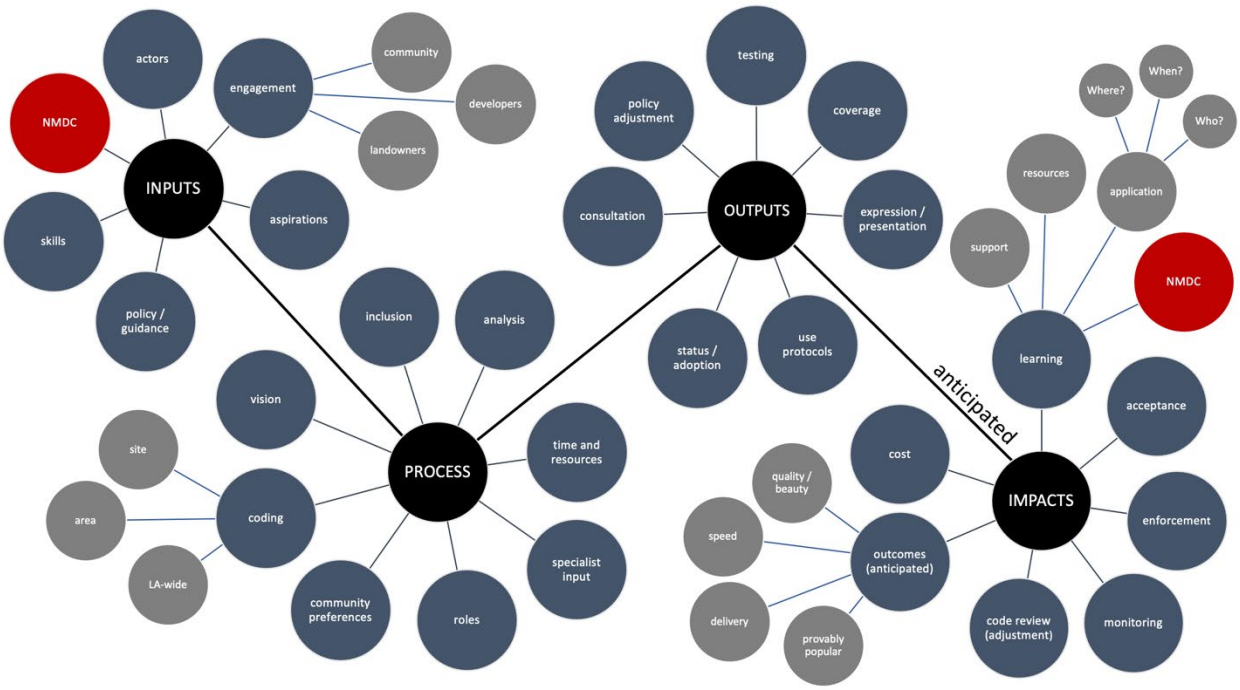
UCL
THE BARTLETT
SCHOOL OF PLANNING

National Model Design Code (NMDC) Pilot Programme Phase One, Monitoring & Evaluation



final research report

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All findings contained in this report stem from the Monitoring and Evaluation and do not represent either Government views or policy.

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Contents

1. EXECUTIVE SUMMARY **5**

1.1 The pilot programme, its monitoring and evaluation *5*

1.2 Inputs to coding *6*

1.3 The process of coding *7*

1.4 Outputs from coding *8*

1.5 Anticipated impacts *10*

2. THE MONITORING AND EVALUATION PROCESS **11**

2.1 The M+E *11*

2.2 The pilots *11*

3. THE DECISION TO CODE **14**

3.1 The motivations to code *14*

3.2 Alternatives to design coding *15*

3.3 The scale of design coding *15*

4. SKILLS AND RESOURCES **17**

4.1 Roles and leadership *17*

4.2 Knowledge and skills required to code *18*

4.3 Resources for coding *19*

4.4 Meeting the costs *20*

5. POLICY AND GUIDANCE **22**

5.1 Establishing policy hooks *22*

5.2 Relating to local highway standards *22*

5.3 Relating to National guidance *23*

6. THE DESIGN CODING PROCESS **26**

6.1 Adapting to local circumstances *26*

6.2 Building on a vision (or not) *29*

6.3 Selecting qualities to be coded for *30*

6.4 The question of beauty *32*

7. ENGAGEMENT AND ANALYSIS **33**

7.1 Engaging the local community *33*

7.2 Measuring community preferences on design *35*

7.3 Engaging stakeholders *36*

7.4 Character analysis *36*

8. COVERAGE OF DESIGN CONCERNS **39**

8.1 The pilot outputs *39*

8.2 Structuring design codes *39*

8.3 Relating to area types *41*

8.4 The content of codes *44*

9. COMMUNICATING CODING **45**

9.1 Illustrations vs. text *45*

9.2 Clarity vs. level of detail *48*

9.3 Flexibility vs. prescription *49*

9.4 Expressing codes: 'Musts', 'shoulds' and 'coulds' *51*

10. CONSULTATION, TESTING AND ADOPTION **53**

10.1 Consulting on codes *53*

10.2 Testing codes *54*

10.3 Adopting codes *55*

10.4 Impacting other policy and guidance *56*

11. ASSESSMENT AND APPROVALS **59**

11.1 Using codes in development management *59*

11.2 Using codes in other regulatory processes *60*

11.3 Knowledge and skills to administer codes *61*

12. DELIVERY AND BEYOND **63**

12.1 Enforcing compliance *63*

12.2 Scope for negotiation *64*

12.3 Coding for post-completion management *64*

12.4 The evolution of design codes *65*

13. EXPECTED OUTCOMES **66**

13.1 Inclusive and popular design *66*

13.2 Influencing developer practices *68*

13.3 Securing design quality (and beauty) *69*

13.4 Time (to code) and speed (of delivery) *69*

13.5 Would you do it again *70*

14. FINDINGS AND LESSONS FROM THE PILOTS **72**

14.1 Detailed findings *72*

14.2 Input findings *72*

14.3 Process findings *73*

14.4 Output findings *74*

14.5 Anticipated impact findings *75*

14.6 Lessons identified by the pilot teams *76*

1. EXECUTIVE SUMMARY

1.1 The pilot programme, its monitoring and evaluation

In January 2021, the government proposed to test the application of the National Model Design Code (NMDC). The NMDC provides detailed guidance on the production of local design codes, guides and policies that lead to well-designed places. It provides advice to local planning authorities on the process for producing codes, the design parameters and issues that need to be considered and tailored to their own context. It includes methods to capture and reflect the views of the local community throughout the process.

Expressions of interest were sought from local planning authorities in England to test aspects of the process and content of the NMDC, demonstrating how it can be applied to different contexts. Each applicant was required to present a proposal that responded to specific questions addressing baseline information, deliverability and objectives.

Through a rigorous assessment process, 16 local authorities were selected to partake in the pilot programme (Table 1). The local authorities represented a mix of proposals from different locations and contexts and a geographic spread representing the nine English regions. They had different development aspirations, addressed various stages of the NMDC process, and began with varying levels of pre-existing experience and in-house design resources. Because one pilot team consisted of three local authorities and one local authority split their funding across two independent testing programmes, the testing programme funded 15 pilot teams.

Local authority	Region
Buckinghamshire Council	South East
Colchester Borough Council (with Tendring & Essex)	East of England
Dacorum Borough Council	South East
Essex County Council (with Colchester and Tendring)	East of England
Guildford Borough Council	South East
Herefordshire Council	West Midlands
Hyndburn Borough Council	North West
Leeds City Council	Yorkshire & Humber
Mid Devon District Council	South West
Newcastle City Council	North East
North West District Leicestershire	East Midlands
Nuneaton and Bedworth Borough Council	West Midlands
Portsmouth City Council (two pilot teams)	South East
Sefton Council	North West
Southwark Council	London
Tendring District Council (with Colchester & Essex)	East of England

Table 1: 15 local authorities funded through the pilot programme

The testing programme formally began in April 2021 and final outputs were submitted in September. During the six-month testing programme, all the testing teams participated in collective roundtable sessions, individual roundtable sessions with members of the specific testing team, offered optional one-to-one monthly discussion sessions and were able to attend a range of topic-based workshops.

During this period a team led by Prof Matthew Carmona at UCL conducted an independent monitoring and evaluation of the work of the 15 pilot teams and this report is the result of that research. The research was conducted over two phases based on extensive interviewing of the pilot teams. A framework for analysis was utilised to structure the work which covered: inputs to coding, the coding process, outputs from coding, and anticipated impacts.

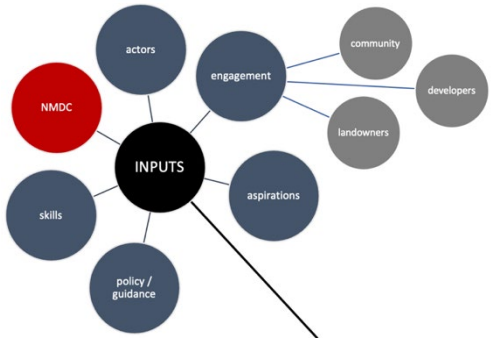
The pilot teams were all starting from different places with different trajectories. Some already had guides or codes in place, some had pre-existing analysis or engagement to draw upon, or existing urban design capacity and skills in-house to utilise. Others were starting from scratch and had little experience of coding. The pilots also

intended to test design coding at different scales, some at the authority-wide scale, others focussed on particular defined areas with multiple sites, and others on a single development and its site.

Adding to the complexity, not all of the pilot teams began with the intention of producing design codes. Some focussed their work on producing local guidance to eventually guide others to produce codes (e.g. neighbourhood groups) or on one aspect of the anticipated coding process only (e.g. area types analysis). As a result, teams followed very different processes and produced widely varying outputs from the programme, including eight actual design codes. The content of these was analysed and fed into the evaluation.

Despite the very different pathways to coding, it was possible to identify a broad range of detailed lessons generated from across the pilot team experiences – 21 spanning the design coding process. Some issues raised by the Phase one pilots will be subject to further testing during the Phase two pilot programme which commenced in March 2022 and the findings in this report should not be taken as a definitive judgment on all design coding processes.

