Institution: University College London

Unit of Assessment: 16 – Architecture, Built Environment and Planning

Title of case study:

Design governance in the built environment: Facilitating the use of design codes

1. Summary of the impact

Work by Carmona et al has supported the national drive for better design in the built environment, helping to mainstream ideas about the importance of urban design and develop tools for design governance. A major strand of this research has focused on the use and potential of design codes in England, and has been a major contributor to their widespread adoption. As a result, by 2012, some 45% of local authorities and 66% of urban design consultants had used design codes.

2. Underpinning research

From the mid-1990s UK government policy took a turn towards more active promotion of better design in the built environment. Over the following decade, research in the UCL Bartlett School of Planning (BSP) provided much of the underpinning research supporting this shift in the areas of design value, street design, public space management, design policy and guidance, the measurement of quality, and the use and utility of design codes. This latter work, led by Professor Matthew Carmona between 2003 and 2012, exemplifies the design governance research at UCL.

Following interest expressed in the potential of design codes by national government, and consternation in the architectural press about the limits this was perceived to place on design freedom, Carmona led a review of the use and potential of design codes in 2003-04. This study built on Carmona's earlier research on design guidance at UCL and established an analytical framework that moved the discussion away from a preoccupation with aesthetics **[a].** Instead, it set the debate on design coding within a larger four-part framework that focused on the fundamental issues of:

- residential development process;
- key contexts which impact on design coding (i.e. site, policy, market, stakeholder and regulation);
- the components of place shaped by codes; and
- potential outcomes from coding (better quality, certainty of process, integration of stakeholder inputs, community engagement, and speed of planning).

Evaluating each of these issues, and their inter-relationships, was vital if the true impact of coding was to be fully understood.

It was within this framework that a full-scale national pilot programme to evaluate design coding was commissioned from CABE by Government, beginning in 2004 **[b]**. This utilised a research methodology developed by Carmona in which each element of the analytical framework was interrogated via seven large scale pilot projects around the country over an 18-month period from 2004-05, alongside nine detailed case studies of coded projects that were already being built. By way of comparison, four schemes that did not use coding, but used other forms of detailed design guidance, were also studied. UCL researchers were embedded within each of the design/ development teams to observe and record progress and to interview all key stakeholders at different stages of the coding process. Ultimately, the results were drawn together by Carmona who authored the research report [b] published by the Department of Communities and Local Government (DCLG). This resulted in the associated academic publications **[a]** and **[d]**, the latter of which reviewed and revealed the potential for codes to bring stakeholders together in a more consensus based development process.

Carmona was subsequently commissioned by DCLG to author a practice guide for professionals in order to promote the use of design coding in practice and disseminate the research findings. *Preparing Design Codes, A Practice Manual* remains the key source for practitioners preparing design codes in the UK today **[c]**. In effect the guide establishes when and when not to use codes and defines an 'optimum' design coding processes based on a developed version of the original

analytical framework. The process has now become the standard across the UK as revealed in a follow-on project for the Urban Design Group six years later, in 2012. This latest research conducted by Carmona and published in *Design Codes, Diffusion of Practice in England* involved a national survey of urban design practitioners and local planning authorities **[e]**, and demonstrated the national take-up of coding, following the original research, as an innovation in mainstream development practice, as will be shown below.

3. References to the research

[a] Carmona, M., Marshall, S. & Stevens, Q. (2006) 'Design Codes, Their Use and Potential', *Progress in Planning*, 65 (4): 201–290. [DOI: 10.1016/j.progress.2006.03.008]

Heavily cited (32 in Google Scholar); Commended (joint runner-up) for the AESOP Prize Best Paper in 2007.

[b] Carmona, M. & Dann, J. (2006) *Design Coding in Practice, An Evaluation,* London: DCLG. http://webarchive.nationalarchives.gov.uk/20120919132719/http://www.communities.gov.uk/publications/citiesandregions/designcoding2

[c] Carmona, M. & Dann, J. (2006) *Preparing Design Codes, A Practice Manual,* London, DCLG. http://www.communities.gov.uk/publications/regeneration/preparingdesigncodes

[d] Carmona, M. (2009) 'Design Coding and the Creative, Market and Regulatory Tyrannies of Practice', *Urban Studies*, 46 (12): 2643–2667**.** [DOI: 10.1177/0042098009344226]

Heavily cited (20 in Google Scholar); Selected for inclusion in *Urban Design in the Real Estate Process* (Tiesdell & Adams 2011).

[e] Carmona, M. & Giordano, V. (2012) *Design Codes, Diffusion of Practice in England*, London, Urban Design Group. http://www.udg.org.uk/publications/udg-publication/design-coding-diffusion-practice-england

The quality of the underpinning research is demonstrated by the following grants:

- Carmona, M. (PI), *The Development and Use of Design Codes in the UK*, CABE, November 2003 – June 2004 (£52,332). This grant led to output [a] above.
- Carmona, M. (PI), *Design Code Pilot Programme Research and Evaluation*, ODPM, June 2004 – November 2005 (£153,502). This grant led to outputs [b] and [d] above.
- Carmona, M. (PI), *Design Codes A Good Practice Guide*, CLG, March – June 2006 (£40,000). This grant led to output [c] above.
- Carmona, M. (PI), *Design Codes, Diffusion of Practice in England*, UCL / Urban Design Group, May – September 2012 (£5,000). This grant led to output [e] above.

