is divided into **two main steps** which are designing general illustrative three-dimensional design schema to guide design in parts and design of parts according to this guidance schema. In order to produce the design according to general guidance schema, appropriate to the complex structure or largeness of the development area, it is possible to produce some guidance documents for different topics or policies or areas of the development area. (Lang, 2005) The degree of control, also, varies from strictly controlled design schemas to more, highly flexible ones (p. 204).

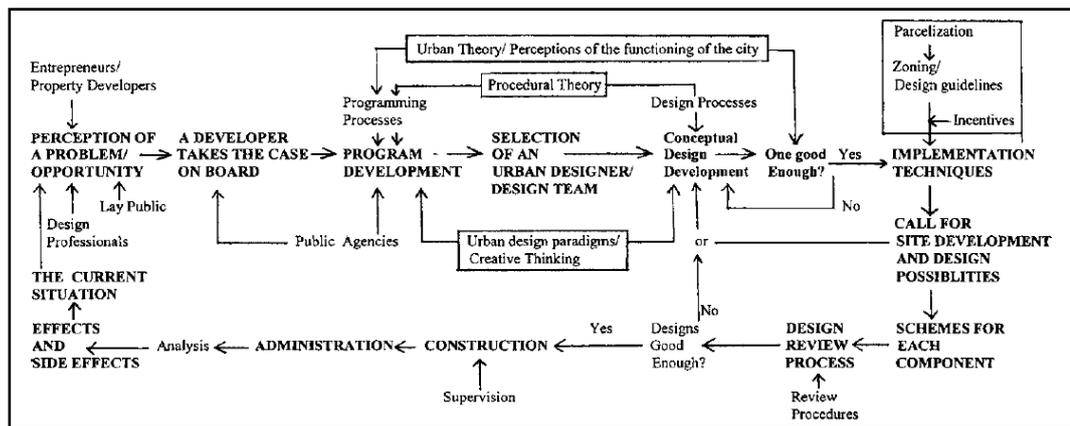


Figure 2.5 Algorithm of steps of all-of-a-piece urban design (Source: Lang, 2005, p. 31)

Third of four, **piece-by-piece urban design**, is the type of urban design where “*general policies and procedures are applied to a precinct of a city in order to steer development in specific directions*” (Lang, 2005, p. 28); in other words, general design policies and methods implemented to a particular district in order to promote development for a desired direction (Lang, 2005, p. 28).

It [piece-by-piece urban design] does not involve specific physical design projects but rather the design of policies that promote the development of certain building and urban types within specific precincts, of a city. Piece-by-piece urban design involves the use of zoning and other planning instruments to achieve urban outcomes without using site-specific design guidelines or directives (Lang, 2005, p. 148).

Piece-by-piece design, according to Lang's typology, is building the city or a district by use of design objectives, development and design policies, and incentives and controls



Figure 2.6 Masterplan for South Yard Enclave in Devonport, includes residential units (450 houses), one community healthcare centre, commercial units and working. (Source: Evans, Kropf, Saxena, & Waite, 2007, p. 85)

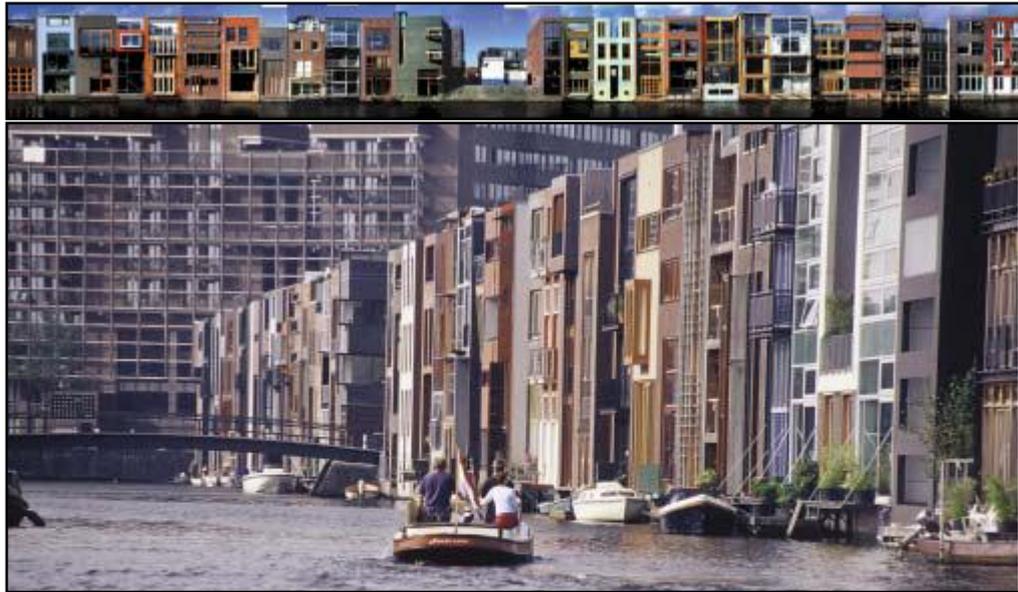


Figure 2.7 Redevelopment of Borneo Sporenburg, “60 free parcels of land were made available on which private individuals were able to build their own homes under the guidelines provided by the design codes.” (Evans et al., 2007, p. 129).

to build these objectives (Lang, 2005, p. 32). The use of incentives is the main tool for this type of urban design, to promote the desired development in particular districts, mostly assigned as special planning districts (Lang, 2005, p. 33). These interventions are indirect interventions to the uses and types of facilities in a development district that direct the development to the desired direction of design objectives. It is the use of market conditions with incentives in term of design goals.

Last of four, **plug-in urban design**, is the type of urban design “where the design goal is to create the infrastructure so that subsequent developments can ‘plug in’ to it or, alternatively, a new element of infrastructure is plugged into the existing urban fabric to enhance a location’s amenity level as a catalyst for development” (Lang, 2005, p. 28); **in other words**, the type is based on the promotion of desired design by designing and providing strategic technical and social infrastructure facilities such as schools, libraries and public services by using their catalytic effects for design and development. The focus

is generally “on the design of links between places” (Lang, 2005, p. 148). Lang (2005) defines two sub-types for plug-in urban design which are “the provision of the infrastructure of ... a precinct of a city or suburb, and the selling of sites into which individual developers can plug buildings” (p. 33) and “plugging the infrastructure into an existing urban fabric to enhance its amenity value” (p. 33). This second phase of design after providing the infrastructure can be strictly controlled by pre-determination of uses of buildings and production of guidance documents, as in the process of all-of-a-piece design type; or can be left to the market forces (Lang, 2005, p. 33).

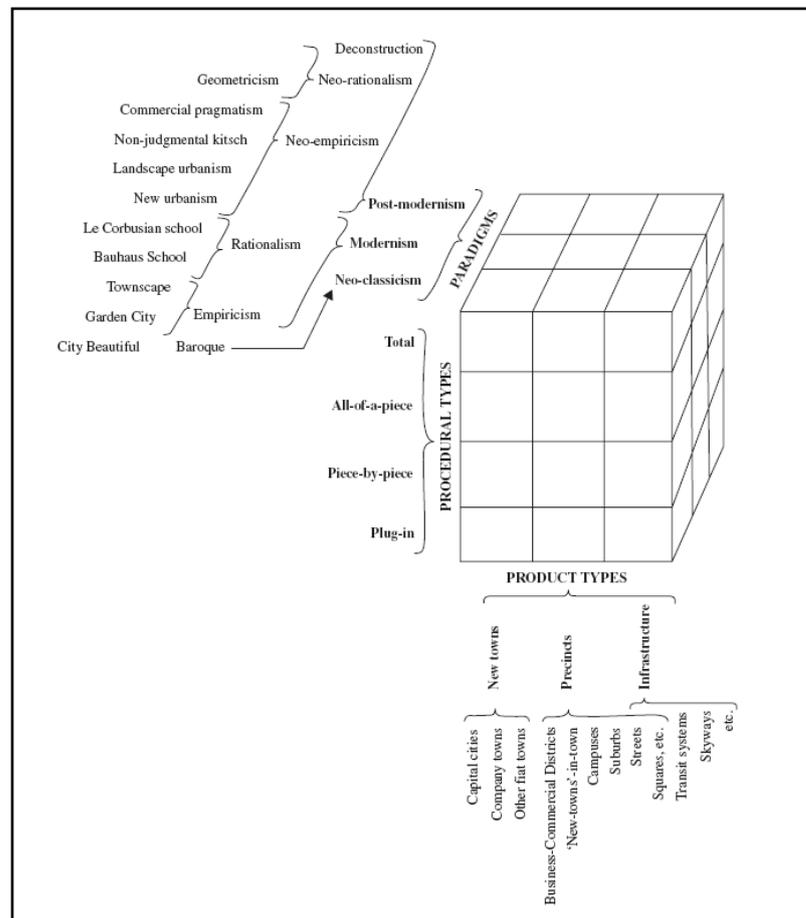


Figure 2.8 Typology of urban design by Lang (Source: Lang, 2005, p. 56)

CHAPTER 3

DESIGN CONTROL

3.1 Design Control in History

The fundamental nature of design guidelines has changed little over the centuries. Façade guidelines prescribing the nature of fenestration to be incorporated on new buildings can, for instance, be traced back at least to fourteenth century Italy. What has changed and will no doubt change in the future are the perceptions of the mechanisms that achieve the design goals and the types of guidelines that are used to ensure those mechanisms are incorporated in a design (Lang, 2005, p. 205).

As Madanipour (1996) asserts, there is a basic apparent dichotomy of and tension between the order-disorder, in other words, order-disorder debate; started with and varied as the debate between Aristotle and Plato, understanding world through senses or reason, to Foucault's criticism of Reason (p. 75). This spectrum of varies of approaches to order-disorder produces different approaches to the production of urban space as:

Whereas Athens was a diverse city with a disordered geometry, Hippodamus, who was known as the father of town planning, put forward his famous plan for Miletus, a rational layout of streets and urban blocks, envisaging a carefully planned socio-spatial structure. ...

.... Such attempts to impose geometrical order onto the disordered growth of towns and cities can be followed throughout history in the design and development of new settlements (Madanipour, 1996, p. 75) .

Despite this varied approaches to order-disorder, according to Imrie and Street (2009) *“The making of urban spaces through the application of spatial rule, regulation and rationality has been a staple feature of urbanism across many different socio-temporal, political and spatial contexts.”* (p. 2510). Despite its increasing popularity in use (CABE, 2005), design control is not a newly developed concept, in fact its tools have been relevant for production of urban space through history (Street, 2007). Thus, throughout history different types of design control and regulation tools have been developed in different contexts or according to conditions of regulation (Ben-Joseph, 2005; CABE, 2005; Carmona et al., 2006). The aim of this section is not providing a comprehensive overview for historical development of design control and regulatory tools, but exemplifies some particular cases from different periods of history and stages of urban development as supportive examples of relevancy of regulation, rules and codes for these periods and stages.

According to Ben-Joseph (2005), by the expansion of cities; laws, social norms and codes have transformed into the concrete codes and standards in practice (p. 6). Some of the selected examples of the codes are Hammurabi Code (1780 B.C.) (Ben-Joseph, 2005; L. W. King, 2007) ; code of Sennaccherib, the Assyrian King between the years of 705-681 B.C.; Law of Caesar on Municipalities (44 B.C.) (Johnson, Coleman-Norton, & Bourne, 1961); “The Ten Books on Architecture” of Vitruvius (CABE, 2005; Carmona et al., 2006; Vitruvius, 1960); regulations in European medieval cities (Ben-Joseph, 2005; Broadbent, 1990; Kostof, 1991); regulations in Renaissance and Baroque Cities and treatises of Renaissance; and Industrial Revolution and The Building and Public Health Acts of England (Ben-Joseph, 2005).

3.1.1 From Code of Hammurabi Code to De Architectura

The relief of Sennaccherib (Figure 3.1), who is the Assyrian King between the years of 705-681 B.C., demonstrates design control and regulations for intervening the urban built environment for his age. Another widely-known example which goes back to more than approximately 1000 years (1795-1750 BC) is the Code of Hammurabi (L. W. King, 2007, p. 46).

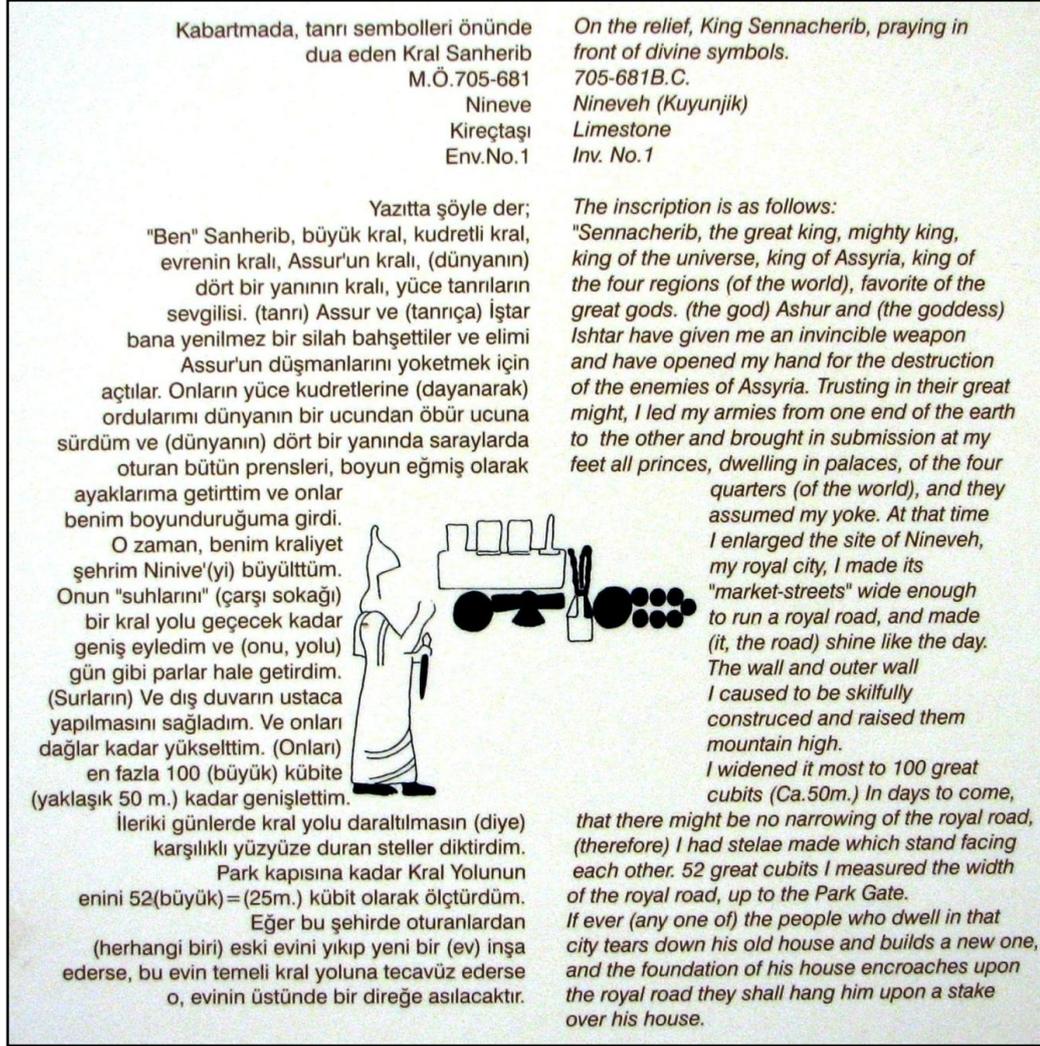


Figure 3.1 Code of Sennaccherib (Photograph taken from İstanbul Archaeology Museum, Baykan Günay's Personal Archive)

Table 3.1 shows six articles of the Code of Hammurabi, which are related to the built environment and aim to regulate.

While Code of Hammurabi deals with construction and sanctions, Law of Caesar on Municipalities (Figure 3.3), 44 B.C. is about maintenance of urban space (Johnson et al., 1961).

Table 3.1 Selected articles from The Code of Hammurabi

<p>228. If a builder build a house for some one and complete it, he shall give him a fee of two shekels in money for each sar of surface.</p> <p>229. If a builder build a house for some one, and does not construct it properly, and the house which he built fall in and kill its owner, then that builder shall be put to death.</p> <p>230. If it kills the son of the owner the son of that builder shall be put to death.</p> <p>231. If it kills a slave of the owner, then he shall pay slave for slave to the owner of the house.</p> <p>232. If it ruins goods, he shall make compensation for all that has been ruined, and inasmuch as he did not construct properly this house which he built and it fell, he shall re-erect the house from his own means.</p> <p>233. If a builder build a house for some one, even though he has not yet completed it; if then the walls seem toppling, the builder must make the walls solid from his own means.</p>
<p>Selected articles from The Code of Hammurabi (Source: King, 2007, p. 46)</p>

Table 3.2 Selected issues from Law of Caesar on

<p>The burden of repair and maintenance of the public streets of Rome was placed on the property owners under supervision of the aediles ([articles] 7-13).</p> <p>Vehicular traffic during the day, from sunrise to late afternoon, was limited to outgoing carts or to those with special license, with a few minor exceptions ([articles] 14-16).</p> <p>The use of stoas, arcades, and public areas by private individuals was regulated ([articles] 17-19).</p> <p>After a passage on two minor points ([articles] 20-21), the qualifications of magistrates and senators in Italian communities were prescribed ([articles] 22-27)</p>
<p>Selected issues from Law of Caesar on Municipalities (Source: Johnson et al., 1961, p. 93)</p>

Three examples below exemplify different issues of regulation the built environment: maintenance, sanctions, regulation of use. The first example is about the physical components and the maintenance of the built environment, mentioning the width of the royal road, measurements of it, and the sanction in case of any violation of code; while second one is about the sanctions for responsible of unsuccessful building process. The common point is for the first two examples that emphasis is on the sanctions. On the other hand in the third example, Law of Caesar on Municipalities, the emphasis is on **how** the maintenance of roads, vehicular traffic would be regulated.

Different from the examples of contemporary urban design tools, whereof three examples of ancient historical codes are mostly about maintenance of urban built environment. However, they are not limited by only maintenance. As fourth example, *Ten Books on Architecture by Vitruvius (De Architectura, 24 B.C.)* is selected which is one of the widely-known examples of ancient codes (Vitruvius, 1960). Different from whereof three examples, it is not a code from ruler to implement by force, but a comprehensive compendium varied from building a city to materials to use. In this section, *De Architectura* is discussed in terms of its topics, contents and components.

De Architectura consists of ten separate books, every of which concentrates on one particular topic. The first six of ten, are about architecture and the urban built environment (Yeğül, 2005) ; whereas, the following one is about materials and details for architecture. The eighth book is about the technical infrastructure for water, buildings for delivering and obtaining water. The ninth one is about astronomy and astrology, and building the time-pieces: the water clock and gnomon. Finally, the last one, tenth book is about the govern machines (by being engineer who had engaged battle field and combat vehicles) (Yeğül, 2005).

With reference to the method of the thesis, contents and components of the books are as significant as the topics for, especially, of the seven books of ten. The order of the content or components is according to the original order of the Books of Vitruvius. Contents are demonstrated by (-) before the concept and components are demonstrated by [].

First of seven, (-) contents of and [] components for the contents of Book I are:

education of architecture;

fundamental principles of architecture which are

- order,
- arrangement [components: ground plan, elevation, perspective],
- eurythmy (beauty and fitness),
- symmetry (based on symmetry of human body, as being anthropocentric),
- propriety (perfect match with the canons of the style that the building is belong, being suitable for its usage and being suitable for its natural environment) and
- economy (in term of feasibility);

departments of architecture which are

- art of building
(public ones which are *defensive* (- contents: walls, towers, and gates, permanent devices for resistance), *religious* (- contents: fanes and temples), and *utilitarian* (- contents: harbours, markets, colonnades, baths, theatres, promenades, and all other similar arrangements); and
private ones for individuals),
- making of time-pieces, and
- the construction of machinery;

principles of architecture which are

- **durability, convenience, and beauty** (*firmitas, utilitas, venustas*)(Vitruvius, 1960, p. 17)

building the city which are

- site of a city [components: height of the site, temperature, wind, orientation according to natural elements and sun];
- city walls (- contents: towers, walls)
- directions of the streets according to the winds [components: direction of wind, direction of streets, tower of winds]
- sites for public buildings (- contents: temples according to Gods, other public buildings) (Vitruvius, 1960, 2005)

Second of seven, (-) contents of and [] components for the contents of Book II are:

origin of the dwelling;

materials used for the construction which are

[component: brick; components used for producing brick, types of brick]

[component: sand ; cautions about the use of sand, types of sand]

[component: lime (production and use of lime)]

[component: pozzolana; source, production, and use of pozzolana]

[component: stone; source, use, and type of stone]

[component: timber; kinds and production of timber)

methods of building walls which are

- different methods for and cautions about the construction
- style of walls,

[component: types of walls] (Vitruvius, 1960, 2005)

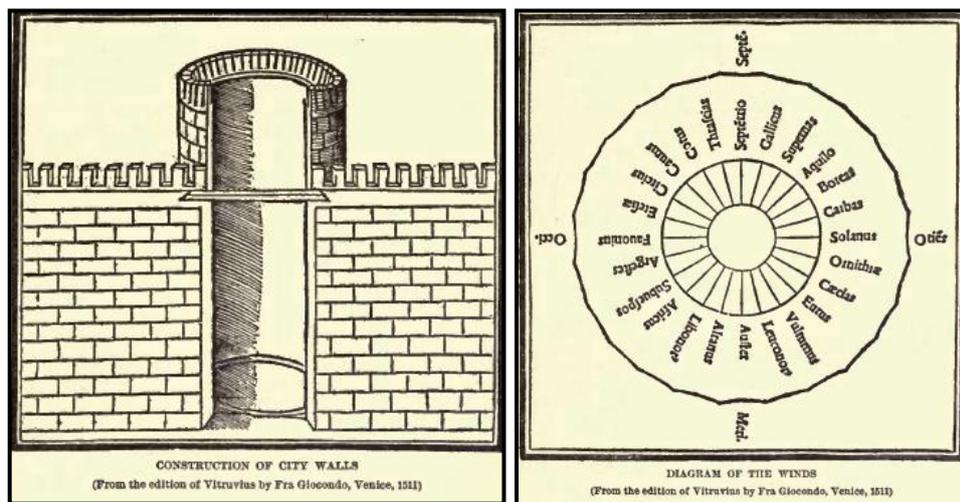


Figure 3.2 Construction of City Walls and Diagram of Winds from Vitruvius
(Source: Vitruvius, 1960, pp. 23-29)



Figure 3.3 Tower of winds of Athens, Personal Archive

Third of seven, (-) contents of and [] components for the contents of Book III are: design of temples (anthropocentrism and symmetry) which are

- symmetry,

[components: proportions, ratios, canons]

[components: columns/foundations/ base, capitals, entablature in Ionic order]

classification of temples which are

- styles of temples (in-antis, prostyle, amphiprostyle, peripteral, pseudodipteral, dipteral, and hypaethral) [components: place of columns, number of columns]
- classes of temple [components: the proportions of intercolumniations and of columns] (which are “*pycnostyle, with the columns close together; systyle, with the intercolumniations a little wider; diastyle, more open still; araeostyle, farther apart than they ought to be; eustyle, with the intervals apportioned just right*”) (Vitruvius, 1960, p. 78)

Fourth of seven, (-) contents of and [] components for the contents of Book IV are:

Three orders (Ionic, Doric and Corinthian) and (Tuscan, Circular, Other Varieties of Temples) (Altars) which are

[components: proportions, ratios, cannons]

[components: columns/foundations/ base, capitals, entablature in Corinthian order]

[components: ornaments of three orders: place/ origin/ order]

[components: face of temples (orientation)/ doorways of temples/] (Vitruvius, 1960, 2005)

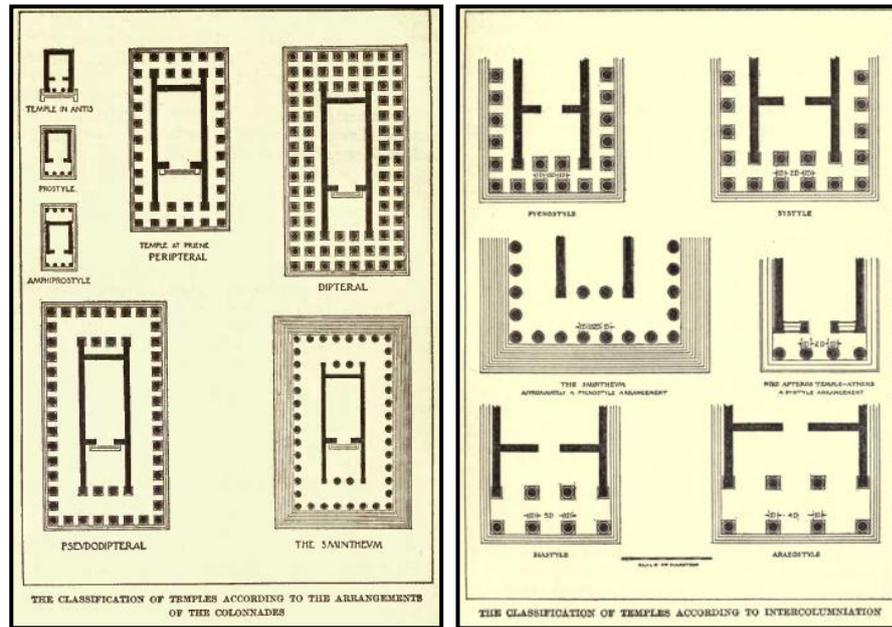


Figure 3.4 Types of temples (Source: Vitruvius, 1960, pp. 76, 79)

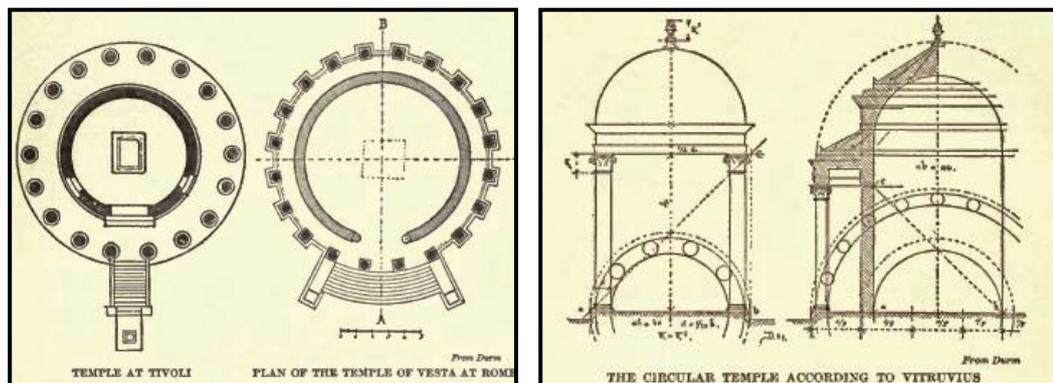


Figure 3.5 Plan and Section of Temples (Source: Vitruvius, 1960, pp. 123, 124)

Fifth of seven, (-) contents of and [] components for the contents of Book V are:

Types of civic public buildings

- forum, basilica, treasury, prison, senate house, theatre, colonnades and walks, baths, palaestra, harbours, breakwaters, shipyards) which are,

[components: location and orientation of the buildings, building plans, type, proportions, ratios, cannons, materials] (Vitruvius, 1960)

Sixth of seven, (-) contents of and [] components for the contents of Book VI are

Style and types of housing, characteristics of houses which are,

- symmetry, climate, orientation of the buildings in principle,
- styles of cavaedium (central hall): (*tuscan, corinthian, tetrastyle, displuviate, and testudinate*)

[components: building plans and structure, type, proportions, ratios, cannons, materials] (Vitruvius, 1960, 2005)

Last of seven, (-) contents of and [] components for the contents of Book VII are:

“polished finishings and the methods of giving them both beauty and durability” (Vitruvius, 1960, p. 201) which are,

[components: floors, stucco, vaulting, ornamentation](Vitruvius, 1960, 2005)

The detailed analysis of De Architectura by disclosing its contents and components shows that De Architectura is a comprehensive book of codes starting with the guidance of the principles of architecture, location choice of a city, to prescription of public and private buildings and to the materials in use in its age. The aim of the guide is to propose criteria to build a healthy city with its orientation, location choice, buildings and materials to use; and the principles, *firmitas, utilitas, venustas* (durability, convenience, and beauty), sum up the approach of De Architectura to urban space and architecture.

3.1.2 From Medieval European City to Industrial City

Medieval Irregularity

We like to think that planning legislation, building regulations and bylaws are products of 20th century bureaucracy and that whilst in Classical and Renaissance times architects may well have been constrained by the geometric layouts of their cities, in Europe in the Middle Ages, at least, people were free to build exactly as they pleased, wherever and whenever that may have been. How else can we account for the picturesque irregularity of the medieval city? (Broadbent, 1990, p. 31)

The point is, here, not to discuss the bases of irregular pattern, but to discuss the relevancy of regulations within the irregularity of urban built environment. **Medieval European city** is generally considered, by having irregular patterns, being free from regulation. In fact, Broadbent (1990) asserts that irregular medieval European city is not free from regulation related to urban built environment, is not unregulated or unplanned. Kostof (1991) also mentions the codification attempts of late medieval cities with the example of Siena (p. 70). Being one of the featured examples of European medieval city, Siena explicates the regulation in irregular pattern. Some of the examples of regulation that regulate the irregularity of Siena are states in Broadbent (1990) as:

Which is exactly as they should be since in 1297 the Council General of Siena passed an Ordinance to the effect that **all the houses on the Campo should have windows 'a colonnelli'** to match those of the Palazzo Pubblico and also 'senza alcuno ballatoio'—that is without any open galleries. (p. 31)

This is not the first ordinance. One of the earlier ordinances, *Ordinance of Costituto 1262*, regulates building line, position of architectural elements and buildings with respect to the streets:

... as far as possible, **each street would take a recta linea from end to end.** This could be achieved by using as a reference point the corner of a building, a pilaster, a tower or whatever; finding another such reference point and stretching a cord between them. Any building which passed beyond this cord, thus forming an obstacle, would be deemed out of line and subject to demolition. (Broadbent, 1990, p. 32)

It also aims to regulate the streets:

The Costituto also **prescribed the widths for various kinds of street** ranging from six braccia (a braccio is the length from elbow to finger-tip which makes this about three and a half metres) and 8 to 10 braccia (4.7 to 5.9 metres) for more important streets. The main street by the cathedral was

considered beautiful and light at 10 braccia, whilst the Cavina di Salicol, larger still, was considered ample, light and luminous. Apart from specifying the dimensions of streets, requirements for drainage, and so on, projections over and into the streets were covered by legislation.... (Broadbent, 1990, p. 32)

In addition to ratios, relative referenced building line regulations and other regulations; there were also some regulations related to maintenance and use of the urban public space (Broadbent, 1990, p. 32).

On the other hand, Ben-Joseph states that these regulations, ordinances of rulers, aiming to restrict the encroachments, starting from twelfth century, were **not enough to regulate the urban built environment** in medieval towns (Ben-Joseph, 2005, p. 20).



Figure 3.6 From Piazza Del Campo to surrounding buildings (Personal Archive)

Renaissance & Baroque

Renaissance city took shape according to the concepts of regularity. According to Ben-Joseph (2005), *“regularly shaped spaces, uniform widths of streets, and standardized frontages”* are relevant features for Renaissance and Baroque periods (p. 26). Morris (1994) defines three main morphological features of renaissance urbanism as *“the*

primary straight street”, “*gridiron-based districts and “enclosed spaces”* like “*squares, piazzas and places*” (p. 159).

Kostof (1991) states “*Florence had begun to campaign for streets that were “pulchrae, amplae et rectae” -beautiful, wide and straight*” (p. 70), for proto-renaissance of Florence.

Brucker (1983) mentions the transformation that Florence had been encountered from Medieval to Renaissance as:

Medieval Florence was a city of towers, both ecclesiastical and secular, and her central zone was a solid, dense block of masonry, broken only by thin lines of alleys and narrow streets, and by occasional courtyards and squares. **But either of these features survived into the sixteenth century** as permanent characteristics of the urban milieu. The towers gradually declined in number, their tops lopped off **by communal ordinance in 1250**, or demolished to make room for other buildings. **The transformation of the urban center into a more spacious area, with larger squares and wider streets, was a gradual process, not finally completed until the 19th century.**(pp. 7-8)

Kostof (1992) also states the transformation in terms of role of standardization:

Standardization gained in popularity in 15th century Florence as the increase in the demand for buildings began to favour specialized workers producing standard details (like cornices or mullions) that would be ready for assembly.(p. 213)

In addition to the adopted approach of regularity and standardisation, with reference to the order-disorder debate mentioned above; other relevant issue for discussion of regulations and codes for renaissance is treatise tradition. Vitruvius was rediscovered by architects and artists of renaissance (Morris, 1994, p. 158). Mallgrave (2006) defines discovery of Vitruvius a “*cornerstone of this classical revival*”. Architects of Renaissance like Alberti, Flarete, or Palladio highly inspired from Vitruvius in terms of writing books on particular topics (p. 27).

One of these treatises is Alberti’s *On the Art of Building* (Ten Books on Architecture of Alberti). While Alberti approaches Vitruvius critically, he uses the structure of Ten Books

of Vitruvius and expresses his approach by using Vitruvius's concepts (Mallgrave, 2006). The ten books of Alberti are Books One Lineaments, Book Two Materials, Book Three Construction, Book Four Public Works, Books Five Works of Individuals, Book Six Ornaments, Book Seven Ornament to Sacred Buildings, Book Eight Ornament to Public Secular Buildings, Book Nine Ornament to Private Buildings, Book Ten Restoration of Buildings (Alberti, 1988).

Other important books are Palladio's The Four Books on Architecture which is also based on Vitruvian concepts (Mallgrave, 2006). The Four Books of Palladio are about "preparation, foundation and materials", column types, orders, room types (Book One); dwellings, types of dwellings (Book Two); "public works" (squares, roads, bridges, basilicas) (Book Three); "ancient sacred architecture" (Book Four) (Tavernor, 1997, p. xv).

The two treatises show the effect of Vitruvius on renaissance architects. As mentioned above, even if Alberti criticizes Vitruvius, he follows his concepts and structure of Ten Books of Vitruvius, therefore, it is not only the concepts of classicism affecting the renaissance, but the method of producing the complete series of books for urban and architectural issues to express the approaches and methods.

Kostof (1992) sums up the approach of Baroque to the use of building codes and guidelines in Baroque as *"The climax of esthetic street regulation is the pride of Baroque urban design."* (p. 200). However, aesthetic regulation is not the only aim, the functional aim of the building codes, ordinances and later Acts, such as 1667 The London Building Act after 1666 Great Fire of London and 1774 The Building Act, is to prevent disasters like fires, provide health and safety, and to provide flow of traffic. Besides the Acts, for 15th century and so on cities like Florence, Dresden, Berlin have been encountered several building codes, regulations dominating building heights, street widths, jetties. (Kostof, 1992, p. 200).

Industrial Revolution and Public Health Acts

But let all men remember this -- that within the most courtly precincts of the richest city of God's earth, there may be found, night after night, winter after winter, women -- young in years -- old in sin and suffering -- outcasts

from society -- ROTTING FROM FAMINE, FILTH, AND DISEASE. Let them remember this, and learn not to theorize but to act. God knows, there is much room for action nowadays.

Oct. 12th, 1843; London Times (quoted in Engels, 1845, p. 75)

Responses to the congested urban form of 19th and early 20th can be divided into three main categories: regulation and sanitation of existing built environment in cities (Building Acts and Public Health Acts) (Ben-Joseph, 2005; Broadbent, 1990); operations of radical demolition of existing structure aiming political purposes (Haussmann) (Broadbent, 1990; Kostof, 1991, 1992) and new town movements as proposals of brand new urban environments (Garden City of Howard) (Broadbent, 1990; Kostof, 1991, 1992). For this thesis, Public Health and Building Acts are discussed as examples for attempts of regulation and coding.

Regulating city through code and regulations had been accepted in UK, US and especially Northern Europe (Ben-Joseph, 2005). Sanitary conditions of 19th and 20th century, and before, great fires in 17th century; had resulted in building acts and health and safety regulations. England had encountered series of building and public health act started with 1667 The London Building Act after 1666 Great Fire of London, 1774 The Building Act, 1844 The Building Act, 1848 The Public Health Act, 1875 The Public Health Act, 1887 The Model By-Laws (Ben-Joseph, 2005).

In order to understand the rationale of Building and Public Health Acts, the conditions of urban settlements of 19th and early 20th century are required to be inspected. A quotation from Symons, who is Government Commissioner for the investigation of the condition of the hand-weavers, sums up health and safety conditions of that age as:

In the lower lodging-houses ten, twelve, and sometimes twenty persons of both sexes and all ages sleep promiscuously on the floor in different degrees of nakedness. These places are, generally, as regards dirt, damp and decay, such as no person would stable his horse in. (Engels, 1845, p. 79)

Thus, "Report on The Sanitary Conditions of The Labouring Population of Great Britain" in 1842 (Ben-Joseph, 2005, pp. 192-193) has been produced. After 1842, The Building Act of 1844 of England had been produced consisting of comprehensive regulations

including town planning principles. The acts regulates **street width and building set-back in order to provide light, air, and other healthy conditions for urban settlements.** Later acts also prescribe more detailed features such as **size of rooms.** (Ben-Joseph, 2005, p. 29). The Act 1848 enforces regulations including sanitary facilities, drainage, water supply systems, and sewers (Broadbent, 1990, p. 114) . The most comprehensive one, 1875 The Public Health Act (Broadbent, 1990, p. 114) includes Housing Bye Law (Ben-Joseph, 2005, pp. 192-193). It consists of more detailed regulations including **construction** of dwellings, sanitary facilities, and *“Bye-Laws covering such things as the levels, widths and construction of new streets, their drainage and so on.”* (Broadbent, 1990, p. 114).