1.2 Inputs to coding



1. Reinforcing design quality expectations across the scales
Design codes represent a tangible demonstration of commitment to design quality:

- Site-specific design coding is used to optimise the responsiveness of development to local conditions and character. Authorities largely looked to code at this scale as this was where they could have most impact and where, they perceived, the real problems lay.
- Area-based coding (e.g. at the neighbourhood scale) can capture multiple smaller sites with an area of uniform character that can benefit from a shared set of design parameters.
- Authority-wide coding can tackle common authority-wide design problems, help to coordinate area-based and site-specific codes, and is of value in the absence of capacity to take a site-specific approach.

2. Vision defining and vision delivery tools
Design codes have for decades been viewed as 'vision delivery' tools, being prepared following and in order to implement a masterplan. Preparing design codes in advance of such an agreed site-based vision, as was the case in many pilots, places design codes in a new 'vision defining' role. This creates challenges as well as opportunities and tends to result in more strategic design codes, focussing on key design principles rather than their detailed implementation.

3. It takes time, skills, resources and leadership
A steep learning curve is required to produce design codes and to use the new methodology in the NMDC, and with a few exceptions local authorities were not set up to deliver design coding in-house. Key skills gaps include urban design, graphic communication, viability assessment and digital engagement. This often lead to the commissioning of external specialist assistance that ranged amongst the pilots between 60 and 200 days of

external professional input. Overcoming, skills, capacity, and organisational barriers to preparing design codes in-house will be a necessary investment for authorities who don't wish to rely on developers to produce design codes.

In order to achieve a more proactive approach, rather than waiting until developers are in place, requires strong place making leadership from chief executive, director and political levels. It can unlock the skills and resources issues.

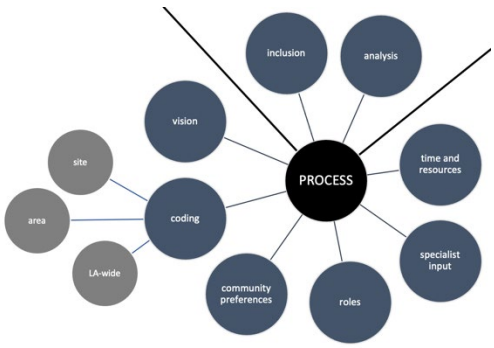
4. Getting those hooks into policy

Coding is no fool-proof solution to delivering design quality. Instead, codes are seen as fitting within a policy hierarchy which cascades from more general policy in the local plan to the more detailed design parameters contained in design codes. Providing policy hooks in the local plan for coding gives them status whether, ultimately, they are formally adopted as part of the development plan or as SPD or submitted with a planning application.

5. Getting those hooks into highways

Highways design remains a challenging issue for many planning authorities, with some highways authorities seemingly reluctant to engage with design coding and some planning authorities reluctant to challenge this. Without highways firmly onboard and committed to improved placemaking, coding is unlikely to be successful.

1.3 The process of coding



6. Some places are more challenging to code, and all places are complex

There is no single one-size-fits-all coding process and pilot teams have been able to successfully adapt NMDC processes to local circumstances. Nevertheless, some locations are inherently more complex to code than others given different delivery constraints (e.g. low market values) and there is a need to be realistic whilst remaining positive and ambitious about design quality.

7. The role of area-types and characterisation

The phase one pilots conducted design coding across different scales. This revealed that the use of area-types is not always appropriate, notably in relation to coding conducted for areas of unified or negative quality, for site-specific coding, and in relation to authority-wide guides dealing with generic principles. Authorities planning authority-wide coding, first, need to determine if they wish to create area types at a very detailed level, or if they will opt for higher-level, more flexible guidance, or coding for only strategic design issues such as location and proportion of green space, transport links, and so forth. Those producing authority-wide guidance during the Phase One pilots opted to produce more flexible guidance that covered their entire area.

Whether leading to the definition of area types, or not, an analysis of existing character will always be appropriate. The scale at which to conduct this seems to be the scale at which design coding can most usefully be conducted and used, typically the site or defined area (e.g. neighbourhood) scale. Pilots struggled with areas types and most did not apply this aspect of the NMDC.

8. Understanding viability is key to coding

Authorities are keen for coding to raise the design quality bar prior to development interest in sites, but understand that viability represents a major constraint on the mix of uses that can be supported and the mix of housing typologies the market will support. Handling developer pressure on these issues was a key concern amongst pilots leading to a sense that it is better to engage developers early in the coding process rather than afterwards.

9. Engagement is a journey

The pilots showed the value of early engagement with communities, but also that this is a time-consuming process during which trust is gradually built with communities that may have been intrinsically opposed to development. It goes beyond simply asking what people like or dislike and at its best is a journey of education (in both directions) from analysis, to vision, to coding and testing of design codes. Communities were primarily interested in whether codes would have teeth, and their future trust in the process is likely to be dependent on that.

10. Mixing methods of engagement to be more proactive

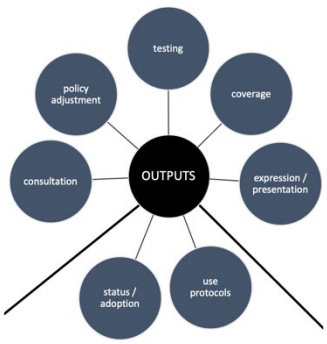
When there was over-reliance on single forms of passive engagement during the Phase one pilots it led to lower response rates and to more basic (less informed) insights on community preferences. By contrast, combining traditional and technological means of interactive engagement around issues of genuine public interest tended to facilitate wider and more inclusive community engagement. Communities, for example, were more interested in the overall design vision for places rather than on technical design and delivery concerns.

In this process the value of existing local networks as a means to tap into local knowledge can be invaluable. Also, the critical role of professional expertise to guide and interpret community preferences should not be underestimated given that constraints and opportunities may not always be apparent to communities. The need is to balance local knowledge and professional support.

11. The potential for staged coding

There is a clear hierarchy from the fundamental design qualities relating to the form, layout and use of new development that need to be prioritised early as they impact on viability, to those that are more concerned with detailed delivery and can be dealt with later. This might imply a staged process for large sites or for area-based coding where detailed codes for different phases of development build upon and develop the principles contained in a more strategic overarching code for the place (or perhaps the authority) as a whole.

1.4 Outputs from coding



12. Character areas / area types can be complex and overlap

A wide range of analysis can feed into identifying area types or (at a smaller scale) character areas, but this needs to capture the fine-grained complexity, variation and constraints that characterise many urban areas. The qualities of areas may overlap and mix, and more sophisticated approaches may use different overlapping layers of character (e.g. through GIS) rather than defining self-contained and bounded areas across the board.

13. Balancing certainty with flexibility and creativity

The balance between prescription and flexibility depended on what was being coded and the context. Issues seen as critical e.g. heights, quantum (density), uses, parking including parking ratios vs. front garden space, dimensions for bin access, and access for pedestrians and cyclists tended to be more rigidly coded whilst aesthetic issues were treated with greater flexibility, particularly where variety and the creative interpretation of context was favoured as a design outcome.

Some qualities are more amenable to expression as more certain target metrics than others. Examples include: density ranges / movement targets / land use mixes / plot and grain / street patterns / open space / landscape and nature quantums / boundary treatments / energy use.

14. Prioritise character as a holistic concern

Local character is a fundamental concern for local communities and needs to be captured in coding in order for councillors to embrace this more systemised, rather than negotiated, approach to decision-making. In defining their response to character, Pilots tended to prioritise tangible issues such as landscape, density, height and building line as the enduring qualities of places and avoided being too prescriptive on purely aesthetic concerns or on what they perceived as less tangible concepts such as beauty. This will be further tested during the Phase two pilots.

15. Code for 'process' as well as 'product'

It is possible to code for desirable and rigorous design process as well as for desirable design product, for example that sites should be subject to character analysis and community engagement prior to development proposals being made. Doing so can give development managers the confidence to encourage such activities at an early – pre-application – stage in the development process.

16. Different audiences are often compatible

Codes focussed on both community and professional audiences are compatible. They each benefit from digestible, readable, precisely worded and attractive design codes, avoiding overly long explanations whilst containing enough detail to support decision-making and graphically emphasising 'must' have design principles.

17. Using consistent language, graphic protocols and slimming codes down

Clear language and graphics protocols help readers to understand the relative importance of different elements within codes. Critical issues should be expressed as 'must' haves, meaning they are mandatory whilst 'should' haves are expected not advisory and 'could' haves are optional. The delivery of 'must' haves can be usefully caveated with 'shoulds' or 'coulds' but should be prioritised and not crowded out with detailed discussion. However expressed, the qualities being requested should be clear and unambiguous so it is clear to all users of the code how they should be interpreted and delivered in any given circumstance.

At the site-specific scale 'must haves' can be beneficially brought together and reflected in a framework or regulatory plan to make their application and significance crystal clear and to reduce code volume.

18. Adding weight through adoption

Adoption can occur as informal design guidance or formally as a Supplementary Planning Document or Development Plan Document. With each step the status of the resulting code increases but at the expense of the time, resources and risk required to get through the process and the ease with which codes can later be revised.

Design codes are typically seen as planning documents to be adopted for planning purposes and highways guidance and standards are seen as related but separate, and too often conflicting. It is, however, possible to jointly adopt and implement design codes if the will and agreement is there.

1.5 Anticipated impacts

19. Turning development management into active place shaping

Design codes, it is believed, give development managers the tools to become active place shapers, allowing their work from the pre-application conversations to the formal assessment of proposals to be informed by a clear vision of design expectations. Compliance checklists, performance targets (against the code) and process guidance can help development managers to challenge poor schemes and evaluate proposals in a proactive, timely and objective fashion.

Development managers will need the skills to administer the new codes and to take on a more proactive role. In many circumstances they could be assisted by those with specialist design skills either inside or outside local authorities and also by design review. This will be particularly so in relation to those elements of design codes and guidance around which greater flexibility is maintained.