4. Details of the impact

A combination of UCL research between 2004 and 2006, later follow-up work, and dissemination through nearly 30 conferences and seminars in the UK and worldwide from 2004–13 has established the effectiveness of design codes in the delivery of high-quality residential design in England and overseas. In the process, research by Carmona et al has become the primary source for advice on the preparation of design codes for practitioners and local authorities alike.

Change in policy and practice:

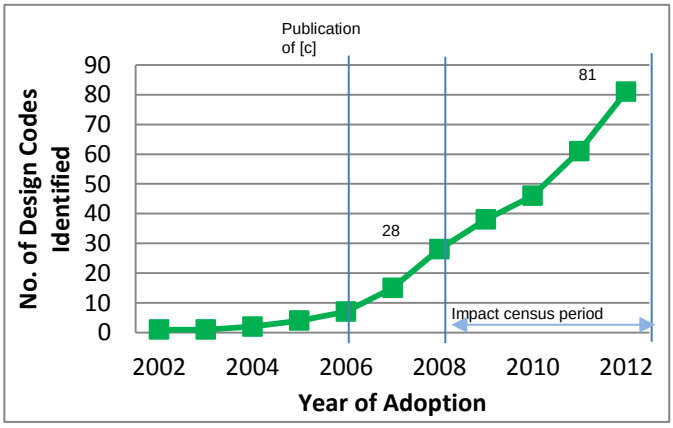
Research described in Section 2 provided the primary evidence base for the direct endorsement of design codes in the *Barker Review of Land Use Planning* (2006) (Recommendation 24 **[1]**, and *Planning Policy Statement 3: Housing* (2006), the UK government's strategic housing policy for England. The latter recommended that *'Local Planning Authorities should … promote the use of appropriate tools and techniques, such as Design Codes'*, in order to *'facilitate efficient delivery of high quality development'* **[2; para 18]**. It remained in force throughout 2006–12, with three editions, the most recent of them in 2011. In 2012, all planning policy statements were replaced by a unified National Planning Policy Framework which once again directed that *'Local planning authorities should consider using design codes'* as a means to *'help deliver higher quality outcomes'* **[3; para 59]** – and all this despite wider simultaneous moves towards deregulation.

The research work was widely referenced by the UK government and its agencies, including:

- Policy and practice documents supporting a dimension of the research that explored the designation of Local Development Orders (LDOs) alongside design codes on the basis that they can speed up the planning process whilst delivering design quality **[d; Appendix 1]**. Initially this found support in CLG *Circular 01/2006*, then in the 2008 *Killian Pretty Review* of the planning system **[4; item 2.1.2]**.
- The Homes and Communities Agency (HCA) published *Urban Design Compendium 2* in 2009, which includes specific reference to the underpinning UCL research on design codes: *'Research has found that it is sites such as these (large sites where delivery is phased either over time or between different design teams) that benefit most from the use of design codes.'* The document thus endorses the practice guide and goes on to summarise key findings from the research regarding the benefits of design coding for stakeholders **[5; p. 128]**
- The 2012 online guidance of ATLAS, the government funded independent advisory service on large scale development, which advocates the use of design coding in their work in order to fulfil one of their corporate objectives, to improve the speed and quality of major housing developments. In doing so they draw from the research to shape their own advice to clients on the use of design codes, quoting *Preparing Design Codes: A Practice Manual* **[c]** as 'the key reference' **[6; item T2.9]**. This emphasis is reflected in its discussion of means to ensure design quality through case studies of successful projects it has advised on, for example, a successful proposal in 2010 to develop west of Waterlooville in Hampshire with 3,000 homes. In this case, ATLAS identified the early submission of design codes as a key driver on quality and a catalyst in creating a conversation about design **[7]**.

<u>Adoption of design codes:</u>

By providing the evidence base to advocate for design codes, and the guidance on adopting them, the research has been hugely influential in driving practice. This was demonstrated through research led by Carmona for the Urban Design Group (UDG) in 2012, which tested the diffusion of design coding as a tool in the development process, and revealed the scale of this influence. From an almost standing start in 2003, by 2012 around 45% of local authorities (geographically spread across England) had used design codes and 66% of urban design consultants had prepared them **[8; pp. 6–7]**. From the data it was estimated that over 120 design codes had been prepared between 2006 and 2012 (85% of these after 2008), compared to a smattering before, with the rate of adoption continuing to climb year on year **[8; p. 2]**. It was found that the research and accompanying guidance was the primary source of advice on the preparation and use of design codes by local authorities and private practitioners alike – e.g. West Northamptonshire's 2009 *Manual for Design Codes;* in Plymouth's 2009 *Design Code Factsheet*; or the 2012 *Design Codes for Strategic Development Sites within the Cambridge Fringe Area* **[9]**.