Broadbent states key section of proposed By-Laws of Act 1875 as:

1. with respect to the level, width and construction of new streets and provision for the sewerage thereof
2. with respect to the structure of walls, foundations, roofs and chimneys for securing stability and the prevention of fires and for the purposes of health
3. with respect to the sufficiency of space about buildings, to secure a free circulation of air, with respect to the ventilation of buildings
4. with respect to the drainage of buildings, from water closets, earth closets, privies, ashpits, and cesspools in connection with buildings, and to the closing of buildings, or parts of buildings, unfit for human habitation and to prohibit their use for such habitation (Broadbent, 1990, pp. 114-115)

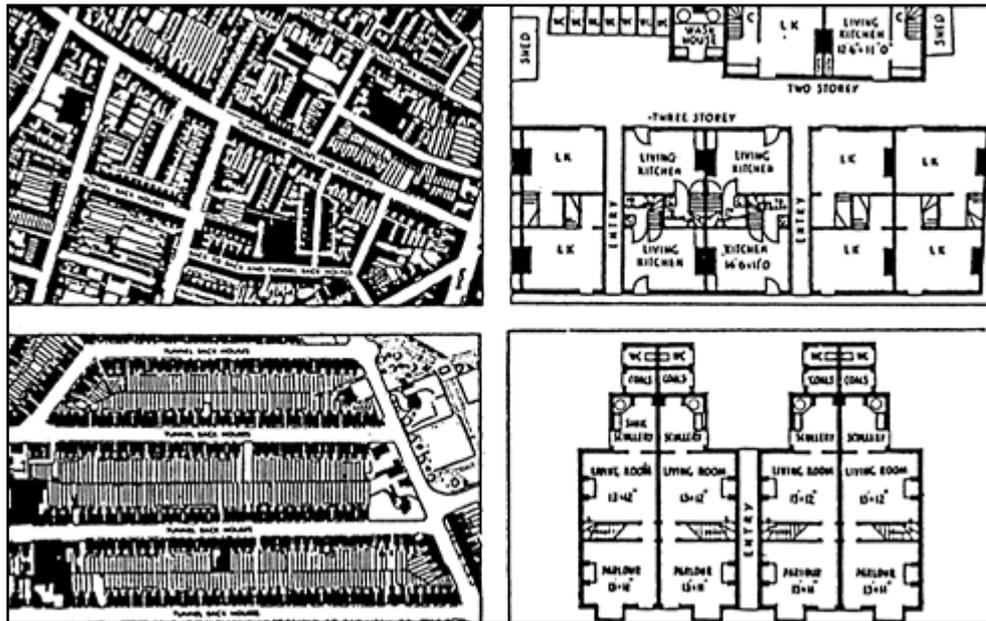


Figure 3.7 Houses produced according to Bye – Laws in Birmingham (Source: Hiorns, 1956 as cited in Broadbent, 1990, p. 116)

Conclusion

This section aims to discuss the relevancy of design control tools by analysing the attempts of design control from different stages of urban development. The cases selected for the thesis are just samples from excessive number of design control tools produced through history of urban development. Table 3.1 presents sum of the cases in terms of their type of regulation and dates. Although the cases vary according to their aim, role of producer, degree of effect on urban development and level of intervention; the common feature is the relevancy of design control tools for related ages. The statement of the relevancy is worth to mention in order to avoid the misinterpretation related to use of contemporary design control tools, which is associating use of design codes with one particular approach, New Urbanism.

Table 3.3 Selected cases from different periods of urban development and type of regulation

Type of Regulation	Case	Date
Laws for construction and sanctions	Hammurabi Code	1780 B.C.
Management of and sanction for public space	Sennaccherib's Code	705-681 B.C
Management of Public space	Law of Caesar on Municipalities	44 B.C.
Codes for various elements of urban space and city building including location choice for a city, orientation of streets, cannons for public buildings	De Architectura, Vitruvius	24 B.C
Regulations on common space, building line, streets and encroachments	Costituto Ordinances of Sienna	1260-1300
Treatises on urban and architectural issues	On the Art of Building, Alberti The Four Books on Architecture, Palladio	1404-1472 1508-1580
Regulations on street widths, building height, line, room size and infrastructure for sanitation of built environment	The Public Health Acts England	1844-1875

3.2 Contemporary Approaches and Critiques for Design Control Tools

City design is the art of creating possibilities for the use, management, and form of settlements or their significant parts.
(Lynch, 1981, p. 290)

3.2.1 Contemporary Approaches for Design Control Tools

The aim of the section is to discuss varied design approaches in term of design control tools. Therefore, the approaches related to design control tools are discussed started with modernism, imageability/legibility, new urbanism trilogy of Forsyth & Crewe (2009) and moving to new urbanism and typomorphology with Moudon's (2006) categorisation.

Forsyth and Crewe (2009) mention three mainstream approaches for production of new development areas with respect to their historical development: modernism, imageability, new urbanism (p. 416). Before discussing new urbanism and typomorphology as contemporary approaches associated with extensively use of design control tools, the other two approaches, which Forsyth and Crewe (2009) mentions, are required to be discussed comparatively in order to constitute a base for discussions of whereof approaches.

Modernism is one of the most progressive approaches among approaches to urban development and architecture. Thus, it is a forward looking approach for searching contemporary styles for both urban development and architecture, therefore, is challenging. It formulates its principles for both urbanism and architecture by widely known Athens Charter, which are the product of 4th International Congresses for Modern Architecture (CIAM) (Forsyth & Crewe, 2009):

Charter advocates **human proportions** as a key base for design (Art. 76) but is also enamoured with the potential of **new Technologies** (e.g. advocating separated roads with grade separated intersections) (Art. 61, Art. 64). Physically it sees **a city where dwellings have access to light and air, proposing the concept of towers in the park, to help reduce or ameliorate the super densities of some of the early 20th century cities** that the CIAM members had studied. The CIAM principles also propose **separation of uses**,

maintaining accessibility through new forms of traffic rationalization and hierarchy. (p. 419)

Considering the conditions of built environment for late 19th and early 20th century as an origin for, the principles of Charter are not mistaken. They propose light and air instead of congested unhealthy urban environment, and propose green open spaces instead of high building densities.

Imageability/Legibility is based on the 'Image of the City' of Lynch. According to Imageability/Legibility, good city form is required to be legible, perceivable by users. According to Forsyth and Crewe (2009), Lynch defines potential advantages of legible built environments in term of following five characteristics:

It is **easy to get around** within such built environments. Such environments have potentials to **provide opportunities for new experiences**. It is *"easier to invest with meaning"*. Such environments are **in good shape and distinct**. They are **experienced and perceived by insiders and outsiders in a similar way** (p. 420).

New Urbanism* is contemporary approach in design of urban space, which is raised on the critiques of low-density suburban development and urban sprawl. It proposes more dense development, transit and pedestrian oriented transport instead of car dependency, mixed uses instead of single-use-zoning (Kuiper, 2010, p. 232).

Charter of the Congress for the New Urbanism presents a widely accepted consensus for principles; although there are other attempts and statements for defining and setting the principles of New Urbanism. The Charter sets principles of the approach under three main levels: region; neighbourhood, district, corridor; block, street, building (Forsyth & Crewe, 2009, p. 421).

* New urbanism is not homogenous; it has different branches in, such as architectonic approach of which examples are Duany Plater-Zyberk's works and approach focusing on transit oriented design and regional development of which examples are Peter Calthorpe's works. While former approach is also named as the 'east coast' approach (US), the latter is called as the 'west coast' approach (US) (Carmona et al., 2006, p. 216).

There are similarities and differences between CNU and CIAM, which is defined in Forsyth and Crewe (2009):

There are many similarities between the Athens and CNU Charters: both criticize sprawl and advocate regional planning; both propose a multifunctional city; both make proposals about economic, social and administrative issues, as well as about the physical form of the metropolis. (p. 421)

Beside the similarities, the two approaches are quite different and even take contrary positions:

functional separation vs. mixed use,
new forms of transportation design vs. return to traditional blocks and streets, more universal modern architecture vs. more local styles (Forsyth & Crewe, 2009, p. 421)

Carmona et al. (2006) states the relation of design coding and New Urbanism: New Urbanism sets package of codes as an alternative to conventional planning. In this context, there are several examples of New Urbanist coding including Smart Coding of DPZ, Western Australia Community Design Code, or examples of Urban Villages Movement in UK (pp. 215, 217).

(The New Urbanist) urban codes are not **conventional 'words-and-numbers codes'** that **focus on land uses, road layouts, highways standards**, etc. **while containing no vision or expectation about the desired urban form**. Instead, they illustrate graphically and pictorially the **key principles such as street profiles, building volume, and, in particular, the relationship of buildings to streets** (Carmona et al., 2003, pp. 251-252)

Rhees and Tortenson (2001), as referred in Carmona et al..(2006), categorise the New Urbanist codes and design control into three categories by referencing their content and components: 'the whole system approach', 'the place-based or plan-based approach' and 'mixed use district approach'. In this categorisation, first, 'the whole system approach' codes consist of "*a complete set of standards that parallel and largely replace the existing zoning ordinance*" (Carmona et al., 2006, p. 234). Second, 'the place-based

or plan-based approach' consists of "*district-specific design standards*", which is "*highly responsive to site conditions*" (Carmona et al., 2006, p. 234). Third, 'mixed use district approach' consists of "*internal gradation of uses and densities*" for producing diversity and widely produced within the zoning ordinances in a particular zone having range of uses (Carmona et al., 2006, p. 235).

Conclusion: Modernism-Imageability-New Urbanism

The two former approaches are discussed briefly in terms of their focuses. While Modernism focuses on producing solution to 20th century city's problems by promoting new forms, new techniques and internationalism, imageability/legibility focuses on perception. 'New' Urbanism, on the other hand, is strictly attached to local and traditional assets for design of urban space; therefore its position can be defined as restoration of traditional and local. In this sense, it is ironical that naming an approach of which base on 'tradition' as 'new'.

It is required to be keep in mind the principles and origins of the former two approaches while encountering critiques proposed by New Urbanism to these former approaches: The aims and principles of former two approaches such as need for light and air, or, producing legible built environments are relevant requirements for also contemporary design and built environment.

Typomorphology

Typomorphology is second important approach engaged with design control tools. It is European originated approach which responses to urban planning and design in terms of urban morphology and geography (Carmona et al., 2006, p. 219). Moudon (2006) defines typomorphology as: "*typomorphology is the study of urban form derived from studies of typical spaces and structures.*" (p. 257). Carmona et al. (2006) stresses the importance of type in typomorphology by referring Moudon: Typomorphology is based on 'type' not only as a tool for descriptive classification but also "*generative*

processes”(p. 219). In other words, typomorphology is heavily based on classification and defining types whether it is morphological or generative.*

Typomorphology is also not homogenous approach. Moudon (2006) defines three schools of typomorphology: Italian school, Conzenian schools (England) and Versailles school (France). The three approaches expresses their ways to deal with urban space, design, planning:

Italy's provides a theoretical foundation for planning and design within age-old traditions of city building. England's offers a scholarly approach to researching how the built landscape is produced. And France's outlines a new discipline that combines the study of built landscape with a critical assessment of design theory. (Moudon, 2006, p. 274)

First one, Italian school of typomorphology is based on Muratori's and Caniggia's works, which include extensive classification of building types and open spaces (of Muratori). Canigga defines built environment as an organism with its component. He focuses on modularity of urban environment and elements; and scales of environment (Moudon, 2006). According to Caniggia, type is a conceptual existence of an object, which is *"in the form of the experience of this object ... apart from its physical existence of its phenomenological being"* (Moudon, 2006, p. 259).

Second one; Conzenian approach of typomorphology, according to Moudon (2006), is a complete method consists of town plan (streets, plots, buildings), building fabric, and land and building utilization. Conzenian approach is different from French and Italian

*According to Vernez Moudon, definition of type in typomorphology is different from other approaches:

“First, type in typomorphology combines the volumetric characteristics of built structures with their related open spaces to define a built landscape type.”

“Second, the inclusion of land and its subdivisions as a constituent element of type makes land the link between the building scale and the city scale.”

“Third, the built landscape type is a morphogenetic, not a morphological, unit because it is defined by time - the time of its conception, production, use, or mutation.” (Moudon, 2006, pp. 257-258)

typomorphology by excluding prescription in planning and design (p. 263). Moudon (2006) defines Conzenian approach morphogenetic rather than morphological, it focuses on *also "temporal dimensions and [city]'s evolution"* in addition to its *"elemental structure"* (p. 268).

Third one; Versailles school of typomorphology has a different position from former two approach while sharing similarities. It is more integrated approach built on not only design but also social aspects, by having participants from other disciplines in addition to design and architects (Moudon, 2006, p. 269).

In *Eléments* of Panerai et al. (1980), which is one of the principle works belongs to Versailles school, defines type as:

A type is defined as an *"abstract object built through analysis"* that reproduces the properties that are deemed essential by the analyst of a family of real objects. (Moudon, 2006, p. 271)

Moudon (2006) compares the three schools in terms of Versailles school as:

In this sense, the Versailles School stands between the Italian and the British schools, and addresses issues of both design and the city-building. (p. 269)

Quatremere de Quincy defines a distinction between *"type as a model to be replicated and the type as a rule to be followed"* (Moudon, 2006, p. 271). The distinction of Quatremere de Quincy is critical in terms of coding. In this context, a code may be a type to be reproduced as a model, or may be a rule to be followed.

Thus, the implementation of typomorphological codes is required to be inspected. Carmona et. al. (2006) states the implementations in France by referencing Kropf' s (1996) work which shows combination of zoning and typomorphological studies by *"illustrating the use of tissues, plot type characteristics, plot regulations and types of building form"*, Samuels and Pattacini's (1997) work which shows use of morphological approach for design guidance and Trache's (1999) works which shows a

typomorphological approach including building and plot typologies, ratios and dispositions (p. 219).

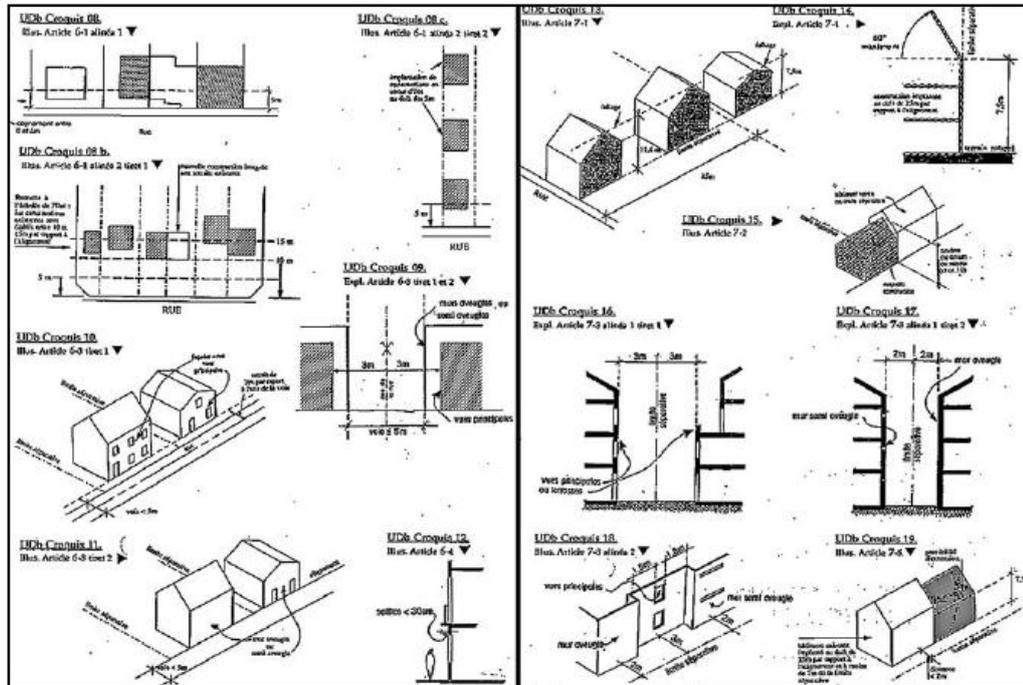


Figure 3.8 Building and plot typologies, and ratios of Plan d'Occupation des Sols, Montreuil, France (Source: Trace, 1999 as cited in Carmona et al., 2006)

Conclusion for Typomorphology and New Urbanism as two contemporary approaches:

Discussions of Typomorphology demonstrates, in addition to the relevancy of design control in history, that despite the engagement of design coding with New Urbanism, design control is not a tool that has limited use in one particular approach (Carmona et al., 2006, s. 219).

Carmona et al.(2006) states the clear distinction between the approaches of Typomorphology and New Urbanism in terms of coding: While the former takes analysis of existing context to find out process of generation as its base; for the latter it is not a common components, but optional one, cannot be observed in general. Furthermore, New Urbanism is mostly criticized by having a tendency to import predetermined forms and types (p. 221). This critique is significant in considering the locality critique of New Urbanism to Modernism. To clarify, while New Urbanism is criticizing modernism to be locality free and to over-internationalize its style, it is also criticized to have a tendency to import predetermined forms and styles rather than to produce form, or other design entities, from local characteristics.

3.2.2 Critiques for Design Control Tools

In this section of the study, critiques to the uses of design tools are discussed independently from approaches. Aim of the section is to discuss the featured critiques for design control tools in the literature. There are several types of codes in use (Carmona et al., 2006, s. 223). Because of being in such a wide range of types of codes, critiques for codes and discussions about codes mostly related to different uses and types. Carmona et al. (2006) illustrate that:

Lord Rogers, who is reported to have criticised Poundbury as a ‘questionable exercise in Hardy-esque nostalgia’ has reportedly declared that he knew of no codes that had worked in the last 50–100 years. This, of course, depends on **which kind of code is being referred to, and how one assesses their successful working**. The way that road layout is governed by road hierarchy and standard highway design details in the UK could be described as a system of ‘coding’ (Marshall, 2005), a point also noted by CABE (2003)— albeit giving this as an example of a ‘bad code’. (p. 223)

Therefore, the critiques are required to be sensitive about whether they are critiques to the way of the use of any tool or they are critiques to the tool itself. In this sense the question is whether a critique is related to the ‘concept of code itself’ or to types of codes (and design control tools), or to existing use of codes, or to the method of the

implementation of code, or to the product (environment) that the code intended to produce.

According to Ben-Joseph (2009), "*codifying the built environment*" is in a critical point in its historical development that originates from the experiences in dealing with production of urban space in terms of uses of "*conventional planning and design standards*" and "*place-based guiding principles*" (p. 2691). The critiques for design control tools, discussed in the section, also vary according to the type of design control instruments which Ben-Joseph (2009) states: **critiques for design codes and critiques for standards.**

3.2.2.1 Critiques for Design Codes

Critiques for design codes are discussed in terms of two highlighted ones which are **style problematic and innovation - restriction problematic.**

3.2.2.1.1 Style Problematic

First discussion point for the critiques for the codes of design codes is '**the style problematic in contemporary implementation of codes**', which is whether the codes are **style-dependent tools or not**. This critique is originated from the neo-traditional style environments which are produced recently, mostly, by the use of design codes and from so-called *rediscovery* of design codes in New Urbanism and neo-traditional style design approach (Street, 2006, 2007). Carmona et al. (2006) assert that codes are style-independent tools, although they are mostly associated with New Urbanism and neo-traditional style (pp. 223-224). CABE (2005), in addition, states that the design codes are able to be "*style-natural*" while they are able to code any architectural style (p. 8) In other words, it is possible to code a particular style by a design code, but, this is a matter of choice, to code the style or not in a design code.

First example is for style independency of codes; different architectural styles produced from the same code, Upton Design Code area. Street (2007) illustrates that design codes are able to support various architectural styles in Upton Design Code example (p. 21). Figure 3.11 demonstrates different buildings belong to different architectural styles from Upton Design Code area.

Second example is for ability to code architectural styles, UDA's Pattern Books. In the pattern book approach, style also coded as detailed architectural elements. Urban Design Associates code architectural patterns and styles in their 'Pattern Books' which consists of community patterns, architectural patterns and landscape patterns (UDA, 2010). Figure 3.12 demonstrates six styles; Mediterranean, Colonial, Coastal, Victorian, French and Classical, coded in the Pattern Book of Celebration. Paneria, Castex, & Depalue (2004) stress the irony of imposed styles of Pattern Book of Celebration and principle of local distinctiveness of New Urbanism, which is one of the fundamental critiques of New Urbanists to Modern Movement in terms of use of international style (p. 189).

3.2.2.1.2 Innovation - Restriction Problematic

Second highlighted problematic of the codes is '**whether the codes are restrictive or supportive for innovation and architecture**' (Ben-Joseph, 2005; Carmona et al., 2006; Street, 2007).

Street (2007) emphasizes on the concerns of innovation and design codes, which the design codes **restrict the freedom of designer**. According to Street*; for many architects "*design codes represent a threat to designers' creative autonomy*" (p. 5), innovation in design and quality. This critique is based on the argument that the quality of design is

* The arguments which Street (2007) discusses based on a research conducted by drawing survey on and interviews with RIBA member architects and research carried out at two sites encountered design coding processes, which are Upton and Newhall.

based on the quality of architect (Street, 2007) and ignores codes and other type of design control tools as inputs for design. Counter argument of these critiques are that design codes are positive inputs in the process of design in terms of providing a base for design, rising awareness of designer of surrounding built environment, standing against



Figure 3.9 Different architectural styles in Upton (Source: Street, 2007, p. 21)

the point that design is luxury. Another counter argument for the critique is that the limitations of design codes do not produce any problem for creative designers (Street, 2007, p. 23)

Carmona et al. (2006) approach **innovation problematic** from a different point of view and they advocate that the role of design coding in the design process is **re-distributing the productive - creative process** between designer parties for the design. Thus, according to Carmona et al.(2006), by separating the “*code writer*” and the final product designer, coding has a role for redistribution of creative process between designer parties rather than diminishing creativity (p. 242).

They mention the debate on innovation/restriction as:

Jack Pringle, President of the RIBA, argued “In the right circumstances and with the right expertise, they [design codes] can speed up the planning process and deliver excellent results”. However, “They [design codes] should not be **simplistic, formulaic or encourage pattern book design, and must be sufficiently flexible to enable innovation and excellence**” (Bennett, 2005). (Carmona et al., 2006, p. 229)

Other critique related to the innovation problematic is, according to Street (2007), “*while they [design codes] may help to determine the minimum acceptable standards of design, codes do little to encourage innovative architecture*” (p. 16). The claim is while providing the minimum design quality, the use of codes restricts better, high level of architecture. As Street mentions, Duany (2004) reflects to this critique as; though the risk to set some limitations on spectacular architecture pieces in coded environment, providing a minimum level of quality for the coded built environment is the “*optimal importance*” (Street, 2007, p. 16).

To sum up, although design control tools are reacted as being restrictive and being obstacle on innovation by some architects and designers; by providing base for design quality, producing the general structure for design, and by distributing design among designers participating design process, design control tools are contributing tools for legible urban design.



Figure 3.10 The Architectural Patterns from UDA Pattern Book for “Celebration” settlement consists of the six styles in detail illustrating their history and character; massing; porches; doors and windows; materials; and possibilities (Source:UDA, 2010)

3.2.2.2 Critiques for Standards with Conventional Codes and Model Codes

Second category, critiques for standards (together with conventional codes and model codes), are discussed in three sub-categories: **rational problematic, locality problematic, and affordable housing problematic.**

3.2.2.2.1 Rationale Problematic

Ben-Joseph (2005) states the advantages of use of standards and model codes that they provide a certain degree of quality, prevent risks for safety, and provide health conditions. He asserts the problem as the losing the bounds between their rationale of existence, which is the first problematic related to the use of standards and model codes. In other words, there is a break in the connection origin of rationale of the codes and standards in first place and contemporary uses of them (Ben-Joseph, 2005, 2005, p. xvi p. 2).

On the other hand, Ben-Joseph proposes the renewed bound between design and planning in last two decades as solution to the problems of contemporary tools of codes and standards.

This disconnect [between rationale and code and standard] has overtaken many standards and codes in the past because we have failed to be receptive to their negative impacts. The past decade has seen a renewed effort to expose the impacts and the inadequacies of codes and standards on our built environment. With renewed bonds between design and urban planning, between shaping space and its local context, between ecological parameters and communities, new opportunities can arise. (Ben-Joseph, 2009, p. 2701)

The critique is to the type of codes and to use of codes, not to the concept of code itself. Ben-Joseph proposes a different rationale than the former ones such as local context, or ecological parameters. Thus, the proposal is to make changes related to rationale and base of codes, not to abolish them.

On the other hand, it is required to be kept in mind that the rationale of the former codes such as need for air, greenery, space, or required health and safety conditions is still relevant for urban environments. The approach proposed in this study is that codes are required to be redefined by preserving the former rationale and upgrading including contemporary requirements like ecological responsibility.

3.2.2.2.2 Local Problematic

Second critique for the use of standards and model codes is disregarding local and cultural conditions (Ben-Joseph, 2009, p. 2691).

Ben-Joseph (2009) criticizes this approach as:

While such internationalisation of codes provides an attractive blueprint for communities lacking financial and technical resources to develop their own codes and standards, it also poses a danger of ubiquitous responses that override unique situations. In such instances, communities may purchase and adopt these generic codes without much attention to their unique locale, thus continuing the mid 20th century trend of a 'cookbook' approach to development. (p. 2694)

Ben-Joseph (2009) also states that:

We must avoid repeating the early 20th-century process of producing multiple sets of standards that are practically identical to a single ancestor and applying them with disregard to environmental conditions and locale. (p. 2700)

The critique is about over homogenisation of urban environment by using similar codes all over the world. It is the critique to 'copy-paste' the codes from one place to other. Therefore, the critique is related both the product and the production process.

It is apparent that such a production process and such '*copy*' products must be avoided. Local characteristics such as climate, cultural entities, and local materials should be considered while model codes or regulations are produced. On the other hand, it is required to be kept in mind that problems related to basic needs such as health and safety conditions are stable and common features for every part of the built environment.

3.2.2.2.3 Affordable Housing Problematic

Third critique to the standards and model codes is to lessen the efficiency, to increase housing cost and has a negative effect on production of affordable housing (Ben-Joseph, 2009, p. 2691).

On the other hand; Universal Declaration of Human Rights in Article 25 declares that:

Everyone has the right to a **standard of living adequate** for the health and well-being of himself and of his family, **including** food, clothing, **housing** and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. (“The Universal Declaration of Human Rights,” 1948, p. Article 25)

By considering the right to have “**standard of living adequate for the health and well-being**” from The Universal Declaration of Human Rights, it should be avoided to consider standards and model codes as an obstacle for affordable housing. Housing for everyone is a right which should be avoided to be considered in terms of building cost.

3.3 Concept of Design Control

There is at last a general understanding that making places socially, economically and environmentally successful depends on high standards of urban design. **What is less understood is how good design can be delivered.** The challenge is to influence the development process, not only on high-profile sites but **wherever urban change is reshaping places.** (Cowan, 2002, p. 4)

What is necessary everywhere is plans that go beyond land-use zoning and address the control of urban form directly (Hall & Doe, 2000, p. 255).

Cowan (2002) states “*what is less understood is how good design can be delivered*” and need for succeeding delivering good design for “*wherever urban change is reshaping places*” (p. 4). Therefore, effective tools for urban design are required to be developed and integrated into planning process. Carmona (1996) states that “*effective control is unlikely without first an investment in appropriate tools with which to do the job*” (p. 47). Hall & Doe (2000) mentions absence of design control tools in planning system has caused a reactive position that prevents to implement design control.

Design control is a mediating tool for designing urban built environment as a coherent way, as a whole. This section deals with basically concept of design control and design

control tools. Main sections are design control in relation with development control as static and dynamic, approaches for design control, need for design control and collaboration via design control tools.

3.3.1 Design and Development Control

Control over the production of urban space has two bases: development control and design control. According to Ünlü (2003), development control is related to the implementation process of the planning decisions, that, it is the production of space according to planning decisions; on the other hand, design control is control within the process of planning via qualitative features of the urban space. The development and design issues are required to be integrated in order to produce a balanced good urban space (Parfect & Power, 1997, p. 24). These two bases are not separate features. Both development and design control tools are bounded tools for production of urban space.

In some cases, the design and the development control are reduced to aesthetic control of production of urban space or reduced to technical, quantitative aspects of the process of production. (Madanipour, 1996; Ünlü, 2005, 2003) This reduction originates from considering urban design as visual management rather than spatial (Madanipour, 1996, p. 97), and from considering urban design as a technical process (Madanipour, 1996, p. 113).

3.3.2 Static and Dynamic Control

Design and development control is not homogenous, there are different approaches developed according to relevant contexts that the control mechanisms developed. There are two main categories for control over the production of urban space: static control and dynamic control (Ünlü, 2003).

First one, static control, is hierarchical which is organised by top to bottom by command and sanctions and is constituted by mandatory processes of control, giving total control

over the process of production of space to the authorities. Static control produces certainty by being normative and prescriptive. The production of urban space in this approach depends on the control on some technical measurement such as floor area ratio, height of buildings or density (Ünlü, 2003). According to Ünlü (2003), main critique to the static control is being unable to cope with the complexity and dynamics of social system, which, therefore, produces tension between the dynamic and the static bodies of the process of production of urban space. In order to overcome the problem, dynamic control over the production of space comes to the stage as an alternative to the static control.

Dynamic control, on the other hand, is a system approach of vertical and horizontal hierarchical relations among central control system and sub-systems of control (Ünlü, 2003). In order to have coordination and interaction among the general system and the sub-systems, two level of intervention is produced: generic and specific. In the first level of control, generic principles are produced in order to control and produce characteristics of the city; on the other hand, in the second level of control, the site-specific regulations are produced according to and for context and conditions of the sites as sub-systems (Ünlü, 2003). Ünlü (2003) refers the sub-system approach of McLoughlin (1969) in relation to the dynamic control approach by stating "*McLoughlin (1969) conceived the spatial context, independent of scale, is made up of systems*" (Ünlü, 2005, p. 21). The dynamic control approach, in addition, allows being proactive rather than being reactive to the problem encountering during the production process (Ünlü, 2003) and coordinated (Lang, 2005, p. 301).

Ünlü (2003) proposes that the process of intervention should not be a passive, one-sided intervention process, but should be interactive, adaptive, flexible enough and dynamic in order to meet the **dynamics of socio-spatial processes**. By building upon the main critique to the static control, which is inability for coping with the **complexity and dynamics of social system**, and therefore, producing of tension between the more dynamic and static partners of the production of urban space; an alternative more dynamic control system.

Friedman (1997), on the other hand, approaches to the problem of control system of not being dynamic enough in the production of urban space from a market-based point of view. He asserts that the control mechanism is required to be as dynamic as market forces and trends. Therefore, alternative control mechanisms are required to be developed for the design and development processes. He proposes a more flexible system which can have an ability to transform according to market forces in the phases of development. The system that Friedman proposes based on both alternative design processes for design and development and the tools within this alternative system which are design guidelines and codes.

Whether the need for flexible design control tools is legitimized by deficiencies of design control systems in terms of falling back of dynamicity of social relations or market condition; the critiques has a common feature which is the need of a more dynamic design control system.

3.3.3 The Need for Design Control

The condition for the need for design control varies according to the context of the development. Firstly, the need for design control is determined according to the context and the conditions of the development: the development in the areas which are encountered with conflicting issues, areas with more than one landowner, areas requiring having a coordinated intervention, areas that are encountered major developments with large areas and multi-phases, and multi-designers or designer teams. (Ben-Joseph, 2009; CABE & DCLG, 2006; Cowan, 2002) Secondly, decision to need for what type of design control is required to be built. To illustrate; it is required to be decided whether the guidance or the coding is the appropriate method for that particular design: Design coding is required when site-specific intervention is needed (CABE & DCLG, 2006), while interventions of urban design guidance varies according to policies, areas, or topics (Cowan, 2002).

3.3.4 Collaboration and Professional Participation

Urban design control tools are effective tools for collaboration of actors and professionals. Firstly, design control tools provide a collaboration platform for the areas which are developed by multi-actors such as areas with more than one developer and areas developed by public-private partnerships (CABE & DETR, 2000, p. 49). Secondly, they are also the tools for the collaboration of design professionals (Cowan, 2002, p. 21), by providing a platform or medium for collaboration of skilled professionals for the design of a particular area. In addition to have a potential to be a platform and medium, the collaboration of skilled professionals is a significant input for an effective guidance and for producing urban design code or guidance (CABE & DETR, 2000; Cowan, 2002). The participating professionals are required to be in broad range as urban designers, policy professionals, professionals related to urban economics, professional dealing with land use, ecology, landscape, urban infrastructure, social assets, urban form; who have *“awareness of and skill in urban design”* (Cowan, 2002, p. 21).

CHAPTER 4

TAXONOMY OF DESIGN CONTROL TOOLS

Design control has several tools in application for particular context such as for different scales of intervention, for different topics of design, for different design policies, some of which are design guides, design codes, standards, design statements. The type of design control tools are determined by the aim of the control, type of intervention, degree of prescription, and depend on the context of the development of change area for which the design control tools are produced.

There are attempt to classify design control tools from different points of view. To illustrate, Chapman & Larkham (1993) classify design guidance according to level of operation, in other words scale of intervention, as national to site – specific and according to decision making processes as appraise, encourage, guide, control and degree of prescription (as cited in Carmona, 1996, p. 65). Another example, Murray and Willie (1991) classify guidance according to operational scale as district, neighbourhood, street, and site (as cited in Carmona, 1996, p. 68).

In this study, contemporary design control tools are discussed in a descriptive way in order produce taxonomy for the tools and to lead study to a further analysis of the contents and the components of these tools.

The tools are discussed under two main categories built in the taxonomy:

tools directly aiming to intervene the production of form and space, and
tools indirectly aiming to intervene the production of form and space.

The two categories are built in order to clarify the role of tools in controlling the design and development according to their way of intervention. First category consists of the tools produced to state and to deliver the framework, criteria and standards for desired design, whilst the second category consists of the methods for controlling and evaluating the proposed designs in terms of desired design schemas which may be formulated by design control tools or may be formulated by more professional expertise. This part of the taxonomy is not limited by UK practice. It provides general categorisation between direct and indirect tools. While former consists of three sub-categories which are design guidance, design coding, and design standards and model codes, latter consists of two sub-categories which are design statements and design review process.

4.1 Direct Design Control Tools

The first two categories of direct design control tools, design guidance and coding, differ from the third category, standards and model codes, by being specific to site, topic, or policy rather than being precise tools drawing exact boundaries and dimensions as standards and model codes do.

As being the first, urban design guidance is the type of design control which is used to guide the physical design of a particular area and communicates ideas related to design, by the use of conceptual diagrams, two or three dimensional sketches with or without dimensions on and without prescription (Cowan, 2002, p. 21).

On the other hand, as second category,

a design code is a set of illustrated design rules and requirements which instructs and may advise on the physical development of a site or area. The graphic and written components of the code are detailed and precise, and build upon a design vision such as a masterplan or other design framework for a site or area. (DCLG, 2006, p. AnnexB)

In this context, design codes differ from design guidance tools by being more prescriptive:

Design coding is distinct from commonly used tools such as design briefs or design guides [guidance], as it sets down hard and fast requirements or rules, rather than guidelines. It is therefore being considered as something which goes beyond these forms of guidance. ... provide a set of definite instructions, rather than general guidance or advice. (CABE, 2005, p. 16)

The third category, standards and international codes, on the other hand, differs from the first two by being precise in terms of dimensions and limitations, which have been rooted to the health and safety acts. *ByDesign* defines standards very simply as; “Standards specify precisely how a development is to be designed (by setting out minimum distances between buildings, for example).” (CABE & DETR, 2000, p. 10).

4.1.1 Design Guidance

Urban design guidance is the term for the documents which aim to guide the urban design in order to produce the desired urban environment, that, it describes and illustrates

the proposed urban form in three dimensions, explaining how that form will achieve the intended vision for people, provide the information on which successful development and high standards of design depend, inspire better and more imaginative architecture by initiating a creative response to the site, provide a design concept to coordinate the design of individual site of buildings, test alternative design and development scenarios, educate professionals and the public in the value of urban design. (Cowan, 2002, p. 11)

Despite the general consideration that urban design guidance is prepared by the local governments, it can be prepared by local governments, landowners, developers, public-

private partnerships, business or community organisations separately or jointly (Cowan, 2002).

Use of urban design guidance serves a bundle of opportunities design of urban space and places. According to Cowan (2002), design guidance links planning policy to design vision, promote collaboration, declares vision, rise design quality and gives clues about future steps (p. 10).