20. Building in review protocols

Changing external circumstances and the experience of using design codes and determining what works and what doesn't, should lead to periodic review processes. This will be particularly important for authority-wide codes or those covering large sites or areas where development will spread over many years. This may involve formal review processes (every two to five years) or the adoption of a staged approach to coding.

21. Meeting aspirations, so far

Pilot teams, community representatives and development stakeholders who had been involved in the design code production largely proclaimed satisfaction with the tools and / or processes that had been put in place and with their potential to deliver a more certain, streamlined and quality focussed development process. Unanimously they would choose to use design coding again – resources allowing.

1.6 Many paths to coding

The coding pilots demonstrated that there are many paths to design coding and that design codes are not a single tool or process. These diverse ends are inevitable because there are many beginnings, with local authorities all at different stages in the development of their design governance infrastructure. More important than the exact form coding took seemed to be the journey coding teams and communities embarked on to get there, and the raising commitment to quality that represented.

Moving forward there was a sense that the momentum needed to be maintained, not least by being clear in policy when design codes would be expected, where other forms of tool might be more appropriate, and who will be responsible for producing codes in the future.

2. THE MONITORING AND EVALUATION PROCESS

2.1 The M+E

On the 30th of January 2021, the Government published a draft National Model Design Code (NMDC) and followed it up on the 20th of July with a final version of the guide. Publication of the draft was accompanied by a call to local planning authorities to be part of a government funded pilot programme to test aspects of the process and content of the NMDC, how it might be applied to different contexts, and the use of design coding in the current planning system. In May 2021, 14 awards of £50,000 were made across 15 pilot teams (Portsmouth spit their award across two teams) kicking off the first phase of the pilot programme.

Learning from these pilots can inform the potential further development of the NMDC, the level and type of support provided by the Office for Place and decisions on the use of design codes in the reformed planning system. To assist with the learning, UCL was appointed by the Planning Advisory Services (PAS) on behalf of the Department for Levelling Up, Housing and Communities (DLUHC) to conduct a monitoring and evaluation of the NMDC Programme. The work was conducted in two stages. At the heart of the approach adopted by UCL were interviews with the pilot teams at interim (three month) and final (six month) stages of the programme. These were supplemented by analysis of the interim and final reports of the pilot teams, their presentations at pilot workshops organised by DLUHC, and through analysing the content of the codes or other outputs produced by the teams.

Over the course of the monitoring and evaluation the range of issues captured in the analytical framework (Figure 1) has been examined, structured across the four key phases of inputs, processes, outputs and anticipated impacts. This final report discusses all these phases, although the progress of some pilots was more limited.

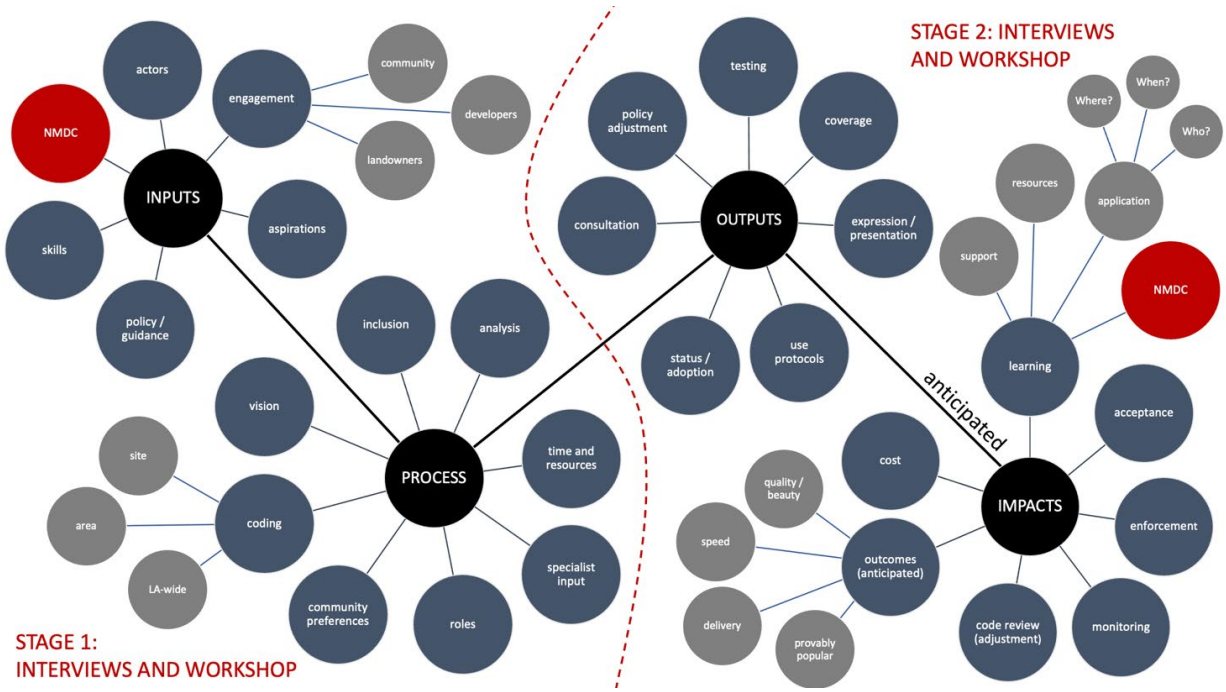


Figure 1: Monitoring and evaluation, analytical framework

2.2 The pilots

The pilot programme included a wide variety of practices. These can be divided into those that focused across their local authority area, those that focused on defined areas within which there may be multiple development sites (e.g. across a neighbourhood), and those that focused on individual sites (including large sites and those in

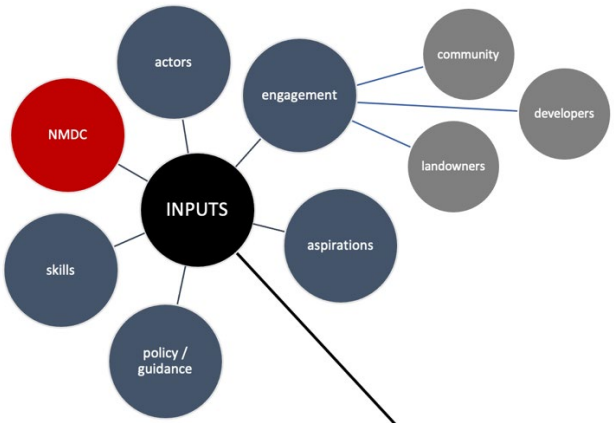
multiple ownerships). Within each of these primary categories there were a variety of contextual circumstances covered by the pilots, from city centre locations to rural areas. All regions of England and a diverse range of local socio-economic contexts were covered. Each pilot team was asked for a 'lift pitch' description of their focus, and these are brought together in Table 2.

Pilot (and region)	Scale	Context	Focus ('lift pitch' version)	Code produced (within the pilot programme)
Buckinghamshire (South East)	Authority-wide	Suburban / rural	New design guide focussed on common design problems across the county	
Leeds (Yorkshire & Humber)	Authority-wide	Urban / suburban	Testing area types at the city scale	
Mid Devon (South West)	Authority-wide	Rural	Testing the value added by coding key sites over and above their generic design guide (including Cullompton and Culm Garden Village)	
North West Leicestershire (East Midlands)	Authority-wide	Suburban / rural	Review existing district wide design guide and take stock	Yes (design guide)
Herefordshire (West Midlands)	Area-based	Rural	A county-wide model to be adopted and adapted by neighbourhood plan groups within their neighbourhood plans	
Newcastle (North East)	Area-based	Urban	Regeneration area with five smaller sites in a sensitive historic context (Ouseburn Central)	Yes
Sefton (North West)	Area-based	Urban	Applying code to an area of opportunity / urban regeneration to maximise the opportunity (Bootle town area)	Yes
Colchester, Tendring & Essex (East of England)	Site-specific	Suburban	Setting a strategic vision for a major development – garden settlement (Tendring Colchester Borders Garden Community)	
Dacorum (South East)	Site-specific	Town centre	Town Centre sites with a focus on gauging popular design qualities (Hemel Hempstead)	Yes
Guildford (South East)	Site-specific	Suburban	Brownfield Regeneration (Weyside Urban Village), community testing of an existing code	Yes
Hyndburn (North West)	Site-specific	Suburban	Major development, garden village project (Huncoat Garden Village)	Yes
Nuneaton and Bedworth (West Midlands)	Site-specific	Suburban	Low density suburban site to learn the lessons and lift the quality of development borough-wide (Arbury)	Yes
Portsmouth Debenhams site (South East)	Site-specific	City centre	To inject quality and attract investment into the city centre (Debenhams site)	Yes
Portsmouth Horatia and Leamington site (South East)	Site-specific	Urban	Estate renewal site, establishing a model for other sites (Horatia and Leamington site as a case study)	
Southwark (London)	Site-specific	Urban	Coding in a highly dense and complex opportunity area location (Hatcham Road site)	Yes

Table 2: Pilot teams, scale, context and focus

It was significant that many of the pilots felt enthused and inspired by the pilot programme, seeing it as an opportunity to work in new ways and collaboratively, although equally they were concerned that such opportunities to take time and think about processes were rare in the fast moving and often under-resourced world of planning. They very much welcomed the funding that enabled them to take the time and explore practices. It is important to note, however, that outputs of the pilot teams varied significantly with some teams never intending to produce a code at all during the pilot programme. Within the pilot programme itself, eight design codes were produced and others were anticipated in the months following the programme.

