Design Coding
Diffusion of Practice in England

UCL

URBAN DESIGN GROUP

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EXECUTIVE SUMMARY

This report summarises a short project that, six years after the completion of the national design coding pilot programme in England, revisits the subject to evaluate the diffusion of design coding as a tool in the planning and development process.

Four key questions were asked:

How widespread are the use of design codes in England today?

- In excess of a third of local planning authorities have had codes produced for them, either through requiring or commissioning them, or otherwise through developers voluntarily submitting them as part of a planning application.
- The use of design codes is advocated in policy in a quarter of local planning authorities, and this is rapidly increasing.
- Around the two thirds of urban design consultancies have experience of producing design codes.
- The overall diffusion of design coding (the proportion of local authority areas in which design codes have been used and / or who recommend their use in policy) is approaching half of England's local authority areas (45%)
- A significant element of diffusion is being driven by private developers, landowners or consultants submitting unsolicited design codes as part of planning applications.
- Regional variations in diffusion vary from 32% of local planning authorities in the South-east of England to 72% in the South-west.

What benefits do the use of design codes have and do these match those identified by the national design codes pilot programme?

- The key aspirations for coding are to secure higher (sustainable) design quality; to deliver more consistent outcomes across the multiple development phases of long-term projects; and to provide a more effective planning process, through expedited reserved matters processes, swifter permissions for those who comply, and by offering greater certainly for developers.
- The actual impact of design codes in practice confirms the aspirations.
- Design codes: improve design quality, tying down 'must have' design parameters; ensure consistency (and where appropriate differentiation) in the delivery of key site-wide design principles between development phases; offer far greater certainly about outcomes and certainly to developers about the process; and bring key stakeholders together early in the process leading to smoother working relationships and to a better understanding of expectations and constraints from the start.
- On the question of speed, codes do speed up the reserved matters

applications associated with successive phases of large development projects, but this requires a considerable front-loading of design time early on.

What has been the value of Government sponsored good practice guidance reflecting the lessons of the pilot programme?

- Preparing Design Codes, A Practice Manual was most frequently cited as the key source of advice for preparing design codes.
- The preparation of design codes took off dramatically after the publication of research and guidance in 2006, and has continued to increase through to 2012.
- In excess of 120 design codes are estimated to have been prepared since 2006, compared to a smattering of codes before.

What support exists for the continued use of design codes in the future?

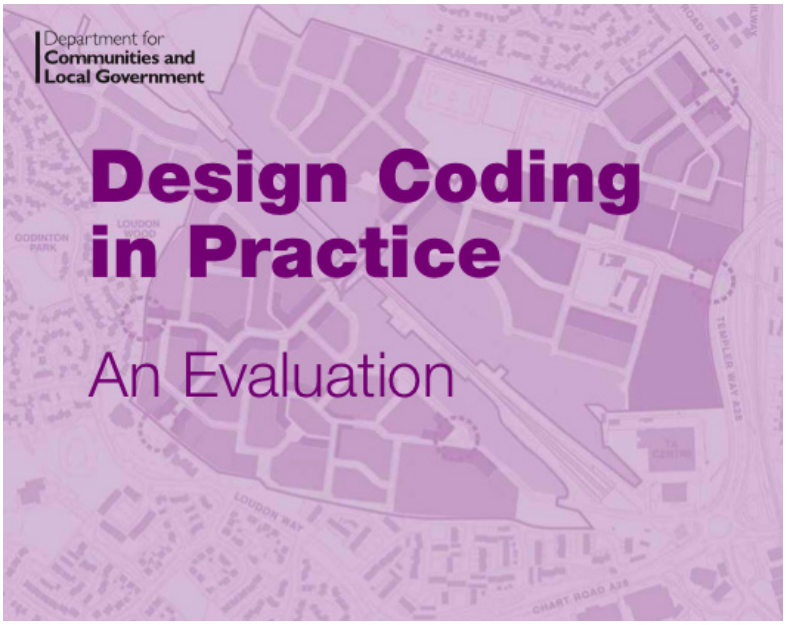
- The assessment amongst planning authorities was overwhelmingly positive, with the vast majority of those who had previously used design codes declaring their intention to use them again as and when the right opportunities arose (namely sites large enough to justify their production).
- A large majority of planning authorities and urban design consultants who have not used codes intend to do so in future.
- Planning authorities particularly welcome the increased control design codes give them over the outputs of the volume housebuilding sector, although stressed the need for an in-built review process to maintain flexibility.
- The use of design codes is just one part of a much needed culture change in the design and delivery of new housing.

DESIGN CODING

Diffusion of Practice in England

1. INTRODUCTION

Faced with the increasingly urgent need to deliver more housing whilst preserving environmental quality and retaining community support, in 2004 the then government launched an extensive pilot programme in England, aimed at assessing the potential of design coding to deliver better quality development, more rapidly. This national pilot programme involved the detailed monitoring and evaluation of nineteen development projects over a two-year period and reported in early 2006 in the document *Design Coding in Practice, An Evaluation*[1].



Whilst the programme itself was coordinated for the CLG by CABE, the monitoring and evaluation and subsequent preparation of practice guidance was undertaken by a team at UCL's Bartlett School of Planning led by Professor Matthew Carmona in association with consultants Tibbalds Planning & Urban Design.