Design Guidelines

Punter (1999) states key components of design policy in terms of design guidelines as:

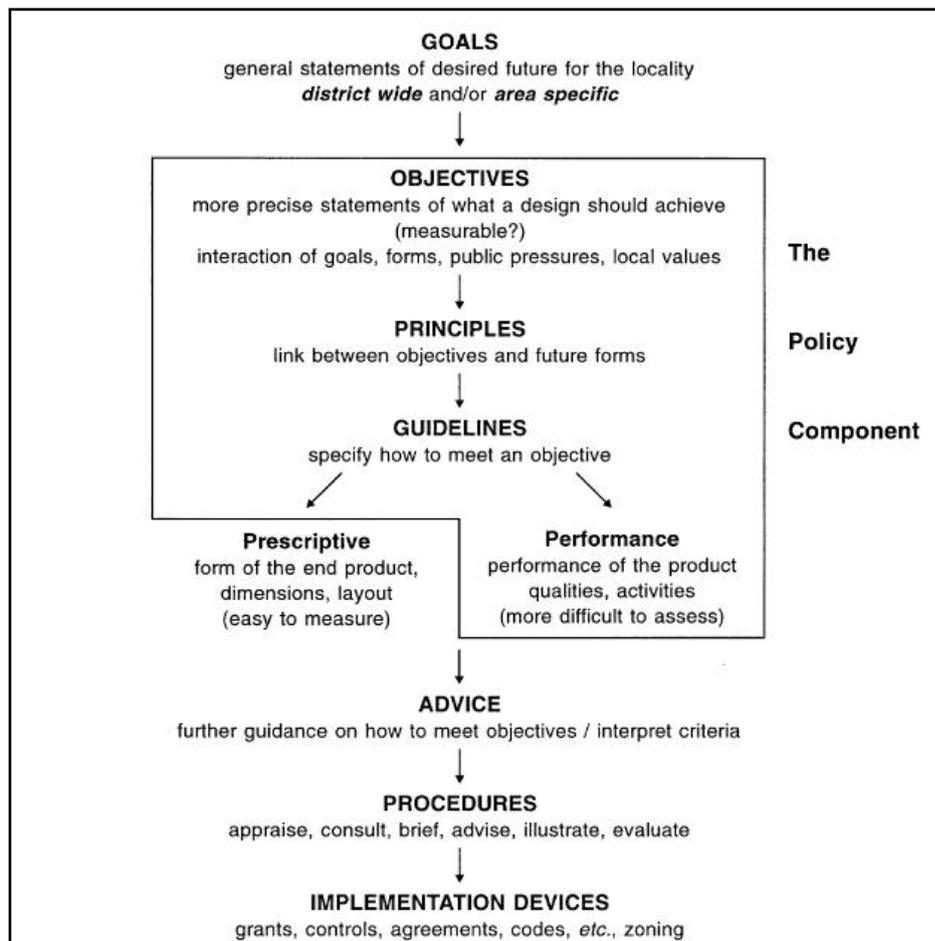


Figure 4.1 Key Components of Design Policy (Source: Punter and Carmona, 1997 as cited in Punter, 1999, p. 28)

As it is demonstrated in Figure 4.1, design guidelines consists both prescription and guidance. Steiner & Butler (2007) states:

Urban design plan reports often **contain a section on design guidelines, including massing, height, building setbacks, architectural style, parking, streetscapes, signage, materials, and sustainable design.** (p. 11)

Design guidelines are design control tools used in Northern American context. Lang (2005) defines three types of design guidelines which are prescriptive, performance and advisory. While first two categories are up to the level of prescription, the third is related to legal status of design guidelines. According to Lang (2005) prescriptive guidelines “*describe the pattern that a building complex, building, or building component must take*” or open spaces such a streets and squares, *whilst* performance guidelines “*specify how a building should work*” or open spaces such a streets and squares (p. 205). Thus, prescriptive ones describe what should be built while performance ones state which conditions the built object should be met. The guidelines can be legally bounded or advisory; mostly, the advisory and mandatory guidelines are used together to give shape to urban built environment (Lang, 2005, p. 205).

In this sense, design guidelines are tools deliver both prescriptive and guidance solutions, that they differ from the guidance tools which are discussed in this section.

4.1.2 Design Coding

Design codes are second main category for contemporary direct design control tools. The most differentiate characteristic of the design codes from design guides is the degree of prescription. There are several types of codes being in use and be used. The codes are called as design codes, urban design codes or urban codes; or architectural codes and building codes (Carmona et al., 2006, pp. 223-224).

According to the subject of and intervention and components of urban space to intervene, codes for built environment are categorised into three main groups as urban design code, architectural code, and building code. The first one, urban design codes, by focusing on urban space and places are the type of design codes that the study focuses on. Building codes, on the other hand, are in the category of model codes discusses in relation with standards.

Definitions for design codes from different authors are stated below:

Design code is a system that specifies **the attributes of urban components or building components** to influence the character or function of the whole urban development. (Carmona et al., 2006, p. 241)

A **design code** is a document (with detailed drawings or diagrams) setting out with **some precision** how the design and planning principles should be applied to development in a particular place. A design code may be included as part of **an urban design framework, a development brief or a master plan** when a degree of prescription is appropriate. Preparing a design code requires a high degree of skill... (Cowan, 2002, p. 16).

They [**Design codes**] establish a set of principles which guide development, enabling the detail to be developed later. Often used alongside a **master plan** (Carmona et al., 2003, pp. 251-252).

A **design code** is an **illustrated compendium** of the **necessary and optional design components** of a particular development with **instructions** and **advice** about **how these relate together** in order to deliver a masterplan or other site-based **vision**. (Carmona et al., 2006, p. 7).

Design codes are a distinct form of detailed design guidance comprising a set of written and graphic rules that establish with **precision the two and three dimensional design elements** of a particular development or area. (CABE & DCLG, 2006, p. 10).

a **design code** is a set of **three-dimensional, site-specific design rules or requirements** for development. It is informed **by a spatial masterplan or other form of urban design proposals** and **describes the rules through words and graphics**. It is a tool that can be used in the design and planning process, but goes further and is **more regulatory than other forms of guidance** commonly used in the English planning system." (CABE, 2005, p. 7)... "It can be thought of as **a process and document** – and therefore a **mechanism** – which **operationalizes design guidelines or standards** which have been established through a masterplan process. (CABE, 2005, p. 15)

A **design code** is a set of illustrated design rules and requirements which instruct and may advise on the physical development of a site or area. **The graphic and written components of the code are detailed and precise**, and build upon a **design vision** such as a **masterplan** or other **design framework** for a site or area.(from PPS3) (DCLG, 2006, p. AnnexB)

Form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in Form-based codes, presented in both diagrams and words, are keyed to a regulating plan that designates the appropriate form and scale (and therefore, character) of development rather than only distinctions in land-use types. (FBCI, 2010)

Form-based codes (FBCs) as defined by the Form-Based Code Institute are structured to include a set of minimum components and may also accommodate a variety of optional ones. The required components are:.. A Regulating Plan, Public Space Standards, Administration, Glossary...others may be included depending on the needs of community and other components that may already be in place. ... Block Standards, Building Type Standards, Architectural Standards, Green Building Standards, Landscape Standards. (D. G. Parolek, K. Parolek, & Crawford, 2008, pp. 15-16)

Although there are several definitions for design codes; *“there is a strong **consensus** that a design code is a distinct tool used to regulate development by setting rules”* (CABE, 2005, p. 7).

Carmona et al. (2006) defines three different design codes as design codes, urban code, and urban design code:

Design code is a system that specifies **the attributes of urban components or building components to influence the character or function of the whole urban development.** (Carmona et al., 2006, p. 241)

Urban code is a system that specifies **the attributes of urban components (buildings, streets, parks, etc.) to influence the character or function of the resulting urban development (quarter, district, neighbourhood, settlement).** (Carmona et al., 2006, p. 241)

[Urban design codes are] systems that specify both building types and components and urban components to create three-dimensional overall urban form (e.g. Seaside, Poundbury)”... “the scale of intervention is the building component (e.g. roof), whole building type or urban component (e.g. square); the scale of intention is the creation of a whole urban development. (Carmona et al., 2006, p. 241)

On the other hand, in this study, design code is used to define general term for design codes as 'design codes are **site-specific**, vision **delivery** tools which are **systems of set of written, graphic and prescriptive rules in two and three dimensions** based on a **vision** that developed generally by a **master plan** or regulating plan, intervening the components and productive elements of urban space'.

Carmona, Marshall and Stephen (2006) categorize the "attributes of codes" (p. 225) into three categories which are *essential attributes, typical attributes and optional attributes*. The categorization is shared characteristic of design codes from essential to optional ones rather than based on the contents of component. The attributes are important in terms of dealing with the contents and components.

The first set of these characteristics, 'essential attributes'; are the most general characteristics for any design code. In this context, essential attributes are being:

- (1) separate processes for design of design codes and the actual design of built environment; designer of the code and the designer of actual elements of built environment are separate parties in the process of production of urban built environment.
- (2) in relation with more than one scale of development from buildings to the whole local authority areas or districts;
- (3) proactive by putting emphasis on the *good* rather than opposing the *bad*;
- (4) concerned with morphological assets (form in three-dimensions and type), not being concerned with their use. (Carmona et al., 2006, p. 225)

The second set of these characteristics, 'typical attributes'; are the second most general characteristics for any design code. They are the characteristics that design codes *tend to have*. In this context, typical attributes are being:

- (1) prescriptive, and definitive,
- (2) engaged by various professions related to urban design,
- (3) consisting architectural features and materials,

- (4) relevant for large development areas, more than one single architect,
- (5) long-term- implementation projects
- (6) parts of a legal agreements. (Carmona et al., 2006, p. 225)

The third set of these characteristics, are not necessary characteristics for any design code, but they are up to the choices of the designer of code or up to the context that the code is prepared. In this context, typical attributes are being:

- (1) supported by a master plan or a framework,
- (2) prepared *for application to a specific site*,
- (3) participatory process by public/stakeholder,
- (4) used to produce traditional built environments,
- (5) used to create high quality environments with high quality materials. (Carmona et al., 2006, p. 225)

Russell (2002), on the other hand, defines the characteristics of an urban design code as; clear to understand, well-explained by illustrations and graphics, (clarity); flexible enough to respond the changing conditions according to time (Russel states as “*without compromising basic New Urbanist principles*” because of dealing with the New Urbanist approach) and flexible enough to be site-specific conditions, (flexibility); used easily, (ease of use); legal bases, (legality) (as cited in Carmona et al., 2006, s. 227).

According to Carmona et al. (2006), “*the type of code to a large extent dictates its content, and therefore the components, which it attempts to code for*” (p. 236). In other words, in a wider context, contents and components depend on the types of code. The reason why the type of code dictates its contents and components is that the type of code is related to the subjects of intervention. For instance, whether it is aiming to control over only architectural assets (architectural code) or both architectural and engineering assets (building code) is selection of type of code depending the subject of intervention and this selection determines the contents and the components of code. Therefore, it is the determination of contents and component of code via the subjects of intervention that the code aiming to control.

In Perspecta35 (2004), the architectural codes are defined as:

[Architectural codes are **the codes that**] define the terms by which the built environment is designed, constructed, and used, and are equally constitutive of both the material production and discourse of architecture. While externally imposed codes have served to both regulate the shape of architectural and urban built form, as well as distinguish and professionalize architecture as a discipline, codes formulated within architecture have both focused and propelled that which was considered the theoretical centre of architecture at any moment in its history. (Perspecta 35, 2004, as cited in Carmona et al., 2006, p. 224)

Thus, architectural codes are codes dealing with the architectural components; materials, style, or approach. One example for architectural design codes is architectural pattern books, Carmona et al. (2006) defines architectural pattern books are architectural design codes of which *“scale of intervention is the individual building component”* whilst of which *“the scale of intention is the whole building”* (p. 241).

As a well-known example Urban Design Associate’s Architectural Pattern book for Celebration settlement, prescribes:

“five or six essential qualities of the style”,
“massing for that style including roof pitch and critical details such as eave and cornice”,
“proportion and profiles of correct windows and doors with principles for placement on facades”,
“special elements such as porches, balconies, loggias with details”,
“materials and colors with critical details such as trim and corner elements”
and “possibilities, a sampling of house facades using these patterns on the range of house size and height in the town”. (UDA, 2010)

4.1.3 Design Standards and Model Codes

Building regulations and codes has been developed respond to fires, health and safety conditions and contemporary response is to energy usage (Harris , 2009). Emphasis of codes and standards is on the health and safety (ICC, 2010).

Codes provide minimum safeguards for people with regard to building safety and fire prevention. Codes protect health, safety and welfare as they relate to the residential and commercial built environment. (ICC, 2010).



Figure 4.2 Architectural Styles from Architectural Patterns from Pattern Book Of Celebration

Standards and model codes are precise, prescriptive tools for design control, which are widely used in practice all over the world (Ben-Joseph, 2009, p. 2694). Ben-Joseph (2005) defines standards as;

In the realm of urban planning, standard are extensively used to determine the minimal requirements in which the physical environment must be built and must perform. But they are also seen as the legal and moral instruments by which professionals can guarantee the good of the public. (p. xv)

There is a distinction between model codes and standards, and also a distinction between building codes and regulations as:

Today, building regulations govern the construction and renovation of buildings, while building codes offer models. (Housing codes control maintenance.). (Harris , 2009)

Model codes

International/National model codes are belong to standard based model approach that provides a model for local authorities to implement. It provides *“an established, technically sound and proven coding framework”* (Ben-Joseph, 2009, p. 2694).

As an example; in US, National Building Code, by starting in early in the 20th century, has allowed *“local governments to adopt technical requirements without the difficulty and expense of research and the production of individual local codes.”* (Ben-Joseph, 2009, p. 2694).

In order to develop *“a single set of national and international model construction codes, including standardised zoning”*, International Code Council (ICC)* has been founded in 1994 as a non-profit organisation by the use and acceptance of the building codes (Ben-Joseph, 2009, p. 2694). Other institutions also produce some other model codes such as Green Codes which American Society for Testing and Materials, American Institute of Architects and International Code Council have been jointly developed. Adoption of such codes is not limited where they are produced, but implemented in different parts of the world (Ben-Joseph, 2009, p. 2694).

* The International Code Council produced a set of model codes in last decade such as International Building Code, International Energy Conservation Code, International Existing Building Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, ICC Performance Code, International Plumbing Code, International Private Sewage Disposal Code, International Property Maintenance Code, International Residential Code, International Wildland Urban Interface Code, and International Zoning Code (ICC, 2010).

Building code, according to Carmona et al. (2006), is

a system that specifies **the attributes or component parts of buildings (roofs, structural system, fenestration, etc.)** to influence the character or function of the resulting buildings, but **without fixing their overall form**. This could be an **'architectural' design code**, or an **'engineering' design code**. (p. 241)

The building code is the type of code which may be dealing with architectural or engineering components. To illustrate, 'The Building Regulations in England and Wales' consist of 14 parts which are structure, fire safety, site preparation and resistance to contaminants and moisture, toxic substances, resistance to the passage of sound, ventilation, hygiene, drainage and waste disposal, combustion appliances and fuel storage systems, protection from falling, collision and impact, conservation of fuel and power, access to and use of buildings, glazing (safety in relation to impact, opening and cleaning), and electrical safety (ODPM, 2005). On the other hand, 'Code for Sustainable Homes' by Department for Communities and Local Government, UK presents categories of energy and CO2 emissions, water, materials, surface water run-off, waste, pollution, health and well-being, management, ecology (Figure 4.3).

Standards

Standard is basically defined as *"a rule, principle, or means of judgment or estimation"* and *"having the quality of a model, pattern or type, a level and grade of excellence, or as the measure of what is adequate for some purpose"* (The Oxford English Dictionary, 2nd Ed. cited in Ben-Joseph, 2005, pp. 2-3)

For urban design, standards provide a minimum degree of requirements for element of built environment (Ben-Joseph, 2005, p. 3). ICC defines standards as *"an extension of code requirements"* (ICC, 2010). ICC mentions that *"standards represent consensus on how a material, product or assembly is to be designed, manufactured, tested or installed to obtain a specific level of performance."* (ICC, 2010). *ByDesign* defines standards as *"Standards specify precisely how a development is to be designed (by setting out minimum distances between buildings, for example)."*(CABE & DETR, 2000, p. 10).

Categories	Issue
Energy and CO ₂ emissions	Dwelling emission rate (M) Building fabric Internal lighting Drying space Energy labelled white goods External lighting Low or zero carbon (LZC) technologies Cycle storage Home office
Water	Indoor water use (M) External water use
Materials	Environmental impact of materials (M) Responsible sourcing of materials – basic building elements Responsible sourcing of materials – finishing elements
Surface Water Run-off	Management of Surface Water Runoff from developments (M) Flood risk
Waste	Storage of non-recyclable waste and recyclable household waste (M) Construction waste management (M) Composting
Pollution	Global warming potential (GWP) of insulants NO _x emissions
Health and Well-being	Daylighting Sound insulation Private space Lifetime homes (M)
Management	Home user guide Considerate constructors scheme Construction site impacts Security
Ecology	Ecological value of site Ecological enhancement Protection of ecological features Change in ecological value of site Building footprint

Figure 4.3 Environmental Categories and Issues for Code for Sustainable Homes (DCLG, 2008, p. 11)

Standards provide a level of quality for urban environment and protection for health and safety and provide an opportunity for local authorities of high level of prescription and predictable results in production of urban space (Ben-Joseph, 2005, p. 2). Implementation of the standards prevents flexible applications or any modifications (Ben-Joseph, 2005, p. 1). As mentioned below for model codes, in addition to health and safety standards, a progressing approach has been developing in terms of ecological standards or environmental standards (Ben-Joseph, 2009, p. 2697) with energy efficiency, green energy standards.

Standards are not limited with prescriptive standards, though there are also performance-based ones. Ben-Joseph (2005) describes performance-based standards as

Performance standards ... do not specify how things must be, but what they must or must not do or what their capacity or impact must be. Rather than work by means of restrictions, this form of regulation shapes the built environment by imposing limits on the impacts of that change, leaving greater flexibility in design and construction. (Ben-Joseph, 2005, pp. 42,44)

4.2 Indirect Design Control Tools

Lang (2005) proposes that:

To some observers, the truly creative activity in the design process lies neither in the design of the programme, nor that of the building or complex but rather in the evaluation of possible schemes. Recognizing and selecting good designs, especially departures from the norm, is a highly risky business and there are many examples of award-winning schemes that have turned out to be failures in terms of people's lives. (p. 39)

Lang (2005) puts emphasis on the use of second category design control tools by putting emphasis on selecting and recognising good designs for the built environment (s. 41). Indirect design control tools are categorized in to two: design statements and design review.

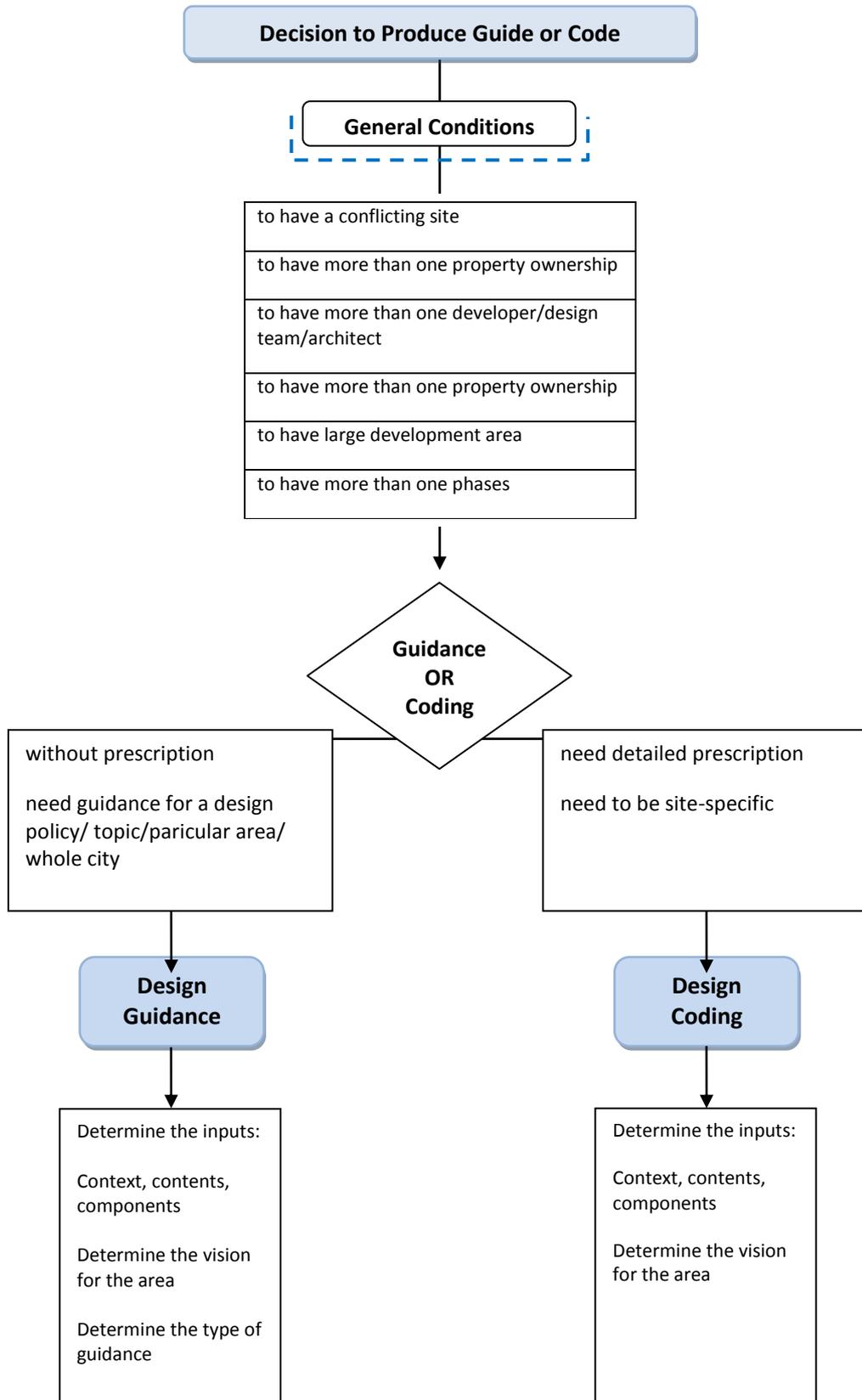


Figure 4.4 Algorithm for decision process to code or to guide

4.2.1 Design Statements

Design statement is first of two categories of indirect design control tools. A design statement is produced by designer or design team in order to define the basic principles of proposed design for a development area and submitted to the local authority as (Cowan, 2002, p. 16). The design statements have two types: 'pre-application design statements' and 'planning application design statement'. Pre-application design statements are developed by developers in order to express the context of the proposal (in terms of relevant design policy and guidance framework for the site), the design principles in progress, their approach to produce those principles and to express how those principles correspond to their physical design such as layout, density, landscape. The pre-application design statements provide a chance to revise the proposal according to critiques from local authorities before final application. (CABE & DETR, 2000, p. 65; Cowan, 2002, p. 16). Second type, 'planning application design statement' is, on the other hand, proposes final design schema which includes the context of the proposal in terms of relevant design policy and guidance, final design principles, approach to produce those principles and to express how those principles correspond to their physical design such as layout, density, landscape (CABE & DETR, 2000, p. 65). Whereof contents and components have three main steps as design context, design principles and design solutions (IGNITE, 2010; The Planning Policy Team, 2010). Design statements can be supported by plans and elevations, photographs of the site and its surroundings, illustrations like model perspectives (CABE & DETR, 2000, s. 66).

Design statements can also include more details such as economic conditions for the project area, approach of the project for the management of design, and relevant participatory stages of design process. The level of detail for the design statement depends on the context of the project area, complexity of the inputs of the project originated from the project area (CABE & DETR, 2000, p. 65).

London Borough of Ealing DRAFT Urban Design Checklist
“...buildings and spaces (should be) attractive, accessible, safe and ... sustainable”
<p style="text-align: center;">CONTENTS</p> <ol style="list-style-type: none"> 1. Good Layout – Urban Structure and Grain 2. Height, Scale, Massing and Density 3. Useful and Quality Architecture and Character 4. Legibility, Continuity and Enclosure 5. Hard and Soft Landscaping – Quality Public Realm 6. Access for All – improving access for pedestrians and disabled 7. Community Safety 8. Appropriate Structural and External Materials 9. Adaptability and Flexibility 10. Local Area Strategies and Planning (Democracy and Accountability) 11. Sustainability (This needs to be considered separately by completing the Sustainability Checklist: SG1)

Figure 4.5 Model contents and components of Design Statements by London Borough of Ealing (Source: The Planning Policy Team, 2010)

According to *ByDesign*; the design statements serve bundle of **opportunities** for both local authorities and designers. To illustrate, pre-application design statements prevent final planning application delays, reduce the possibility of rejection of final design proposals, give designer opportunity to revise the proposed design before the final planning permission application and give local authority opportunity to be proactive by reflecting designer’s response to proposed design, principles of design and the way of its production (CABE & DETR, 2000, p. 65; Cowan, 2002, p. 16).

4.2.2 Design Review

Design review is design control system relevant for North American planning system. Habe (1989) defines design review as implementation tool for design guidelines (for US cities). Design review controls urban design, architectural and visual assets of an urban development. The applications are reviewed according to either guidelines or committee by design review boards (Madanipour, 1996, p. 177).

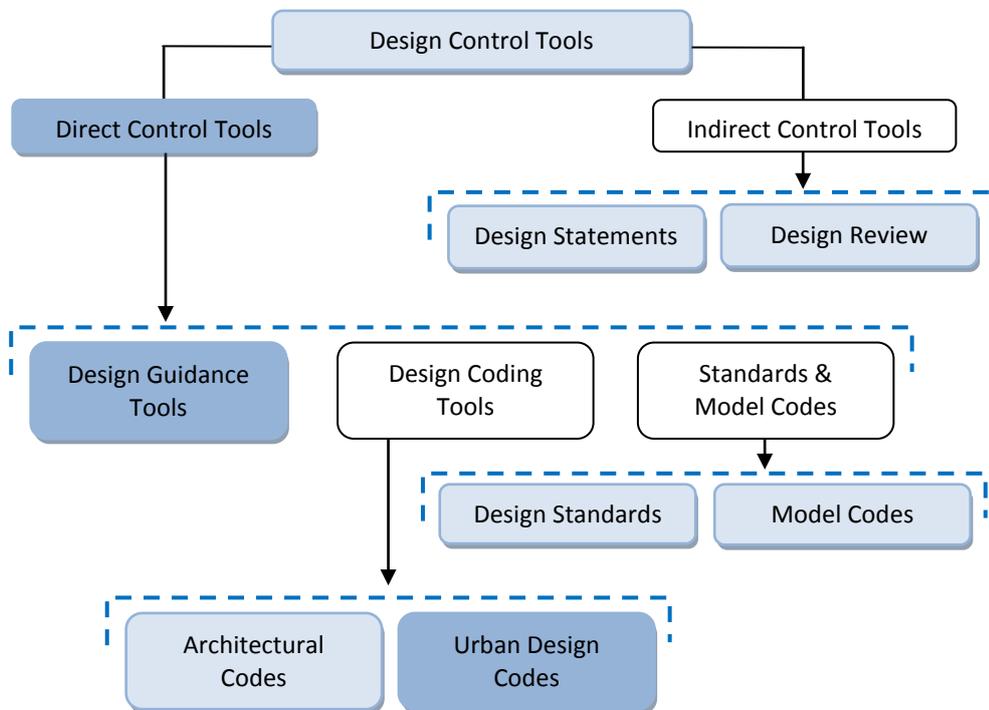


Figure 4.6 Taxonomy of Design Control Tools, marks shows the type of tools of which sub types are categorised in UK context.

4.3 Taxonomy of Direct Design Control Tools in UK

Design codes and regulations are not new and have been used for producing and shaping the urban environment in England through the history, of which well-known examples are building the city of Edinburg, building the Royal Crescent in Bath, and Rebuilding* of City of London. (Ben-Joseph, 2005; Carmona et al., 2006; Street, 2007)

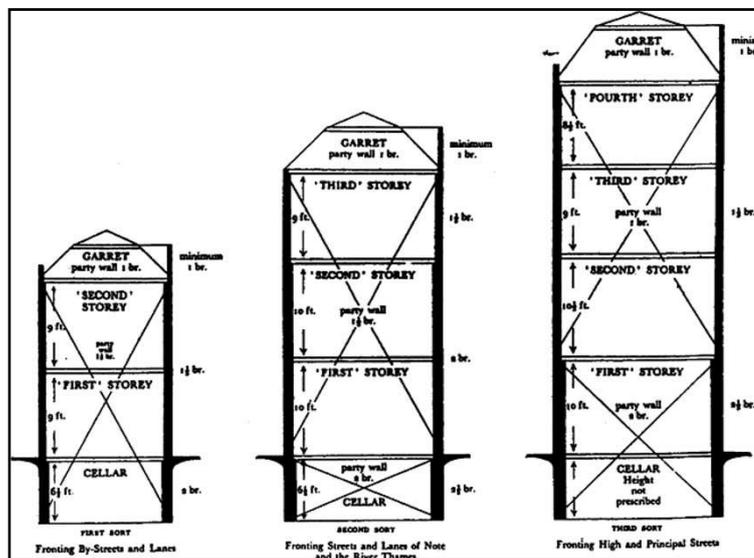


Figure 4.7 Details of types of buildings, Act for Rebuilding the City of London (1667)
(Source: Carmona et al., 2006, p. 215)

*As an example, 'The Act for the City of London' was developed after the Great Fire of 1666. Carmona et al. state, by quoting from Hebbert (1998), the act proposes "typology of streets and matching buildings, whilst the regulations led to straightened, paved streets, with buildings of uniform height and cornice lines" and "prohibition of buildings with jutting projections and [the] dispense with the timber framed construction reminiscent of Tudor and Stuart eras". The act is highly definitive and prescriptive. The "materials, ceiling heights, wall thicknesses, and structural requirements such as the placing of joists" were prescribed. (Carmona et al., 2006, p. 214) According to Hebbert (1998), the Act was "the system of building control, which regulated the great expansions of 18th- and 19th-century London, and, through the office of District Surveyors, continues to operate 300 years later". (as cited in Carmona et al., 2006, s. 214)

Appendix 2 presents a sequence of design evolution of design control tools starting with Building Acts to Urban Design Compendiums. It presents examples to demonstrate the change and relevancy rather than presenting a complete set of regulations.

The difference of the last two decades from the former regulations is that the design control tools are integrated to the planning system and urban design became an entity for all scales of urban planning (Evans et al., 2007, p. 15):

As the Urban Task Force pointed out, the best way to promote successful and sustainable regeneration, conservation and place-making is to think about urban design from the start of the planning and development process. Leaving urban design until the end can make the planning process slow, frustrating and a source of wasteful conflict, and is unlikely to lead to the best outcome in terms of quality. (CABE & DETR, 2000, p. 9)

It is now mandatory, as stated in Planning Policy Statement PPS1 and PPS3, for the planning process to incorporate urban design principles (relating to place-making and the physical form of development) at every level, from the strategic to the local. (Evans et al., 2007, p. 17) *

The integration is the result of the shift from laissez-faire period of 1980s to plan-led development starting with 1990s. In 1980s general approach of Department of the Environment has been discouraging local authorities for not to getting involved in details of design and 'interfering the works of architects' (Hall & Doe, 2000; Parfect & Power, 1997). Since 1990s, in contrasting 1980s, there has been a greater emphasis on design (Hall & Doe, 2000). Before mid-1990, it is a rare situation that the rejection of a planning application because of the design grounds of its design scheme (Parfect & Power, 1997, p. 22). Carmona (1996) defines this change as "*a new renaissance for design control*" as "*design control more widely understood to encompass a new and wider social, functional and environmental agenda*" (p. 48). It, according to Carmona (1996),

* Design guidance tools gain weight and legal status by preparing them as Supplementary Planning Guidance (SPG) documents. SPGs are supplementary guidance documents which provide detailed guidance according to design policies in plan. SPGs consist of methods of implementation of design policies (CABE & DETR, 2000, pp. 46-47).

reflects the increasingly widespread acceptance by government planners and the development professions alike that control of urban design—rather than architecture—represents the most appropriate and effective means through which local authorities can influence the quality of new development. (pp. 48-49)

Apart from discouragement of policy of government, absence of tools for design control within the planning system has also created a reactive situation prevents to implement design control issues (Hall & Doe, 2000). Carmona (1996) states that “*effective control is unlikely without first an investment in appropriate tools with which to do the job*” (p. 47). Thus, within this shifting process, urban design control tools have been developed and defined as parts of the planning process.

In addition to the development of tool and integration of tools to the planning system, the design control tools have a certain hierarchical relationship in UK planning system starting from strategies to more specific ones like briefs. (Carmona et al., 2006, pp. 229-230). Carmona, Punter and Chapman (2002) presents *design policy hierarchy* as national/regional policies, authority-wide policies, area-wide policies (action plans) and site-specific policies (p. 24).

The hierarchy presents the tools for different scales of urban design. It is defined for three scales of urban design, defined in definitions of urban design section, which are for macro-scale national-regional guidance, general design policy, and guidance for guidance; for meso-scale city, area and district based guides; and for micro scale site specific, architectural guides and design codes. Figure 4.8 demonstrates the relationship between scales of urban design and design policy hierarchy.

Within these hierarchical relations, the relation of concepts of design policy* and

* *ByDesign* sets the two of the characteristics of good design policy. First one is the linkage of planning policy and design policy, that, any good design policy is required to contribute to planning decisions significantly. Second one is the level of clearance and detail; that, any good design policy is required to be clear and brief and not to be prescriptive (CABE & DETR, 2000, p. 44) . Furthermore, any design policy contains the aim of design which is appropriate to the particular context of the area related to the policy and design objectives of plan; the criteria for assessment of planning applications; consistency of the policy within a policy framework; and finally, (the way of implementation of the policy. (CABE & DETR, 2000, p. 44)

guidance is critical. Design control tools are based on the design policies. The guidance tools aim to put the concrete steps of development process in order to implement the design policy by guiding the actual design without prescribing it (CABE & DETR, 2000, p. 45)

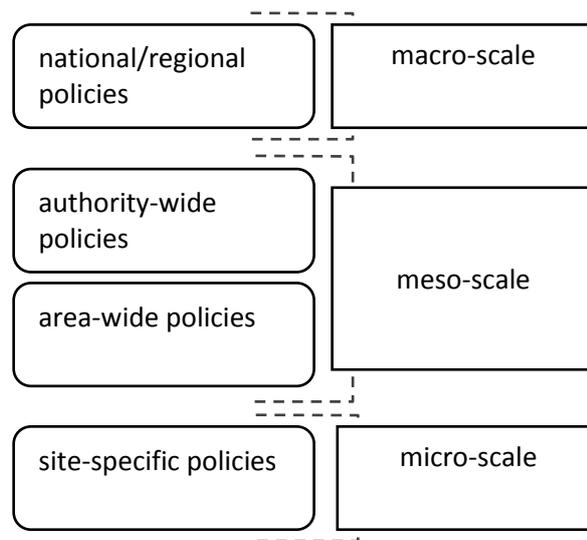


Figure 4.8 The Relationship Between Scales of Urban Design and Design Policy Hierarchy

The relationship between policy and guidance is stated in *ByDesign*, which is itself a guide for implementing Planning Policy Guidance Note 1 General Policy and Principles, in Figure 4.9 and Figure 4.10. It defines two categories of design policies as general and specific; and the three types of specific design policies as area-specific design policies, site-specific design policies and topic-based design policies, which are the bases for the production of design guidance tools (CABE & DETR, 2000, pp. 44-45) .

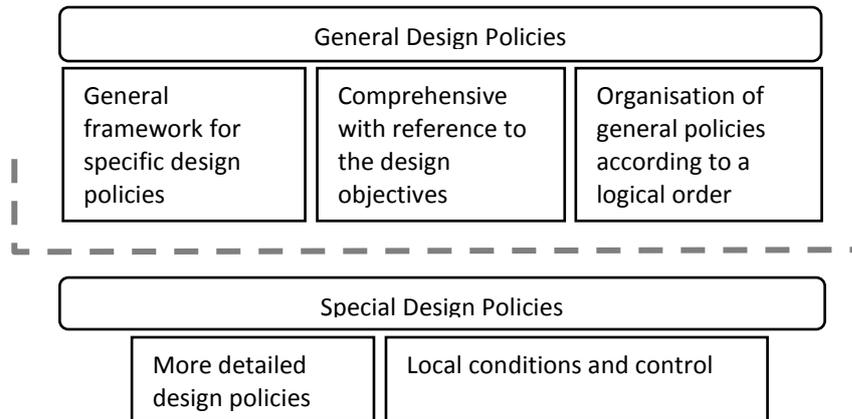


Figure 4.9 General policies and Special policies (Produced from CABE & DETR, 2000)

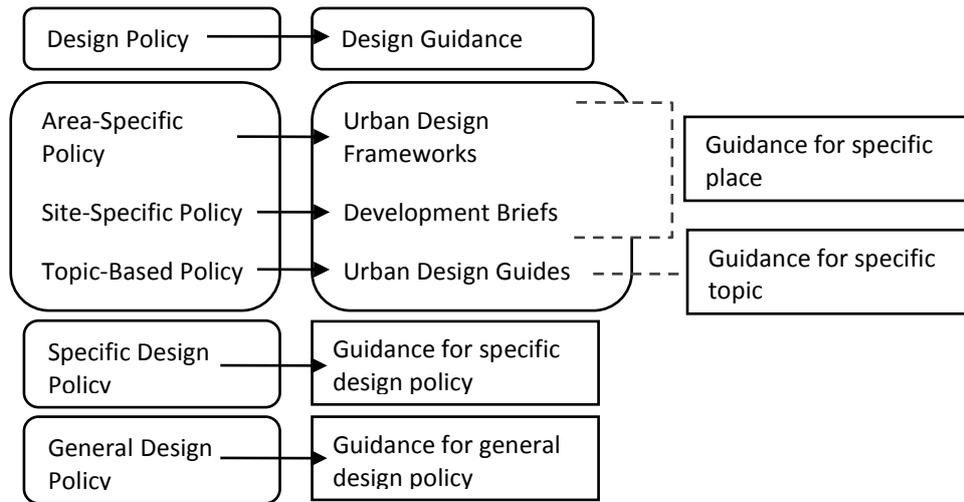


Figure 4.10 Design Policy and Guidance (Produced from CABE & DETR, 2000)

The design control tools categorised in this study are in an integrated hierarchical relationship. Appendix 3 presents the hierarchy of design policy and guidance in UK planning system. The reason of selection of tools from UK for detailed analysis and taxonomy is to discuss the effectiveness of use of design control tools in such a system.

4.3.1 Design Guidance Tools

In this taxonomy, design guidance tools are categorised into five types which are Design Control Framework-aimed Design Guidance Tools, Place-aimed Design Guidance Tools, Topic-aimed Design Guidance Tools, Policy-aimed Design Guidance Tools, and District-aimed Design Guidance Tools. While the first type is based on Carmona, Punter and Chapman (2002)'s work and on analysis of the cases in this study, the last four are mainly based on Cowan (2002)'s categorisation of design guidance tool with some alteration and on analysis of the cases in this study.