Inputs to coding



3. THE DECISION TO CODE

3.1 The motivations to code

Amongst the pilots, some have a history of little intervention on design, largely accepting what they are offered by housebuilders, others have devoted considerable time and resources to demanding more and better from developers. The availability of in-house urban design expertise ranged from well-resourced to no-resource and everything in between, but all shared a perception that more needs to be done and that outcomes are too often substandard. The situation is well illustrated in the testimony of one authority with a sizable urban design team and authority-wide design policy and guidance already in place but which still feels hamstrung in achieving the quality of place that they would like to see:

> "The planners are having to make concessions all the time whether it is on materials or general appearance or place making aspects. Currently developers wear the authority down. The planners outline how the schemes can be improved. Then the developer goes away and improves only one thing that has been spoken about. Then the planners have to explain that the applicants don't seem to get the gist of the planners' comments – that they should look at the whole place. Ultimately planners cannot say that the issues have not been addressed because over 6 months the developer has addressed one item at a time. But in many instances, the final scheme is not as design-focused as the planners would like".

This authority, like many others in the pilot programme are looking to design codes to provide a tool that will put them on the front foot when demanding better design, that will allow them to move beyond existing policy and guidance which, more often than not, is perceived as being too weak, and which will offer much clearer guidance to developers on local expectations. Motivations amongst the 15 pilots can be classified under four headings:

Raising levels of design quality

- Raising the game: securing the highest possible design quality outcomes through a clear and deliverable vision that acts as an exemplar locally
- Coordinating outcomes: achieving a coherent approach across large sites with multiple developers or by establishing consistent urbanistic parameters in areas of gradual change
- Addressing repeated problems: common design problems often raise the greatest challenges. In the pilots these included dealing with high buildings, public realm design, dealing with density (high and low), integrating landscape, highways design and responding to character

Delivering more predicable design outcomes

- Robust delivery: reinforcing existing ineffective policy and guidance to make delivery aspirations more tangible and predictable in their quality – "Having a process that holds developers to account", "something that is set in stone"
- Proactivity: Moving beyond past laisse fare approaches to design quality and towards proactive planning with a stronger vision of design quality – "setting out our stall in advance"
- Making design more tangible: simplifying and replacing the patchwork of policy and guidance and bringing challenging issues such as character and "what it looks like" to the fore in decision-making

Raising expectations locally

- Creating a local culture of design quality: systematically raising expectations so that developers and communities know what is expected – "We are not going to be just passing and approving any kind of proposal"
- Engaging the public: cutting through to and enthusing the public by clearly identifying their preferences and demonstrating that the authority is going the extra mile to secure design quality – "A great opportunity to be really visual with the public, to portray the type of place the council wants to develop"

- Engaging local politicians: addressing a local political priority in some places and in others demonstrating to councillors that an investment in planning resources can deliver better outcomes, even in economically challenged locations

Delivering more effective governance of design

- Streamlining decision-making: addressing under-resourcing through a clear set of rules and protocols that offer consistency, clarity, and certainty – "a go-to, practical tool for officers to refer to in order to determine planning applications"
- Time to innovate: using coding to carve out time for thinking about how new agendas can be addressed such as health and well-being and zero carbon, ultimately allowing the thinking to feed upwards into local plan revision
- Remaining in control: Getting ahead of national policy changes and avoiding having to rely on national guidance when negotiating design by having local guidance in place

3.2 Alternatives to design coding

For the majority of local authorities engaged in the pilot programme, the use of design codes was either new or otherwise only something they had been involved in tangentially, for example approving codes produced by developers for their sites. Prior to the pilot programme some authorities had been considering alternative tools to achieve their heightened design ambitions, but more often than not "internal resourcing issues meant that planners just had to focus on processing planning applications rather than 'enhancing the package'"

Alternatives to design coding typically consisted of different forms of authority-wide design guidance adopted as supplementary planning documents (SPD), although across most authorities there was little confidence in the effectiveness of such tools to fundamentally improve design outcomes – "A text based SPD was started then abandoned". Other tools considered across the pilots included:

- Mini local plan
- Area action plans
- Site or area-based masterplans
- Urban design frameworks / strategies
- Village design statements
- Local development orders

Design codes are not envisaged as free-standing tools, but instead as tools that work alongside other forms of policy and guidance (see 5.1). In addition, those pilots with a longer standing commitment to achieving design quality were already anticipating a significant role for design review (and / or community review) alongside their coding.

3.3 The scale of design coding

As Table 2 confirms, the scale of coding varied across the pilots, being classified as authority-wide, area-based and site-specific.

Authority-wide

Those authorities envisaging an authority-wide code are doing so for very practical reasons – "We need something that is council wide. We could spend time on design codes for specific sites or spend the time on an authority-wide document that targets problems that crop up regularly". The consequence of this, however, is that these forms of document are likely to resemble the sorts of residential design guides that have been in use for decades and that other pilots noted were often ineffective (see 3.2).

For these authorities, resource constraints tended to limit other options – "the size of the district, the vast diversity and geography, settlement patterns and materials, and vernacular architecture, make it too difficult to do a detailed code. That necessarily narrows the scope of what can be produced that is universally applicable". The challenge, in such cases, is to turn generic discretionary guidance into specific non-negotiable codes that are applicable everywhere (within the municipality) or that can be adapted according to clearly defined criteria without compromising the flexibility required to adapt to diverse and distinctive local conditions.

Site-specific

At the other end of the spectrum, site-specific codes were being produced for sites that ranged in size from new settlements of up to 9,000 dwellings to single urban blocks, with some pilots planning to test coding across a range of scales within their areas. In these cases, a key concern was that whilst codes could be designed for the very specific circumstances of the identified sites, their preparation should also consider the larger context beyond the red line and should act as exemplars for other strategic sites. For these authorities the focus on individual sites tended to reflect, first, an immediate need related to sites coming forward for development, but second, the contextual variety that ranged, in one pilot, from a new town to historic villages and was not amenable to more generic coding. Amongst this group, a number of pilots planned to begin coding with defined sites and work up to the authority as a whole as and when principles could be applied across the scales.

Area-based

In between the two extremes, authorities that were coding on an area basis were doing so because they could capture multiple sites with similar contextual qualities within a shared set of principles. In Newcastle, for example, there are five separate sites within the Ouseburn Central area that a single design code will cover, although with five sets of variations for the separate sites – "there will be a continuity between the sites but there might be subtle variations also to acknowledge their difference in character". Elsewhere, the emphasis was less on a defined site or area, but was instead on testing out the potential of applying codes to different areas across a city (Figure 2)

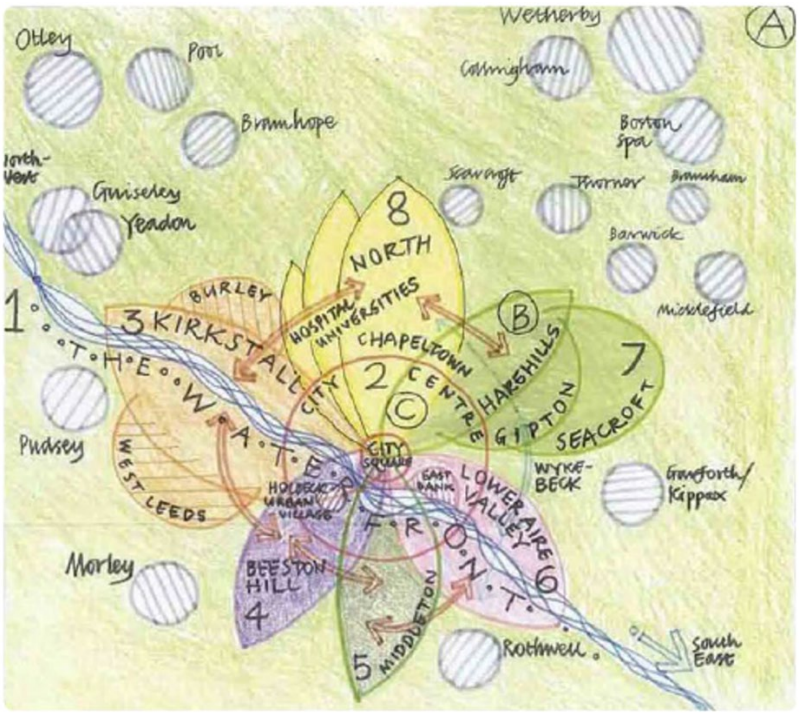


Figure 2: Leeds, well established character areas in Leeds provide the basis for an experimental approach to where codes might apply across the city

4. SKILLS AND RESOURCES

4.1 Roles and leadership

The coding teams vary in size and make-up depending largely on the resources available in-house within local authorities, whether they were unitary or not, and what pre-exiting structures were in place. What is clear is that coding at the scale being conducted by the pilot teams was complex involving multiple public sector players and their advisors. Significantly, none of the pilot teams had development partners involved in the coding itself, although development interests will be feeding in, in many cases, through stakeholder engagement processes (see 7.3).

Partnership coding

All of the coding teams were local authority led, although the job of actual coding was often being carried out by consultancies commissioned to do the work. This reflects the situation whereby most local authorities have little experience and even less capacity to code themselves. By contrast, there are a wide range of consultants who have become very used to coding large-scale housing schemes, either for local authority or, more often, landowner or developer clients. Whilst authorities were generally confident in the ability of their consultants to deliver, most were retaining a firm guiding hand on the process to avoid the delivery of an unworkable document, "a thick yellow pages of a design code" as one interviewee referred to it. Consultant input on design was also often combined with advice on community engagement and viability, helping to ensure that codes remain practical and deliverable whilst not losing sight of design ambitions.

In these cases a lead consultant holds the main contract with the relevant local authority, with sub-contractors typically working for them. When coding partnerships are formed between public organisations (e.g. between district councils and county councils or districts to neighbourhood groups) these relationships seem to remain informal, managed as part of the normal practices of interlacing statutory responsibilities. One pilot team employed a project manager specifically to coordinate all the disparate inputs and interests feeding into the production of the code, including the key role of driving the process forward and getting parties enthused.

Local government-led

A smaller group are conducting the coding largely in-house within the pilot authorities. In a few cases, the coding is fitting into larger work programmes already underway with their own dedicated teams. In Colchester and Tendring, for example, a local authority-led cross boundary policy team is already in place to coordinate the larger new settlement project with a dedicated project manager (consultant) employed. The coding will be a small part of this larger governance architecture which includes a design and masterplanning sub-group.