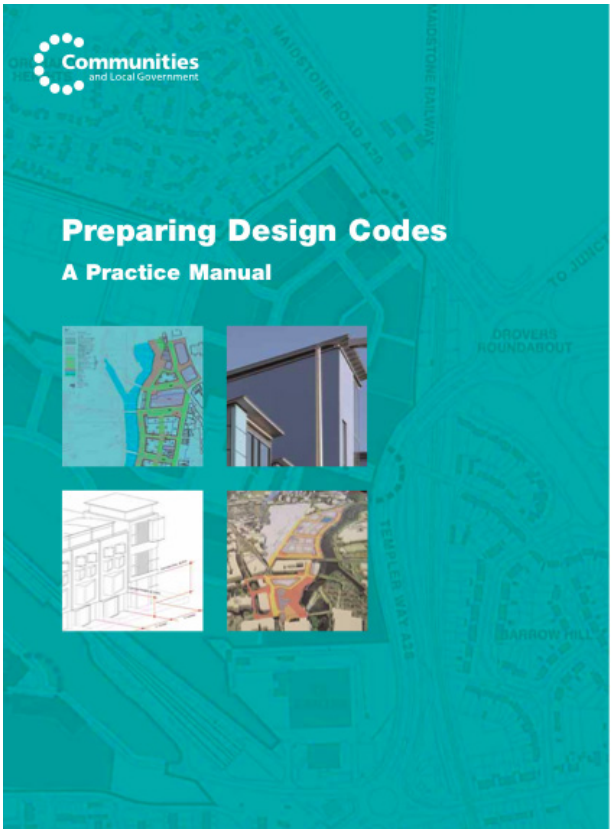
The research defined design codes to be site-specific tools, typically building upon the design vision contained in a masterplan, development framework or other site or area-based spatial vision. The codes themselves focus on urban design principles aimed at delivering better quality places, for example the requirements for streets, blocks, massing and so forth, but may also cover landscape, architectural and building performance issues, such as those aiming to increase energy efficiency.

The research revealed a range of potential headline benefits of the use of design codes, including:

- Better designed development, with less opposition locally, and a more level playing field for developers
- Enhanced economic value derived from the positive sense of place that better quality design can deliver
- Less uncertainty with the planning process and a resulting positive climate for business investment
- Streamlined regulatory processes, saving time and money for developers and local authorities alike
- A more coordinated development process, built on consensus instead of conflict.

The use of codes was subsequently recommended in national policy, initially in 2006 in Planning Policy Statement 3: Housing (para.18), and subsequently in the 2012 National Planning Policy Framework (para 59). Policy was accompanied in late 2006

1 http://www.communities.gov.uk/publications/regeneration/designcoding2



by detailed guidance covering the purpose, preparation, use and utility of design coding in *Preparing Design Codes, A Practice Manual*[2].

Six years later, this paper reports on the diffusion of design codes as a tool in planning and development practice, and gauges:

- How widespread the use of design codes is today in England
- What benefits the use of codes have and whether these match those identified by the pilot programme
- The value of Government sponsored good practice guidance reflecting the lessons of the pilot programme
- Support for the continued use of design codes in the future.

2. MEASURING THE DIFFUSION OF PRACTICE

The project was limited by time and resources, so in order to get as accurate a picture as possible of the diffusion of design coding practice across England, a number of concurrent approaches were used to trace practice:

- A desktop review of LDF/local plan policy across 311 local planning authorities in England to gauge whether the use of design codes feature in policy
- A questionnaire via SurveyMonkey to the 311 local planning authorities in England asking four simple questions:

1. Have site-specific design codes been produced for any developments within the boundaries of your authority? And requesting (i) title (ii) date (iii) author(s) (iv) who commissioned each code, and (v) there status.
2. If you have prepared, commissioned or required that design codes be produced for development proposals, what did you hope to achieve by the use of the codes?
3. Looking back on your use of design codes, can you comment on how they have impacted on: (i) the quality of resulting design outcomes (what have they impacted on and why) (ii) coordination between phases of development (iii) the speed of delivering development (iv) certainty within the development process (v) relationships between stakeholders?
4. Would you use design codes in the future, and why?

- A desktop review of the websites of 117 urban design consultancies in England derived from the Urban Design Group directory.
- A questionnaire via SurveyMonkey sent to the 117 urban design consultancies with a modified version of the same four questions above
- A further desktop search of planning authority planning application portals to trace design codes mentioned in either of the surveys but not previously found. Such

2 http://www.communities.gov.uk/publications/regeneration/preparingdesigncodes

codes were included as part of a planning application but did not feature in any policy framework.

51 local authorities responded to the survey representing a response rate of 16%. 18 practices responded to the survey representing a 15% response rate.
The desktop research was carried out to supplement and validate the findings of the online surveys, helping in the process to counteract any self-reporting bias in responses to the survey. It also helped to overcome the low response rate, revealing a much higher take up of design codes than would have been suggested by the surveys alone (see below).

In addition, whilst the search for evidence for the diffusion of practice through the advocacy of design codes in policy initially focused only on the Core Strategies of Local Development Frameworks (LDF), after reviewing the policies of the first 100 local authorities, it became apparent that most were in the process of reviewing their planning policy (reflecting the emergence of the recent National Planning Policy Framework published in March 2012) and much local policy was therefore still somewhat fluid. For this reason, the search was expanded to include other policy documents that had already been published (both statutory and non-statutory) as part of emerging local planning framework.

3. THE DIFFUSION OF DESIGN CODES IN LOCAL PLANNING PRACTICE

Taking the results of the online survey of local planning authorities first, the first question asked if site-specific design codes had been produced for any developments within the boundaries of the authority. Of those who replied, a small majority reported having design codes produced for, or submitted to, their local authority (Fig.1). This headline figure, however, is likely to overestimate the true diffusion of practice because of the small survey response rate and the increased likelihood of those with design codes experience replying to the survey over those without.