First type, Design Control Framework-aimed Design Guidance Tools, consists of national and regional guidance. While national guidance consists of Guidance for Design Policy/Guidance, Guidance for Urban Design, and Good Practice Guides, regional guidance consists of County Design Guides.

Cowan (2002) groups design guidance in four types; "guidance relating to specific places", "guidance relating to specific topic", "guidance relating to specific policies", and "guidance relating to a whole local authority area" (p. 12).

As being the first type of the four, Cowan (2002) names **guidance relating to specific places** as three sub-types as urban design frameworks, development briefs and master plans. His categorisation for the first type and sub-types are adapted into the taxonomy as Place-aimed Design Guidance Tools.

Second one, Cowan (2002) defines **guidance relating to specific topic** of which examples are shop-front design guides, design guides for house extensions or design guides for lighting. He names mostly the type as design guides. While the second type is adopted for the taxonomy as Topic-aimed Design Guidance Tools, naming them mostly guides

(which Cowan does) avoided in order to prevent the confusion in considering district based guide.

Third one, Cowan (2002) defines **guidance relating to specific policies**, as guidance which is produced in order to realize particular policies such as conservation policies or policies for transportation. The third type of Cowan’s categorisation is adapted into the taxonomy as Policy-aimed Design Guidance Tools.

Fourth one, last type of guidance that Cowan (2002) categorises, **guidance relating to a whole local authority area**, provide the general design guidance for an entire local authority area. While Cowan defines the type based on local authority area, in the taxonomy District-aimed Design Guidance Tools are based on being tools to provide guidance for a complete, defined district whether for a complete authority area or not.

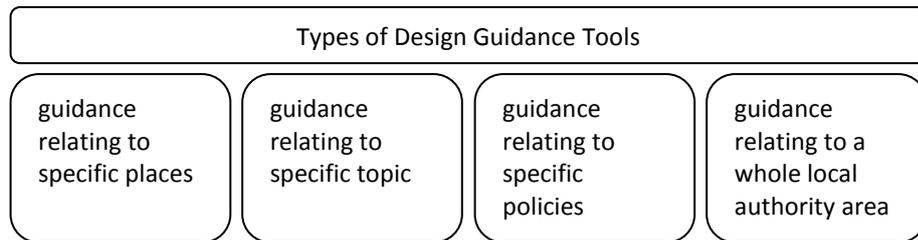


Figure 4.11 Types of design guidance tools according to Cowan (Produced from Cowan, 2002)

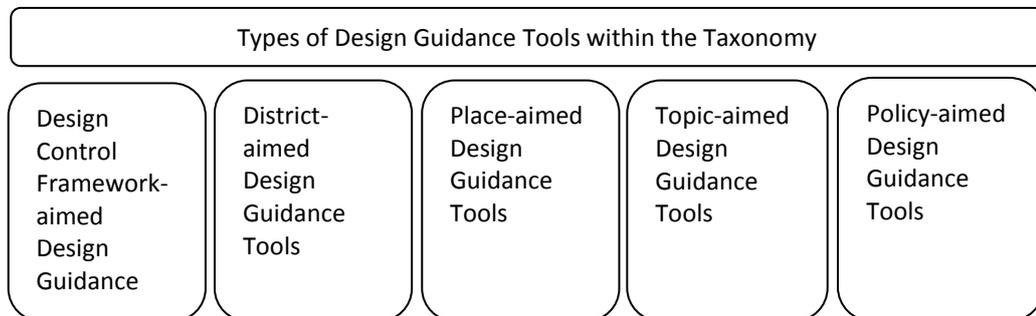


Figure 4.12 Types of Design Guidance Tools in the Taxonomy in the thesis

4.3.1.1 Design Control Framework-aimed Design Guidance Tools

Design Control Framework-aimed Design Guidance Tools are tools which draw general framework for urban design and design control for macro scale. It consists of four subtypes which are Guidance for Design Policy/ Guidance, Guidance for Urban Design, Good Practice Guide, and County Design Guides. The type belongs to general design policies while other types from this thesis are belong to special design policies.

4.3.1.1.1 Guidance for Design Policy/ Guidance

This type of guidance consists of governmental advice for design policy and guidance, the methods for implementing design guidance and policy, guidance about the tools for building them and implementing them, guidance for design principles and objectives. This type of design control tool is an important one considering urban design for all scales. One of the well-known examples for this type is *ByDesign*, which is also one of the cases of the analysis of the thesis. This type of guidance provides bases for design policies, methods, principles and objectives for other types of design guidance.

4.3.1.1.2 Guidance for Urban Design

This type also consists of governmental advice for design policy and guidance. This type, different from the former one, is mainly about urban design itself. It consists of approach for urban design, principles for urban design, element of urban design. It draws a complete approach for design of places. One of the well-known examples for this type is Urban Design Compendium 1, which is also one of the cases of the analysis of the thesis.

4.3.1.1.3 Good Practice Guide

This type consists of cases considered good practices which can lead cases from similar situations to the desired directions. The guides state the principles and cases that realize or close to realize whereof principles. One of the well-known examples for this type is Urban Design Compendium 2, which is also one of the cases of the analysis of the thesis.

4.3.1.1.4 County Design Guides

County design guides are regional scale design control tools which draw general framework for design issues for regional scale such as road hierarchy. They also focus on design issues such as principles (Carmona et al., 2002, p. 88).

4.3.1.2 Place-aimed Design Guidance Tools

Place-aimed Design Guidance tools are tools aiming to guide urban design specific to areas or sites which are encountered changes. It consists of three sub-types which are urban design frameworks, development briefs and master plans (Cowan, 2002).

4.3.1.2.1 Urban Design Framework

Urban design frameworks are defined by Urban Design Compendium 2 as *“the bridge between policy and implementation”* (Evans et al., 2007, p. 25). The frameworks are also called in different names such as **urban design strategy, area development framework, spatial masterplans, or planning and urban design frameworks** (CABE & DETR, 2000, pp. 49, 92; Cowan, 2002, p. 12). They are used for drawing general framework for design strategies for more detailed design control tools such as development briefs and master plans (Cowan, 2002; Evans et al., 2007, p. 25). By drawing general principles for more detailed stages, the frameworks provide

opportunity to intervene development area and parts of it in an integrated way (CABE & DETR, 2000, p. 50; Evans et al., 2007, p. 25).

The distinguishing feature of urban design frameworks is the area for which framework is produced. The urban design frameworks are for **the areas of change** “*only part of which is likely to be developed in the near future.*” (CABE & DETR, 2000, p. 48; Cowan, 2002, p. 12) and, of which developments are required to be “*controlled, guided and promoted.*” (Cowan, 2002, p. 12). The frameworks serve also an opportunity of coherency for the areas, more than one of which sites encounter development process. By providing coherency in development of related sites, the frameworks have a potential to prevent undesired contest among the whereof development sites (CABE & DETR, 2000, p. 49). In addition to the use for coherency between sites within one particular area, the urban design frameworks are design control tools to be used for multi-partnered, multi-phased development processes (Cowan, 2002, p. 12).

Definitions for urban design frameworks:

ByDesign defines urban design frameworks as;

a document which informs the preparation of development plan policies, or sets out in detail how they are to be implemented in a particular area where there is a need to control, guide and promote change. (CABE & DETR, 2000, p. 93)

Cowan (2002) defines urban design frameworks as;

An urban design framework is a document describing and illustrating how planning policies and principles should be implemented in an area where there is a need to control, guide, and promote change. It includes two-dimensional vision of future infrastructure requirements. (p. 12)

UDC 2 defines urban design frameworks as;

A framework describes and illustrates how planning and design policies, and principles, should be implemented in an area where there is a need to control, guide and promote change. They can help deliver change across a wide area by coordinating more detailed development briefs and masterplans for separate sites. (Evans ve diğ., 2007, p. 25)

In this context, urban design frameworks are urban design control tools which draw general design framework for areas, gone under change, by describing the broad design principles and by describing and illustrating the ways of or methods for implementation of design policies proposed for the related area. (CABE & DETR, 2000, p. 48; Cowan, 2002, p. 12) They use the 2D and 3D drawings and models in order to deliver the concepts and ideas (CABE & DETR, 2000, p. 49).

4.3.1.2.2 Development Briefs

Development briefs are also called as planning briefs, design briefs and site development frameworks (CABE & DETR, 2000, p. 53). Parfect and Power (1997) define planning and development briefs as two distinct concepts; that, planning brief as tools for delivering planning guidance for various development needs and opportunities, development briefs on the other hand, site-specific guidance for a development area included in a planning brief (pp. 37-38). On the other hand, Cowan (2002) defines concepts of planning and design briefs in terms of development briefs. He assert that the terms of development, design and planning briefs can be used as separate concepts when planning and design phases are separated. Otherwise, the term development brief is used instead of the two terms (Cowan, 2002, p. 12). According to *ByDesign*, these terms are required to be integrated, because design and planning is required to be integrated (CABE & DETR, 2000, p. 53). Thus, in the study, the term development brief is used instead of planning and design briefs.

Development briefs, like urban design frameworks, are related to the areas which undergo *change*, but not only part of which does, but also most parts of which do (Cowan, 2002, p. 12). The key point here is the intervention level of detail. The role of development briefs as urban design control tools is **to make the urban design frameworks more detailed**, to provide a *“more detailed guidance for a specific site”* (Cowan, 2002, p. 12) and to detail the way of implementation of design policies, which are decided in the plan, on a specific site (CABE & DETR, 2000, p. 53). In addition, development briefs are design control tools, which are required to be for the sites

where a **level of complexity** is issued and a **coordinated approach** is required to overcome this complexity. By prepared for sites which carry out some level of sophistication in terms of size, sensitivity or complexity; development briefs provide an opportunity to avoid uncertainty and support an efficient process for planning and development (CABE & DETR, 2000, pp. 53-54).

Definitions for development brief:

Cowan (2002) defines the development brief as;

A development brief is a document providing guidance on how a specific site of significant size and sensitivity should be developed in line with the relevant planning and design policies. It will usually contain some indicative, but flexible, vision of the future development form. (p. 12)

It is also defined in the *ByDesign* as;

Development brief; A document, prepared by a local planning authority, a developer, or jointly, providing guidance on how a site of significant size or sensitivity should be developed. (CABE & DETR, 2000, p. 90)

Contents and components of briefs are generally defined by the site which they are developed for. In other words, they are prepared according to the characteristics and the context of the site (Madanipour, 1996, p. 176). To exemplify the context-dependency of Contents and Components of design brief;

A brief for a **small infill site** may require no more than straight-forward guidance about such matters as **height, access, the building line and materials**, and consultation with neighbour.

On **large housing or brown field sites** requiring an orderly approach to phased development, the emphasis is likely to be on **layout, density and massing**.

Landscape is likely to be particularly important on **green field sites**, with **topography, ecology, watersheds and boundaries** needing careful attention.

A development brief for a large site will have many of the characteristics of an urban design framework, but it will be tailored to such detailed issues as density, **access and circulation requirements, relationships to adjacent development, and new landscape**. (CABE & DETR, 2000, p. 54)

On the other hand, there are some common contents and components relevant for development briefs, which are defined in *ByDesign* as ‘development principles’, ‘the method of the implementation of these principles’ and ‘design objectives and related ideas to these objectives’ (CABE & DETR, 2000, pp. 53-54).

4.3.1.2.3 Master Plans

The aim of the master plan is to state the important detailed principles for urban design. Master plan is much more detailed than other types of design guidance such as having detailed three dimensional vision for the design area, details related to implementation, costs of the project and phases of the projects (Cowan, 2002, p. 13).

Definitions for master plans:

Cowan (2002) defines the master plan as;

A master plan is a document that charts the master planning process and explains how a site or a series of sites will be developed. It will describe how the proposal will be implemented, and set out the costs, phasing and timing of development. (p. 13)

UDC 2 defines master plans as;

A masterplan is a detailed, three-dimensional plan which sets out the intended layout of an area. It presents proposals for buildings, spaces, movement and land use in three-dimensional, and matches all of these to an implementation strategy. (Evans et al., 2007, p. 25)

As other terms for design control tools, the term master plan is used for different meanings and for different forms of design guidance (Cowan, 2002, p. 13). **Cowan (2002) illustrates this confusion as,** while *ByDesign* prefers not to use the term master plan, *Towards an Urban Renaissance*, which is a report of Urban Task Force, the term is preferred to use master plans for the documents that focus on the form visual, three dimensional form of the design. Cowan (2002) states that there is even a tendency to use term master plan for all types of guidance documents, which brings confusion. In this study, Cowan (2002)’s categorisation for master plan is adopted.

Table 4.1 Comparison of Area Specific Guidance

Sub-Types Of "Design Guidance Relating To Specific Places"(by Cowan)			
Characteristics of Guidance	Urban Design Framework	Development Brief	Master Plan
for an area of change			
for a specific site			
including appraisal, policy review, vision statement, and planning and design principles			
including feasibility appraisal and describing the proposed development process			
including details for implementation, and the costs, phasing and timing of development			
prepared by an organisation that owns the site or controls the development process			
outlining appropriate planning obligations			

Comparison of Area Specific Guidance (Produced from Cowan, 2002, p. 13)

4.3.1.3 Topic-aimed Design Guidance Tools

Topic-aimed design guidance tools are design guidance tools which are produced for guiding specific topics of urban design. Some examples for this type of design guidance are design guides for façades such as shop-front design guides, guides for extensions such as guides for house extensions or guides for landscape elements such as design guides for lighting (Cowan, 2002, p. 12). Such topic based design guides provide opportunity to promote appropriate innovative design to the local context of the design area and higher quality of design (CABE & DETR, 2000, p. 58).

Design guide is defined in *ByDesign* as

a document providing guidance on how development can be carried out in accordance with the design policies of a local authority or other organisation often with a view to retaining local distinctiveness (CABE & DETR, 2000, p. 89) .

ByDesign defines six types of design guides, three of which are categorised in the Topic-aimed Design Guidance in the taxonomy. The three sub-types adopted from *ByDesign* to the taxonomy are “*design guides for buildings*”(shopfronts, building extensions and signs), “*streetscape and landscape design manuals*” (public space, cycling, landscape, lighting, nature conservation, planting), “*design guides for specific uses*” (residential, leisure, retail or industrial) (CABE & DETR, 2000, pp. 58-59).

The contents of the guides, on the other hand, are defined in *ByDesign* as ‘design principles relating to the topic of the design guide and the local context’, ‘relation of the guide to the planning policies, to other guidance documents’ such as the tools related to that topic in different scales like national or regional guidance and to any related guidance documents (CABE & DETR, 2000, p. 58). **Contents and components** of a design guide are not independent from particular characteristics of the site and the context. In other words, they are prepared according to the characteristic and the context of the development. The types of the design guides take form according to the topic or topics of the guide which can be in a wide range of the form of design and development (CABE & DETR, 2000, p. 58).

4.3.1.4 Policy-aimed Design Guidance Tools

This type of design guidance is exemplified by Cowan (2002) as “*policy on conservation areas, transport corridors, waterfronts, promenades and green belts*” (p. 12). In the taxonomy, **Policy-aimed Design Guidance Tools** are defined as general type without any sub-types.

In *ByDesign*, special policy areas are also considered as potential areas for preparation of urban design frameworks; (CABE & DETR, 2000, p. 50) on the other hand, the production of **design control for special policies and policy areas** is required to be

assessed and addressed cautiously. Because, **policy-aimed design guidance** is another type of design guidance while urban design frameworks are under the classification of **place-aimed design guidance** (Cowan, 2002, p. 12).

4.3.1.5 District-aimed Design Guidance Tools

According to *ByDesign*, design guides have three more types which are: “*neighbourhood, district and city development guides*”, “*countryside design summaries*” and “*village design statements*” (CABE & DETR, 2000, p. 59). While the last two types from *ByDesign* are adopted to the taxonomy, the first one is categorised as three different types as ‘city design guides’, ‘neighbourhood design guides’ and ‘district design guides’. Therefore, the **District-aimed Design Guidance Tools** have five types in the taxonomy as city design guides’, ‘neighbourhood design guides’, ‘district design guides’, “*countryside design summaries*” and “*village design statements*” (CABE & DETR, 2000, p. 59).

4.3.2 Design Codes

a set of illustrated design rules and requirements which instruct and may advise on the physical development of a site or area. The graphic and written components of the code are detailed and precise, and build upon a design vision such as a masterplan or other design and development framework for a site or area. PPS3 (DCLG, 2006)

Urban design codes are **site- or area- specific**, vision **delivery** tools which are **systems of set of written, graphic and prescriptive rules in two and three dimensions** based on a **vision** that developed generally by a **master plan** or other type of guidance, intervening the components and productive elements of urban space. According to Urban Design Compendium 2 design codes are required to set some mandatory and some advisory design proposals and it also proposes a regulatory plan for implementation (Evans et al., 2007, p. 127).

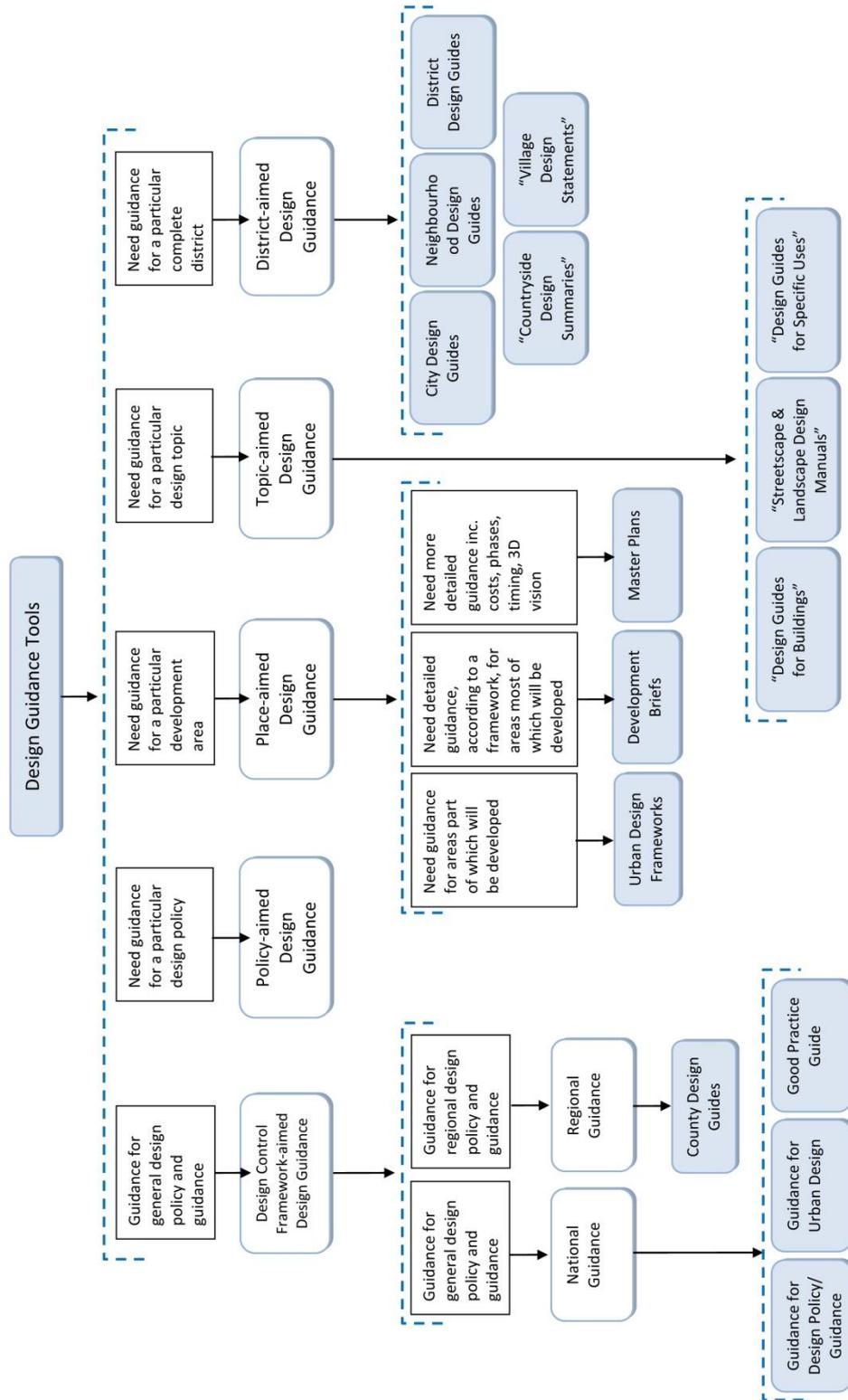


Figure 4.13 Design Guidance Tools in UK Planning System

Carmona et al. (2006) emphasise the importance of dealing with contents and components of the code.

CABE (2003), in addition, states contents of design codes into two sets which are three-dimensional masterplan and set of written requirements. While the former shows *“clearly the intended arrangement of spaces and buildings, including massing, orientation, distribution of uses, densities, building lines, spaces etc.”*, the latter sets *“the plan, including dimensions where relevant, and which address more detailed issues, including issues such as use of materials, landscaping and tenancy mix depending on the level of prescription required.”* (CABE, 2003, p. 6).

CABE & DCLG (2006) defines four spatial scales to code: settlement pattern which is to code elements such as general settlement pattern with street hierarchy, building lines, regulating plan; urban form which is to code elements such as grouping of elements, parcel layout, courtyard, linking elements; urban space which is to code elements such as street character, proportions related to public realm, open space requirements, massing; and built form which is to code elements such as boundary treatment, building materials, details (pp. 68-71).

Carmona et al. (2006) postulate analytical framework for coding as in Figure 4.14. Within the proposed analytical framework, the components are proposed as land uses, streets, blocks, plots, buildings (p. 226). According to the postulated components, they categorize the components of the codes as stated in the Table 4.2

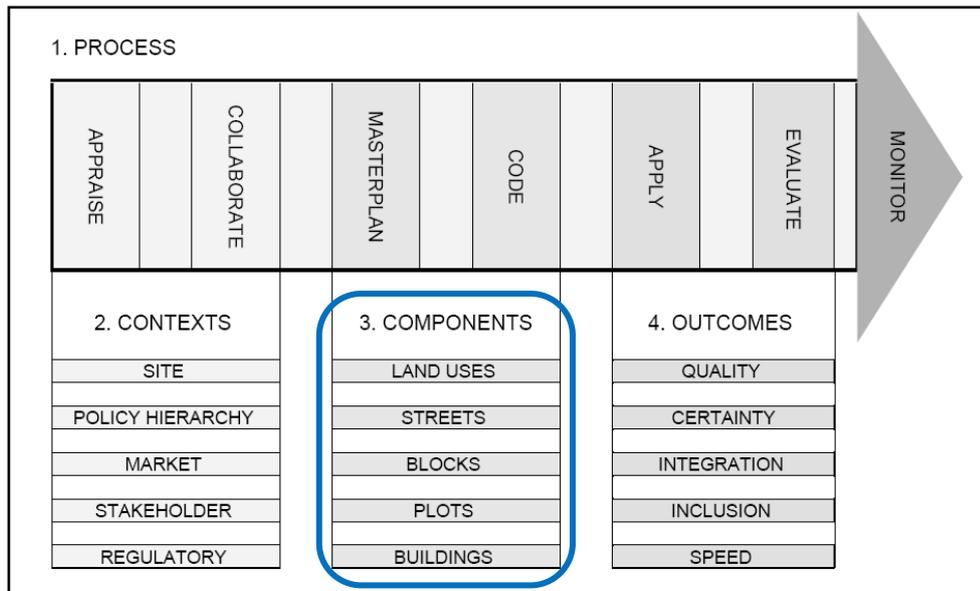


Figure 4.14 Postulated process for coding the component defined in the figure is *land uses, streets, blocks, plots, buildings* (Source: Carmona et al., 2006, p. 226)

Table 4.2 The classification of components of design codes by Carmona et al..(2006)

Classification Of Components Of Design Codes by Carmona et al. (2006)	
Land Uses	Layout of public space Residential, commercial and mixed land uses Building use Parks and open spaces
Streets	Street types and dimensions Location of car parking Street furniture, planters, etc Type and placement of trees, etc.
Blocks	Street block pattern Plot aggregation
Plots	Position of buildings Gardens Boundary treatments
Buildings	Building type Building massing Height of buildings Size and shape of windows, doors, etc Details of eaves/overhangs, gutters, etc Signage

(Produced from Carmona et al., 2006, pp. 235-236)

CABE (2005) in *Design Coding: Testing its use in England* states ‘common’ contents and components for the design codes as: “strategic access, movement framework/street hierarchy, parking, open space, building envelopes, architectural design” (CABE, 2005, p. 8) and ‘potential contents of a design code’ in seven parts as in the Table 4.3 (CABE, 2005, p. 18).

Table 4.3 “Potential contents of a design code-The Product”

“Potential contents of a design code-The Product” by CABE (2005)	
Character of The Area	Quality of layout Architecture Landscape
Dimensions Inputs & Orientation	Shape Dimension Location Orientation of buildings & streets
Design and Layout of Streets	Design and layout of streets Relation of streets with people, cars, public transport, utilities, trees, etc.
Open Spaces and Public Realm & Private Spaces	Parks Squares Streets Layout of private shared gardens
Density & Land Uses	Mix of land uses Focusing on the density of development Location of community facilities
Detailed Building Regulations & Materials	Quality and key principles of the design of individual buildings & blocks Architectural principles Use of certain materials in the buildings and public spaces Individual components (such as dimension of windows and materials)
Principles & Requirements Related to Sustainability	Requirements relating to sustainability (standards of energy efficiency/the use of materials/ methods of construction)

Produced from *Design Coding: Testing its use in England* (CABE, 2005, p. 18)

Design Coding in Practice-An Evaluation (2006), which provides a comprehensive analysis of adopted design codes in UK, defines contents of design code as in the Table 4.4.

Table 4.4 “What the codes contained: Content”

“What the codes contained: Content” by Carmona, Blum, Stevens, Hammond, Stille, Rowlands, Pittock, Karski and Dann (2006)	
Streets and Enclosures	Street hierarchy Street coding Ratios and proportions Coding for street furniture Boundary treatments Materials
Parking	On-street parking Parking courts Garages
Open Space and Landscape	Planting standards Types of trees Coding for front gardens Boundary treatments
Land Use Mix	Unit types Land uses Coding for building adaptability Densities Block frontages
Neighbourhood Character	Character areas Coding for morphological differences
Built Form and Townscape	Coding for built form and block layout Building line Building height Building placement Building lines and frontages Plot dimensions
Architectural Design	Building envelope Rooflines Corner buildings Colour palette Architectural details and materials

Produced from “*Design Coding in Practice-An Evaluation*” (Carmona et al., 2006)

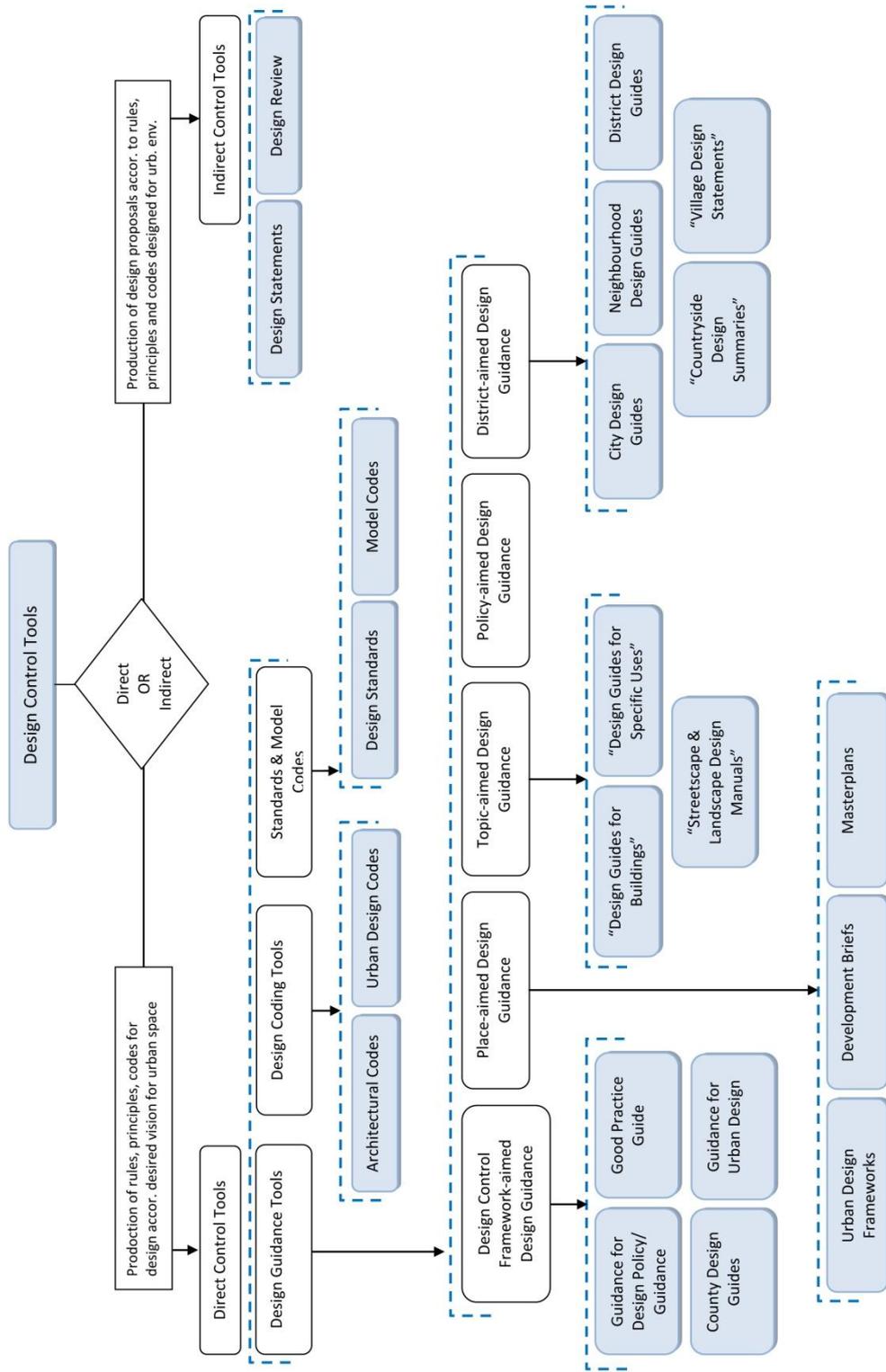


Figure 4.15 Taxonomy of design Control Tools

4.4 Taxonomy of Contents and Components of Design Control Tools

In addition to taxonomy of design control tools embedded in UK planning system, contents and components* of the tools which codifies the urban built environment and guide the design of the urban space are classified.

The term content means “*what is contained in something*” (Abate , 1999), and the term component means “*a part or element of a larger whole*” (Soanes & Stevenson , 2005a).

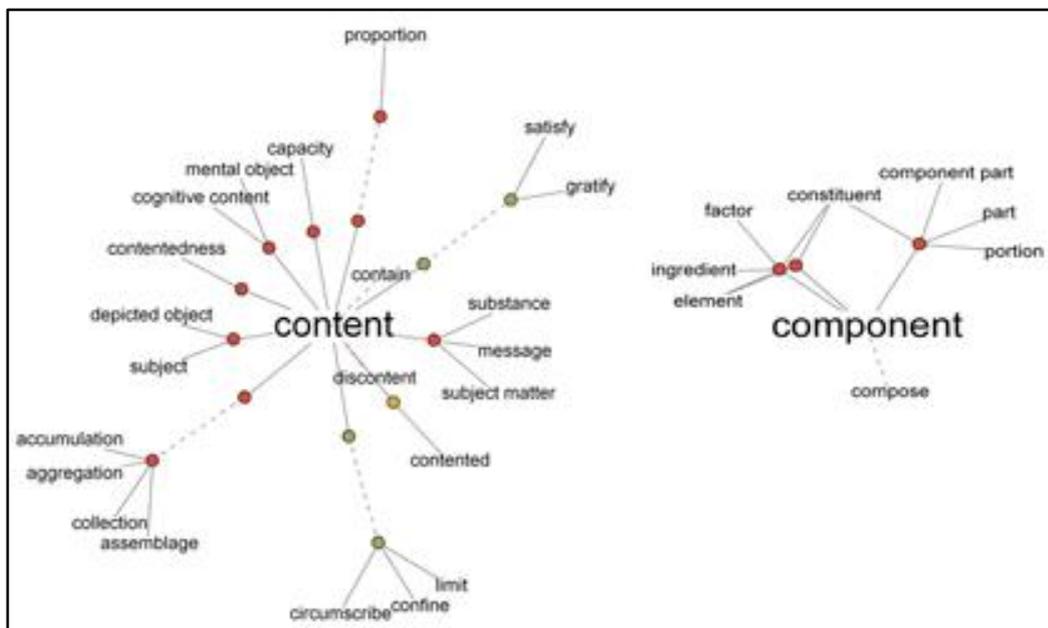


Figure 4.16 Visual map of the ‘content’ & ‘component’ (Source: Visual Thesaurus, 2010)

* The terms contents and the components of design control tools are used for **two distinct meanings**. **One is for contents and components related to the components and elements of urban space that are guided or coded**, which is the main concern of the thesis. These contents and components are the components of the urban space for which the design guide or design code is produced for. **The other is the contents and the components of the documents**, which is also important to produce a guide, or code; but not one of the main concerns of the thesis.

CONTENTS of design control tools are the elements which the tools aiming to control and produce in order to build a meaningful whole such as streets, buildings, blocks, (FORMAL ASSETS) or design principles or objectives (CONCEPTUAL and CONTEXTUAL ASSETS) . On the other hand, *COMPONENTS* are the concrete ‘parts’ which construct the content such as public-private frontages or set-back dimensions in design code or for street guide; or landscape elements in an open public space guidance document (FORMAL ASSETS); or productive morphological elements of urban form (CONCEPTUAL and CONTEXTUAL ASSETS) such as structure, grain, height or mass. Thus, contents are *elements aiming to build*, while components are *elements aiming to intervene in order to build the contents*.

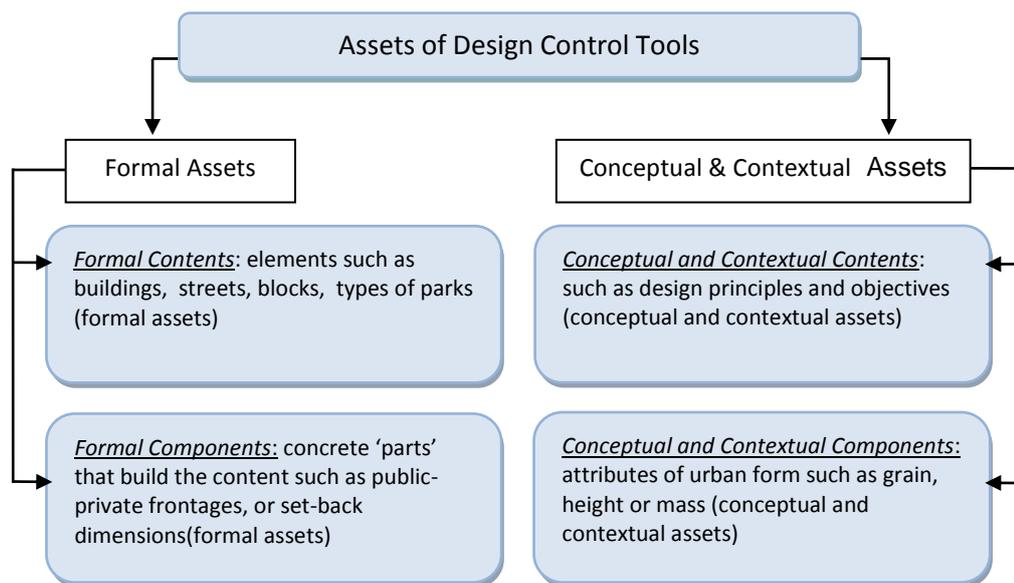


Figure 4.17 Formal and Conceptual & Contextual Assets

Assets of design control tools are analysed and grouped into contents and components which are parts of wholes bounded by the laws of whole – part relationships, discussed in the Theoretical Framework Chapter, while producing the whole. Each type of content and component has their inner balance while interacting each other in the process of producing the whole. In this context, contents and components are ‘centers’ that has their inner balance, order, ‘*whole*’. The Conceptual and Contextual Components such as urban grain, height, mass and the Formal Components such as public-private frontages, set-backs are components that form the Gestalt percept which are contents. In other words, Formal Contents and Conceptual & Contextual Contents are seen and perceivable components such as streets, buildings; or perceived legibility or permeability of urban space; while Formal Components and Conceptual & Contextual Components are coded or produced structural parts such as set-back dimensions, ratios; or grain, layout.

In this context, the contents of the design control tools are elemental components of urban space, whereas the components of the design control tools are productive components of urban space. In order to produce the urban space as a whole and built the sense of place, the design control tools intervenes the productive components of urban space; therefore, their contents are constituted by the productive components of the urban space. On the other hand, in order to produce such a whole, *design* control tools should dominate the elemental components of urban space by intervening to the productive ones.

As a result of the analysis and literature review, the contents and components are categorised into four types according to formal and conceptual & contextual assets: formal contents (Type A1), conceptual/contextual contents (Type A2), formal components (Type B1), and conceptual/contextual components (Type B2).