Elsewhere, dedicated new structures have been set up to deliver the coding. In Portsmouth, a working group for estate renewal consisting of planning policy, development management, strategic development, highways, public health, and a design team (from the housing directorate) – has been set up to deal with the design code project and this itself will be a significant outcome from the pilot, encouraging cross-departmental working and engagement on design. Design South-East will work as a critical friend to 'enable' the process.

Such arrangements across coding teams are very varied, typically with Director level overview, and sometimes with political overview as well. Most frequently, responsibility for the coding pilots lay within the planning policy team or place / design teams, and occasionally in development management. Local authorities were of the view that direct engagement of the policy team in code creation could lead to a beneficial link with the local plan which is required to make it enforceable but full engagement from development management was also necessary to ensure that a usable code was being created.

Teams were often guided by an ad hoc working group set up to produce the code, with colleagues variously brought from highways (from the county in two tier areas), neighbourhood planning, archaeology, heritage, landscape and ecology, property, major projects, regeneration, housing and GIS. Others reached out to design review panels, to local universities and even to neighbouring local authorities to act in the capacity of critical friend (e.g. Coventry for Nuneaton and Bedworth).

4.2 Knowledge and skills required to code

Whilst a minority of the local authority teams had pre-existing experience with design coding, in the main this related to first, codes produced by developers for large sites and without the direct involvement of planners, and second, to the use of codes for previously masterplanned projects or with an outline planning permission, as opposed to sites prior to development interest, as was the case in most of the pilots. The direct expertise in creating design codes brought to the team by external consultants was therefore invaluable, although typically that had been gained in the post-application period, rather than prior to it, and was usually commissioned by landowners or developers, rather than local authorities.

When asked what was the range of knowledge and skills required to code, most teams listed a wide range of skills, requiring multi-disciplinary input. These can be classified, based on how often they were listed, as primary knowledge, secondary knowledge and technical skills:

Primary knowledge

- Urban design
- Landscape / public realm
- Architecture
- Highways / infrastructure / transport
- Planning (policy and development management)
- Viability and delivery (marketability)

Secondary knowledge

- Ecology / SUDs / arboriculture
- Engineering
- Heritage and conservation
- Energy (zero-carbon)
- Construction
- Access

Technical skills

- Graphics and visualisation (2D and 3D)
- Communications (traditional and digital)
- Engagement
- Analytical
- Political awareness
- Multi-disciplinary working
- GIS
- Project management

In part the art of writing codes is striking the right balance between all the competing areas of expertise and input and the interests they represent – “There is no benefit having a code that, as it progresses through the planning negotiation process, causes antagonism between the parties”. How this was achieved depended on the make-up of teams, with most teams drawing on a combination of internal and external expertise, although the balance

varied between cases. Even where reliance on consultant expertise to produce a code was strong, authorities were aware that their input was critical given the need for them to take on the resulting code afterwards – "In the past when the council has appointed consultants to do various pieces of work, at some point in the project we normally have to tell them what to say because they are not saying the things that need to be said".

Whilst some smaller authorities felt that it was unrealistic for them to have all the skills required in-house, other small authorities who had invested in internal urban design capacity did have much of what they needed in-house, albeit with input from higher tier authorities on highways issues. Some of the larger unitary authorities felt at an advantage in this respect in having highways in-house with political support to deliver a unified design-led approach.

4.3 Resources for coding

The resources required for coding were, in many cases, not seen as isolated one-off costs, but instead as part of an ongoing investment, either in critical projects that would deliver on long-term housing requirements, or alternatively on the building of long-term and robust policy positions on design.

In the case of the Tendring Colchester Borders Garden Community, for example, the authorities had already funded external masterplanning and evidence gathering, and the design coding will reinforce this and enable a more thorough approach to engagement than would otherwise have been possible (Figure 3). Further substantial costs are anticipated to take the masterplan forward. Elsewhere the coding was feeding into the revision of guides and policy-based plans that were already in existence or otherwise benefited from prior work already done, for example the landscape character assessment conducted for Mid Devon as a feed into its authority-wide design guide.

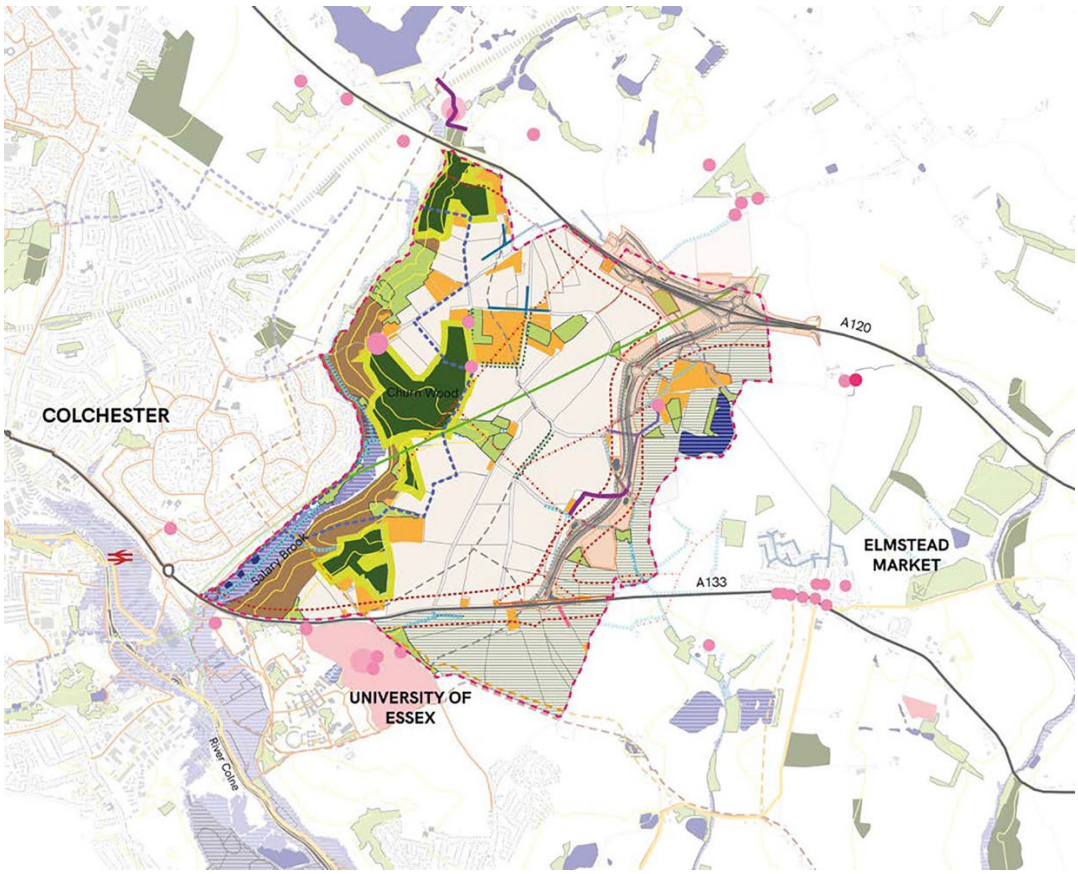


Figure 3: The Tendring Colchester Borders Garden Community masterplanning is an ongoing complex project of which the coding is just a part

A seemingly obvious point was clear from the interviews that the time needed to write a design code would depend on the required scope of the code and the size and complexity of the site or area being coded. Additionally, the amount of background knowledge already in existence, the extra information needed, and the relative commitment to engagement would all affect the time required for the code – "There is a base amount of time for a code but then some codes are more political, with lots of public involvement and engagement and objections. It won't be a 'one size fits all' code or coding process".

Each pilot team measured the time and resources for coding differently, with many only accounting for external (costed) time and not for their own time, making comparison difficult. Estimates from those who offered a more comprehensive analysis of time included:

- Two planning officers at 0.5 days per week, one planning officer at one day per week, the urban designer and lead on three and a half days per week, and the project sponsor on half a day per week, plus 67 days (£42,000) consultant time and £6,500 for specialist public engagement expertise
- 80 person days for the consultant, plus local authority time of half a day per week for the project leader
- Consultant time of 35 days (£24,200) and 20 days of one dedicated planning officer as manager of the code production process, with six days of other colleagues' time
- 90 days consultant time over six months plus 25 days planning officer time and 20 days for other staff
- 112 external consultant time, and a similar amount of in-house time, with a total around 200-230 days.

Many argued that for the extra time they spent coding now, the hoped to save time later in a more streamlined and less confrontational development management process.

4.4 Meeting the costs

Because the funding provided to the NMDC pilot authorities was a one-off, authorities were asked how they would usually fund design coding.

To code or not to code?

For around half of the pilots, the answer was that without the pilot programme they would not do the coding given the tightness of their funding and the call of other priorities such as getting their plans prepared and adopted. In most cases, therefore, development projects would simply proceed without coding and with design matters considered in the normal way through the development management process. The proviso put on this was if they were required to code, for example to access Homes England funding, or, in the future, because of the planning reforms.

Only one authority noted that the generous funding their planning service received as a result of the high development pressure in the area allows them routinely to go further than most authorities and to fund coding themselves. For others, the absence of their own funding combined with the desire to deliver design codes meant that they routinely relied on developers to fund and produce the design codes they require. This, however, meant a paired back approach to the rigour with which coding was prepared and notably to public engagement – "we would have had to cut our cloth accordingly. You just do less of a job" or, in most cases simply "waited for the site to come forward 'naturally' through the pre-application process" with no focussed pre-development management consideration of design. The funding has "enabled this work to be front loaded".

In the future, as codes become more of an expectation, authorities felt that the funding for codes would have to come from the general budget which would mean squeezing elsewhere, notably from the funding set aside for the local plan. It would likely mean that codes were prepared more slowly and in a less front-loaded manner, although at least one pilot team noted that as design codes do not always need all the evidence base required for an SPD, a lighter touch in their preparation is possible. Others were using the opportunity of the pilot funding either to create an authority-wide design guide that would be used instead of site by site coding in the future, or, in the case

of Mid-Devon, were developing a framework that they would require developers to use in order to generate a code.