Fig.1

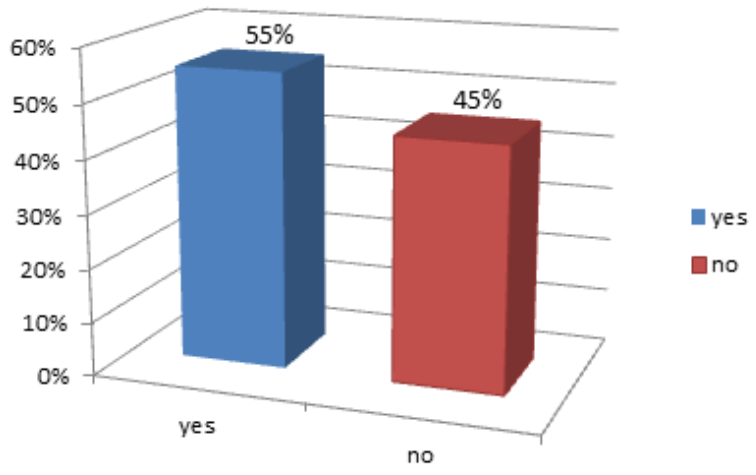
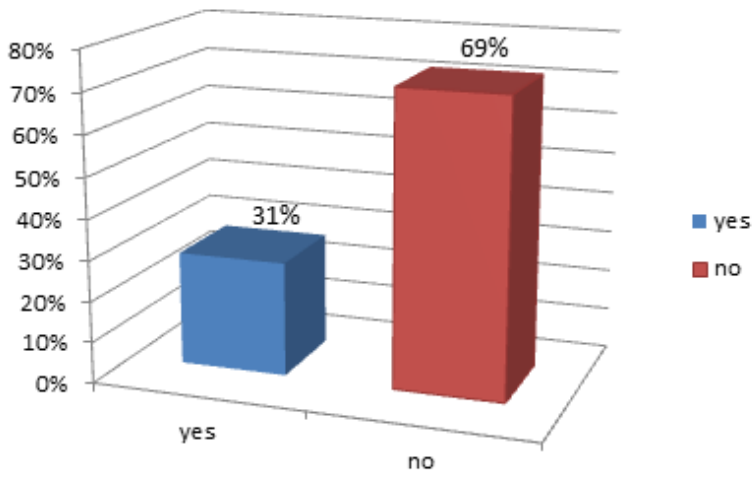
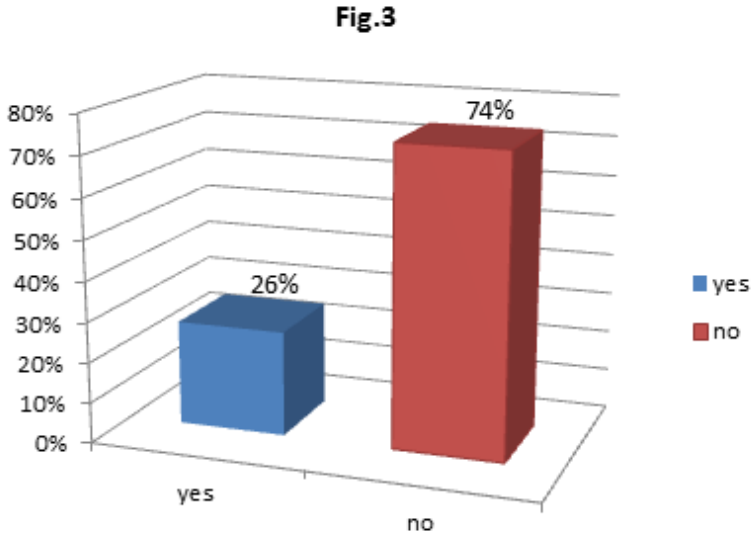


Fig.2



By way of comparison the desktop survey of the diffusion of practice revealed a smaller figure, although still approaching a third of planning authorities having had codes produced for them, either through requiring or commissioning them, or otherwise through developers voluntarily submitting them as part of a planning application (Fig. 2). Whilst the desktop results were based on a systematic search of web resources and were useful in showing take up and trends over time, the complex nature of most local authority websites, the absence of some codes online, and the difficulty of searching without prior

↑ Fig.1 Survey evidence of the use of design codes in local planning practice
↑↑ Fig.2: Desktop evidence of design codes in local planning authorities



knowledge for codes submitted as part of planning applications (see below) means that these figures are likely to underestimate the actual diffusion of practice.

In particular, as most codes are prepared as a condition of an outline planning permission or are submitted as part of a planning application together with a masterplan prepared by a private consultant for a private landowner or developer, they tend not to be openly published on local authority websites. As such they can only be accessed by entering a specific application number or project address into the online portal for planning applications. The true extent of the diffusion of design coding into local planning practice is likely to lie somewhere between the figures given in fig. 1 and 2, with somewhere well in excess of a third of local authorities actively using codes.

4. THE DIFFUSION IN DESIGN CODES IN PLANNING POLICY

In addition to the design codes actually used, however, the research measured how the aspiration to use design codes had diffused into local policy. On this measure, the use of design codes is advocated in policy in a quarter of local planning authorities, either in the Core Strategy of their LDF or in supplementary planning guidance of various descriptions (Fig.3).

↑↑Fig.3 Design codes in policy

In undertaking this analysis it was notable that mentions of design codes in policy have grown significantly over the past 2 years as a surge of Core Strategies have come forward for adoption. Whilst codes themselves are typically submitted as part of a planning application or (less frequently) are being adopted as supplementary planning guidance, increasingly local planning policy is recommending their use.