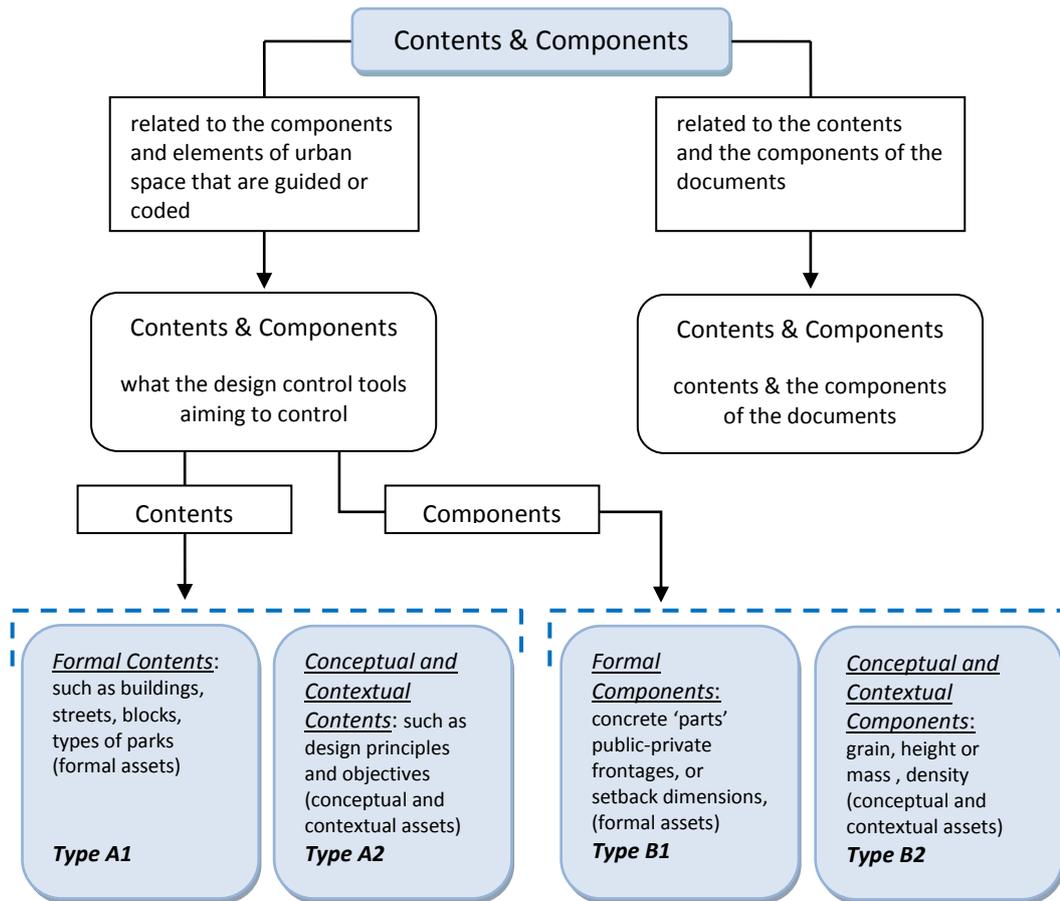


Figure 4.18 Contents and components of a design control tool

4.4.1 Formal Contents (TypeA1)

Formal contents (Type A1) consist of buildings, streets, squares, blocks, and building parcels & plots.

4.4.2 Conceptual & Contextual Contents (TypeA2)

Conceptual & Contextual Contents (Type A2) are design principles, design objectives, vision, and architectural style (if relevant).

4.4.3 Formal Components (TypeB1)

Formal Components (Type B1) consist public-private frontages, set-back dimensions, boundary treatments, street width, plot depths or ratios, building floor number, dimensions for height and depth, building line, pavements materials, street furniture, landscaping, urban architectural elements and materials.

4.4.4 Conceptual & Contextual Components (TypeB2)

Conceptual & Contextual components (Type B2) consists layout, urban grain, height, mass, and building density.

Table 4.5 Types of Contents and Components

TypeA1 Formal Contents	buildings, streets, squares, blocks, and building parcels & plots
TypeA2 Conceptual & Contextual Contents	design principles, design objectives, vision, and architectural style
TypeB1 Formal Components	public-private frontages, set-back dimensions, boundary treatments, street width, plot depths or ratios, building floor number, dimensions for height and depth, building line pavements materials, street furniture, landscaping, urban architectural elements and materials
TypeB2 Conceptual & Contextual Components	layout, grain, height, mass, building density,

CHAPTER 5

ANALYSIS OF CONTENTS AND COMPONENTS OF SELECTED CASES

The cases consist of examples in two main groups: Design Guidance and Urban Design Coding. For each group, selected cases are analysed in terms of their contents and components. The analysis is made by analysis of contents and components of cases by grouping them into the types of taxonomy of contents and components of design control tools which is built in this study. The method is to analyze the contents and components in detail and group them in to the categories that form the types (of contents and components).

The first group consists of cases from Design Control Framework-aimed Design Guidance, District-aided Design Guidance, Place-aimed Design Guidance, and Topic-aimed Design Guidance in order to determine the contents and components of design guidance tools and the differences between the contents and components of different types.

Firstly, for 'Design Control Framework-aimed Design Guidance', cases are By Design, Urban Design Compendium 1 and Urban Design Compendium 2. The three cases are selected from national guidance documents in order to analyse the contents and components of leading tools of such a nation-wide guidance-based design control-planning system. All of the three cases provide guidance from different aspects, including design policy guidance, guidance for element of urban design and good practice guidance. Cases in this group are guidance documents that draw framework of good design by exemplifying through best practice (Compendium1&2), and draw framework for urban design by stating the components and contents of urban design

(Compendium1) and draw framework for tools for urban design defining tools for design such as frameworks, briefs, guides (ByDesign).

Secondly, for 'District-aided Design Guidance', selected cases are Nottingham City Centre Design Guide and Oldham and Rochdale Urban Design Guide, which are selected in order to determine the contents and components of district specific guides with different level of detail. While the former case is more comprehensive and detailed, the latter guide provides more general guidance.

Thirdly, for 'Place-aimed Design Guidance', selected cases, Southampton City Centre Urban Design Strategy, Havant Town Centre Urban Design Framework, Urban Design Framework for Stratford-upon-Avon, are from one sub-type of guidance which is the 'urban design frameworks'. Aim of the limitation of cases by one particular sub-type is to provide opportunity of comparison and determination of contents and components at least one particular sub-type. Thus, urban design frameworks are selected as being more general and one of the most confused types.

Fourthly, for 'Topic-aimed Design Guidance', only one case is selected, London Borough of Richmond upon Thames Public Space Design Guide. Because the contents and component of this type strictly related to topic that the guide prepared for, the case is selected only for exemplifying how the topic based guides are built.

The second group consists of design codes selected having different characteristics as one for new development area Upton Design Code, two for built up areas Design Code for the Rotherham Town Centre River Corridor, and Walker Riverside Design Code.

The analysis in this chapter is required to be considered with analysis tables in Appendix A which consist of the detailed analysis of contents and components of the cases and visual entities from the cases.

5.1 Design Guidance

5.1.1 Design Control Framework-aimed Design Guidance

5.1.1.1 By Design: Urban Design In The Planning System: Towards Better Practice

Table 5.1 ID of By Design: Urban Design In The Planning System: Towards Better Practice

Case	By Design: Urban Design In The Planning System: Towards Better Practice
Type	Guidance for Design Policy/Guidance
Produced by	Department of the Environment, Transport and the Regions (DETR) and Commission for Architecture and the Built Environment (CABE) (UK)
Date	2000, (CABE & DETR, 2000)
Headlines from Contents Page (For detail see Appendix A)	<p>The Need For Better Urban Design Urban design Place-making The role of the planning system Towards better practice</p> <p>Thinking About Urban Design Objectives of urban design Aspects of development form Objectives and development form brought together Prompts to thinking</p> <p>Urban Design and The Planning Toolkit Understanding the local context The development plan Supplementary planning guidance Development control</p> <p>Raising Standards In Urban Design Proactive management / Collaboration Developing the right skills Design initiatives Monitoring and review</p>

The joint Department of Transport, Local Government and the Regions DTLR/CABE publication *By Design* sets out the need for better urban design and discussed the key principles for the preparation of site-specific urban design guidance in a wider context. This new contribution build on the advice in *By design* by focusing on the detail, and spelling out exactly what local authorities might include in urban design guidance, and what developers and designer should expect to find in it. Hopefully, the result will be less confusion all rounds and a better quality built environment. (Cowan, 2002, p. 7)

As Cowan (2002) states, importance of *ByDesign* that it clarifies the urban design guidance tools and key principles to produce them. *ByDesign* aims to promote better urban design and it guides the urban design applications by determining its principles and components, and defines its tools and legal framework. It is also based on some basic principles three of which are stated in the guide. Firstly, one of the basic principles of *ByDesign* is the need for good design for everywhere; according to *By Design*, “good design is important everywhere, not least in helping to bring rundown, neglected places back to life” (CABE & DETR, 2000, p. 5), in other words, good design is essential for every part of urban built environment, not just for urban regeneration areas as produced usually. Secondly, *ByDesign* puts emphasis on the role of skill of designers and local authorities for successfully produced places. According to *ByDesign*, while planning is essential for delivering good design, making liveable places is mainly up to the skills of designers and the commitment of local authorities for the good urban design. Finally, *ByDesign* highlights the importance of uniqueness and the context dependency of good design; that, every particular place is identical, good urban design is always dependent to the understanding of characteristics of the place and always dependent to the context itself (CABE & DETR, 2000, p. 5).

Aim of the guide is to promote better urban design and to guide the production of better urban built environment by urban design. It is a delivery tool for the design policy of central authority, which is encouragement of good design in every part of urban built environment, formulated as PPGs (Planning Policy Guidance) at the time when *it* is produced (CABE & DETR, 2000, p. 8).

Attempt to set objectives and principles for a design policy guide is crucial. *ByDesign* states objectives of urban design as character, continuity and enclosure, quality of the public realm, ease of movement, legibility, adaptability, and diversity; and aspects of the development form as urban structure (layout), urban grain (layout), landscape, density and mix, height (scale), massing (scale), details (appearance), and materials (appearance) (CABE & DETR, 2000, pp. 15-16).

Considering design objectives and aspects of development form, *ByDesign* proposes 'prompts to thinking' which combines design objectives and aspects of development form. Prompts deals with whereof three types of contents and components, however, they in addition deal with TypeA1 Formal Contents, too; by mentioning such as building form, plots, building types directly.

Types of Contents and Components of ByDesign

Contents and components of *ByDesign* has been analysed and grouped according to the types of contents and components. By being a comprehensive guide for design policy, assets of *ByDesign* contain **all four types of contents and components**. However, *ByDesign* discusses TypeA1 Formal Contents (such as buildings, blocks, streets) indirectly by prompts. In *ByDesign*, main emphasis is on TypeA2 Conceptual & Contextual Contents and TypeB2 Conceptual & Contextual Components (for detailed analysis SEE Appendix A).

Both the determination of conceptual & contextual and formal aspects is important inputs for the design of design control tools. As being a nation-wide guidance tool, by putting these two aspects as main bases of urban design, the guide directly intervene in the content of the other design control tools. It is not limited by whereof content, but also states delivery tools for design, types of plans, types of design policies, types of design guidance tools as supplementary planning guidance; and implementation methods of these aspects, method for professional participation, design skills, initiatives and monitoring stage. (CABE & DETR, 2000)

5.1.1.2 Urban Design Compendium 1

The Compendium provides an analysis of core design issues through the different stages of the project process, from assessment of overall context to deciding the detail of proposed developments. It is principally about the substance of urban design in creating the product. In other words, how do we change the urban landscape to create places where people want to live, work and socialise, from the street corner to the brand new settlement. UDC 1 (Walton et al., 2007, p. 7)

Table 5.2 ID of Urban Design Compendium 1

Case	Urban Design Compendium 1
Type	Guidance for Urban Design
Produced by	English Partnerships, The Housing Corporation, Urban Design Alliance (UDAL) (UK)
Date	2000 (1 st Ed.), 2007 (2 nd Ed.) (Walton et al., 2007)
Headlines from Contents Page (For detail see Appendix A)	<p>The Fundamentals The Importance of Urban Design/ Key Aspects of Design</p> <p>Appreciating The Context Community/ Place/ Natural resources Connections/ Feasibility/ Vision</p> <p>Creating The Urban Structure The Movement Framework Movement assessment/ The walkable neighbourhood Street network/ Types of grid</p> <p>Mixing Uses The neighbourhood unit / Character areas Compatible uses/ Mixed forms, uses and users Centres/ Edges/ Transition zones</p> <p>Density, Facilities and Form Density and Facilities/ Form/Interior Space/ Time</p> <p>Energy and Resource Efficiency Solar Design/ Water/ Earth/ Wind/ Waste</p> <p>Landscape</p>

Table 5.2 ID of Urban Design Compendium 1 (continued)

	<p>Open space and landscape design Public access to open space Open space networks/ Wildlife and ecology Topography/ Microclimate/ Management/ Urban forestry</p> <p>Landmarks, Vistas and Focal Points Landmarks/ Vistas/ Focal points</p> <p>Blocks Perimeter Blocks/ Block Size/ Block Shape/ Block Interiors</p> <p>Parcels and Plots Parcel Size/ Plot Size/ Plot And Parcel Sub-Divisions</p> <p>Making The Connections</p> <p>Streets and Traffic Street Types/ Main Routes/ Streets as Social Places Tracking/ Junctions/ Traffic Calming and Pedestrian Crossings</p> <p>Parking and Servicing Parking Standards/ Positioning Parking/ Car Parks/ Servicing</p> <p>Utilities Infrastructure Services Routing/ Equipment Boxes</p> <p>Detailing The Place Positive and Negative Space/ Building Lines, Setbacks/ Enclosure Active Frontage/ Richness and Beauty</p> <p>Building Size and Scale Building Height/ Building Depth/ Corners/ Building Width</p> <p>Thriving Public Realm Social Spaces/ Distinctive Places/ Street/ Furniture/ Signage/ Lighting</p>
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Urban Design Compendium 1 (UDC 1) aims to cover all spatial components in order to provide guidance for every type and scale of development (Walton et al., 2007). While *ByDesign* puts emphasis on **TypeA2** Conceptual & Contextual Contents and **TypeB2** Conceptual & Contextual Components, Urban Design Compendium 1 puts emphasis on **TypeA1** Formal Contents (such as buildings, streets, blocks) and **TypeB1** Formal Components (such as landscaping, architectural elements) in addition to setting 'key aspects of urban design'. Different from *ByDesign*, *Urban Design Compendium 1* uses good practice cases to exemplify its proposals.

While *ByDesign* states objectives of urban design as character, continuity and enclosure, quality of the public realm, ease of movement, legibility, adaptability, and diversity; (CABE & DETR, 2000, pp. 15-16) UDC 1 prefers the term 'key aspects' instead of 'principles and objectives'. UDC 1 states the reason to use 'key aspects' as they are specific practical applications of design. This approach of defining conceptual issues in terms of practice is highly consistent with the approach of UDC 1 as using good practices to exemplify the contents and components (Walton et al., 2007, p. 12). The whereof key aspects are places for people, enriching the existing, making connections, working with the landscape, mixing uses and forms, managing the investment and designing for change (Walton et al., 2007, p. 12)

UDC 1 groups the 'key aspects' according to correspondence of them with principles of *ByDesign*, Princes Foundation Design, Responsive Environments, PPS1. To compare UDC 1 with *ByDesign*, UDC 1 proposes 'places for people' corresponding to 'quality of the public spaces' and 'continuity and enclosure'; 'enrich the existing' corresponding to 'character'; 'make connections' corresponding to 'ease of movement' and 'legibility'; 'mix uses and form' corresponding to 'diversity', 'design for change' corresponding to 'adaptability'; and 'work with landscape' and 'manage the investment' not corresponding to principles of *ByDesign*. *ByDesign* meets these by other parts of the guide.

UDC 1 sets key aspects as 'fundamental's, which are in the **Type A2** Conceptual & Contextual Contents of the design control tools (for detailed analysis SEE Appendix A). In addition to 'fundamental's, UDC 1 put emphasis on the 'context' as every design is enquired to be context-dependent; which is emphasised in most of the design control tools. UDC 1 defines context in terms of locality, integration, distinction in design, characteristics of place and character including social and morphological assets.

Type A2 Conceptual & Contextual Contents is referred in any type of design control tools. However, for *ByDesign* and UDC 1 role of this type of content is important, because these tools are general guidance tools for producing other type of design control tools.

Nonetheless, it is not enough to set TypeA2 Conceptual & Contextual Contents. Thus, UDC1 sets contents and components of “creating the urban structure” which are **Type B2 Conceptual & Contextual Components**.

UDC 1 defines structure as:

“The term urban structure refers to the **pattern or arrangement of development blocks, streets, buildings, open space and landscape** which make up urban areas. **It is the interrelationship between all these elements, rather than their particular characteristics that bond together to make a place.**”(Walton et al., 2007, p. 33)

UDC1 Key aspects of urban design	By Design Principles of urban design	Princes Foundation Design and theory principles	Responsive Environments	PPS1 Principles of good design
Places for people	Quality of the public realm	Make Places	Robustness	create an environment where everyone can access and benefit from the full range of opportunities available to members of society
	Continuity and Enclosure			
Enrich the existing	Character	Build beautifully	Visual appropriateness	be integrated into the existing urban form and the natural and built environments
			Richness	
Make connections	Ease of Movement	Allow movement logically and legibly	Permeability	be integrated into the existing urban form and the natural and built environments
	Legibility		Legibility	address the connections between people and places by considering the needs of people to access jobs and key services
Work with the landscape		Design using natural harmonics		consider the direct and indirect impacts on the natural environment.
Mix uses and form	Diversity	Engender social interaction	Variety	address the connections between people and places by considering the needs of people to access jobs and key services
Manage the investment		Sustain land value		
Design for change	Adaptability		Personalisation	create an environment where everyone can access and benefit from the full range of opportunities available to members of society

Figure 5.1 Comparison of principles and key aspects of Urban Design Compendium 1, ByDesign, Princes Foundation Design, Responsive Environments, PPS1 (Walton et al., 2007, p. 13)

UDC 1 focuses on **Type B2 Conceptual & Contextual Components** as productive components for “fundamentals”. In addition, UDC 1 states **Type B1 Formal Components** as ‘details’.

UDC 1 defines detail as:

“What is meant here is the design of the buildings and public realm, and most particularly, the interface between them. **The building elements include elevations, corner treatments, roof lines, doors and windows, materials, floorscapes of colour and texture**, for example. The public realm elements concern the street, **the pavement** and the square and include **planting, street furniture, lighting and public art**. The interfaces are **the steps, the fences, front gardens, hedges, walls, windows and doors – the hinge between the horizontal and vertical planes.**” (Walton et al., 2007, p. 85)

UDC 1 also mentions land uses, character areas, microclimate, and management of landscaping, urban forestry, promote mix uses, promote compatible uses, promote mix housing types and tenures, promote cautious use of water and earth resources, orientation according to topography, safety, security issues, implementation and delivery, public realm, social spaces, even sound and smell.

Types of Contents and Component of Urban Design Compendium 1

To conclude, UDC 1 states **each type of contents and components** as a comprehensive guidance tools for producing guidance while focusing on **TypeA1 Formal Contents** (such as buildings, streets, blocks) and **TypeB1 Formal Components** (such as landscaping, architectural elements).

5.1.1.3 Urban Design Compendium 2: Delivering Quality Places

Table 5.3 ID of Urban Design Compendium 2: Delivering Quality Places

Case	Urban Design Compendium 2: Delivering Quality Places
Type	Good Practice Guide
Produced by	English Partnerships, The Housing Corporation, Urban Design Alliance (UDAL) (UK)
Date	2007 (Evans et al., 2007)
Headlines from Contents Page (For detail see Appendix A)	<p>Sowing The Seed Urban design policy Character and identity</p> <p>Integrated Design Implications for urban form Density Streets as places</p> <p>Delivering Quality And Adding Value Why good design? Adding value through design Defining the right mechanism and team</p> <p>From Vision To Reality Design quality and planning control Delivering the transport element Delivering street and service infrastructure Constructing quality places</p> <p>Managing Quality Places Managing physical assets</p>

“This Compendium reduces the risk by providing guidance and examples of how problems can be overcome. Where the original Compendium [UDC 1] provided guidance on the principles of urban design and how to apply them; this Compendium provides guidance on the processes which lead to successful villages, towns and cities.” UDC 2 (Evans et al., 2007, p. 6)

Urban Design Compendium 2 (UDC 2) is a comprehensive good practice guide consisting of 82 cases. It provides possible ways for solutions to problems encountered in the design process.

UDC 2 focuses on **urban design policy**, importance of effective design policy and how to produce it. According to UDC 2 *“Each policy should provide: first, a **design objective** and second, **an explanation of how a solution might fulfil that objective.**”* (Evans et al., 2007, p. 17). In other words, UDC 2 defines design policy as a package of solutions consisting of aim and method to reach that aim. **[TypeA2, Conceptual & Contextual Contents]**

UDC 2 also proposes implementation process of good design by proposing mechanisms for delivering design, gathering design team and partnership, planning control, mechanism to control design quality including design control tools and planning conditions, sub-dividing land of change area and phasing the urban development. UDC 2 also deals with urban design control tools, especially, frameworks which it defines as *“the bridge between policy and implementation.”* (Evans et al., 2007, p. 25). It states the relationship of frameworks, briefs, master plans and codes and also states the contents of frameworks in detail from **TypeA2 Conceptual & Contextual contents** to **TypeB1 Formal Components**.

UDC 2 discusses density in terms of promoting higher densities, efficient use of land, compact neighbourhoods **[TypeB2 Conceptual & Contextual Components]**, defines types of densities and measurement ways for densities **[TypeB1 Formal Components]**. UDC 2 stresses on streets as places rather than roads while putting functions of streets as places, movement, access and parking. For streets, UDC 2 states use of street furniture, trees, lightening **[TypeB1 Formal Components]** and street hierarchy **[TypeB2 Conceptual & Contextual Components]**.

UDC 2 also discusses character and identity, sustainability as a nationwide vision for urban development, engagement of community to the design process, integrated approach for all inputs of design which makes *“a whole that is greater than the sum of its parts.”* (Evans et al., 2007, p. 25); location and combination of uses in terms of multi-use, multi function, mix use **[TypeA2 Conceptual & Contextual contents]**. In addition to character and identity, sustainability, the guide discusses good design, social,

environmental, economic benefits of good design, value of design [**TypeA2 Conceptual & Contextual Contents**]. UDC 2 also discusses delivering technical infrastructure including public transport, construction mechanisms and methods, and management of built environment.

Types of Contents and Components of Urban Design Compendium 2

To conclude, UDC 2 focuses on process of design. It deals with **TypeA2 Conceptual & Contextual Contents** and **TypeB2 Conceptual & Contextual Components**; and very limitedly **TypeB1 Formal Components**. The importance of UDC 2 is the cases. As a good practice guide, it proposes desired and exemplifies it with cases that close to it.

Conclusion for Types of Contents and Components of Design Control Framework-aimed Design Guidance:

This type of general guidance tools deal with all types of contents and components. On the other hand, their foci are different. While *ByDesign* deals with all four types but focuses on **TypeA2 Conceptual & Contextual Contents and TypeB2 Conceptual & Contextual Components**, UDC 1 deals with the four types, but, focuses on **TypeA1 Formal Contents and TypeB1 Formal Components**. UDC 2, on the other hand, focuses on **TypeA2 Conceptual & Contextual Contents and TypeB2 Conceptual & Contextual Components, while dealing with also TypeB1 Formal Components**.

There are several examples of this type of guidance produced by DETR, CABE and other governmental institutions. This approach of producing national guides as good practice guides, guides for urban design and guides for design policy/guidance has a critical role to produce good design and places. Design policy guides like *ByDesign* draw general framework for key aspects of urban design by proposing objectives of design, aspects of urban form and combination of these two to produce principles that designer proposes.; while good practice guides like *Urban Design Compendium 2*, exemplifies implementations of urban design, methods of urban design with best practices related to whereof topics. *Urban Design Compendium 1*, on the other hand, has a different position by describing components of urban space and design in a comprehensive way and focuses to guide the urban design in terms of the components of urban form.

Thus, the three guides have complementary positions for each other by having different focuses to provide guide for urban design in general.

5.1.2 District-aimed Design Guidance

5.1.2.1 Nottingham City Centre Design Guide

Table 5.4 ID of Nottingham City Centre Design Guide

Case	Nottingham City Centre Design Guide
Type	District Design Guide
Produced by	For Nottingham City Council and Nottingham Regeneration Ltd. by URBED (UK)
Date	2009 (URBED, 2009)
Headlines from Contents Page (For detail see Appendix A)	Urban Form Public Realm Massing Activity Sustainability Design

It is an amplification of the existing policies for the city centre in the emerging Local Development Framework. The guide will be used primarily as a development control tool and as a checklist when considering applications in the city centre. It would therefore be helpful for architects and designers to use the contents of this guide to structure the Design and Access Statements submitted with planning applications. Nottingham City Centre Design Guide (URBED, 2009, p. 1)

First section of Nottingham City Centre Design Guide is 'urban form'. The guide deals urban form as "*Urban form relates to the way that buildings are positioned and designed to enclose public spaces, streets and squares.*" (URBED, 2009, p. 11) and defines it as "*The way that buildings enclose the streets, alleyways, parks and public squares of the city is known as its urban form.*" (URBED, 2009, p. 13).

The guide starting with defining urban form in terms of relation of solid (buildings) and voids (streets, alleyways, parks and public squares) puts emphasis on regulating 'building line' which is defined in guide as "*the interface between buildings and public spaces*" (URBED, 2009, p. 13).

It uses figure-ground map to analysis solid-void relationship in order to figure out "*the density of development, the grain of its buildings, the extent to which public spaces are enclosed by buildings and issues of permeability within the urban form*". It is stated in the guide that "*you can see the bones and structure of the place*" (by figure-ground map) (URBED, 2009, p. 13). According to this analysis, guide aims to preserve the fine-grain in the core, and restore the damaged periphery (URBED, 2009, p. 13). Thus, guide develops a strategy of "*repair and reinvention*" (URBED, 2009, p. 15). Former is to repair the damaged in the core; the latter is proposing new approach for periphery.

The guide use '**building line**' as its tools to shape urban form. It is expected from the new buildings in repair zone to rebuild the existing building line, while the new buildings in the new development zone (named in the guide as reinventing zone) are expected to follow newly developed structure. In order to establish this structure, rules for building lines are developed in the guide: building line compliance ("*All new buildings should follow the building line*"), changing the building line ("*Building lines cannot be changed in the Zone of Repair*"), multiple building lines ("*Where buildings front onto more than one street they must follow the building line on both frontages*".), set-backs and projections ("*Variations from the building line such as balconies are acceptable*"), stand-alone buildings ("*the private and public space with an appropriate boundary treatment*"), alleyways ("*Buildings should not turn their backs on these alleyways. Bridging over alleyways with new buildings will normally not be acceptable.*"), continuous street frontage ("*New buildings should form a continuous frontage joining to the buildings on*

either side”), and master planning (“In the Zone of Reinvention, ... Masterplans should be based on perimeter blocks enclosed within a permeable street network. These blocks should respect existing buildings and the historic street pattern.. No dimension of a block should exceed 150m.. establish a new building line for the area to which all buildings should relate..”) (URBED, 2009, pp. 18-19).

By these rules, building line of solid is determined strictly (with 1 m flexibility), according to dimensions of blocks and type of block - perimeter block (for reinventing zone), while extensions (like balconies) are left to the decision of architect. The guide also justifies the rules in relation with character of Nottingham.

Second section of the guide is public realm. The guide states streets and squares of the city are vital elements for its character. It refers another manual for public realm, which is Nottingham City Centre Streetscape Design Manual. Such refers to other topic-specific guides are common for district-aimed guides.

Guide deals with street network, first. The guide accepts four types of streets, developed in Nottingham City Centre Streetscape Design Manual, which are vehicle dominated, pedestrian/vehicle, pedestrian dominated and historic. As it is for building lines, street network in repair zone is repaired according to existing network, while it is proposed by master planning for development zone (reinventing zone). (for detail SEE Appendix A)

The guide also determines paving material for streets as according to usage of street, related surrounding buildings, pedestrian flow and level of restriction of vehicular access (URBED, 2009, p. 25).

Alleyways are important assets for character of the city centre of Nottingham, according to guide. They provide variety of spaces and active frontages. Guide describes alleyways as *“often built over on the main street frontages and form narrow canyons through the blocks adding unique character to the street scene”* (URBED, 2009, p. 29). It proposes principles for alleyways as character (uniqueness), activity (encouragement of active frontages including shop windows, entrances and doorways), reduction of clutter (keeping additions such as lightening, street furniture, signage minimum) , surface

materials (like historic streets), lighting, historical context, entrances, movement (encouragement of use as short cuts), information (way finding) (URBED, 2009, p. 29).

As for building lines, the guide proposes some rules for public realm: permeability, pedestrian priority, public realm improvements, street character, malls and arcades, activity, signage, trees.

By these rules, guide defines integration of new street network to existing and types of street to adopt according to zones. Components related to streetscape, signage and landscaping has left to other guides which are topic-specific. By leaving details to the other guides, different from rules of building lines, these rules are sets principle and objectives.

Third section of the guide is about height and mass of the buildings. It deals with the ratios of buildings with street widths, buildings effect on views and vistas. It sets important vista points of city centre and specific views. For the guide not the blockage this view is important. The guide proposes six massing zone. The zones are determined according to historical characteristics and vista and views by considering existing heights of the buildings and mass. The heights of the buildings are strictly dominated in terms of preservation of vistas and views. Height of the new buildings is predetermined according to these zones.

Tall buildings are also regulated as locating them *“where they will not impinge on key views or the setting of historic buildings”* (URBED, 2009, p. 41). According to guide taller buildings than existing heights can be accepted if they have a potential to be landmark by predetermining, tall building zones by masterplans.

The guide proposes some rules for mass and height, also: predominant building heights, street enclosure ratios, variations in height (*“replicating existing rhythm”*), landmarks, plant rooms (lift motors and antenna) (*“not visible from surrounding streets”*), the fifth elevation (design of the roofs of buildings), tall building definition (*“buildings are defined as all buildings that rise above the maximum building heights”*), tall building zone

(“buildings more than 4 storeys over the predominant height will only be acceptable in the tall building zone”), tall building assessment (“building assessment as set out in the CABE, English Heritage guidance on tall building”), the design of tall buildings (“the design of tall buildings should pay particular attention to the base and top of the building and should use the CABE, English Heritage guidance as a check list”)(URBED, 2009, pp. 44-45).

Height Zone	Max. no. of residential storeys over active ground floor	Max. no. of commercial storeys over active ground floor	Max. eaves height from predominant ground level
The City Core	Ground + 5	Ground + 4	20m
The City Centre North	Ground + 7	Ground + 5	26m
Eastside	Ground + 6	Ground + 5	23m
Waterside	Ground + 6	Ground + 5	23m
Southside	Ground + 4/5	Ground + 4	20m
Northern and Western fringes	Ground + 4	Ground + 3	17m

Figure 5.2 Height Zones from Nottingham City Centre Guide (Source:URBED, 2009, p. 42)

The guide sets building heights according to existing structure zones, enclosure ratios according to street types, variations in height according to rhythm, height limits for landmarks, height limit for tall buildings and bind them to other governmental guidance documents. Thus, it is obvious that it dominates building height and mass strictly by height limitations and ratios.

Forth section of the guide is about activity. The guide sets rules as mix of uses, primary active frontage, secondary active frontages, building orientation; eyes onto the street, building-street transition, building-street transition, street activity, densities, and residential amenity.

By these rules, the guide determines the relationship between the buildings and the streets and squares, relationship between the public and private by determining entrances of buildings, uses of ground floors (commercial, residential), and orientation of openings of buildings .

Types of Contents and Components Nottingham City Centre Design Guide:

As mentioned, contents and components of a guide depend on the context that it is produced for and type of design control tool.

Although the guide puts emphasis on **TypeA2 Conceptual & Contextual Contents**, the focus of the guide is the **TypeB2 Conceptual & Contextual Components** (layout, height, and mass). The guide dominates the **TypeB1 Formal Components** (building set-backs, building height and ratios) in order to produce the **TypeB2 Conceptual & Contextual Components**.

5.1.2.2 Oldham and Rochdale Urban Design Guide

Table 5.5 ID of Oldham and Rochdale Urban Design Guide

Case	Oldham and Rochdale Urban Design Guide
Type	District Design Guide
Produced by	Oldham Metropolitan Borough Council
Date	2007, (Oldham Metropolitan Borough Council, 2007)
Headlines from Contents (For detail see Appendix A)	Character Safety and inclusion Diversity Ease of movement Legibility Adaptability

Table 5.5 ID of Oldham and Rochdale Urban Design Guide (continued)

	Sustainability Designing for future maintenance Good streets and spaces Well designed buildings
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The guide focuses on design principles as being district design guide. It is not as detailed as the former case, Nottingham City Centre Design Guide. It sets design principles as character, safety and inclusion, diversity, ease of movement, legibility, adaptability, sustainability, designing for future maintenance, good streets and spaces, and well designed buildings. The guide puts emphasis on good streets and spaces, and well designed buildings in terms of combining elements for other design principles

It also builds connections to other design policy/guidance tools varying from national guidance/policy documents to residential guides.

Types of Contents and components of Oldham and Rochdale Urban Design Guide:

The guide consists of, **TypeA2 Conceptual & Contextual Contents** and **TypeB2 Conceptual & Contextual Components**. The focus of the guide is **TypeB2 Conceptual & Contextual Components** in terms of realisation of **TypeA2 Conceptual & Contextual Contents**. It is based on highly guidance; do not define any proportions or dimensions.

Conclusion for Types of Contents and Components of District-aimed Design Guidance:

The analysis of the two cases shows that the focus is on **TypeB2 Conceptual & Contextual Components** (layout, height, and mass). Although district-based guides may consist of all four types in terms of comprehensiveness, the level of prescription is limited.

The focus is on **TypeB2 Conceptual & Contextual Components** (layout, height, and mass).

5.1.3 Place-aimed Design Guidance

5.1.3.1 Southampton City Centre Urban Design Strategy

Table 5.6 ID of Southampton City Centre Urban Design Strategy

Case	Southampton City Centre Urban Design Strategy
Type	Urban Design Framework
Produced by	Southampton City Council by EDAW Limited (UK)
Date	2001 (EDAW, 2001)
Headlines from Contents Page (For detail see Appendix A)	<p>The current urban form</p> <p>The urban design framework</p> <p>City centre themes & goals</p> <p>Key urban design themes</p> <p>Enhancing the arrival and movement through the city</p> <p>Reconnecting the waterfront</p> <p>Enriching the public realm</p> <p>Creating landmarks</p> <p>Reinforcing individual character</p> <p>Character area guidelines</p> <p>Keynote projects</p> <p>Implementation strategy</p>

As it is defined in taxonomy, urban design frameworks are guiding design control tools for an area of which part will encounter changes in near future. Therefore, an urban design framework draws ‘framework’ for change and does not go into details.

Southampton City Centre Urban Design Strategy is a comprehensive urban design framework consisting not only framework but also analysis of context; and character areas, keynote projects and implementation strategy. It is discussed here with its framework part.

The framework defines three levels as the city centre framework, character area guidance and keynote projects. The framework states the reason of these levels as design hierarchy:

This structure has been prepared to ensure that there is a logical sequence in the progression of the design guidance from the large scale vision for the city through to the individual arrangement for prominent sites. (EDAW, 2001, p. 37)

The framework proposes a vision, key themes for spatial structure, goals for public realm, goals for the form and urban design (EDAW, 2001, p. 37).

It states the goals and principles; and determines the intervention areas to guide other design control tools as character areas and key project areas. For character areas, which the framework determines, the spatial characteristics which are required to be dealt with are stated as urban grain, open spaces, and built form. For each character areas, design objectives are determined in relation with its role within the urban design framework. Project areas are defined as key interventions points to build the conceptual framework proposed in the framework. Project sites describes clearly with its objectives and opportunities (EDAW, 2001). It also proposes some potential massing schemas for the key projects which may be better if it is left for development brief and master plans. (for details SEE Appendix A)

Types of Contents and Components of Southampton City Centre Urban Design Strategy:

As it is understood, the framework consists of **TypeA2 Conceptual & Contextual Contents** (design objectives) and **TypeB2 Conceptual & Contextual Components**. However, the focus is **TypeA2 Conceptual & Contextual Contents** (design objectives). **TypeB2 Conceptual & Contextual Components** (mass, height, layout) only are only mentioned in terms of principles; ratios, dimensions, other type of precise information and decision does not included as it is included in former case, the city centre design guide.

5.1.3.2 Havant Town Centre Urban Design Framework

Table 5.7 ID of Havant Town Centre Urban Design Framework

Case	Havant Town Centre Urban Design Framework
Type	Urban Design Framework
Produced by	Havant Borough Council, Hampshire County Council by Roger Evans Associates (UK)
Date	2006, (Roger Evans Associates , 2006)
Headlines from Contents Page (For detail see Appendix A)	Havant in context Framework rationale Urban design framework The framework plan Illustrative masterplan Urban design guidelines Study areas Key development areas Improvement areas

Havant Town Urban Design Framework is a comprehensive urban design framework. In addition to drawing a development framework for the areas, it consists of analysis of

context; principles and objectives for development and character areas; brief guidelines for areas for future development (grouped in to three sections; key development areas, improvement areas, existing development sites). It also consists of an illustrative master plan which provides a key schema for development areas.

The framework sets key elements and principles. The key element areas of the framework are redevelopment areas, transformation areas, establishment areas for pedestrian links, green area network and historic waterway network to reveal, and historic town centre to improve in terms of activities and public realm. The principles and objectives for these key elements are accessibility, viability, traditional town centre character, commercial development.

Types of Contents and Components of Havant Town Centre Urban Design Framework:

The framework consists of **TypeA2 Conceptual & Contextual Contents** (design objectives, principles, key elements) and **TypeB2 Conceptual & Contextual Components** (lay out, street network). It also gives some clues for **TypeB2 Conceptual & Contextual Components** in terms of height and mass by 3-D illustrative master plan and for **TypeB1 Formal Components** by design guidelines.