Funding the skills gap

Whilst a minority of pilot authorities felt that they were not necessarily lacking skills internally to deliver design coding, amongst this group the pilot funding ensured that they were able to dedicate the necessary resources to do the job properly – "carefully and methodically" – and to test out different approaches. In these cases, without the funding, the work would have taken far longer, or not be done at all.

In the majority of pilots, skills were most often lacking in areas of urban design, graphic presentation and communication, around issues of viability and digital engagement. The ability to buy-in these skills from consultants on a temporary basis would normally be impossible and so the funding enabled them to fill a skills gap as the chances of internalising resources to employ a consultant were very low. As one pilot noted "No pilot funding, then no consultant and the exercise would be impossible."

5. POLICY AND GUIDANCE

5.1 Establishing policy hooks

All authorities recognised the importance of tying their approach to coding back to their broader policy and guidance approaches.

A number of pilots already had local plan policy in place that would support their approach to coding, helping to give it the necessary weight when completed. Sometimes these policy hooks related to general policy on design quality expectations, and in other cases to particular development allocations. The Newcastle Local Plan, for example, has a dedicated policy for Quayside in Ouseburn (Q01) that will underpin the delivery of the code. In Portsmouth, the local plan policy on estate renewal will have a similar effect, alongside the Area Action Plan.

As well as the local plan, a wide range of supplementary planning documents will be used to underpin codes and enforce their necessary status. These include masterplans and urban design frameworks for relevant sites, existing local authority wide design guides, described by one authority as "a nuts-and-bolts development control type SPD", conservation area appraisals, and Area Action Plans. A number of the pilots were debating whether to adopt the emerging codes as SPDs, whilst being aware that the evidence required to go down this formal route would be more onerous. In Guildford's case, a strategic design code was already in place for the whole site and the pilot funding was being used to test out the production of a more detailed design code based on public preferences for part of the site that will reinforce and extend the existing code.

Elsewhere, the necessary policy hooks were not yet in place but the preparation of the design code as part of the pilot process will feed into local plan review which, in some cases, will now contain a requirement for design codes to be produced, or will reinforce the status of codes relating to particular strategic sites. The objective was for design codes to ultimately fit within a policy hierarchy which cascaded from more general strategic policy to the detailed and deliverable parameters contained in design codes (Figure 4).

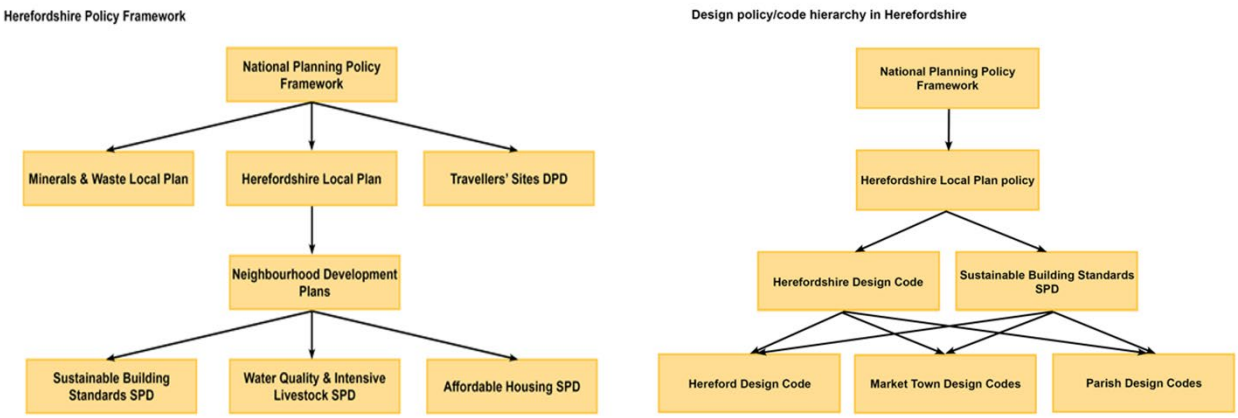


Figure 4: In Herefordshire the plan is for codes to mirror county-wide policy that sets the framework for county wide design guides under which local design codes will be produced for the City of Hereford, for the county market towns, and for the parishes

5.2 Relating to local highway standards

Each of the pilot teams were grappling with how they would incorporate highways issues into their codes, typically involving negotiations with highways colleagues to try and improve on adopted standards. In two tier areas, pilot teams were often struggling with the highways standards of the higher tier highways authorities, but at the same time having to rely on highways colleagues who did not always see how their work related to the NMDC. Issues of concern included parking standards, streets trees, and shared surfaces, with county adoption practices typically

strict, and in some areas seemingly unmoveable – "There does not seem to be an alignment between the aspirations of the planning department in terms of place making and the creation of high-quality streets and spaces versus the policies of the county highways department who tend to have a much more conservative approach to highways matters." Unitary authorities, by contrast often seemed to be in a better position, with a more direct relationship and engagement with highways colleagues who were often in the same directorate and seemingly more open to discussion about departing from local highways standards.

Parking standards were noted to be a source of concern amongst teams, sometimes involving negotiations with councillors who in some areas were particularly hesitant about reducing standards in order to allow a greater emphasis on place making – "Our Highways Development Management colleagues are still stuck in the 1960s and councillors are very car oriented, so sometimes it feels like we are pushing against a locked door". More positively, the coding pilots were generally seen as a valuable opportunity to get the standards right.

5.3 Relating to National guidance

The pilot teams were asked to use the new guidance in the NMDC which in turn refers to the National Design Guide

NMDC

Whilst teams were broadly following the guidance in the NMDC – the design characteristics and seven step coding process – most teams saw the NMDC as a toolkit that could be used and adapted according to local circumstances. Some, for example, used the characteristics of well designed places faithfully, for example using the characteristics to establish a template for analysis, others felt the need to adapt, dropping characteristics felt to be less relevant at this stage (e.g. resourcing and lifespan with their crossover with building regulations) or adapting the principles so that they are more suited to public consumption (Figure 5).

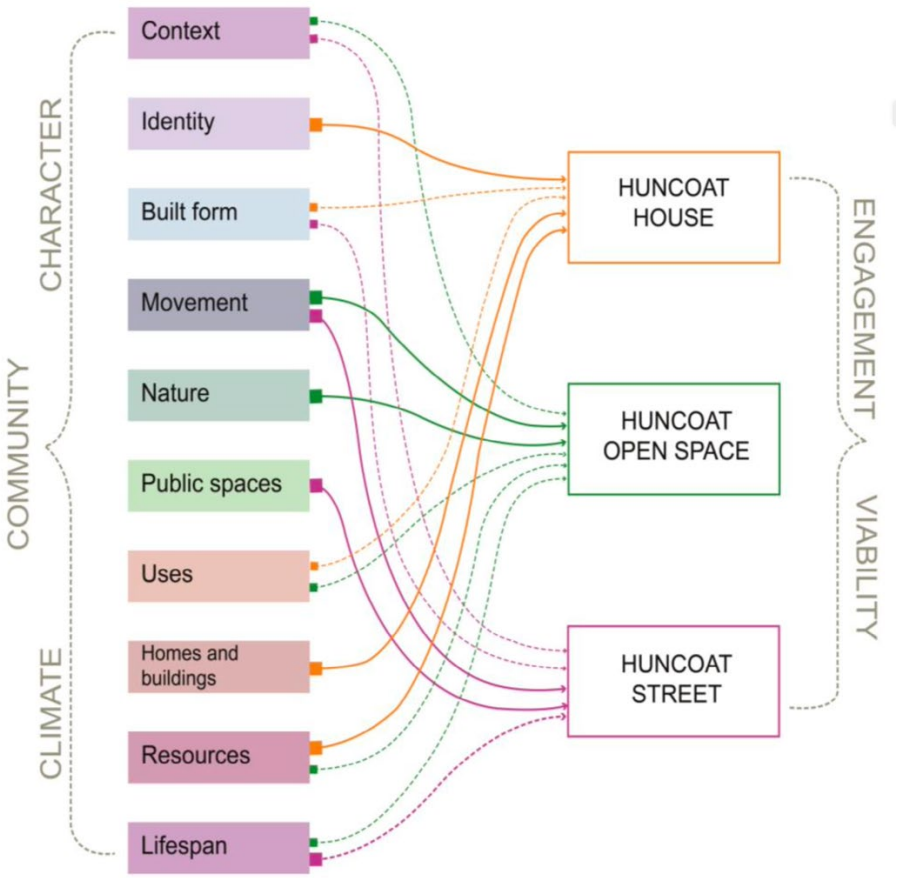


Figure 5: For the Huncoat Garden Village (Hyndburn), the ten design characteristics are refined and described in terms of three Huncoat themes

In this regard many felt that the content and the processes articulated in the NMDC are primarily directed at design professionals and are less accessible to local communities. The result is that a lot of briefings have been required to explain and discuss the various aspects of the design code. Others were simply treating the code as a technical tool and were seeking to use the structure to "populate the code with as many metrics as we can find" in order to reinforce their design position against expected testing by housebuilders in the future.

Some were adapting the order of the coding process, for example on large sites where it was difficult to define areas for coding prior to putting a masterplan in place. One team was exploring establishing pre-masterplanning principles (the critical spatial masterplanning parameters) in order to then define the area coding types.

A number of teams were struggling to fit their sites or areas within their authority to the ten area types contained within the NMDC. The canal side site in Sefton, for example, or large areas around university and hospital campuses in Leeds – "areas that are unique and do not fit and might need something bespoke". Teams representing more rural areas felt that the area types skewed towards more urban areas, with just two types of relevance to them. Similar arguments were made in relation to those preparing site-specific codes where decisions about strategic land allocations tended to dictate what could be achieved on design grounds long before the coding was even begun. One interviewee commented – "We are not the definitive voice within the planning authority".