Reflecting back on planning practice, although many of the authorities advocating codes in policy were also identified in the totals of Figs 1 and 2 (above) others were not. It is nevertheless likely that a good proportion of these latter cases will have been exposed to the actual use of design codes, which the difficulties of searching local authority planning application portals made it impossible to detect. If this is the case, it further supports the argument that the totals in Fig 2 underestimate the actual diffusion of design coding practice.

5. THE DIFFUSION OF DESIGN CODES IN PRIVATE PRACTICE

Turning from the public sector to the private, Figs. 4 and 5 show respectively the diffusion of design coding practice into private urban design consultancy, first, through responses to the survey, and second, following a desktop analysis of the websites of all practices listed in the UDG Directory.

Once again, the findings have to be assessed against the limitations of the data. Thus whilst nearly three quarters of those who responded to the survey said they have produced codes, arguably, responses are far more likely from this group of respondents, than from those who have not, potentially over-inflating the final figure. Equally, information published on practice websites suggested that a lesser figure of about half of urban design consultancies have produced codes. This, however, may underestimate

their true use, as practice websites tend only to refer to codes that have or are being implemented, and therefore many codes will not be listed. The true figure of diffusion in urban design consultancy is likely to lie somewhere in between, perhaps around the two thirds of consultancies mark.

6. OVERALL DIFFUSION OF DESIGN CODES

The discussion so far has revealed something of the difficulties faced when trying to gauge an accurate figure of the diffusion of design coding practice, but also that evidence from local planning authorities suggests that somewhere in excess of a third of their number are actively engaged with the use of design codes in the planning process, and that two thirds of urban design practices are producing codes, sometimes for authorities not included within the first figure. Bringing evidence from these two sources together and combining them with the evidence of diffusion in policy in about a quarter of local authorities, it is possible to identify an overall figure (Fig. 6) of how design codes are being taken on board across the country, both in actual day to day planning practice, and as an aspirational element of future practice.

This overall diffusion figure, amounting to somewhere between two fifths and a half of local authority areas, reflects the fact that whilst the different categories of diffusion (planning practice, private practice and policy) substantially overlapped, overall diffusion is defined by the number of local authorities that occur (once or more) across the three categories of diffusion. For example, out of 311 surveyed planning authorities, 230 do not mention design codes in their planning policy, although 50 of these have received design codes as part of a planning application. The robustness of the numbers in Fig 6 are confirmed by the overall diffusion of codes lying more or less midway between the figures garnered from the survey and desktop analysis of local planning authorities (Figs 1 and 2 above) which were thought to respectively over and underestimate the true picture of diffusion.