5.1.3.3 Urban Design Framework for Stratford-upon-Avon

Table 5.8 ID of Urban Design Framework for Stratford-upon-Avon

Case	Urban Design Framework for Stratford-upon-Avon
Type	Urban Design Framework

Table 5.8 ID of Urban Design Framework for Stratford-upon-Avon (continued)

Produced by	World Class Stratford Initiative, World Class Stratford Strategy Group (Stratford-on-Avon District Council, Warwickshire County Council, Advantage West Midlands and Stratford Town Management Partnership, Stratford Town Trust, Stratford Society, Shakespeare Birthplace Trust and the Royal Shakespeare Company) (UK)
Date	2007, (World Class Stratford Strategy Group, 2007)
Headlines from Contents Page (For detail see Appendix A)	Evolution of a great town Strategic context Movement strategy Context and movement vision Walking/Cycling/Buses/Rail
Headlines from Contents Page (For detail see Appendix A)	<ul style="list-style-type: none"> Vehicular movement/Parking Landscape and public realm strategy Landscape context and vision Gateways Central area strategy Thresholds Street routes Shared surfaces Civic spaces Lanes Canalside spaces/Wetlands Lighting strategy Development strategy Development context Development principles Opportunity sites Site specific guidance

Urban Design Framework for Stratford-upon-Avon is the third comprehensive urban design framework analysed in this study. Urban Design Framework for Stratford-upon-Avon includes analysis of context; principles and objectives for development; policy

context with other design policy and guidance documents; particular districts (Bridgeway and the riverfront corridor, town centre and canal and station area).

The framework sets principles, objectives, comprehensive design strategies in three groups as movement strategy, public realm strategy and development strategy. First, movement strategy, has five groups: walking, cycling, public transport (public transport spine, bus and rail), vehicular movement and parking. Second, public realm strategy, is built on a typological approach of which types are defined thresholds, street routes, and shared surfaces, civic spaces with traffic movement, lanes, canalside, and wetland route. Second, public real strategy also includes lightening strategy and proposes materials assigning particularly such as *“Areas will be created next to the water’s edge with copses of clear stem trees and high quality surfacing that enhance the experience of the canal.”* or *“The canal side is treated with a bound gravel surface such as sealed gravel or hoggin.”* (World Class Stratford Strategy Group, 2007, p. 93). Third, development strategy, proposes development principles and ‘opportunity sites’. These sites are future development areas in order to realize the vision and principle of the framework. (For detail SEE Appendix A)

Types of Contents and components of Urban Design Framework for Stratford-upon-Avon:

The framework consists of **TypeA2** Conceptual & Contextual Contents (design objectives, principles, strategies). It gives some clues for **TypeB2** Conceptual & Contextual Components (street network, public realm) and assigns some areas for change as opportunity sites. As the framework delivering urban design visions and strategies for city-wide, it focuses on **TypeA2** Conceptual & Contextual Contents.

Conclusion for Types of Contents and Component of Urban Design Frameworks:

To sum up, the frameworks analyzed as case studies, propose design vision, strategies, character areas, intervention zones; links to other design policy and guidance

documents. As it is mentioned, the frameworks assign some areas as future development areas though they name them differently such as opportunity sites from the last case. It is also common to draw general strategic framework, the content of these strategies on the other hand context-dependent.

As a result, it is clear to say that, main contents and components of the frameworks are **Conceptual and Contextual Contents and Components TypeA2, TypeB2.**

5.1.4 Topic-aimed Design Guidance

5.1.4.1 London Borough of Richmond upon Thames Public Space Design Guide

Table 5.9 ID of London Borough of Richmond upon Thames Public Space Design Guide

Case	London Borough of Richmond upon Thames Public Space Design Guide
Type	Design Guide
Produced by	Urban Design team of the London Borough of Richmond upon Thames (UK)
Date	2006 (Wolfe-Cowen & Butterworth, 2006)
Headlines from Contents Page (For detail see Appendix)	Policy Procedure Floorscape General principles Problems Guidelines Conservation Footway surfacing Carriageway surfacing

Table 5.9 ID of London Borough of Richmond upon Thames Public Space Design Guide (continued)

	<p>Furniture</p> <ul style="list-style-type: none"> General principles Seating Bollards Railings Litter bins Cycle stands, parking and shelters Bus shelters <p>Signage</p> <ul style="list-style-type: none"> General principles Parking signage Other traffic related signage Borough and local identity signage Signage for pedestrians and cyclist CCTV and security signage Local maps and noticeboards Street nameplates <p>Lightscape</p> <ul style="list-style-type: none"> General principles Problems Guidelines Types of lighting Uplighting and in-paving lighting <p>Greenscape</p> <ul style="list-style-type: none"> Character areas and open spaces Thames Landscape Strategy and Thames Strategy Trees Issues <p>Riverscape</p> <ul style="list-style-type: none"> Existing policies/proposals Character areas General guidelines <p>Other Public Space Issues</p> <p>Character Areas</p>
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Aim of the guide is stated as improving quality of public spaces, reinforcing the character, promoting integrated approach and enhancing landscape and townscape. The guide aims to provide simplification by removing cluttered elements from public space, to

provide high quality in materials and workmanship, to support local distinctiveness within coherence, to provide limited range of colour in materials while allowing some changes in distinct parts, to support universal design for access issues, safety and security.

The guide also proposes a policy framework in relation to policy documents relevant for the topic and the area varying from local to national policy and policy guidance tools and procedural issues. It proposes categories for landscape and townscape elements as floorscape, furniture, signage, lightscape, greenscape, and riverscape. For categories, the guide states some principles, problems and general guidelines as well as prescriptive elements such as colours, dimensions, fonts, material and certain types and styles; and maintenance.

For floorscape, the guide proposes materials for paving according to characteristics of the areas such as pedestrian as footway surfacing, vehicle uses as carriageway surfacing; historical character. It defines the pavement materials and their uses and also proposes location of and materials for utility boxes, traffic light control boxes, and access covers; and location of, and materials and dimensions for pedestrian refuges and traffic islands, speed reduction, carriageway marking such as bus lanes, cycle lanes, and crossovers.

For street furniture, the guide states general principles as promotion of sense of place, choosing appropriate furniture for local distinctiveness and coherency between the different furniture. It lists categories of street furniture; defines detailing related to the furniture such a colours; proposes materials to use and different types and styles of furniture within the categories according to their colour, material, and style. The categories of street furniture, which the guide proposes, are seating, bollards, railings, litter bins, and bus shelters.

For signage, the guide states some principles like coherency with other elements of urban space, minimizing signage (avoid unnecessary repetitions), using lower heights for signage. It sets categories for signage as traffic related signage (including parking signage), borough and local identity signage, signage for pedestrians and cyclists,

security signage, local maps and notice boards, street nameplate; and types within the categories, and it also states location of signs, and dimensions, font size and colours for the signs.

For lightscape, the guide proposes principles such as considering unlit areas in terms of light pollution and aesthetic of lightening elements as well as their function; and proposes types of lightening.

For greenscape, the guide proposes some principles for open spaces in terms of character areas and trees. It defines three character types of open spaces rural, suburban and urban; according to these type three types of open spaces as informal open space, parks and commons and greens; and defines different materials used in the different types of parks appropriate to their character. In addition to the guidance for parks and open spaces, it proposes guidance for trees including planting, grilles, guards, surrounds in two sub-categories which are trees in the parks and trees in the streets.

For riverscape, the guide proposes character areas and types for riverscape area as pastoral, urban parkland, urban hard, and residential.

Types of Contents and Components of the London Borough of Richmond upon Thames Public Space Design Guide:

As a topic-aimed design guidance tool, it focuses on certain type of contents and components of urban space: by being streetscape design guide, it consists of **TypeB1 Formal Components such as** pavements materials, street furniture, landscaping. The guide also refers other policy documents and guidance.

Conclusion for Types of Contents and Components of Design Guidance Tools:

The three types of guidance tools; the district-aimed guides, urban design frameworks and the streetscape, guide present examples of an integrated hierarchical design guidance system, that all documents refer a more comprehensive or a more specific document. While they refer other tools related to the topic, area, or district they

intervene; they focus on particular scales of intervention and has a certain degree of prescription.

5.2 Design Coding

5.2.1 Upton Design Code

Table 5.10 ID of Upton Design Code

Case	Upton Design Code (Northampton)
Type	Urban Design Code
Produced by	English Partnership, Northampton Borough Council , The Prince Foundation, consultant by EDAW (UK)
Date	2005 (EDAW, 2005)
Headlines from Contents Page (For detail see Appendix)	<ul style="list-style-type: none"> Creating a Sustainable Urban Extension Upton Development Principles The Northampton Context Character Areas Street Types Block Principles Boundary Treatment Building Types and Uses Building Heights SUDS, Parks and Open Spaces Building Materials and Details Environmental Standards Implementation

Upton is an urban extension area of South West District of Northampton. Upton Design Code is one of the leading examples of adopted design codes. It is based on some objectives and principles which are **achieving social diversity** by critical mass, diverse

dwelling types with different dwelling size and tenure mix from different level of incomes including affordable housing units, mix of uses and integration with surroundings; **environmental sustainability** by achieving sustainability by sustainability standards (eco homes), sustainable urban drainage system (SUDS); **long-term biodiversity** by enhancing local ecology; **local Identity** by distinctive local character which is based on local vernacular design (morphology, architecture and landscape) and materials; **liveability** by accessible public transport with reduction of car dependency and promoting walking, integrated open space network, legible design of structure of streets and blocks, resident management. By promoting Northampton vernacular, the code defines characteristics of the local vernacular in terms of urban form and hierarchy, street patterns, public spaces, thresholds and edges, townscape elements and built form (including building types).

Upton Design Code defines eight set of codes which are for character areas, streets, block, boundary treatments, building types and uses, building heights, parks and open spaces (with SUDS), building materials and details.

Character Areas

Four character areas are defined in the code: urban boulevard, neighbourhood spine, neighbourhood general, and neighbourhood edge. The code defines "*sub-set of urban design parameters*" for character areas as block types and boundary treatment, building height, uses and building types, and architectural attributes. For the character areas, the code designates street types, land uses, building types, building heights, treatments and type of parks. Urban boulevard proposes active ground level and active street frontages uses to support public realm. Neighbourhood spine is defined as "*key linear public realm corridor and public transport route*"(EDAW, 2005, p. 21) and "*flexible frontages*" are proposed (EDAW, 2005, p. 21) to adapt different uses and Upton Square for public uses.

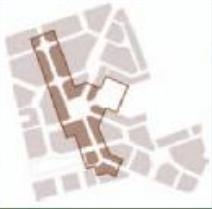
				
	URBAN BOULEVARD (WEEDON ROAD)	NEIGHBOURHOOD SPINE	NEIGHBOURHOOD GENERAL	NEIGHBOURHOOD EDGE
Street Type	Urban Boulevard	Main Street Street Mews	Main Street Street Lane Mews	Main Street Street Lane
Land Use	Offices, Live work, Shops Restaurants/Pub Housing Community Facilities	Housing Local Shops Community Facilities School	Housing	Housing
Building Type	Mixed Use	Apartments Townhouses Mixed Use, Mews, School	Townhouses Apartments Mews Semi-detached	Townhouses Detached Semi-detached
Height	Minimum 4 Storeys	Varies	Varies	Varies
Boundary Treatment		Varies	Varies	Varies
Parks and Open Space		Upton Square	Neighbourhood Square SUDS Upton Country Park	Ashby Wood SUDS Upton Country Park

Figure 5.3 Character areas of Upton Design Codes (EDAW, 2005, p. 18)

Street Hierarchy

The code defines seven street types: urban boulevard, main street, streets (with three sub-types according to densities that they accommodate; central, medium, lowest), streets with suds, lanes, mews and central courtyards. While first two accommodate public spaces and uses, the latter ones serve for accessibility to courtyards and buildings. The code prescribes details for design of streets like detailed street dimensions, parking; palette of materials for pavement, roundabouts, junctions, footways; plantation, public transport routes and stops, traffic routes, street furniture; infrastructure and drainage SUDS (Sustainable Urban Drainage System) which is main infrastructural element of Upton, access to courtyards. (For detail SEE Appendix A)

Block Principles, Perimeter Block

Basic block structure of the code is perimeter block. The code puts the rationale of selecting perimeter block as being a type which provides *“clear distinction between public fronts and private backs”* (EDAW, 2005, p. 58). Three types of perimeter block are defined in the code as courtyard blocks, mews blocks and neighbourhood edge blocks. One important thing about the block types is that the zones of block types do not overlap with character areas. Therefore, the two character areas, neighbourhood spine and neighbourhood general, consist of two types of building blocks which are courtyard blocks and mews blocks.

The courtyard blocks consist of townhouses, apartment block and communal courtyard with parking and semi-public open spaces. The code sets block principles for courtyard blocks. One is continuous street frontages by setting percentages of continuous street frontages according to street types. To illustrate; a courtyard block with main street will be *“at least 95% of street frontage of any single block will be defined by building fronts; the remaining 5% will comprise garden wall or block access.”* and courtyard block with other street types will be *“at least 80% of street frontages of any single block will be defined by building fronts; the remaining 20% will comprise garden wall”* (EDAW, 2005, p. 61). Some others are consistent building line, provided by set-back regulations; frequency of doors and windows in order to provide regular rhythm of doors and windows; flexible ground floor use on main street provided by convertible ground floor to other uses; highlighted block corners; building apartments at block corners. The code puts some limitations to access of courtyards, to the use of courtyard and the number of houses uses the courtyard.

Mews block is larger block divided by mews which are defined by mews houses. This type consists of three types of buildings which are mews houses, townhouses and apartments. The code also sets block principles for mews blocks such as continuous street frontages, mews entrances, central courtyards access.

Neighbourhood edge blocks are, on the other hand, least dense block while keeping the character of perimeter block. It consists of detached or semi-detached houses with garages. This type is also encountered with different street types. According to different street types, the code proposes some principles for neighbourhood edge block such as limitation of access from main street, consistent building line, frequency of doors and windows, and highlight block corners.

Building Types and Uses

Six types of dwelling types are defined in the code, which are detached house, semi-detached house, town houses, mews house, and apartments. Heights of the buildings vary from 2 storeys to more than 3 storey buildings. The code proposes higher buildings on spine neighbourhood in order to define public space. The heights of the buildings and the types of the buildings do not overlap; thus produces variety within the buildings from same types and produces rhythm for the skyline. Although Upton Design Code puts emphasis on local vernacular, it does not refer any architectural style as in the Pattern Books discussed in other chapters.



Figure 5.4 HTA Architects response to development of one block in Neighbourhood Edge Character Area (worldarchitecturenews, 2010)



Figure 5.5 HTA Architects response to development of one block in Neighbourhood General Character Area (Design for Manufacture Competition, 2010)

DWELLING TYPE	Detached House	Semi-Detached House	Town Houses	Mews House	Apartments	Mixed Use Buildings	Weedon Road	School	Uses
	I	II	III	IV	V	VI	VII	VIII	
CHARACTER AREA									
Urban Boulevard									Office, live work, housing, shops, pub/restaurants, community facilities
Neighbourhood Spine									Housing, local shops, community facilities, school
Neighbourhood General									Housing
Neighbourhood Edge									Housing

Figure 5.6 Relationship between building types, character area, uses (Source:EDAW, 2005, p. 74)

Boundary Treatments

Boundary treatments, which are boundaries between public and private areas, are set in Upton design code. The code defines three types of boundary treatment: front boundary which is “where buildings front onto streets”, rear boundary which is “where properties have a boundary or shared access to secure central courtyards”, side

boundary “where two properties meet and where corner properties edge the street” (EDAW, 2005, p. 68). The code also divides front boundaries into three strips; privacy strip which is “the extent of set-back of building line from property line and the landscape treatment within this area”, encroachment which is “the extent of projection (e.g. bay windows, balconies and awnings) from the prevailing building line”, boundary treatment which is “height of railing, fence, hedge or wall that demarcates the property line and the materials to be used” (EDAW, 2005, p. 68). Figure 5.7 shows an example of boundary coding with its dimensions and materials in relation with street type, and neighbour type.

CHARACTER AREAS	BOUNDARY CODING	MAIN STREET	STREET	STREET WITH SUDS	LANE	MEWS
NEIGHBOURHOOD GENERAL 	PRIVACY STRIP					
	Dimension	N/A	2m	0.6-1m	2m	0.6-1m
	Materials	N/A	1. Hard landscape; materials should be complementary to public realm 2. Soft landscape; gravel or planting in soil pockets	1. Hard landscape; materials should be complementary to public realm 2. Soft landscape; gravel or planting in soil pockets	Hard landscape; materials should be complementary to public realm	Hard landscape materials should match mews shared surface with granite setts to define property line
	ENCROACHMENT					
	At Junctions	N/A	Max. 1m	N/A	Max. 1m	N/A
	On straight edges	N/A	Max. 1m	N/A	Max. 1m	N/A
	BOUNDARY TREATMENT					
	Height	N/A	0.9m - 1.1m	0.9m - 1.1m	0.9m - 1.1m	N/A
	Materials	N/A	Wrought iron railing (stone or rendered upstand is permitted)	Wrought iron railing or stone	Wrought iron railing or wall	N/A

Figure 5.7 Boundary treatments for Neighbourhood General (Source: EDAW, 2005, p. 70)

The code also develops some codes for building materials and details, without proposing any architectural style, while promoting use of Northampton vernacular. Building materials and details are dealt with three sections as overall elevation design, elements within the overall elevation (*external doors and porches, windows, roofs, walls*), and design accommodating building services (*rainwater, street signs, lights, alarms, chimneys television antenna, satellite dishes*) (EDAW, 2005, p. 82).

As one of the aims is to build a sustainable extension area, buildings are required to meet the environmental standards and ratings Building Research Establishment Environmental Assessment Method (BREEAM) and National Home Energy Rating (NHER).

Types of Contents and Components of Upton Design Code

Upton Design Code also has its principle bases and vision as **TypeA2** Conceptual & Contextual Contents and as an urban design code focuses on **TypeA1** Formal Contents

(streets and blocks) and **TypeB1** Formal Components (set-backs, privacy strips, encroachments materials); while producing desired height and mass as **TypeB2** Conceptual & Contextual Components.

By comparing district design guides example, discussed in this chapter, the design code is more prescriptive than the guides. While guide focuses on masses, heights with ratios, code focuses on the width of streets, details of design of street by describing details including footways, street furniture, material and focuses block pattern and location of buildings on by describing types of blocks, access of different types of blocks, building types, building set-backs, privacy strips, frontages. As a result the focus of the code is on the design of **TypeA1** Formal Contents while it inherits the **TypeB2** Conceptual & Contextual Components from “Urban Framework for Upton” which is guiding master plan schema for the development.

5.2.2 Design Code for the Rotherham Town Centre River Corridor

Table 5.11 ID of Design Code for the Rotherham Town Centre River Corridor

Case	Design Code For The Rotherham Town Centre River Corridor
Type	Urban Design Code
Produced by	Rotherham Metropolitan Borough Council, Transform South Yorkshire, Yorkshire Forward by Roger Evans Associates (UK)
Date	2005, (Roger Evans et al., 2005)
Headlines from Contents Page (For detail see Appendix)	Vision for the town centre river corridor The code Implementation scheme Regulating plan Landuse plan Baseline studies and masterplan rationale

The code is produced according to Strategic Development Framework for Rotherham Town Centre. It inherits vision, key opportunities and issues, principles from master plan and other planning documents.

Design Code for the Rotherham Town Centre River Corridor has three main categories for codes, which are regulating plan and general codes, urban codes, and detail codes. The first one, regulating plan is defined in the code as guiding plan for arrangements of streets and shows more implementation areas for detailed codes (Roger Evans et al., 2005). General codes consist of “*the frontage (the boundary between the public highway and private property), the building line (a reference line for set-backs) and areas within the public highway for footways, parking and carriageways.*” (Roger Evans et al., 2005, p. 11). The second one, urban codes, are the codes focusing on street in terms of public

realm and three dimensional aspects (Roger Evans et al., 2005). The second one, the detail codes, codes the materials, buildings, plots.

Main element for the code is the streets. All other elements are coded according to the streets. For each street type, the code proposes some urban codes which are grouped under three categories as plot series, plan (carriage and footpath width, speed, junctions, parking, access, tress) and section (height, set-back, balconies, position of access and uses); and proposes some detail codes which are materials (pavement materials and furniture), plots and buildings .

Types of Contents and Components of Design Code for the Rotherham Town Centre River Corridor:

The code focuses on streets and put emphasis on plots and buildings. Therefore, it deals with **Type A1 Formal Contents**. To compare, while Upton Design Code focuses on the street and block patterns, The Rotherham Town Centre River Corridor Design Code keeps the level of prescription of blocks in the master plan and regulating plan level and does not interfere with the code. The Rotherham Town Centre River Corridor Design Code defines the elements of urban space as buildings, plots, streets in term of street. It considers streets as a combining basic element. As productive components to the spatial elements, it codes the **TypeB1 Formal Components**. Thus, the focus of the code is on **formal contents and components**.

5.2.3 Walker Riverside Design Code

Table 5.12 ID of Walker Riverside Design Code

Case	Walker Riverside Design Code
Type	Urban Design Code
Produced by	New Castle City Council, Places For People, Bellway by Walker

Table 5.12 ID of Walker Riverside Design Code (continued)

Date Headlines from Contents Page (For detail see Appendix A)	Riverside Project Board
	2007, (Walker Riverside Project Board, 2007)
	Chracter areas Perimeter block Street Typology

Walker Riverside Design Code, as it is in the The Rotherham Town Centre River Corridor Design Code, deals with the area in terms of type of streets. In addition, it also deals with blocks as perimeter block, block corners, active frontage with use of doors and windows, perimeter block rears, building lines, limitation to access to blocks and courtyards and boundaries. It divides codes in terms of property ownership as code dealing with public or private and defines design parameters as road speed, roadway, kerb type, verge and foorways, corner radii tree planting as public; building height, plot width, frontage on building line, front garden, set back, rear garden as private. This case is a brief design code.

The code provides guidance for open spaces, green corridors, and architectural materials according to Action Plan of the area while it prevents some materials to use.

Types of Contents and components of Walker Riverside Design Code:

The code consists of, **TypeA1** Formal Contents and **TypeB1** Formal Components. It also present design principles from other plans and guidance documents. It gives some clues for **TypeB2** Conceptual & Contextual Components (with building height) but does not deal with particularly mass or layout.

Conclusion for Types of Contents and Components of Design Codes:

Design codes are more prescriptive tools than guides as inspected before. The focus of the codes is on **TypeA1** Formal Contents and **TypeB1** Formal Components. They mostly inherit Conceptual and Contextual Contents **TypeA2** and have a masterplan or regulating plan consisting Conceptual and Contextual **Components TypeB2**.

Conclusion for Analysis

In the analysis of the cases, contents and component of design control tools are disclosed and typified. As a result of this analysis, differences between the types of design control tools in terms of their contents and components are highlighted.

First group of cases, Design Control Framework-aimed Design Guidance tools mostly deal with all four types of contents and components, but, the focus of guides differs according to their topic to intervene. To illustrate, firstly, ByDesign as design for policy/policy and guidance, deals with all four types but it guides some of them directly by setting objectives and principles, some of them indirectly by setting prompts. Emphasis is on **TypeA2 Conceptual & Contextual Contents and TypeB2 Conceptual & Contextual Components**. Secondly, UDC 1 also deals with all four types, but, the emphasis is on **TypeA1 Formal Contents and TypeB1 Formal Components**. Thirdly, UDC 2 focuses on process of design. Therefore, it deals with **TypeA2 Conceptual & Contextual Contents and TypeB2 Conceptual & Contextual Components, TypeB1 Formal Components**, but, puts emphasis on first two.

Second group of cases, District-aimed Guides analysed in this study, focuses on **TypeB2 Conceptual & Contextual Components** (layout, height, and mass). They also has potential to intervene all four type, but the level of prescription is critical. The two cases from this type selected from different level of details. To illustrate, although both of the guides focuses on TypeB2 Conceptual & Contextual Components; the first also deals with TypeA2 Conceptual & Contextual Contents (principles and objectives) and TypeB1 Formal Components (building set-backs, building height and ratios), while the second also deals with one TypeA2 Conceptual & Contextual Contents.

Third group of cases, Place-aimed Guides analysed in this study, is limited by the sub-type of urban design frameworks. The cases focus on **TypeA2 Conceptual and Contextual Contents and TypeB2 Conceptual and Contextual Components**.

Fourth group of cases, Topic-aimed Guides analysed in this study, is limited by one case, because the type is highly dependent on the topic it prepared for and the topics are generally related to the **TypeB1 Formal Components**. Therefore, as it is a streetscape design guide, it consists of **TypeB1 Formal Components such as** pavements materials, street furniture, landscaping.

Fifth group of cases, Design Codes analysed in this study, focuses on **TypeA1 Formal Contents and TypeB1 Formal Components** as being the most prescriptive tools. They mostly inherit **TypeA2 Conceptual and Contextual Contents** from upper scale guides and have reguřating schema defining **TypeB2 Conceptual and Contextual Components**.

CHAPTER 6

CONCLUSION

Relationship of whole and parts is a productive relationship producing coherent, consistent, liveable urban space and places. Design control tools are effective tools in defining, coding, and guiding for this relationship.

The approach of the thesis to the urban space is that urban space is the product which produced by productive elements, and by relationship between the elements with the whole. The thesis approaches the whole, urban space; and the parts, elements of urban space from an integrated point of view. Thus, throughout the thesis, adopted analysis method is to divide the topics to the parts, analyse the part and re-integrate them..

The theory of whole – parts, as being the bases of each type of design, is the main point for urban design and design control tools. Firstly, as a part of this approach, urban design is analysed in term of its debates related to the definitional components as scale, being product-process and having visual-spatial emphasis. These debates are related discussions to the discussions of design control. The selected debates present the approach of the study to the contradictory ontological discussions of urban design. In the thesis, urban design is defined as both process and product, which is relevant for every scale of urban space and phase of urban development. Urban design is not just relevant for visual assets; but, designs the spatial assets. As a result of this conceptualisation of urban design; secondly, dimensions of urban design are discussed in terms of both its morphological and visual-aesthetics dimensions (by accepting the presence of other dimensions such as social or functional). Thirdly, types of urban design

are discussed in relation to their procedural status, because urban design tools are both procedural and product related. These theoretical discussions draw the perspective for the following discussions of design control.

Design control is a concept that consists of many dimensions, approaches and types. One required discussion for the analysis of the contemporary design control is the definitive relation between design and development control. The two are not separate terms and phenomena, but integrated. They constitute two sides of production process of urban space. To illustrate with a basic example, the type development briefs in the taxonomy consists both design and development briefs, which some authors define separately. However, this integrated approach is not an approach that homogenises concepts. The design control is discussed, in this study, in terms of its different procedural approaches as static and dynamic design control; and different related approaches such as typomorphology and new urbanism. Firstly, dynamic design control system is a system of design control which supports participation, collaboration, coordination, adaptable solutions to design problems and horizontal hierarchical relations, in addition to vertical one. Thus, this type of design control systems is able to respond the dynamics of society. Secondly, the approaches related to design control, such as typomorphology and new urbanism, build different attachments with the design control tools. The approaches, themselves, have different branches which approaches design control different sides. On the other hand, common conclusion from the discussions, by also considering the design controls in history, is that design control is a phenomenon which cannot be reduced to one approach, or phase of urban development. It has different types co-existing in the phases of process of production of urban space. Thus, there are different types of design control tools which co-exist and interact to each other; which the taxonomical approach aims to define and clarify.

The taxonomy is built in terms of the relational approach of whole-parts. In this study, urban space is defined in terms of its components. Every component urban space is defined as inner balanced consistent centers. Urban space, in this sense, is constituted by their interacting relationship. The components of urban space are defined as elemental components and productive components. The elemental components are the components which are perceived 'centers' of the urban space, in other words, percepts;

while the productive components are constructive centers for the perceived ones, in other words, centers which constitute the perceived ones. In this context, examples for the elemental components are building, streets, blocks; and examples for the productive components are set-back dimensions, ratios and grain. The contents and components of design control tools, which are typified in taxonomy, are based on the distinction of this elemental and productive distinction. While *contents* defined in the taxonomy are based on elemental components of urban space, the *components* defined in the taxonomy are based on productive components of urban space.

The main aim of building the taxonomy of design control tools is to clarify the concepts related to design control in order to provide a base for understanding and analysing the contemporary design control tools and a base for development of future design control tools.

The taxonomy is built firstly generally, secondly specific to the tools used in UK. This narrow down is done in order to produce a more detailed analysis for at least one particular context of implementation of design control tools and to provide detailed analysis for the direct design control tools which are defined below being the type having several sub-types requiring to be clarified. The selection of UK, on the other hand, is not arbitrary. The aim is to analyse the tools in a context which integrates them into the all scales of planning and design. The reason of the selection of UK originates from the integrated hierarchical process adopted in British planning system.

Firstly, for the general categorisation, it is important to distinguish the design control tools by producer of the tool: whether it is produced by authority to draw general framework for desired environment (direct) or it is produced by designer in order to show intent and response of designer to the design area according to direct design control tools (indirect). The taxonomy states on this basic distinction of contemporary design control tools, being direct and indirect control tools. For these two main types of design control tools, designers have different positions and roles. In direct design control tools, the designers are in the position of code writers (Carmona et al., 2006); in indirect design control tools, the designers are designers who design the actual designs to build according to the direct design control tools. The two types are not contrary;

although there is a tension between in practice, they are the types complement each other. The two types consist of sub-types; for the former design guidance, design coding, and standards & model codes, for latter design statements and design review. The triad categorisation for direct design control tools is one important entity for clarification of design control tools in order to avoid the confusion. This classification is important for understanding, analysing, and criticizing the existing tools; and developing the new tools for direct design control.

Secondly, the specific categorisation of the taxonomy presents comprehensive overview for tool using in UK context and is based on certain parameters which are level of prescription, scale of intervention, and content and components of the tools. The parameters are not constant for distinction of all types, thus, the weight of them are different from each other. Figure 6.1 demonstrates the relationship of the parameters and the types

The third parameter, contents and components, has different role and position in the taxonomy. As a part and input of the taxonomy of design control tools, taxonomy of contents and components of the design control tool is built. It is produced from the analysis of cases. The cases are selected from different types of design control tools. As method of the analysis, the contents and components of the cases are listed in detail; then, they are grouped according to the assets according to elemental and productive components of urban space and definition of content and components.

According to taxonomy of contents and components, four types of contents and components are defined as Formal Contents (**TypeA1**), Conceptual & Contextual Contents (**TypeA2**), Formal Components (**TypeB1**), and Conceptual & Contextual Components (**TypeB2**) (Figure 4.5).

The relationships between these types of contents and components and design control tools constitute the third input for the taxonomy of design control tools. These relationships present the tools' level of prescription and scale of intervention according to the contents and component of the tools. In other words, the focus of tools to the certain types of contents and components presents tools' level of prescription and scale of intervention.

To illustrate, while focus of design codes, analysed in the cases section, is on *formal contents and components (TypeA1 & TypeB1)*, the focus of district-aimed guides is on *conceptual & contextual contents and components (TypeA2 & TypeB2)*. This presents certain differences between the two types of design control tools. While former by focusing on *formal contents and components (TypeA1 & TypeB1)* is more prescriptive and dealing with larger scale than the latter one.

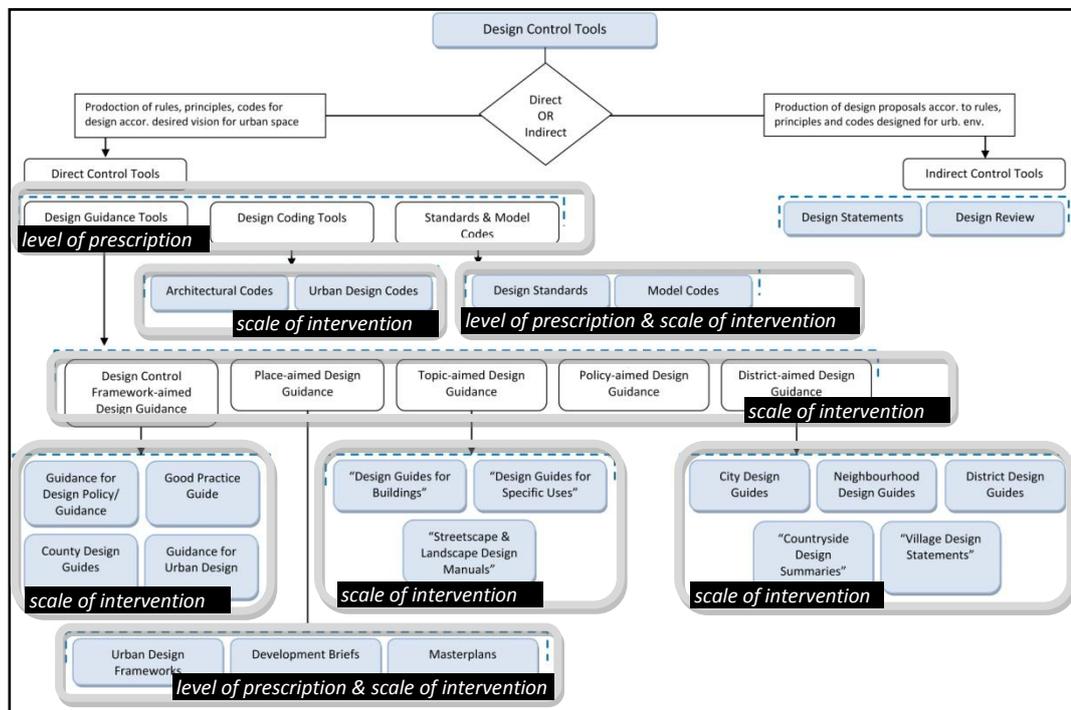


Figure 6.1 Parameters and the types of design control tools

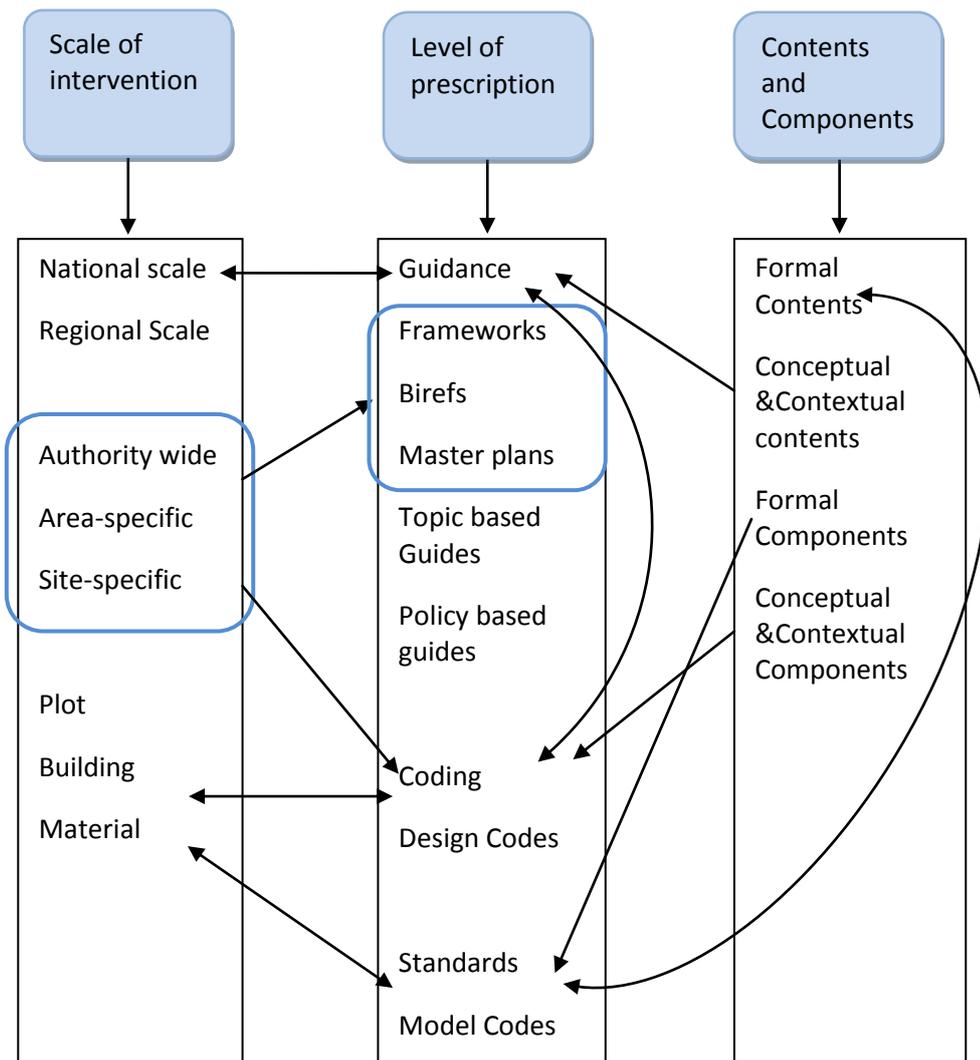


Figure 6.2 Relationship of the parameters of the taxonomy

The analysis and taxonomy of design control tools in UK context presents the use of design control tools as parts of an integrated planning system in terms of design control tools. It is a hierarchical dynamic system including both vertical and horizontal hierarchical relations. Planning system in Turkey, on the other hand, has static control over the production of urban space. The tools are planning bylaws and development

plans. In such system of static regulation of production of space, it is hard to find specific emphasis on urban design which is a requirement for designing high quality urban built environments and production of places.

The tools of planning system of Turkey do not consist of the four types of contents and component of design control tools defined within the taxonomy. First of all, by the absence of Conceptual and Contextual Contents (Type A2) which are defining design principles and proposing a particular vision which is specific to that designed site, development plans are unable to escape to be technical documents which redistribute property rights, determine set-backs and heights of buildings; define transportation routes; assign densities and land uses (Günay, 1997).