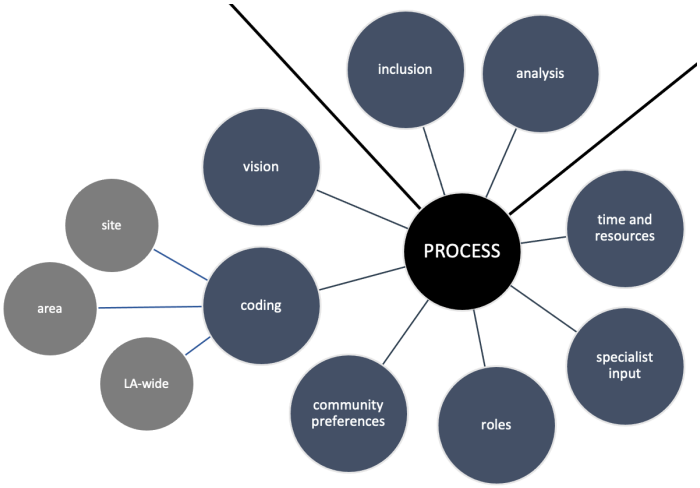
National Design Guide

The principles in the national design guide underpin the NMDC, and whilst many teams were simply adopting the ten design characteristics wholesale, others were attempting to group and simplify them. Generally, there was a sense that stronger alignment with the National Design Guide would create a stronger and more defendable design code.

Most of the teams felt that the principles related well to their own circumstance and worked well in tandem with the NMDC. For them it provided a useful and strong steer on issues such as movement, density and parking – "so you don't go off-piste with preferences for low density". Whilst being realistic that the guidance was not relevant everywhere – "some bits just don't work, or just don't apply to where we are" – having the guidance in place was valuable in encouraging more conservative local authorities to do something new and not just accept what they were being given. By contrast, those representing more rural areas felt that too often the design characteristics did not reflect the reality on the ground – "We know the benefits of being in places with public transport, and we know the benefits of building density, but that is not always possible".

There was a sense that guidance at the national level "needed to have that local flavour added to it" and was therefore a starting point only. By incorporating the distinctiveness of local places in their codes and guidance and in new developments that come forward, there was a sense that they could resist "generic volume house builders with their standard product contending that if it meets the ten principles in the National Design Guide, then it must be acceptable"

The coding process



6. THE DESIGN CODING PROCESS

6.1 Adapting to local circumstances

The processes set out in the NMDC around the core stages of 1) Analysis 2) Vision 3) Coding have been the starting point for all teams, although each has adapted these stages to meet local needs. In part, the approach adopted locally has been shaped by the starting point, with some teams beginning from a blank slate, whilst others were building on an existing suite of authority-wide policy and guidance or an already prepared masterplan. To a large extent this determined how closely the teams were able to follow the national guidance, with teams that were already well advanced having, to some extent, to retrofit their approach. Within these parameters, all teams had established a route to coding (Figure 6), although often this did not follow the logical linear path set out in the NMDC, but instead involved the concurrent running and overlapping of key stages, for example, site analysis and characterisation happening concurrently with masterplanning and coding.

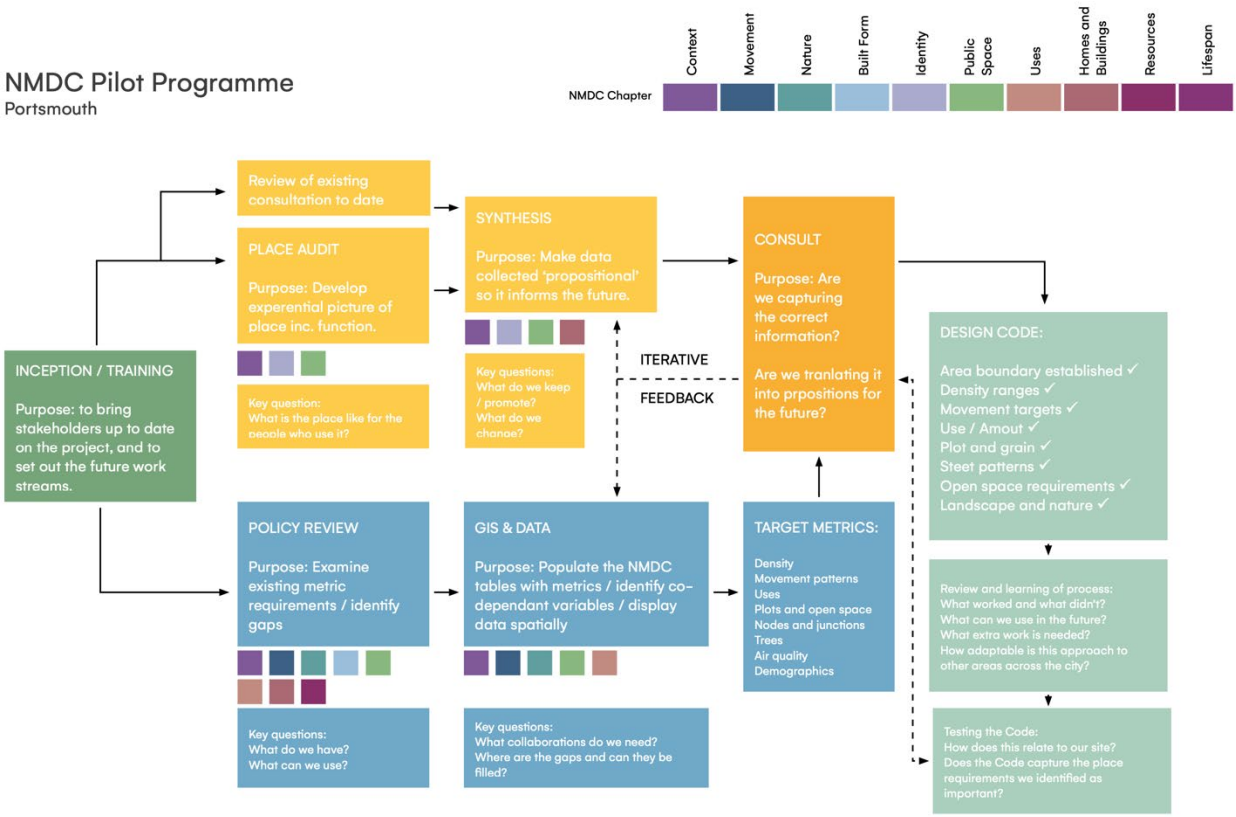


Figure 6: The process for designing coding for estate renewal in Portsmouth is encompassing key stages of: inception and training / place audit / reviewing exiting consultation / policy review / target metrics / consult / code

Training up-front

A key early stage of design coding had been training in order that all parties to the coding process fully understand the purpose, potential and process of design coding. Often this stage has taken longer than anticipated, although has been important to build a commitment to the process and to ensure that all parties start from a common understanding of the process and desired outcomes. In some teams this training has focussed on neighbourhood planning groups, in others on development management officers, and in others within the team itself in order to refine and agree on the process to be followed.

Defining area types

A wide range of approaches were being adopted to evaluate the character of the range of areas subject to coding with a good degree of experimentation being used (see 7.4). In turn this was feeding into the identification of area

types, with authorities needing to decide early on how they were going to define these. Rural Mid Devon, for example, were considering a number of possibilities to structure an area analysis:

- Use of already established landscape character areas
- Functional attributes of areas such as active travel areas
- Existing planning designations
- Settlement typologies in an existing design guide
- A combination of the above.

Leeds were trialling different approaches to mapping area types from time consuming manual approaches to GIS automated approaches. In turn the work was demonstrating how varied areas are, and how there is little consistency even in single neighbourhoods. The work raised questions over "do you create types at the very detailed level or the higher more crude area?" (Figure 7). Finding a means to code for this variation in such a diverse context represented a big challenge in order to prevent the resulting coding becoming meaningless.

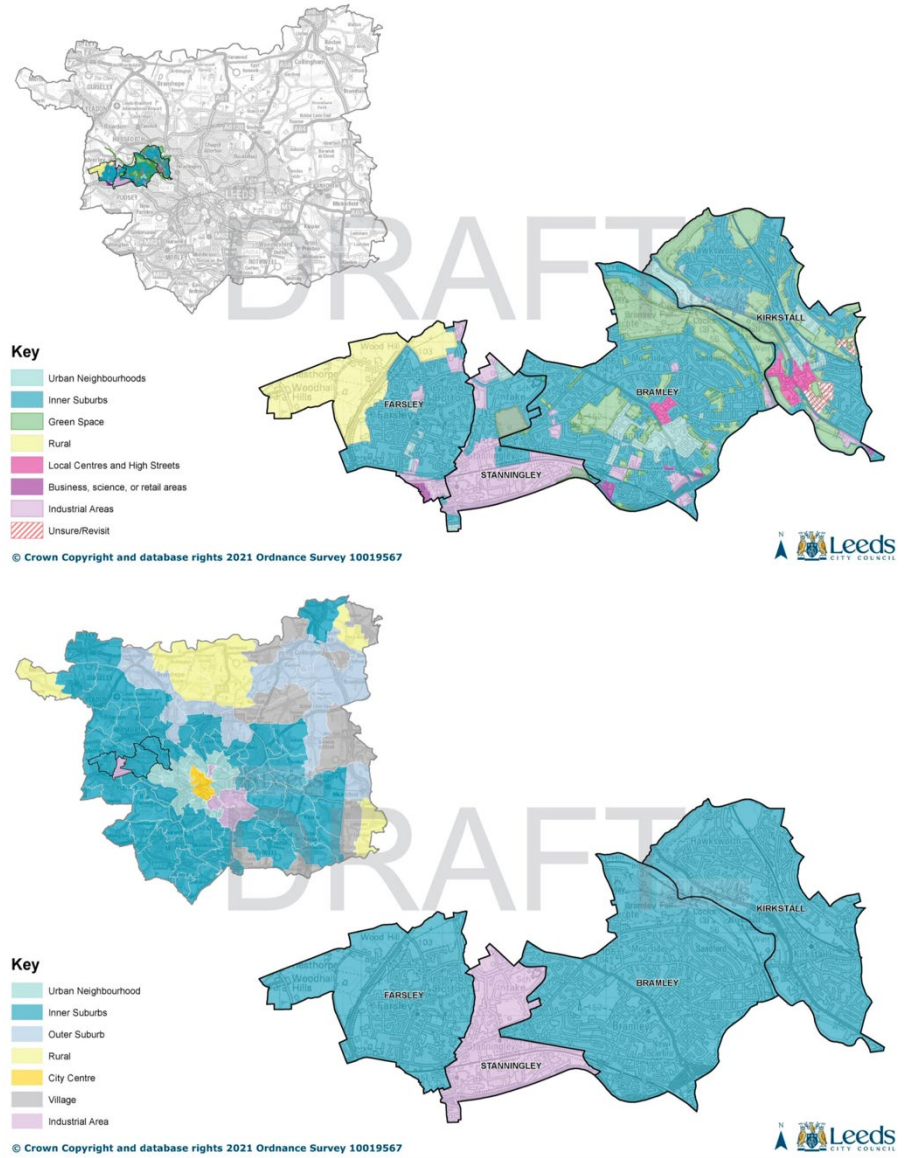


Figure 7: Leeds attempted characterisation at a fine grain (top) and at a more strategic level (bottom). The fine grained approach revealed huge variation in character even across small areas that the strategic level was unable to capture