Fig. 4

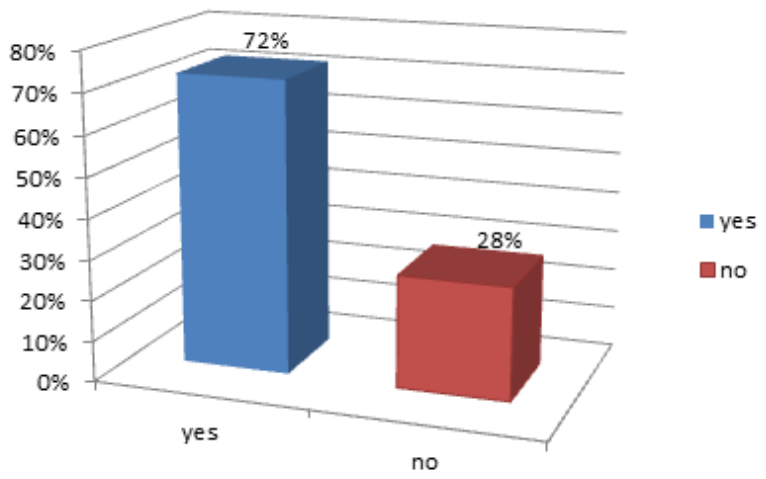


Fig.5

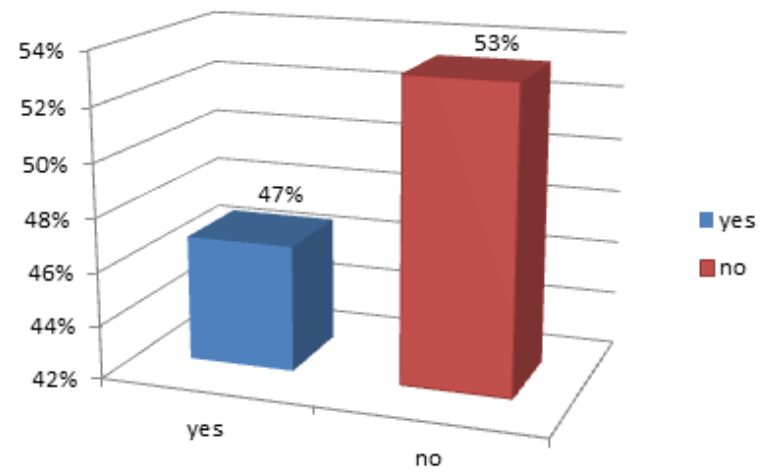
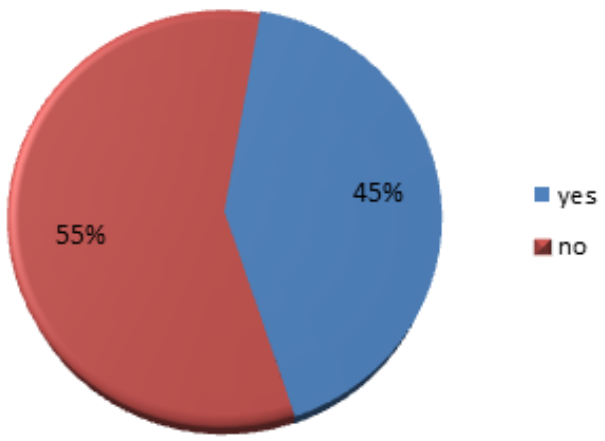
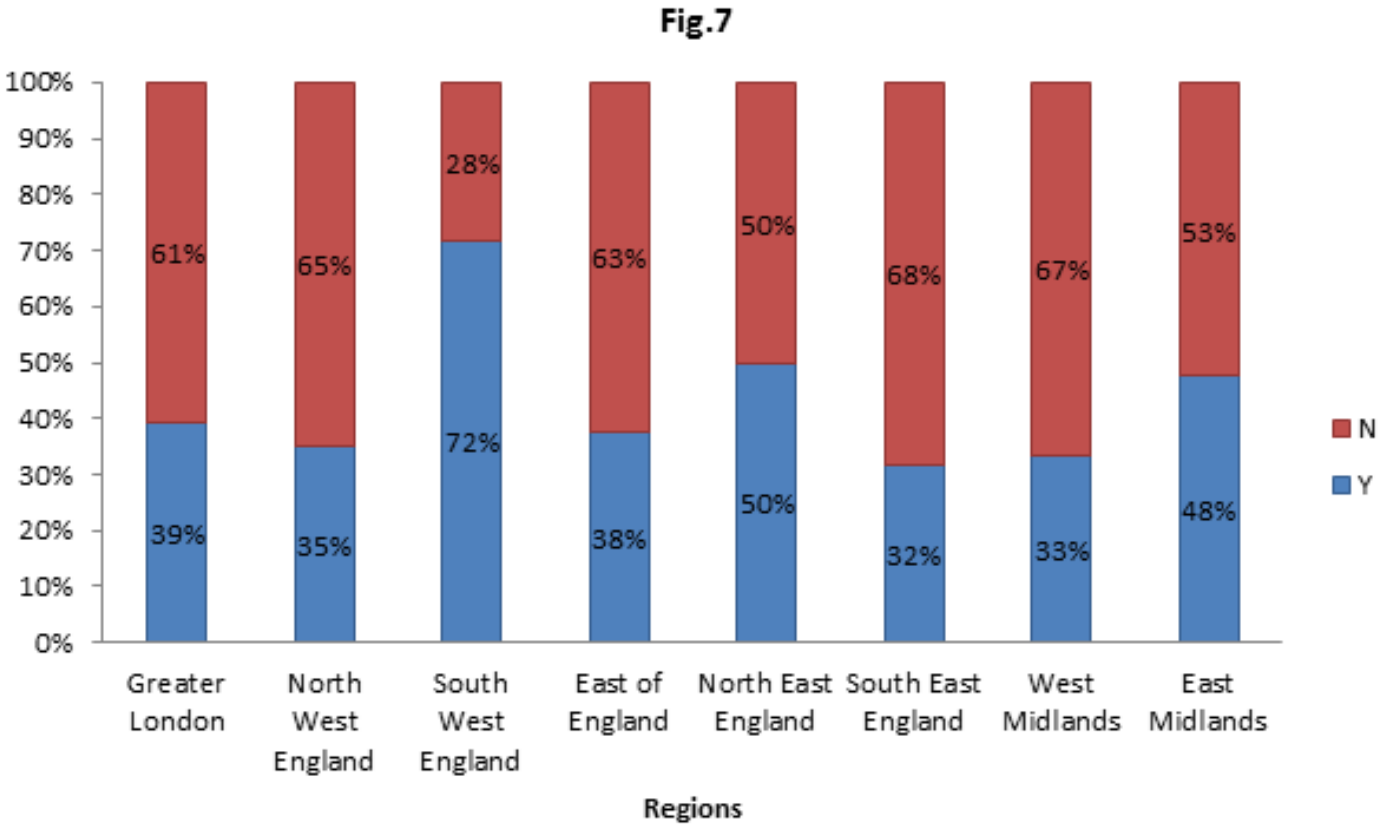


Fig.6



↑ Fig. 4 Survey evidence of the preparation of design codes by urban design consultancies
↑↑ Fig.5 Desktop evidence of the preparaiton of design codes by urban design consultancies
↑↑↑ Fig.6 Overall diffusion of design codes in the public sector



The results suggest that the diffusion of design codes in policy and practice are not advancing at the same pace, and that a significant element of diffusion is being driven by private developers, landowners or consultants submitting unsolicited design codes as part of planning applications for reasons explored below. Geographically, also, differential diffusion was apparent (Fig. 7), with take up figures for the use / advocacy of design codes varying from 32% of local planning authorities in the South-east of England to 72% in the South-west. These figures are somewhat surprising given, first, the relatively rural nature of much of the South-west where large-scale residential development is less likely, and, second, the particular desire of Government (at the time of the pilot programme) to drive better housing design and a more effective planning process in the South-east where much of the pressure for new housing was, and still is today.

↑ Fig.7 Overall diffusion by region

7. ASPIRATIONS AND IMPACT

To throw more light on the diffusion of practice, survey respondents were also asked about their aspirations going into a coding process, and about the ex-post impact of their decision to code.