Taken together, design codes now direct the development of many thousands of houses over many thousands of acres across England. Taking just one local authority as an example, since 2006 Swindon Borough Council has used codes in all four of its major strategic housing sites at Wichelstowe, Tadpole Farm, Commonhead, and New Eastern Villages, covering 14,580 new homes on 1,000+ hectares of land **[10]**.

The survey revealed a wide range of projects across England - from Ashford to Carlisle - in which respondents reported that the 'innovation' of codes had enhanced both process and outcomes. Indeed, 93% of those who used design codes reported they would do so again **[8; p. 12]**. By 2012, design codes were advocated in a quarter of local plans, and the number was rapidly increasing, whilst a large majority of planning authorities and urban design consultants who have had not yet used design codes stated their intention to use them in the future. As one officer said, *'codes are the only way to get volume builders to develop out in an appropriate integrated manner'* **[8; p. 12]**.

As a sign of this significant diffusion of design coding practice, the UDG study revealed that private developers are now submitting unsolicited design codes in large numbers as part of planning applications, indicating how practice has become mainstreamed, whilst survey respondents reported the following benefits of using the codes **[8; pp. 1–2]**:

- Improving design quality by tying down the 'must have' design parameters that hold the schemes together, and ensuring consistency in the delivery of key site-wide design principles;
- Offering far greater certainly about outcomes and certainly to developers about the process;
- Bringing key stakeholders together early in the process leading to smoother working relationships and to a better understanding of constraints from the start;
- Speeding up the reserved matters planning applications made in connection with the successive phases of large development projects.

As one planner put it: *'Well framed codes, based on a clear understanding of the limits of the client's control and influence have resulted in a clear uplift in quality, principally in the better integration of complicated development sites or where the landownership is a patchwork.'* **[8; p. 9]**.

Contributions by UCL research to policy are ongoing. The above diffusion of practice was further advanced by a recommendation of the Taylor *External Review of Government Planning Practice Guidance* (2012) that the underpinning practice guidance should be incorporated into the new *National Planning Practice Guidance*; this was duly done in August 2013 **[11; ID 26-032-130729]**.

The reach of these impacts was extended further when the research at UCL by Carmona et al inspired the HOPUS consortium of universities and municipalities in the European Union's URBACT programme to focus on the use and potential of design codes as a tool for improving the sustainability of housing development. As its 'Lead Expert' through the project's life (2008-10) Carmona advanced the principles and processes of design coding developed during the research as a basis for local investigations in Portugal, Italy, Poland, and The Netherlands, which enabled HOPUS to assess the value of design coding, as well as the conditions necessary for its success **[12; p. 6]**. In Poland, for example, tests carried out in six cities led to the conclusion that design coding offers a valuable tool to challenge development practice that is typically driven by a private sector with little interest in design quality **[11; p. 205]**.

5. Sources to corroborate the impact

[1] *Barker Review of Land Use Planning* (2006) [http://bit.ly/19afVQE, PDF].

[2] *Planning Policy Statement 3: Housing* (2006 / 2011, 4th edition) [http://bit.ly/1hYNuXH, PDF].

[3] National Planning Policy Framework (2012) [http://bit.ly/17vEYKZ, PDF, demonstrating the continuing relevance of the research through the reflection in national policy].

[4] Killian Pretty review of the planning system [http://bit.ly/H5KBsl, PDF, para 2.1.2, linking LDOs with design codes as advocated through the research].

[5] HCA *Urban Design Compendium 2* (2009, 2nd edition) [http://bit.ly/19aiVfD, PDF, p. 128, giving advice on design coding and endorsing the research].

[6] ATLAS website advice on design coding [http://bit.ly/1bBBhXs, T2.9 endorsing the research].

[7] ATLAS case study of West of Waterlooville with design codes [http://bit.ly/1fFbrXa, PDF].

[8] Study [e] reviewed and subsequently published by the Urban Design Group Executive Committee [http://bit.ly/1ar9CGc, PDF, on the diffusion and relevance of design coding practice].

[9] Research as primary source of advice, e.g. Plymouth (2009) [http://bit.ly/1dCNPBV, PDF, p. 4] and Cambridge (2012) [http://bit.ly/HqJWSu, PDF, p. 4].

[10] Swindon Borough Local Plan 2026 (December 2012) [http://www.swindon.gov.uk/ep/ep-planning/forwardplaning/ep-planning-localdev/Documents/Local%20Plan%20Pre-Submission%20draft.pdf, PDF, pp. 173–192].

[11] Continuing relevance of research in national guidance demonstrated by inclusion in National Planning Practice Guidance on design coding [http://bit.ly/1aQZkjW, August 2013) following Taylor Review recommendation (December 2012) [http://bit.ly/1hmvEQM, PDF, Annex B].

[12] EU URBACT, Housing Praxis for Urban Sustainability (HOPUS) [http://bit.ly/16DGjPM, PDF].