Main focus of the design control in the planning system is on the Formal Contents (Type A1) as focusing on the building and the road system, and dealing with Formal Components (Type B1) in a technical way. Firstly, Ünlü (2003, 2006) proposes that the main concern of the planning legislation and design control in Turkey is *the building* (Ünlü, 2003) and the *building parcel*; that, control over the process of production of space and regulations are reduced into the building regulations (Ünlü, 2003). Therefore, the plans are insufficient for the production of urban space as a complete coherent system with its contents, components and sense of place. As a result, cities and towns are produced as the bulk of buildings without any emphasis on production of places.

Secondly, other emphasis of planning system of Turkey is on the *road system*, rather than defining them as streets. This fragmented approach to the urban built environment, by the absence of other two types of contents and components (Conceptual and Contextual ones, Type A2, B2,), leads the designs to put building parcels and roads as two separate parts and prevent to consider the urban design as a complete system. It leads the design to be stuck in-between *the building parcels and roads* conceptually and to avoid considering the components of urban space as part of a complete system in the process of production of space. By being stuck between the building parcel and road, production of an urban space is missed. In other words, the focus of system is on the design of the elemental components of urban space. This can even be seen by the

notations of the development plan. The conceptualisation of the two type states also in a very technical way. Therefore, the problem is that the focus of the system is on controlling design of building (Ünlü, 2003, 2006) rather than controlling the design of building block as a meaningful entity of design and on controlling design of roads rather than controlling the design of street as a meaningful living space for design of the city.

Ünlü also proposes other critique for the planning system in Turkey that the planning bylaws over-homogenize the urban built environment by consider every part of the urban built environment having the same characteristics and prevent to develop site-specific approaches (Ünlü, 2003). Homogenising built environment by development bylaws are not limited for implementing the similar regulations within the parts of a particular city by intervening its part like they are alike; but includes implementing same bylaw for the cities that do not develop a specific development bylaw. This critique is also relevant and present the absence of an integrated system of design control tool varies according to the local contexts they are encountered.

As Punter states, in order to overcome deficiencies of their systems, planning systems having different legal structures develop appropriate design controls tools and embed these tools to their existing systems. This process results in US as integration of design review processes to the existing system; results in UK as integrating direct and indirect design control tools as a hierarchical system. As a result of the critiques and discussions above, planning system of Turkey is required to be re-considered and revised in terms of integration of design control tools to the system and in term of controlling all of the four types of contents and components.

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APPENDIX A

ANALYSIS OF SELECTED CASES

Table A.1 By Design: Urban Design in The Planning System: Towards Better Practice

Contents & Component of <i>ByDesign</i>	Types of Contents and Components
<p>Character: A place with its own identity</p> <p>distinctive patterns of development, landscape and culture</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Continuity and enclosure: A place where public and private spaces are clearly distinguished</p> <p>continuity of street frontages the enclosure of space</p>	<p>Type A2 Conceptual & Contextual Contents</p> <p>Type B1 Formal Components</p>
<p>Quality of the public realm: A place with attractive and successful outdoor areas</p> <p>public spaces and routes that are attractive, safe, uncluttered work effectively for all in society</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Ease of movement: A place that is easy to get to and move through</p> <p>accessibility local permeability easy to move through, putting people before traffic integrating land uses and transport</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Legibility: A place that has a clear image and is easy to understand</p> <p>recognisable routes, intersections landmarks</p>	<p>Type A2 Conceptual & Contextual Contents</p> <p>Type B2 Conceptual & Contextual Components</p>

Table A.1 By Design: Urban Design in The Planning System: Towards Better Practice (continued)

<p>Adaptability: A place that can change easily development responding to changing conditions</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Diversity: A place with variety and choice a mix of compatible developments and uses that work together</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>“Objectives of Urban Design” by ByDesign (CABE & DETR, 2000, p. 15)</p>	
<p>Layout: urban structure framework of routes and spaces that connect locally and more widely the way developments, routes and open spaces relate to one other basic plan of all other aspects of the form and uses</p>	<p>Type B2 Conceptual & Contextual Components</p>
<p>Layout: urban grain the pattern of the arrangement of street blocks, plots and their buildings</p>	<p>Type B2 Conceptual & Contextual Components</p>
<p>Landscape the character and appearance of land (shape, form, ecology, natural features, colours and elements, and combination of the components) all open space (its planting, boundaries and treatment)</p>	<p>Type B1 Formal Components</p>
<p>Density and mix range of uses intensity of development vitality and viability plot ratio (particularly for commercial developments) number of dwellings the number of habitable rooms (for residential developments)</p>	<p>Type B2 Conceptual & Contextual Components Type B1 Formal Components</p>
<p>Scale: height size of a building in relation to its surroundings the size of parts of a building or its details views, vistas and skylines</p>	<p>Type B2 Conceptual & Contextual Components Type B1 Formal Components</p>

Table A.1 By Design: Urban Design in The Planning System: Towards Better Practice (continued)

<p>number of floors height of parapet or ridge overall height a ratio of building height to street or space width height relative to particular landmarks or background buildings strategic views</p>	<p>Type B2 Conceptual & Contextual Components</p> <p>Type B1 Formal Components</p>
<p>Scale: massing</p> <p>volume and shape of a building or group of buildings in relation to other buildings and spaces</p> <p>three-dimensional expression of the amount of development on a given piece of land</p>	<p>Type B2 Conceptual & Contextual Components</p>
<p>Appearance: details</p> <p>craftsmanship, building techniques, decoration, styles and lighting of a building or structure</p> <p>all building elements (openings and bays; entrances and colonnades; balconies and roofscape; and the rhythm of the facade)</p>	<p>Type B1 Formal Components</p>
<p>Appearance: materials</p> <p>texture, colour, pattern and durability of materials, how they are used</p> <p>richness of a building lies in its use of materials</p>	<p>Type B1 Formal Components</p>
<p>“Aspects of Development Form” by ByDesign (CABE & DETR, 2000, p. 16)</p>	

Table A.2 Urban Design Compendium 1

Contents & Component of <i>UDC 1</i>	Types of Contents and Components
<p>Places for People</p> <p>distinctive places variety choice</p>	<p>Type A2 Conceptual & Contextual Contents</p>

Table A.2 Urban Design Compendium 1 (continued)

<p>Enrich the Existing</p> <p>enriching the qualities of existing urban places encouraging distinctive response</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Make Connections</p> <p>places easy getting to and being integrated with their surroundings</p> <p>being accessible</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Work with the Landscape</p> <p>balance between the natural and built environment utilise each site's intrinsic resources</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Mix Uses and Forms</p> <p>widest possible range of users, amenities and social groups</p> <p>combination of different building forms, uses, tenures and densities</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Manage the Investment</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Design for Change</p> <p>being flexible enough to respond to future changes in use, lifestyle and demography</p> <p>designing for energy and resource efficiency</p> <p>creating flexibility in the use of property, public spaces and the service infrastructure and introducing new approaches to transportation, traffic management and parking</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p><i>"The Fundamentals" by UDC 1 (Walton et al., 2007, p. 12)</i></p>	
<p>Context</p> <p>strengthening local communities creating places of distinction harnessing intrinsic site assets and resources integrating with surroundings ensuring feasibility providing vision</p>	<p>Type A2 Conceptual & Contextual Contents</p>
<p>Social and local dynamics</p>	<p>Type A2 Conceptual & Contextual Contents</p>

Table A.2 Urban Design Compendium 1 (continued)

<p>Place and character, “genius loci”,</p> <p>regional identity linkages to surroundings local character morphology natural features socio- economic profile</p>	<p>Type A2 Conceptual & Contextual Contents</p> <p>Type B2 Conceptual & Contextual Components</p>
<p>“Appreciating The Context” by UDC 1 (Walton et al., 2007, p. 12)</p>	
<p>Movement pattern</p> <p>street network</p> <p>connection with existing network boundaries</p> <div data-bbox="507 920 922 1368" style="text-align: center;"> </div> <p><i>“how best the site can be connected with nearby main routes and public transport facilities”</i></p>	<p>Type B2 Conceptual & Contextual Components</p>

Table A.2 Urban Design Compendium 1 (continued)

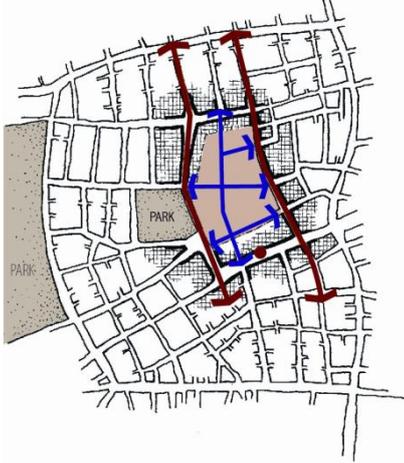
 <p><i>“A more pedestrian-friendly approach that integrates with the surrounding community links existing and proposed streets, and provides direct links to bus stops “</i></p>	<p>Type B2 Conceptual & Contextual Components</p>
<p>Type of grid</p> <p>regular or irregular, providing choice</p> <p>size of grid, blocks</p> <div style="display: flex; justify-content: space-around;">   </div> <p><i>Philadelphia, USA</i> <i>London, West End</i></p>	<p>Type B2 Conceptual & Contextual Components</p> <p>Type B1 Formal Components</p> <p>Type A1 Formal Components</p>
<p>Blocks</p> <p>Perimeter blocks</p> <p>Public-private frontages</p> <p>Edges of blocks, continuous frontages</p>	<p>Type A1 Formal Contents</p> <p>Type B1 Formal Components</p>

Table A.2 Urban Design Compendium 1 (continued)

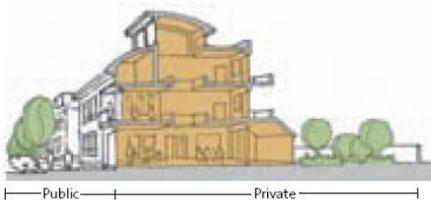
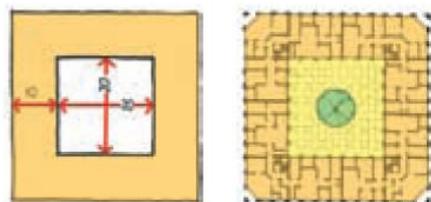
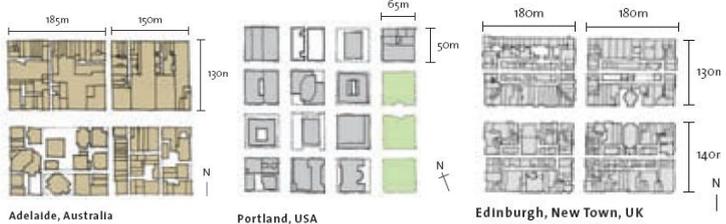
<p>Block size</p>  <p>A clear definition between public and private space is a fundamental tenet of good urbanism</p>  <p>A 10m block depth is able to accommodate double aspect buildings with good daylighting to the internal space (Block 1 IBA-Kothener Strasse 35-37, Berlin)</p> <p><i>“Ease of access The ability to sustain a variety of building types and uses The ability to change and adapt over time”</i></p>  <p>Block shape</p> <p>Square, rectangular, irregular blocks</p> <p>Block interiors</p> <p>Possible uses:</p> <p><i>“car parks or service yards private / communal gardens with children’s play spaces, mews houses, offices, workshops or live-work units, a park or civic square to occupy part / whole of the block”</i></p>	<p>Type A1 Formal Contents</p> <p>Type B1 Formal Components</p> <p>Type A2 Conceptual & Contextual Contents</p>
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Table A.2 Urban Design Compendium 1 (continued)

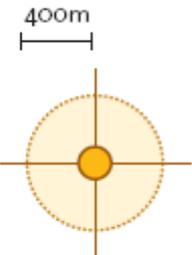
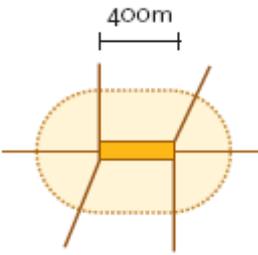
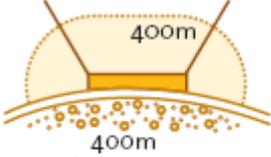
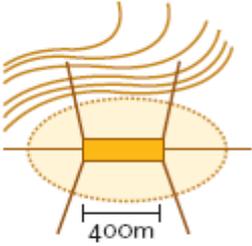
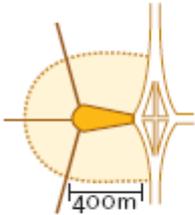
<p>Parcel and Plot size</p> <p>small parcels and plots in order to promote diversity</p>	<p>Type A1 Formal Contents</p> <p>Type B1 Formal Components</p>
<p>Neighbourhood</p> <p>types of neighbourhoods, walkable neighbourhoods</p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center; margin: 10px;">  <p>a) Nodal neighbourhood</p> </div> <div style="text-align: center; margin: 10px;">  <p>b) Street neighbourhood</p> </div> <div style="text-align: center; margin: 10px;">  <p>c) Neighbourhood adjacent to main road</p> </div> <div style="text-align: center; margin: 10px;">  <p>d) Waterfront neighbourhood</p> </div> <div style="text-align: center; margin: 10px;">  <p>f) Neighbourhood across a slope</p> </div> <div style="text-align: center; margin: 10px;">  <p>e) Neighbourhood at a motorway</p> </div> </div>	<p>Type B2 Conceptual & Contextual Components</p> <p>Type B1 Formal Components</p>

Table A.2 Urban Design Compendium 1 (continued)

<p>Districts</p> <p>Centres</p>  <p>centres on public transport routes local centres away from main transportation routes public services and civic centres</p> <p>Edges</p>  <p>re-injecting out-of-town development to the urban centres developing liveable edges</p> <p>Transition zones</p> <p>between centre and edge</p> <p>Landmarks/Vistas/Focal Points/</p>	<p>Type B2 Conceptual & Contextual Components</p>
<p>Density</p> <p>higher densities relate density with facilities and form</p>	<p>Type B2 Conceptual & Contextual Components</p>

Table A.2 Urban Design Compendium 1 (continued)

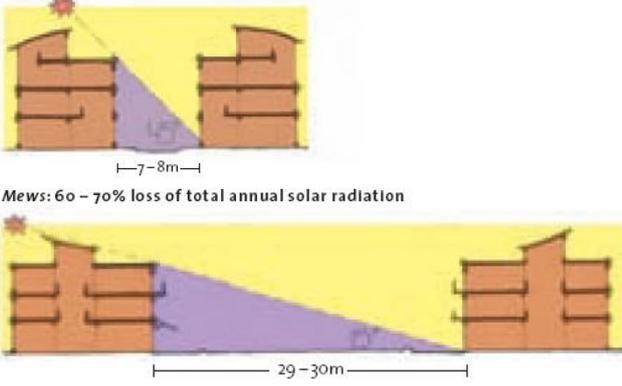
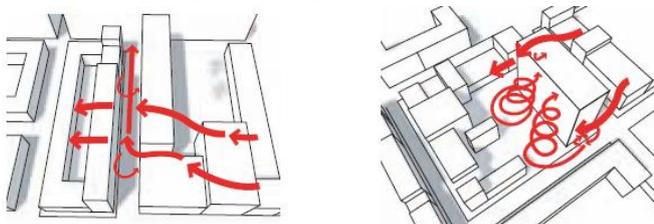
<p>Orientation</p> <p>Solar design</p> <p>‘let the sunshine in’ while considering street enclosure</p>  <p>Wind</p> <p>“wind is both a friend and foe”</p>  <p>Building form can also affect the quality of public space by channelling wind along streets ...</p> <p>... or creating vortices in plazas in front of tall buildings (from Lang, 1995)</p>	<p>Type B2 Conceptual & Contextual Components</p> <p>Type B1 Formal Components</p>
<p>Open Space, Landscape Design</p> <p>typology of open spaces (greenways, nature reserves, church yards, allotments, square, playground, courtyard....)</p> <p>type of parks with areas</p> <p>open space network</p> <p>block size and biodiversity</p>	<p>Type A1 Formal Contents</p> <p>Type B1 Formal Components</p> <p>Type B2 Conceptual & Contextual Components</p>
<p>“Creating The Urban Structure” by UDC 1 (Walton et al., 2007, pp. 32-67)</p>	

Table A.2 Urban Design Compendium 1 (continued)

Contents & Component of <i>UDC 1</i>		Types of Contents and Components												
<p>Streets and Roads</p> <p>prefer streets as people spaces rather than roads</p> <p>street types combining capacity and character:</p> <table border="1"> <thead> <tr> <th>Conventional capacity-based terminology</th> <th>Streets that combine capacity and character</th> </tr> </thead> <tbody> <tr> <td>Primary distributor</td> <td>Main road Routes providing connections across the city</td> </tr> <tr> <td>District distributor</td> <td>Avenue or Boulevard Formal, generous landscaping</td> </tr> <tr> <td>Local distributor</td> <td>High Street Mixed uses, active frontages</td> </tr> <tr> <td>Access road</td> <td>Street or Square Mainly residential, building lines encouraging traffic calming</td> </tr> <tr> <td>Cul-de-sac</td> <td>Mews / Courtyard Shared space for parking and other uses</td> </tr> </tbody> </table> <p>defines the street width of types design junctions according to streets not roads</p> <p>Car Parks</p> <p>positioning of car parks for residential, commercial uses</p>		Conventional capacity-based terminology	Streets that combine capacity and character	Primary distributor	Main road Routes providing connections across the city	District distributor	Avenue or Boulevard Formal, generous landscaping	Local distributor	High Street Mixed uses, active frontages	Access road	Street or Square Mainly residential, building lines encouraging traffic calming	Cul-de-sac	Mews / Courtyard Shared space for parking and other uses	<p>Type A2 Conceptual & Contextual Contents</p> <p>Type A1 Formal Contents</p> <p>Type B1 Formal Components</p>
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Cul-de-sac	Mews / Courtyard Shared space for parking and other uses													
<p>Servicing</p> <p>service from street equipment boxes</p>		<p>Type B1 Formal Components</p>												
<p><i>"Making the Connections"</i> by <i>UDC 1</i> (Walton et al., 2007, p. 12)</p>														

Table A.2 Urban Design Compendium 1 (continued)

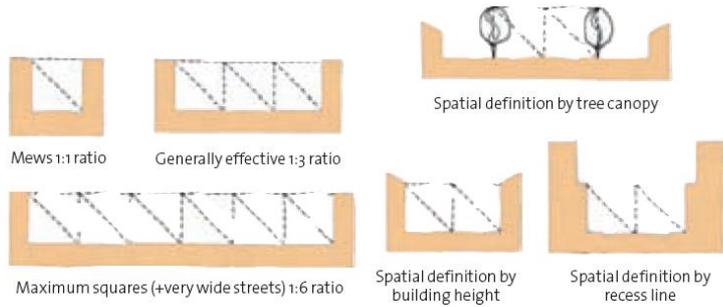
Contents & Component of UDC 1		Types of Contents and Components												
<p>building lines and set-backs</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Set-back</th> <th>Purpose</th> </tr> </thead> <tbody> <tr> <td>Core commercial areas</td> <td>Adjacent to pavement edge</td> <td>Direct commercial frontage</td> </tr> <tr> <td>Inner urban areas</td> <td>1.5 m to 3m semi-private strip between residential or commercial building fronts and public pavement</td> <td> <ul style="list-style-type: none"> Amenity space for a small garden, bicycle stand or seating Functional space for residential rubbish-collection or meter-reading 'Spill-out area' for pavement cafes or shops </td> </tr> <tr> <td>Outer urban areas</td> <td>'Tolerance zone' of about 5m</td> <td>Adjacent to busier arterials, providing a more substantial buffer for houses. Avoid car hard-standings, which create a divisive barrier between building and street</td> </tr> </tbody> </table> <p>enclosure, height to width ratios</p> 		Location	Set-back	Purpose	Core commercial areas	Adjacent to pavement edge	Direct commercial frontage	Inner urban areas	1.5 m to 3m semi-private strip between residential or commercial building fronts and public pavement	<ul style="list-style-type: none"> Amenity space for a small garden, bicycle stand or seating Functional space for residential rubbish-collection or meter-reading 'Spill-out area' for pavement cafes or shops 	Outer urban areas	'Tolerance zone' of about 5m	Adjacent to busier arterials, providing a more substantial buffer for houses. Avoid car hard-standings, which create a divisive barrier between building and street	<p>Type B1 Formal Components</p>
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<p>Building size and scale</p> <p>Building height, depth, width, corners</p> <table border="1"> <thead> <tr> <th>Building depth</th> <th>Implications</th> </tr> </thead> <tbody> <tr> <td>< 9m</td> <td>Too shallow for a central corridor and limited flexibility in internal planning</td> </tr> <tr> <td>9-13 m</td> <td>Provides naturally lit and ventilated space = OPTIMUM ROBUSTNESS</td> </tr> <tr> <td>14-15 m</td> <td>Sub-division is still facilitated, but some artificial ventilation and more artificial lighting is required</td> </tr> <tr> <td>16-22m plus</td> <td>More energy intensive, though a double-aspect cellular form is possible with the insertion of an atrium/light well, giving a block width of up to 40 m.</td> </tr> </tbody> </table>		Building depth	Implications	< 9m	Too shallow for a central corridor and limited flexibility in internal planning	9-13 m	Provides naturally lit and ventilated space = OPTIMUM ROBUSTNESS	14-15 m	Sub-division is still facilitated, but some artificial ventilation and more artificial lighting is required	16-22m plus	More energy intensive, though a double-aspect cellular form is possible with the insertion of an atrium/light well, giving a block width of up to 40 m.	<p>Type B1 Formal Components</p>		
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Table A.2 Urban Design Compendium 1 (continued)

<p>Façades, active frontages</p> <table border="1"> <tr> <td colspan="2">Grade A frontage</td> </tr> <tr> <td>• More than 15 premises every 100m</td> <td>• No blind facades and few passive ones</td> </tr> <tr> <td>• More than 25 doors and windows every 100m</td> <td>• Much depth and relief in the building surface</td> </tr> <tr> <td>• A large range of functions</td> <td>• High quality materials and refined details</td> </tr> <tr> <td colspan="2">Grade B frontage</td> </tr> <tr> <td>• 10 to 15 premises every 100m</td> <td>• A few blind or passive facades</td> </tr> <tr> <td>• More than 15 doors and windows every 100m</td> <td>• Some depth and modelling in the building surface</td> </tr> <tr> <td>• A moderate range of functions</td> <td>• Good quality materials and refined details</td> </tr> <tr> <td colspan="2">Grade C frontage</td> </tr> <tr> <td>• 6 to 10 premises every 100m</td> <td>• Very little depth and modelling in the building surface</td> </tr> <tr> <td>• Some range of functions</td> <td>• Standard materials and few details</td> </tr> <tr> <td>• Less than half blind or passive facades</td> <td></td> </tr> <tr> <td colspan="2">Grade D frontage</td> </tr> <tr> <td>• 3 to 5 premises every 100m</td> <td>• Flat building surfaces</td> </tr> <tr> <td>• Little or no range of functions</td> <td>• Few or no details</td> </tr> <tr> <td>• Predominantly blind or passive facades</td> <td></td> </tr> <tr> <td colspan="2">Grade E frontage</td> </tr> <tr> <td>• 1 or 2 premises every 100m</td> <td>• Flat building surfaces</td> </tr> <tr> <td>• No range of functions</td> <td>• No details and nothing to look at</td> </tr> <tr> <td>• Predominantly blind or passive facades</td> <td></td> </tr> </table> <p><small>Adapted from Gehl, 1994</small></p>	Grade A frontage		• More than 15 premises every 100m	• No blind facades and few passive ones	• More than 25 doors and windows every 100m	• Much depth and relief in the building surface	• A large range of functions	• High quality materials and refined details	Grade B frontage		• 10 to 15 premises every 100m	• A few blind or passive facades	• More than 15 doors and windows every 100m	• Some depth and modelling in the building surface	• A moderate range of functions	• Good quality materials and refined details	Grade C frontage		• 6 to 10 premises every 100m	• Very little depth and modelling in the building surface	• Some range of functions	• Standard materials and few details	• Less than half blind or passive facades		Grade D frontage		• 3 to 5 premises every 100m	• Flat building surfaces	• Little or no range of functions	• Few or no details	• Predominantly blind or passive facades		Grade E frontage		• 1 or 2 premises every 100m	• Flat building surfaces	• No range of functions	• No details and nothing to look at	• Predominantly blind or passive facades		<p>Type B1 Formal Components</p>
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<p>Street Furniture</p> <p>Public art</p> <p>Signage</p> <p>Lightening</p>	<p>TypeB1 Formal Components</p>																																								
<p style="text-align: center;"><i>“Detailing the Place” by UDC 1 (Walton et al., 2007, pp. 85-107)</i></p>																																									

Table A.3 Urban Design Compendium 2: Delivering Quality Places

Contents & Component of <i>UDC 2</i>	Types of Contents and Components
<p>urban design policy</p> <p>design objective</p> <p>an explanation of how a solution might fulfil that objective</p>	<p>TypeA2 Conceptual & Contextual Contents</p>

Table A.3 Urban Design Compendium 2: Delivering Quality Places (continued)

<p>urban design control tools</p> <p>frameworks <i>“the bridge between policy and implementation.”</i> the relationship of frameworks, briefs, master plans and codes the contents of frameworks, briefs and codes</p>	<p>TypeA2 Conceptual & Contextual contents</p>
<p>density</p> <p>streets as places street furniture, trees, lightening street hierarchy</p>	<p>TypeB2 Conceptual & Contextual Components)</p> <p>TypeB1 Formal Components</p>
<p>character and identity</p> <p>sustainability</p> <p>engagement of community to the design process integrated approach</p> <p>location and combination of uses</p> <p>good design, social, environmental, economic benefits of good design,</p> <p>value of design</p>	<p>TypeA2 Conceptual & Contextual Contents</p>
<p><i>“Urban Design Compendium 2: Delivering Quality Places” by UDC 2 (Evans et al., 2007)</i></p>	

Table A.4 Nottingham City Centre Design Guide

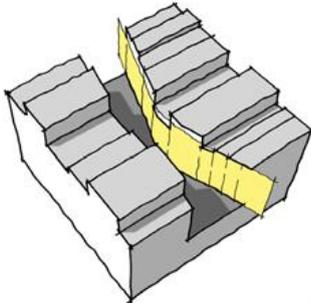
<p>Contents & Components of Nottingham City Centre Design Guide</p>	<p>Types of Contents and Components</p>
<p>Urban Form Building line</p> 	<p>TypeB1 Formal Components</p>

Table A.4 Nottingham City Centre Design Guide (continued)

<p>Building Line</p> <ul style="list-style-type: none"> Building line in Zone of Repair Indicative building line in Zone of Reintervention The building lines in the regeneration areas remain provisional until the proposals are approved 	<p>TypeA1 Formal Contents</p> <p>TypeA2 Conceptual & Contextual Contents</p> <p>TypeB1 Formal Components</p>
<p>density of development grain of its buildings the extent of public spaces permeability</p>	
<p>rules for building lines:</p>	
<p>building line compliance, changing the building line, multiple building lines, set-backs and projections, stand-alone buildings, alleyways, continuous street frontage, masterplanning</p>	

Table A.4 Nottingham City Centre Design Guide (continued)

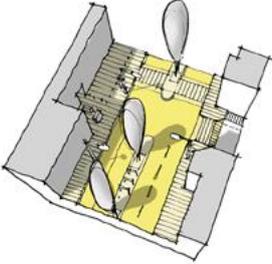
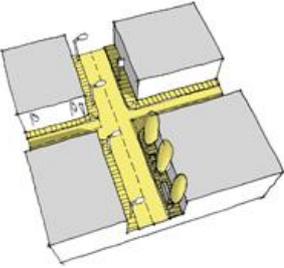
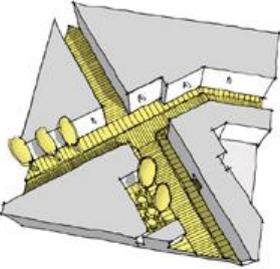
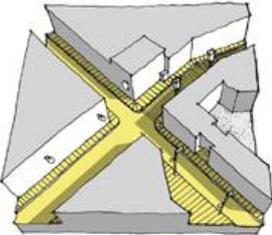
<p>Public Realm streets and squares</p> <p>types of streets: vehicle dominated</p>  <p>pedestrian/vehicle</p>  <p>pedestrian dominated</p>  <p>historic</p>  <p>paving material for streets</p> <p>alleyways providing variety of spaces and active frontages</p> <p>rules for public realm:</p> <p>permeability pedestrian priority public realm improvements street characters malls and arcades activity signage trees</p>	<p>TypeA1 Formal Contents</p> <p>TypeA2 Conceptual & Contextual Contents</p> <p>TypeB2 Conceptual & Contextual Components</p>
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Table A.4 Nottingham City Centre Design Guide (continued)

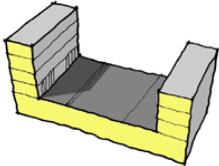
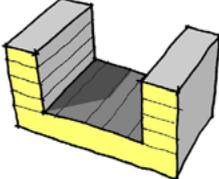
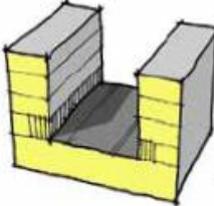
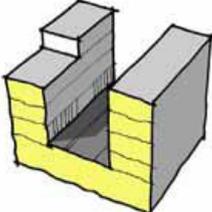
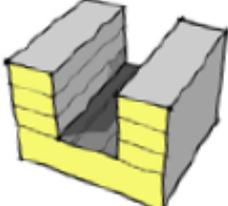
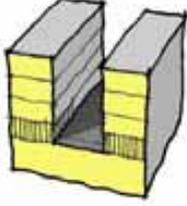
<p>Massing</p> <p>rules for mass and height: predominant building heights</p> <p>street enclosure ratios:</p> <p>Arterial routes 1:2</p>  <p>Ring Road 1:1.5</p>  <p>High Streets 1:1</p>  <p>Secondary Streets 1:0.75</p>  <p>Minor Streets 1:0.75</p>  <p>Alleyways 1:0.5</p>  <p>variations in height landmarks plant rooms (lift motors and antenna) fifth elevation (design of the roofs of buildings) tall building tall building zone tall building assessment the design of tall buildings</p>	<p>TypeB1 Formal Components</p> <p>TypeB2 Conceptual & Contextual Components</p>
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Table A.4 Nottingham City Centre Design Guide (continued)

<p>Activity</p> <p>density of development around the fringes of the city centre, promoting a greater mix of uses ensuring that buildings spill their activity out onto the street</p> <p>rules of activity: mix of uses, primary active frontage, secondary active frontages, building orientation, eyes onto the street, building-street transition, building-street transition, street activity, densities, residential amenity</p>	<p>TypeA2 Conceptual & Contextual Contents</p> <p>TypeB1 Formal Components</p>
<p>Sustainability</p> <p>enclosure and sky view passive zones residential accommodation glazing ratios massing and overshadowing renewable energy cooling and glare microclimate effects tall buildings (carbon emission requirements) materials recycling green infrastructure drainage (sustainable urban drainage systems) cycling</p>	<p>TypeA2 Conceptual & Contextual Contents</p> <p>TypeB1 Formal Components</p>
<p>Design</p> <p>foreground buildings masterplans landmarks contemporary design respect for context building good manners quality materials public art design and access statements</p>	<p>TypeA2 Conceptual & Contextual Contents</p>
<p style="text-align: center;">“Nottingham City Centre Design Guide” (URBED, 2009)</p>	

Table A.5 Oldham and Rochdale Urban Design Guide

Contents & Component of <i>Oldham and Rochdale Urban Design Guide</i>	Types of Contents and Components
<p>aims, principles:</p> <ul style="list-style-type: none"> Character Safety and inclusion Diversity Ease of movement Legibility Adaptability Sustainability Designing for future maintenance Good streets and spaces Well designed buildings 	<p>TypeA2 Conceptual & Contextual Contents</p>
<p>sense of enclosure</p> <ul style="list-style-type: none"> continuity in the frontages of streets and spaces relate height and massing of buildings to the character relate building heights to the width of streets and spaces relate building height and silhouette to the hierarchy of importance of routes <ul style="list-style-type: none"> width of the streets and spaces function of the streets and spaces variety and interest regular rhythm 'active' building frontage minimize blank walls, service areas and other 'dead' frontages onto the layout and orientation of buildings <ul style="list-style-type: none"> building scale form and massing proportion materials and detailing housing types skyline; <ul style="list-style-type: none"> hierarchy of routes, streets and spaces <p>parking</p>	<p>TypeB2 Conceptual & Contextual Components</p>
<p style="text-align: center;">"Oldham and Rochdale Urban Design Guide" (Oldham Metropolitan Borough Council, 2007)</p>	

Table A.6 Southampton City Centre Urban Design Strategy

Contents & Component of <i>Southampton City Centre Urban Design Strategy</i>	Types of Contents and Components
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key themes for spatial structure

enhancing connections and movement



connecting waterfront with core



TypeA2 Conceptual & Contextual Contents

Table A.6 Southampton City Centre Urban Design Strategy (continued)

<p>Enriching public realm with hierarchy and linkages</p> 	<p>TypeA2 Conceptual & Contextual Contents</p>
<p>Creating landmarks</p> 	
<p>Promoting distinct character areas</p>	

Table A.6 Southampton City Centre Urban Design Strategy (continued)

<p>Goals for public realm</p> <p><i>“a more co-ordinated and seamlessly legible townscape, not only for pedestrians, but also for cyclists, drivers and public transport users.”</i></p> <p>emphasis on the streets and the network of pedestrian spaces pedestrian oriented design</p> <p>integration of new and existing public space and street network</p> <p>the creation of a contemporary streetscape spatial integrity with public art and landscape elements quality in pavement materials for streets with use of simple, robust, natural materials street level activity for vitality design principles, design objectives, vision, and architectural style</p> <p>development of new quarters as foci.</p> <p>integrating public transport (both routes and infrastructure)</p>	<p>TypeA2 Conceptual & Contextual Contents</p>
<p>Goals for form and urban design</p> <p>integrated centre as a whole with its character areas, mass and height, building lines</p> <p>creating integrated character areas determining special sites for redevelopment/refurbishment</p> <p>reinforcement of the street - block relationship emphasis on height of buildings in terms of skyline emphasis on material selection</p> <p>mix use and variety in centre active ground floors</p> <p>energy efficiency</p> <p>use of urban design statements</p>	<p>TypeA2 Conceptual & Contextual Contents</p> <p>TypeB2 Conceptual & Contextual Components</p>
<p><i>“Urban Design Framework” by Southampton City Centre Urban Design Strategy (EDAW, 2001, pp. 37-48)</i></p>	

Table A.7 Havant Town Centre Urban Design Framework

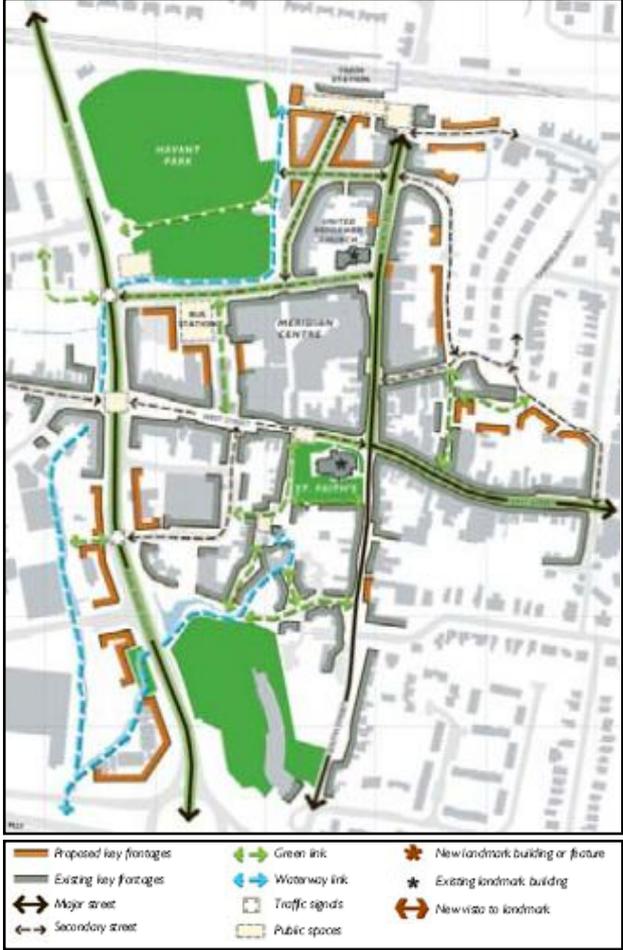
Contents & Component of <i>Havant Town Urban Design Framework</i>	Types of Contents and Components
<p>Principles and objectives Analysis of context</p>	<p>TypeA2 Conceptual & Contextual Contents</p>
<p>Key development elements and principles</p> <p>transformation areas establishment areas for pedestrian links green area network historic waterway network to reveal historic town centre to improve in terms of activities and public realm</p>  <p> ▬ Proposed key frontages ↔ Green link ★ New landmark building or feature ▬ Existing key frontages ↔ Waterway link ★ Existing landmark building ↔ Major street Traffic signals ↔ New vista to landmark ↔ Secondary street Public spaces </p>	<p>TypeA2 Conceptual & Contextual Contents</p>

Table A.7 Havant Town Centre Urban Design Framework (continued)