When local planning authorities were asked to comment about their aspirations, responses were dominated by three key aspirations:

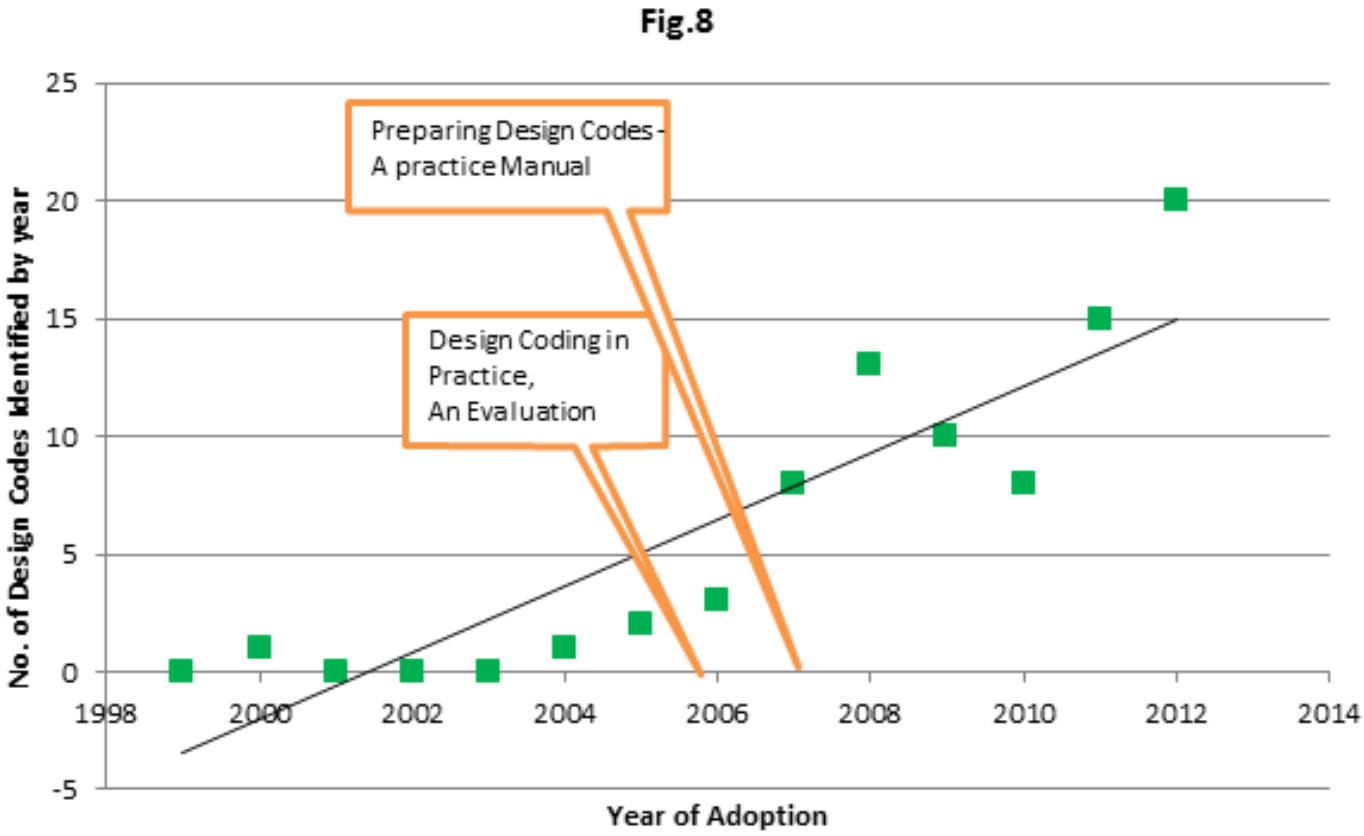
1. To secure higher (sustainable) design quality
2. To deliver more consistent outcomes across the multiple development phases of long-term projects
3. To provide a more effective planning process, through expedited reserved matters processes, swifter permissions for those who comply, and by offering greater certainly for developers.

Urban design practitioners identified the same three aspirations, whilst emphasising that confidence is a two way process, giving

confidence to local authorities that quality would be maintained, and to developers, that permissions would be forthcoming and values maintained. A small number of practitioners also mentioned the important role of codes as: "a tool to operationalise the key parameters of the masterplan".

The aspirations of planning authorities and practitioners more or less echoed those of the then Government when the pilot programme was launched in 2004. However, whether these were being delivered represented the subject of a further set of questions exploring the actual impact of codes against design outcomes, coordination processes, speed of development, certainty within the development process, and the impact on relationships between stakeholders. In summary:

- **Design quality**: Planning authorities and practitioners were overwhelmingly positive about the impact of design coding on design quality, with codes praised for their ability to tie down the key 'must have' design parameters, particularly in relation to the quality of the urban design / public realm, although less so on architectural design. As one respondent argued: "It is vital to decide early on in the production process the locations where a level of prescription is important and the reason for prescription if warranted verses flexibility".
- **Coordination**: Coordination between phases of development has been a key success of codes, both in ensuring consistency in the delivery of key site-wide principles e.g. links, edge treatments, volumes, and public spaces; and, where required, in helping to differentiate the character of different phases of large-scale developments: "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".
- **Speed**: On the question of speed, the story was more mixed. Whilst around half of planning authorities and practitioners lauded the front-loading of the key design decisions as a means to successfully speed up reserved matters applications associated with successive phases of development, many others argued that the time expended at the front end nullified the gains later on: "an approved design code means faster processing of applications, but in our case the codes were very detailed and negotiating the code itself was very onerous and took a long time - in fact 2 years!". A minority also argued that the detail of codes took longer for unfamiliar developers to work with and for planning officers to interpret, or that unrelated factors (particularly the economy) were far more significant in whether schemes progressed rapidly or not. For them, on this factor, the impact of codes was less clear-cut.
- **Certainty**: On the certainly of decisions, views were clear-cut, with 100% of local planning authority respondents arguing that the presence of codes gave a far greater degree of certainly about outcomes and certainly to developers about the process, albeit, in some cases, still subject to the vagaries of economic cycles. Practitioners largely agreed whilst remaining mindful of the need to adequately enforce actual delivery. One argued: "Developers have the certainty not only of their application being permitted, if in compliance, but also that neighbouring landlords will be bound by the codes and will make their contribution toward the overall vision". Another concluded: "The degree of certainty is dependent upon the degrees of control, influence and willingness exercised by parties, and on their wish to work together rather than to compete. No code can survive a breakdown



in relationships and a code which exceeds the powers available will always be challenged, undermined, or ignored".

- **Consensus**: Finally, on the question of working relationships and the coordination of development stakeholders, the large majority of respondents, both public and private, agreed that the decision to code had brought key stakeholders together early in the process and this has led to smoother working relationships and to a better understanding of expectations and constraints from the start: "It helped to establish joint working on design issues between the two councils and it certainly ensures a better understanding between the councils and developers as to what was expected, and, in the case of the councils, what was realistic".

Comparing these findings with those from the original monitoring and evaluation of the pilot programme reveals a remarkable robustness in the findings of the original study (see above). It confirms the words of the then Minister for Housing and Planning, Baroness Andrews, who, in endorsing the research, wrote in the Foreword to *Preparing Design Codes, A Practice Manual*:

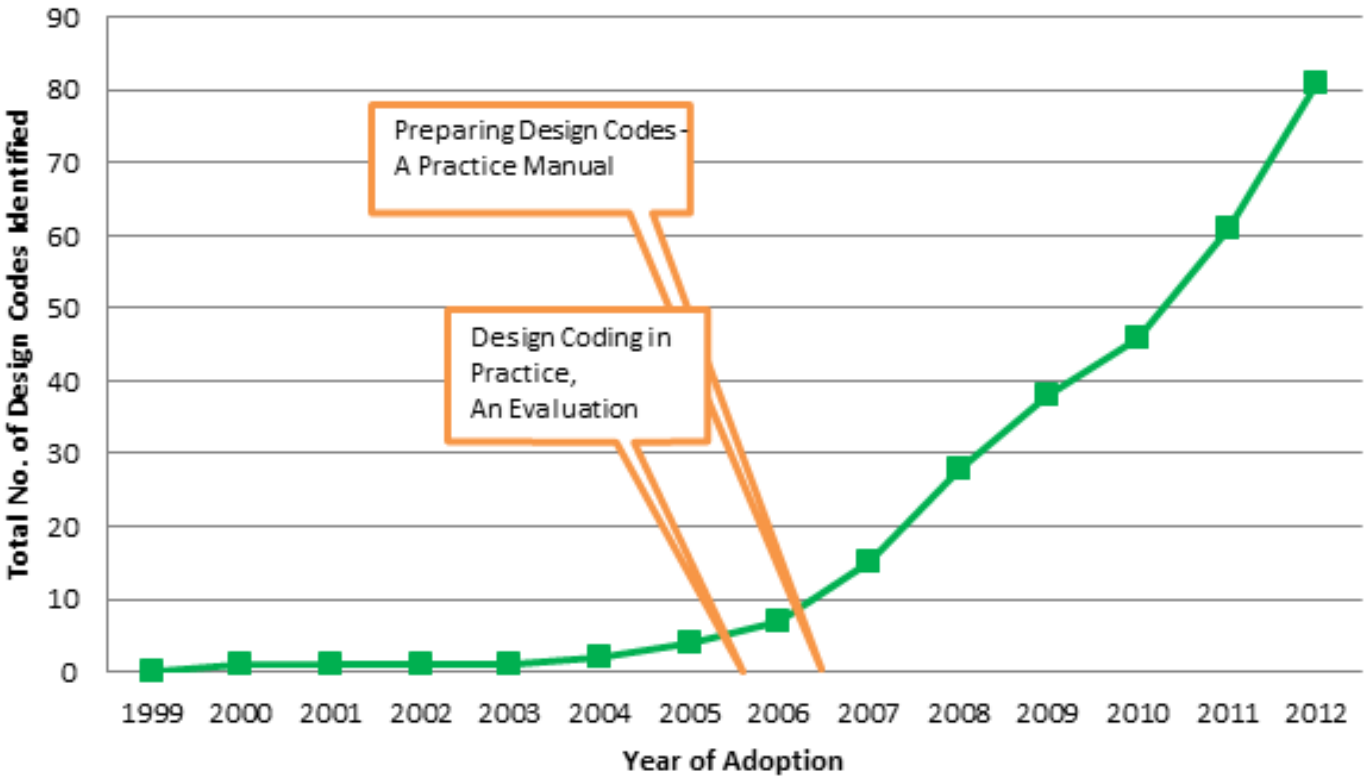
> "Design Coding is one option open to local authorities and designers to achieve high quality, well designed places. Although it is not the only option, it is one which I believe, if used effectively, will present local authorities and designers with greater opportunities to achieve good quality design in a transparent, streamlined and collaborative way and which is tailored to reflect local needs and circumstances".

8. KEY SOURCES OF ADVICE

Whilst the then Minister clearly backed the research and guidance she was publishing, a key question, six years on, was to what degree the pilot programme and the resulting research and guidance was able to lead practice. The survey included a question

↑ Fig.8 Trend in design codes produciton over time

Fig. 9:



aimed at identifying the guidance and / or research (if any) that had been instrumental in decisions to use design codes. Whilst not all could name the various outputs from the pilot programme, *Preparing Design Codes, A Practice Manual* was most frequently cited as the key source of advice, with a third of planning authority and practitioner respondents mentioning the various research and guidance outputs published on codes, another third mentioning more generic national guidance on design, and a fifth citing the design coding case studies produced during the research (published in *Design Coding in Practice, An Evaluation*). Small numbers of urban design practitioners drew on knowledge of practice in Continental Europe to shape their approach to design codes.