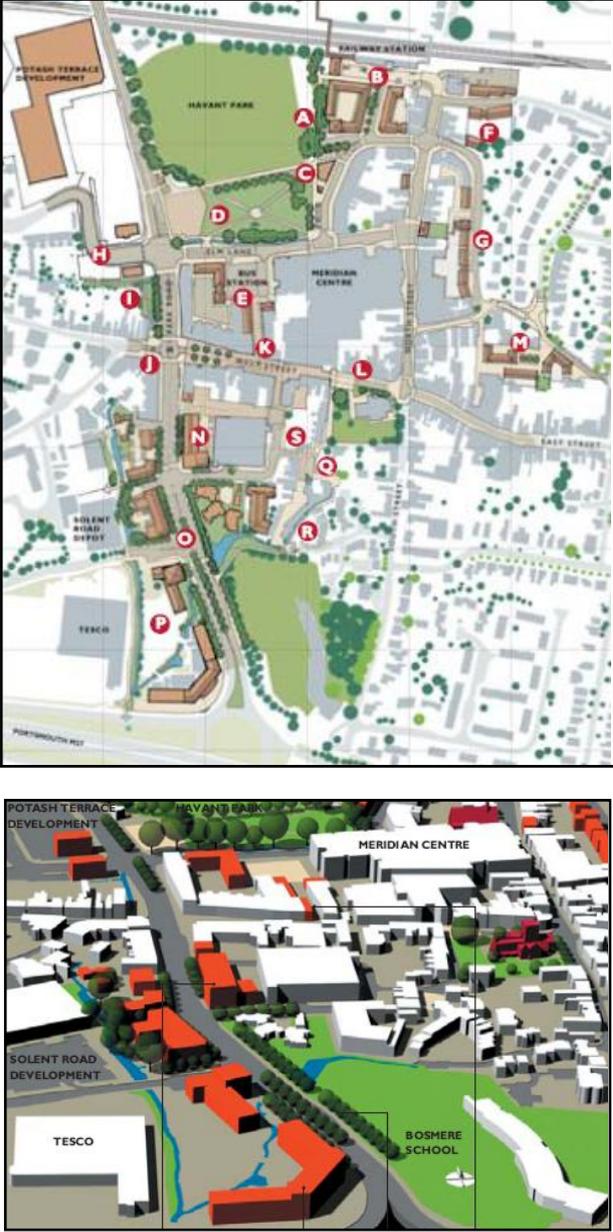
<p data-bbox="338 331 593 362">Illustrative master plan</p>  <p>The top image is a 2D site plan of the Havant Town Centre Urban Design Framework. It shows a central area with various zones labeled with letters A through S. Key features include Havant Park, Meridian Centre, Solent Road Depot, and a Tesco store. The plan also shows a network of streets and public transport routes, including a bus station and a railway station. The bottom image is a 3D architectural rendering of the same area, showing the building heights and street layouts. It highlights the Meridian Centre, Solent Road Development, and Bosmere School. The rendering shows a mix of building heights and styles, with a central area of taller buildings and lower buildings towards the edges.</p>	<p data-bbox="1120 331 1340 430">TypeB2 Conceptual & Contextual Components</p>
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Table A.7 Havant Town Centre Urban Design Framework (continued)

Brief guidelines for each key development area		TypeB1 Formal Components
Design Character	Light and contemporary, a statement of architectural excellence , a landmark for Havant	
Streets and Access	Service access from the street and the interior of the block: New architecturally designed footbridge over railway as part of new development	
Urban Form	Up to 4 storeys, with a landmark tower element up to 8 storeys. The height of the building is subject to planning approval	
Landscape & Public Realm	New street link to the station and a public square located against the park. Major enhancements to the station forecourt to present it as an arrival square	
Activities	Mix of office, residential, retail and restaurant / café, possible multi-purpose hall within the scheme	
Development Capacity	<1600 sqm retail / café and approximately 63 flats	
Parking	Parking in basement and on-street	
Phasing	Medium term	
Steps to Implementation	Feasibility Study completed, marketing and design brief required	

Potential project for an elegant new footbridge designed through architectural competition

Strong active frontage of pavement café and restaurants on the park

Significant improvements to Station forecourt as an arrival square into Havant

Figure 11: View of redesigned Market Place from the south-west

8 storey tower visible from the railway and town centre

Strong active frontage to the park

Pavement café or restaurant on the park

Figure 12: View of Market Place redevelopment with new footbridge and modern building

“Havant Town Centre Urban Design Framework” (Roger Evans Associates , 2006)

Table A.8 Urban Design Framework for Stratford-upon-Avon

Contents & Component of <i>Urban Design Framework for Stratford-upon-Avon</i>	Types of Contents and Components
Vision, design aims, objectives, principles Particular districts (character areas) Movement strategy Public realm strategy Development strategy	TypeA2 Conceptual & Contextual Contents

Table A.8 Urban Design Framework for Stratford-upon-Avon (continued)

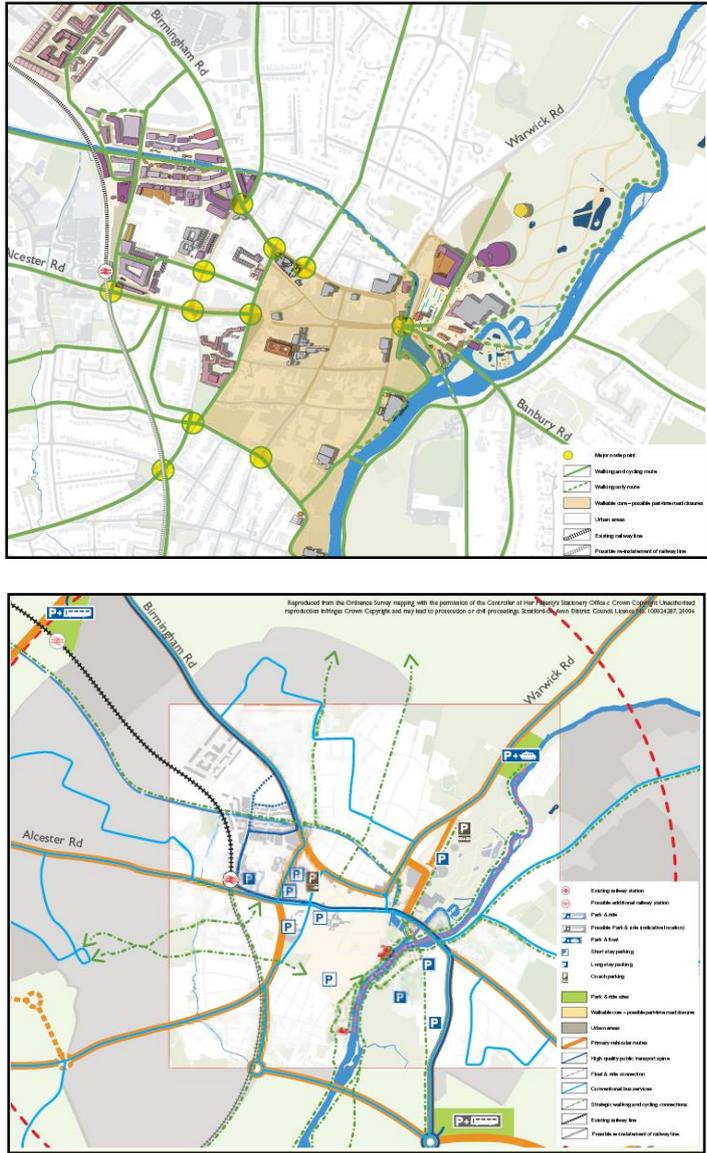
<p>Movement strategy</p> <p>Walking Cycling Public transport (Public transport spine, bus and rail) Vehicular movement Parking</p>  <p>The top map illustrates the movement strategy for walking and cycling, highlighting public transport spines, vehicular movement, and parking. The bottom map provides a detailed view of the public transport network, including bus and rail routes, and parking locations.</p>	<p>TypeA2 Conceptual & Contextual Contents</p> <p>TypeB2 Conceptual & Contextual Components</p>
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Table A.8 Urban Design Framework for Stratford-upon-Avon (continued)

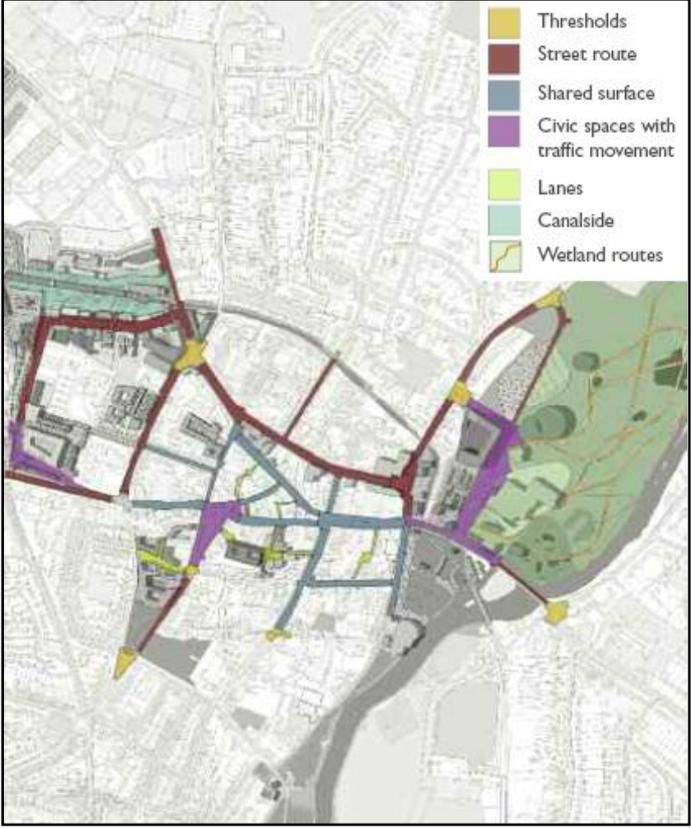
<p>Public realm strategy</p>  <p>typological approach</p> <ul style="list-style-type: none"> Thresholds Street routes Shared surfaces Civic spaces with traffic movement Lanes Canalside Wetland route <p>Lighting strategy</p> <p>Materials</p>	<p>TypeB2 Conceptual & Contextual Components</p>
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Table A.8 Urban Design Framework for Stratford-upon-Avon (continued)

<p>Development strategy</p> <p>Development principles</p> <p>Opportunity sites</p> <p>Development components</p> <ul style="list-style-type: none"> Wetlands area and associated wetlands visitor centre between development and the river New access only road off Warwick Road Landscaped coach and car parking Major new cultural attraction on site of existing leisure centre (an appropriate alternative site will need to be found for the current leisure centre) Mixed-use redevelopment of the Bridgefoot M&G Two-way traffic flows throughout Refurbished and extended Hobby Inn (see later) New tourist welcome centre replacing existing Information Centre New 'Taxes' to market with small shops and bar units Refurbished Royal Shakespeare and Swan Theatres <p>Public realm components</p> <ul style="list-style-type: none"> Transition zone between 21st Century Stratford and 'natural' Stratford (reed beds, grasses, wetland planting, bio-purification of surface water) Links to wider landscape Grassland meadows and waterbodies managed to enhance biodiversity Links to canal re-established and used to enhance access to the town New formal gardens Portable closure of Bridgefoot, Bridge Street, High Street and Wetlands to vehicles Swan Reserve is maintained and potentially enhanced in conjunction with exploring educational opportunities Nature-inspired adventure playground Refurbished Bencoll Gardens and Recreation Ground <p>Figure 5.7 Bridgeway development and public realm strategy</p>	<p>TypeA2 Conceptual & Contextual Contents</p> <p>TypeB2 Conceptual & Contextual Components</p>
<p align="center">"Urban Design Framework for Stratford-upon-Avon" (World Class Stratford Strategy Group, 2007)</p>	

Table A.9 London Borough of Richmond upon Thames Public Space Design Guide

<p>Contents & Component of London Borough of Richmond upon Thames Public Space Design Guide</p>	<p>Types of Contents and Components</p>
<p>design aim</p> <ul style="list-style-type: none"> improving quality of public spaces reinforcing the character promoting integrated approach enhancing landscape and townscape providing simplification high quality in materials and workmanship local distinctiveness within coherence limited range of colour in materials universal design for access issues safety and security 	<p>TypeA2 Conceptual & Contextual Contents</p>

Table A.9 London Borough of Richmond upon Thames Public Space Design Guide (continued)

<p>policy framework</p> <p>policy documents relevant for the topic and the area from local to national policy and policy guidance</p>	<p>TypeA2 Conceptual & Contextual Contents</p>
<p>categories for landscape and townscape elements</p> <p>floorscape, street furniture signage lightscape greenscape riverscape</p> <p>materials, colors, types, styles for the categories</p>	<p>TypeB1 Formal Components</p>
<p style="text-align: center;">“London Borough of Richmond upon Thames Public Space Design Guide” (Wolfe-Cowen & Butterworth, 2006)</p>	

Table A.10 Upton Design Code

Contents & Component of <i>Upton Design Code</i>	Types of Contents and Components
<p>Design principles</p> <p>achieving social diversity critical mass diverse dwelling types with different dwelling size and tenure mix from different level of incomes including affordable housing units mix of uses and integration with surroundings</p> <p>environmental sustainability achieving sustainability sustainable urban drainage system (SUDS)</p> <p>long-term biodiversity enhancing local ecology</p> <p>local Identity distinctive local character based on local vernacular design (morphology, architecture and landscape) and materials</p>	<p>TypeA2 Conceptual & Contextual Contents</p>

Table A.10 Upton Design Code (continued)

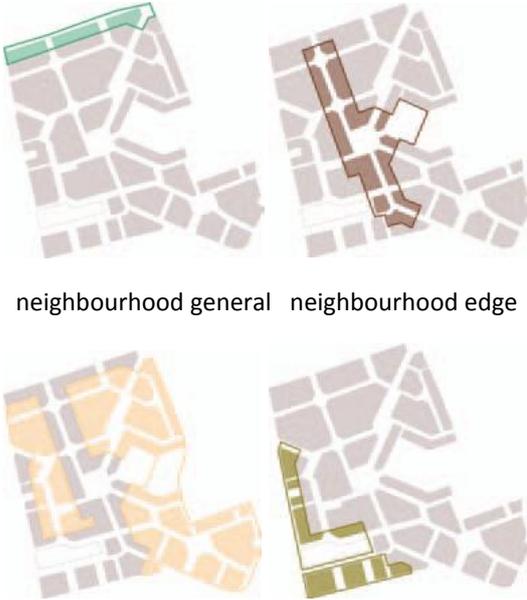
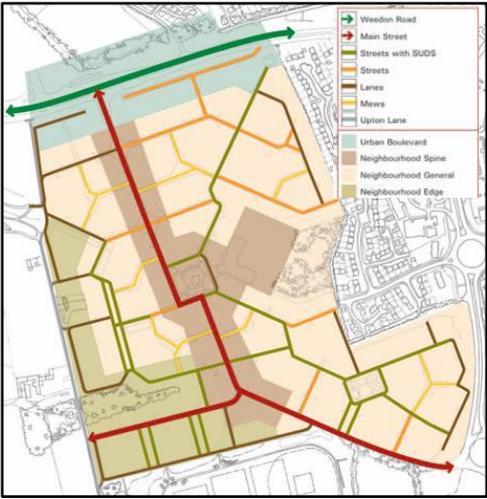
<p>liveability accessible public transport reduction of car dependency and promoting walking integrated open space network legible design of structure of streets and blocks resident management</p>	<p>TypeA2 Conceptual & Contextual Contents</p>
<p>character areas</p> <p>urban boulevard neighbourhood spine</p>  <p>neighbourhood general neighbourhood edge</p> <p>street network</p> 	<p>TypeA2 Conceptual & Contextual Contents</p>

Table A.10 Upton Design Code (continued)

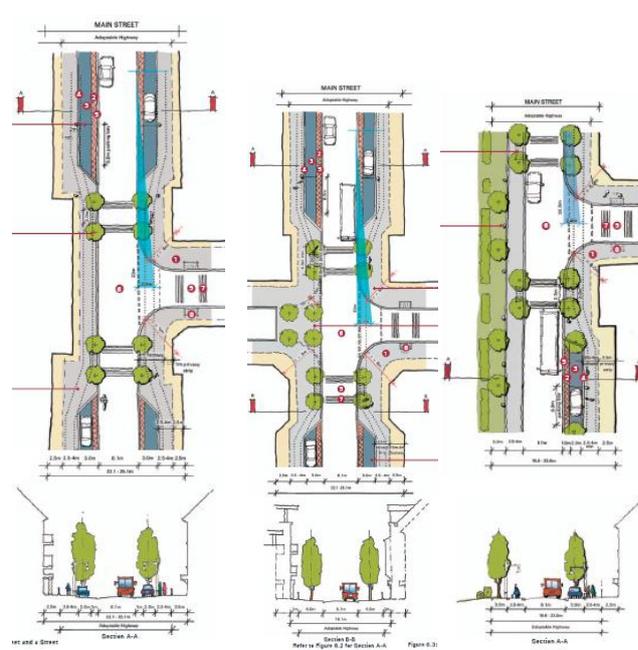
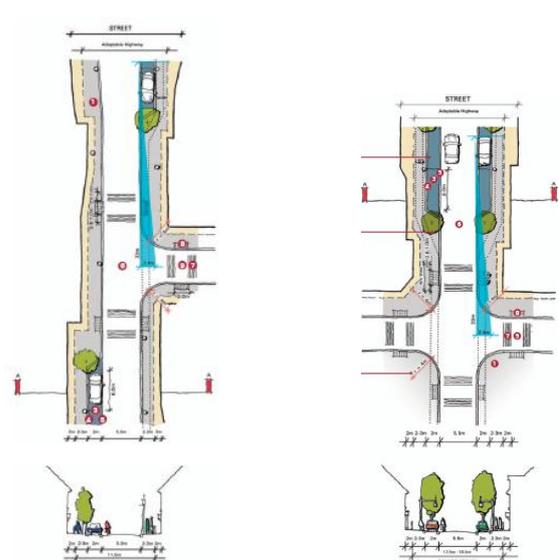
<p>Street types</p> <p>urban boulevard</p> <p>main street</p> 	<p>TypeA1 Formal Contents</p> <p>TypeB1 Formal Components</p>
<p>streets</p> 	<p>TypeA1 Formal Contents</p> <p>TypeB1 Formal Components</p>

Table A.10 Upton Design Code (continued)

<p>streets with suds</p>	<p>TypeA1 Formal Contents</p> <p>TypeB1 Formal Components</p>
<p>mews</p> <p>lanes</p>	
<p>central courtyards</p>	

Table A.10 Upton Design Code (continued)

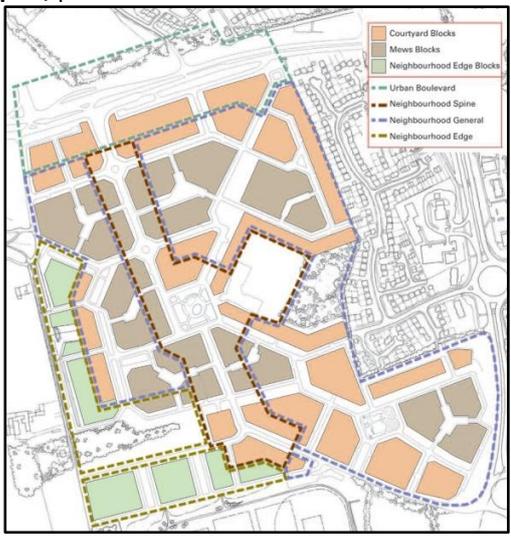
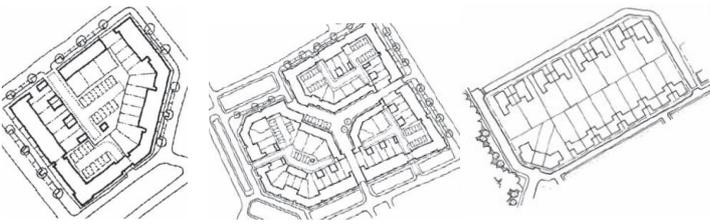
<p>block principles, perimeter block</p>  <p>Types of blocks courtyard blocks mews blocks neighbourhood edge blocks</p>  <p>principles for types of blocks continuous street frontages consistent building line frequency of doors and windows provided by regular rhythm flexible ground floor use highlighted block corners building apartments at block corners limitations to access of courtyards limitations to use of courtyard limitations to number of houses uses the courtyard</p> <p>boundary treatments front boundary rear boundary side boundary privacy strip encroachment boundary treatment</p>	<p>TypeA1 Formal Contents</p> <p>TypeB1 Formal Components</p> <p>TypeB2 Conceptual & Contextual Components</p>
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Table A.10 Upton Design Code (continued)

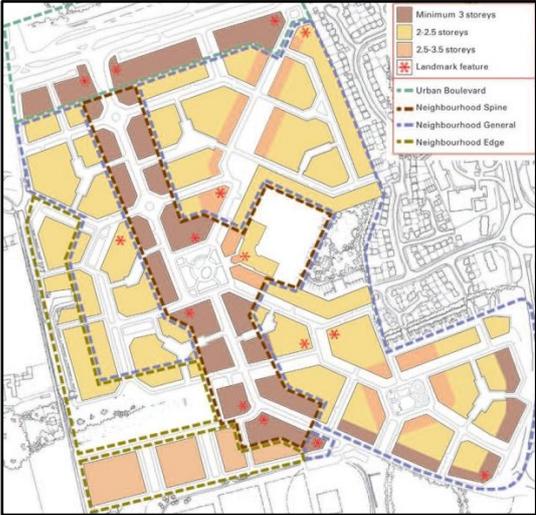
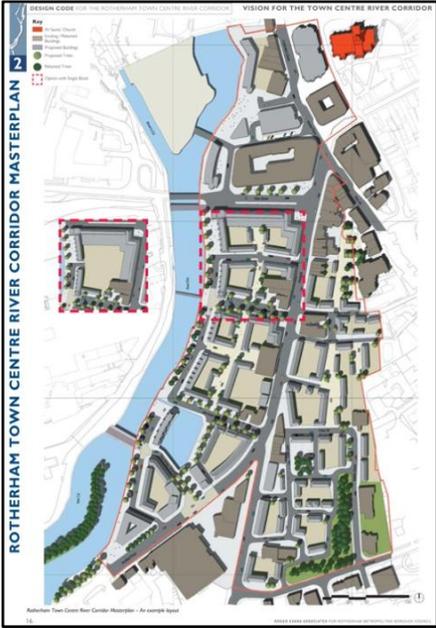
<p>building types and uses</p> <p>detached house semi-detached house town houses mews house apartments</p> <p>building heights</p> <p>varying from 2 to more than 3</p>  <p>parks and open spaces (with SUDS)</p> <p>building materials and details</p> <p>architectural elements, details and materials with dimensions</p>	<p>TypeA1 Formal Contents</p> <p>TypeB1 Formal Components</p> <p>TypeB2 Conceptual & Contextual Components</p>
<p>“Upton Design Code” (EDAW, 2005)</p>	

Table A.11 Design Code for the Rotherham Town Centre River Corridor

Contents & Component of Design Code For The Rotherham Town Centre River Corridor **Types of Contents and Components**

<p>vision, key opportunities and issues, principles</p> 	<p>Type A2 Conceptual & Contextual Contents</p>
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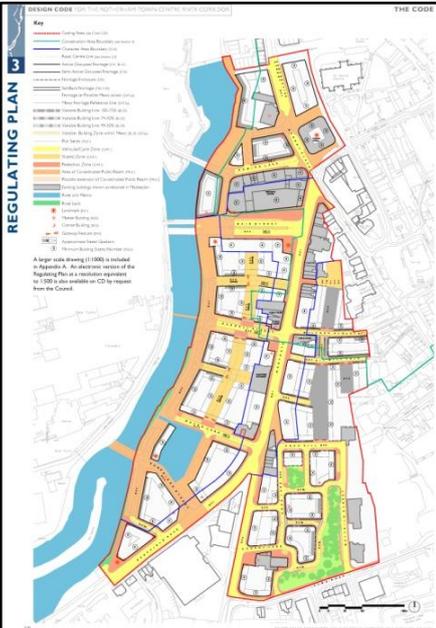
<p>regulating plan and general codes</p> 	<p>TypeB2 Conceptual & Contextual Components</p> <p>Type A2 Conceptual & Contextual Contents</p>
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Table A.11 Design Code for the Rotherham Town Centre River Corridor (continued)

<p>character areas public highway frontages active occupied frontage</p> <table border="1"> <thead> <tr> <th colspan="2">F.01 ACTIVE OCCUPIED FRONTAGE</th> </tr> </thead> <tbody> <tr> <td colspan="2">Principal boundary between the public highway and private property with building on the frontage line</td> </tr> <tr> <td>orientation of access</td> <td>must include principal access to buildings</td> </tr> <tr> <td>orientation of fenestration</td> <td>must include principal openings for access to light and air on all floors</td> </tr> <tr> <td>relation to internal space</td> <td>openings along the frontage must be to habitable rooms or occupied spaces</td> </tr> <tr> <td>set-back</td> <td>none</td> </tr> <tr> <td>boundary feature</td> <td>building</td> </tr> </tbody> </table> <p>active set-back frontage semi-active occupied frontage semi-active set-back frontage frontage enclosure</p> <p>building line (continuous line with 4 variable lines)</p> <table border="1"> <thead> <tr> <th colspan="2">BL.02 VARIABLE LINE I</th> </tr> </thead> <tbody> <tr> <td colspan="2">The fronts of adjacent buildings are aligned to form a continuous line as shown on the regulating plan but a percentage of the building may be set-back or forward from the building line</td> </tr> <tr> <td>Percentage of building frontage on building line</td> <td>100-75%</td> </tr> <tr> <td>Dimension of allowable set-back</td> <td>as shown on the Regulating Plan</td> </tr> <tr> <td>Frequency/spacing of set-back/forward</td> <td>no continuous set-back or forward may be longer than 6m</td> </tr> </tbody> </table>	F.01 ACTIVE OCCUPIED FRONTAGE		Principal boundary between the public highway and private property with building on the frontage line		orientation of access	must include principal access to buildings	orientation of fenestration	must include principal openings for access to light and air on all floors	relation to internal space	openings along the frontage must be to habitable rooms or occupied spaces	set-back	none	boundary feature	building	BL.02 VARIABLE LINE I		The fronts of adjacent buildings are aligned to form a continuous line as shown on the regulating plan but a percentage of the building may be set-back or forward from the building line		Percentage of building frontage on building line	100-75%	Dimension of allowable set-back	as shown on the Regulating Plan	Frequency/spacing of set-back/forward	no continuous set-back or forward may be longer than 6m	<p>Type B1 Formal Components</p> <p>Type A1 Formal Contents</p>																										
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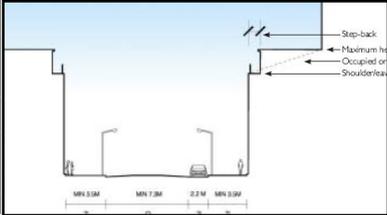
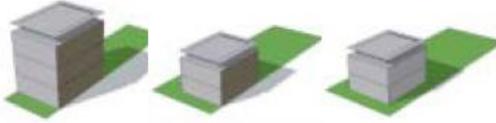
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Table A.11 Design Code for the Rotherham Town Centre River Corridor (continued)

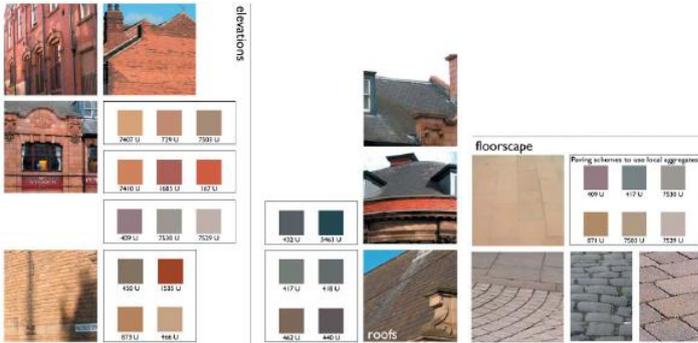
<p>plots</p>	<table border="1"> <thead> <tr> <th colspan="2">P.01 WESTGATE / SHEFFIELD ROAD / CORPORATION STREET - PLOT</th> </tr> <tr> <th>Plots</th> <td>Westgate/Main Street Character Area</td> </tr> <tr> <th>Attribute</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td colspan="2">Front</td> </tr> <tr> <td>Boundary</td> <td></td> </tr> <tr> <td>Type</td> <td>Building (See Building Line Code 06)</td> </tr> <tr> <td>Height</td> <td>N/A</td> </tr> <tr> <td>Front area/garden</td> <td></td> </tr> <tr> <td>With vertical boundary</td> <td>N/A</td> </tr> <tr> <td>Without vertical boundary</td> <td>N/A</td> </tr> <tr> <td colspan="2">Side/Back</td> </tr> <tr> <td>Boundary with public highway</td> <td></td> </tr> <tr> <td>Type</td> <td>Building (See Building Line Code 06)</td> </tr> <tr> <td>Height</td> <td>N/A</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Boundary with shared private open space</td> <td></td> </tr> <tr> <td>Type</td> <td>Brick/masonry wall, timber fence</td> </tr> <tr> <td>Height</td> <td>1800mm-2100mm, top 600mm may allow limited view through</td> </tr> <tr> <td>Boundary shared with adjacent plot</td> <td></td> </tr> <tr> <td>Type</td> <td>Brick/masonry wall, timber fence</td> </tr> <tr> <td>Height</td> <td>1800mm-2100mm</td> </tr> <tr> <td colspan="2">Side/Back area</td> </tr> <tr> <td>Parking position</td> <td>N/A</td> </tr> <tr> <td>Parking access</td> <td>N/A</td> </tr> <tr> <td>Parking integral</td> <td>N/A</td> </tr> </tbody> </table>	P.01 WESTGATE / SHEFFIELD ROAD / CORPORATION STREET - PLOT		Plots	Westgate/Main Street Character Area	Attribute	Code	Front		Boundary		Type	Building (See Building Line Code 06)	Height	N/A	Front area/garden		With vertical boundary	N/A	Without vertical boundary	N/A	Side/Back		Boundary with public highway		Type	Building (See Building Line Code 06)	Height	N/A			Boundary with shared private open space		Type	Brick/masonry wall, timber fence	Height	1800mm-2100mm, top 600mm may allow limited view through	Boundary shared with adjacent plot		Type	Brick/masonry wall, timber fence	Height	1800mm-2100mm	Side/Back area		Parking position	N/A	Parking access	N/A	Parking integral	N/A	<p>Type B1 Formal Components</p> <p>Type A1 Formal Contents</p>
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<p>“Design Code For The Rotherham Town Centre River Corridor” (Roger Evans et al., 2005, p. 15)</p>																																																				

Table A.12 Walker Riverside Design Code

Contents & Component of <i>Walker Riverside Design Code</i>	Types of Contents and Components
<p>Character areas Guidance and action plan</p>	<p>TypeB2 Conceptual & Contextual Components</p>
<p>Perimeter block frontage</p> <p>building line block corners active frontage with use of doors and windows</p> <p>perimeter block rears</p> <p>access to blocks and courtyards boundaries</p> <p>Parking for Residential/non-residential uses</p>	<p>TypeB1 Formal Components</p>
<p>Street Typology</p> <p>Walker Boulevard (District Distributor) Main Street (Local Distributor) Side Street (Local road with buses) Local Street (Access collector) Green Corridors (Shared surface street) Mews, Lanes, Courtyards (Shared surface street)</p> <div data-bbox="341 1420 715 1798"> <p>Side Streets</p> <p><small>© Crown copyright. All rights reserved. Newcastle City Council, 100115629, 2005</small></p> </div> <div data-bbox="724 1460 1109 1798"> <p>Side Street Junctions</p> <p>Side Street Cross Section</p> </div>	<p>TypeA1 Formal Contents</p> <p>TypeB1 Formal Components</p>

Table A.12 Walker Riverside Design Code (continued)

<p>Design Parameters</p> <p>Public Road Speed 30mph</p> <p>Roadway 2x 3.65m vehicular + 2x 1.50m cycle + 2x 2.5m parking where specified</p> <p>Kerb Type Raised (100mm nominal)</p> <p>Verge & footways 2x 2m to 3m paved verges + 2x 2m footways</p> <p>Tree Planting Acer Platanoides Emerald Queen or Carpinus Betulus [Fastigate] in paving, or Sorbus in gardens. Aligned with plot divisions: 10-12m centres.</p> <p>Corner Radii 10.00m at Main Streets, 6.00m at Local and Side Streets</p> <p>Private Building Height 2 storeys generally, 3-5 storeys at corners & at Community Focus</p> <p>Plot width 5m minimum</p> <p>Frontage on building line 80-100%</p> <p>Front garden / setback 2m to 3m</p> <p>Rear Garden 10m minimum at mid terrace, 5m behind street corners</p>			<p>TypeB1 Formal Components</p>
<p>Materials</p>			
<p><i>"Walker Riverside Design Code"</i> (Walker Riverside Project Board, 2007)</p>			

APPENDIX B

DESIGN CONTROL TOOLS IN UK FROM BUILDING ACTS TO URBAN DESIGN COMPENDIUMS

Table B.1 Historical development of design control tools in UK starting from Building Acts to Urban Design Compendiums

1667 The London Building Act	Restrictions on building height
1774 The Building Act	Development of buildings, management of waste
1842	Report on The Sanitary Conditions of The Labouring Population of Great Britain
1844 The Building Act	Town Principles in England
1848 The Public Health Act	Establishment of General Board of Health
1875 The Public Health Act	The Bye Law, comprehensive act
1887 The Model By-Laws	The Model By-Laws
1909 Housing and Town Planning Act	Housing and Town Planning Act
1922 The Interim Development Orders	Controlling Development
1925 Bath Corporation Act	Act peer reviewed by RIBA, RICS, JPs

Table B.1 Historical development of design control tools in UK starting from Building Acts to Urban Design Compendiums (continued)

1932 Town and Country Planning Act	Non-static areas and areas of high amenity, design and control
1947 Town and Country Planning Act	Introduction of comprehensive planning
1960 Homes for Today and Tomorrow	Minimum public sector residential standards
1967 Civic Amenities Act	Establishment of conservation areas
1968 MHLG conservation studies	Conservation area appraisal for Bath, Chester, Chichester, York
1968 Town and Country Planning Act	Town and Country Planning Act
1970s	Use of the design guides
1973 Essex Design Guide	Residential design guidance, rejected standards approach for contextual approach
1977 Design Bulletin 32	Guidance on more innovative residential road layouts
1977 House of Commons Expenditure Committee	Call for new advice on design control and for design freedom from the RIBA and HBF
1980s	Free market approach to design control <i>laissez faire</i>
1980 Circular 22/80	Approach considering design subjective and put authorities away from design processes
1989 A Vision of Britain	Traditional vision of Britain by the Prince of Wales
1990s	Consensus on design control
1990 Birmingham Urban Design Study	City-wide strategy, and hierarchy of guidance established
1990 Planning for Beauty	RFAC advocate design guidelines and a positive approach to design control

Table B.1 Historical development of design control tools in UK starting from Building Acts to Urban Design Compendiums (continued)

1990 Town and Country Planning Act	Town and Country Planning Act
1991 RIBA/RTPI Joint Statement	Agreement on design control
1991 Planning and Compensation Act	Development plan priority
1992 PPG1 Annex A: Design Considerations	Collaboration between RIBA and RTPI
1993 Suffolk Design Guide	Urban design rather than architecture is highlighted
1993 Design Policies in Local Plans	Works on good practice guide on the writing of design policies in development plans
1994 What makes a Good Building	RFAC attempt to define 'good' architecture
1994 Quality in Town and Country	Emphasis on urban design on quality pays and on mixed use
1994 Vital and Viable Town Centres (DoE)	Recognizing the value of use, of social vitality and of preserving the urban realm
1995 Sustainable Settlements (LGMB)	Exploring the link between sustainability and design
1995 Quality in Town and Country: Urban Design Campaign	Using development briefs as means to strengthen emphasis on urban design
1996 Revised PPG1 promised	Greater emphasis on urban design and local distinctiveness
1996 Good Practice Guide on Urban Design promised	Aiming raising the profile of urban design in the public's mind
1997 Planning Policy Guidance 1 (PPG 1)	PPGs continued to publicised to PPG 25 (which are gradually replaced by PPSs)

Table B.1 Historical development of design control tools in UK starting from Building Acts to Urban Design Compendiums (continued)

1999 Publication of "Towards an Urban Renaissance" by Urban Task Force	"Towards an Urban Renaissance"
2000 Publication of "By Design, Urban Design in the Planning System"	Policy Guidance document to guide design guidance and policy
2000 Publication of "Urban Design Compendium"	Comprehensive design guide for urban design
2001 Publication of "Better Practice to Live"	"Better Practice to Live"
2001 "Planning Green Paper"	Supplementary guidance formally adopted as part of Local Development Frameworks
2005 Publication of "Planning Policy Statement 1: Delivering Sustainable Development" (PPS1)	Replacement of Planning Policy Guidance 1: General Policies and Principles (PPG1) by (PPS1) (PPGs gradually replaced by PPSs)
2007 Urban Design Compendium 2: Delivering Quality Places	Best Practice Guide
Design control tools from Building Acts to Urban Design Compendiums produced from (Carmona, 1996, pp. 50-51), (Ben-Joseph, 2005, pp. 192-193) (Broadbent, 1990) (Carmona et al., 2002) (Evans et al., 2007) ("Planning Policy Guidance Notes (PPG)," 2010) (DCLG, 2006) (Marchigiani, 2004) (Madanipour, 1996)	

APPENDIX C

DESIGN POLICY AND GUIDANCE HIERARCHY IN UK

Table C.1 Design policy and guidance hierarchy in UK

National/regional policies	National guidance	Planning Acts Planning Policy Statements (PPS)	
		Government Advice	Circulars Design Bulletins Good Practice Guides
	Strategic guidance	Regional Spatial Strategies (RSS) Sub-regional strategies Landscape Character Assessment County Design Guides	

Table C.1 Design policy and guidance hierarchy in UK (continued)

Authority-wide policies	Authority-wide guidance	Community strategy	
		Local development framework - core strategy and proposals section	
		Local development framework - authority-wide design statement	Design guides for authority area Design standards Design strategy Landscape strategy
Area-wide policies (action plans)	Area or site-specific guidance	Local development framework	Area appraisal Design codes
Site-specific policies		Area action plans SPG	Development/design frameworks Master plans Development briefs
Design Policy and Guidance Hierarchy, Produced from "From Design Policy to Design Quality" (Source: Carmona et al., 2002, pp. 24,88)			