By mapping the year by year production of the design codes over time, it is possible to see how practice developed from a near standing start before 2004 when the research began, with interest picking up slightly in 2004 and 2005 spurred on by publicity around the pilot programme, and then taking off from 2006 onwards as the research and guidance was published (Fig. 8).

Whilst there was a dip after 2008, coinciding with the 'credit crunch' recession, despite the persisting flat economy and low level of housebuilding, from 2010 onwards the production of design codes took off again. In excess of 80 design codes were identified across England by the researchers, although the difficulties associated with searching for codes means that many more are likely to exist. If, for example, the same assumptions are applied to actual numbers of codes as were applied to the overall diffusion of design coding practice (see above) then a number in excess of 120 design codes may be more accurate.

9. THE FUTURE OF DESIGN CODES

A final question related to perhaps the ultimate test of diffusion, to their future use.

↑ Fig. 9: Production of design codes over time

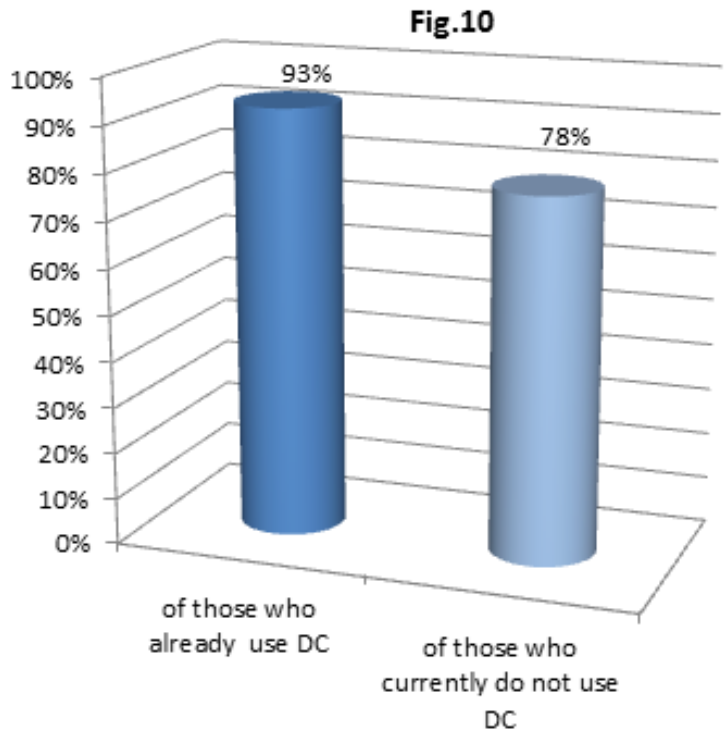


Fig.10
Will you use design codes in future

Ultimately, despite their perceived benefits, the effectiveness of codes will depend on whether those responsible for their production consider their preparation to be a worthwhile investment. In other words, that the benefits exceed the costs.

The assessment amongst planning authorities was overwhelmingly positive, with the vast majority of those who had previously used design codes declaring their intention to use them again as and when the right opportunities arose (namely sites large enough to justify their production), whilst in excess of three quarters who had not used them responded likewise.
Interestingly, whilst reasons given for this positive assessment reflected perceptions about their impact (see above), it was the increasing control they give to planning officers, particularly when dealing with the "standard products of volume housebuilders", that represented the most frequent justification for their use in the future. As one officer put it, "codes are the only way to get volume builders to develop out in an appropriate integrated manner". Other common justifications included:

- The ability to enforce minimum design standards from the beginning of the design process: "In the current climate there is a tendency to erode the quality and go for cheaper options. The code has helped to keep quality up through the phases and changes in market conditions".
- To ensure consistency in design quality across large site: "the scheme overall is considered a success creating strong streets of high quality housing and a clear and legible movement network connecting into the existing network of streets".
- To engage all the different parties involved in the development from an early stage in order to established a clear shared vision.
- To speed up the decision making process.

A small minority argued that further evidence of the positive value of design codes was required, with some respondents remaining concerned that:

- Design codes might fail to allow enough flexibility during the later stages of the development process, with their use requiring an in-built review process: "Unlike some European coding, there is still an acceptance that some small flexibility is required where changes are de minimus".
- Codes might encourage an undue focus on detail during the development management process, thus delaying development: "they require a particular discipline in terms of tying down a lot of detail at an early stage in the process - it's fair to say we've not always been successful here".
- Changes in the development or design team can undermine the delivery of codes (although others argue it is exactly in such circumstances that codes come into their own, in ensuring consistency)
- Design codes might be used in sites that are too small, and therefore inappropriate for their use, with one planning officer arguing this meant sites with 500+ units,

to justify the initial time taken in agreeing the detail of the code.

Overwhelmingly urban design practitioners were also positive about the future use of design codes, with two fifths of those who have not so far used codes declaring their intention to do so as and when the right project came along. Yet, despite all their potentially positive potentials, practitioners also remained cognisant of the limitations of design codes, that this tool alone could not change established patterns of behaviour, and that the use of codes is just one part of a much needed culture change in the design and delivery of new housing. As one respondent put it:

> "The point of private developers preparing design codes is that they are not trusted to do what they say they will. Planning authorities and other public agencies see design codes as a way of holding them to their word. To the same end the developer tries to write them in a way that appears that they are doing this without actually doing so … if that is not too cynical!"