This was a relatively common experience, in particular in historic urban areas. The characterisation of Bootle, for example, revealed significant overlaps between development types, and that identified development sites, even within a geographically tight area were never a perfect fit into the standard typologies (Figure 8). This reality check for coding complex brownfield sites has led to a strategy focusing on the common uniting factor of the canal (rather than on the area types) and using coding to bring out its key strategic role in the area and associated design principles for canal side sites.

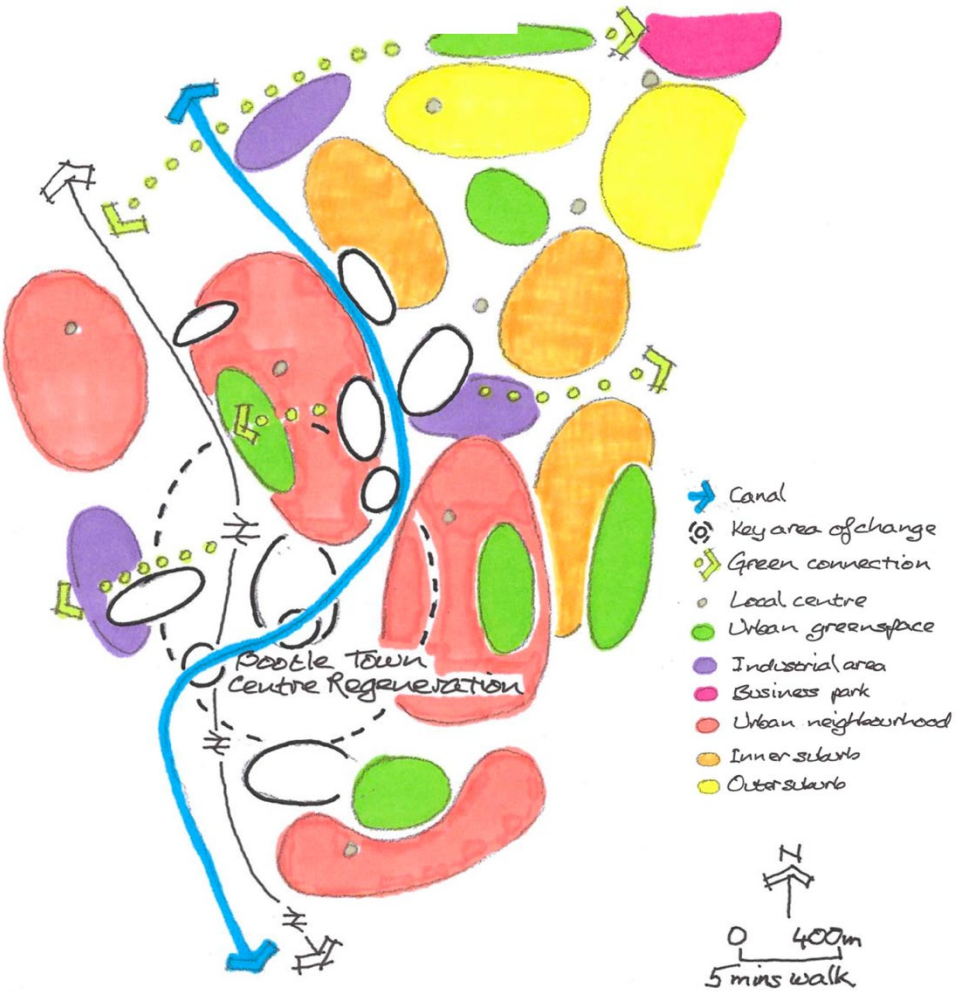


Figure 8: The fine-grained interaction of area types and sites along the Bootle canal corridor

These cases and others suggest that unless there is a clear understanding of the fine grained complexity and constraints, it will be difficult to write a meaningful design code – "A local authority might be able to produce a high level more strategic code but as soon as the code becomes more detailed and focuses on the more specific issues, the task becomes more challenging as there may not be the technical information to underpin it".

Engaging others

Teams were undertaking a range of engagement activities related both to character analysis and identification of area types, and generally to gauging public preferences on design. These divided between community and professional stakeholder audiences (see 7.1-7.3), and incorporated a wide range of approaches:

- Interviews with local business owners and landowners
- Engagement with targeted groups (e.g. surrounding communities and faith groups)
- Public exhibition
- Community panel consultation
- Walking tours

- Technical expert panel
- Officers and councillor presentations
- Code-making (three-day workshop)
- Code-breaking (testing workshop)
- 'Friendly' developer workshops
- Design review panel

Some teams were focussing on a small number of set-piece events lasting over a number of days and others focussed over a longer period, either on multiple relatively quick-fire activities or via ongoing open calls to input into coding e.g. online. The aspirations of the most ambitious are to move from the general to the specific, taking those who are engaging (generally the already more informed) on a journey from analysis, to vision, to coding and testing. Other teams are remaining at a more basic level around broad likes and dislikes and aspirations. For most, engagement was taking longer than expected, made all the more challenging by the pandemic.

Deciding where the coding goes

A further task for many was deciding what would go into the code as opposed to into other instruments, for example into policy, a future masterplan or SPD. In Herefordshire, for example, the broad approach involved 'translating' the NMDC into a set of locally distinctive templates and guidance notes to assist parish councils and give them the confidence to produce a design code as part of their neighbourhood planning work. A key stage in this was identifying what was appropriate for guidance at the county wide scale and what for coding at the parish scale. The smaller scale focussed on those more architectural issues that define local distinctiveness (Figure 9).

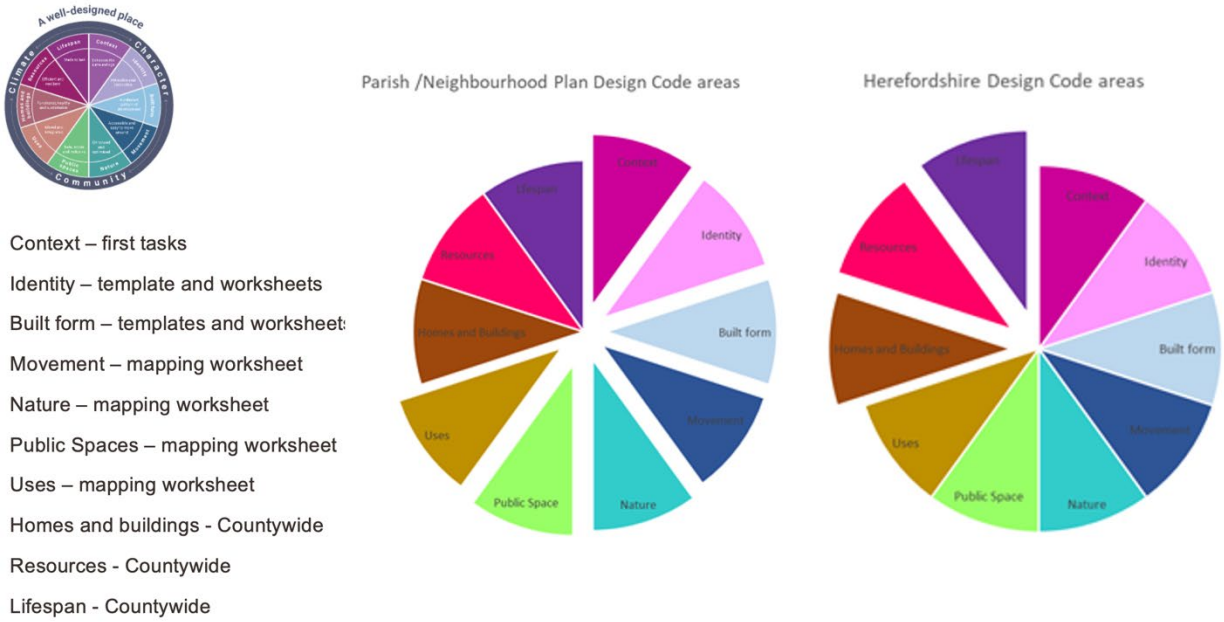


Figure 9: Initially consideration was given to which elements of the key characteristics of the NMDC would be appropriate to include within a countywide Herefordshire Design Code or more appropriate within local parish codes

6.2 Building on a vision (or not)

The scale at which the various coding projects applied determined the relationship to any wider vision beyond that in general policy (see 5.1) and also the extent to which they could be specific (to a particular development) as opposed to generic in their content (to unspecified future developments).

For a number of the pilots, fully developed masterplans, urban design frameworks or parameter plans for the sites / areas under consideration had already been prepared (prior to the pilots being announced) and in these cases the coding could simply build on these visions, putting in place, in effect, delivery tools. In Southwark, for example a fully resolved masterplan exists within the Old Kent Road AAP. The code will therefore focus on the detailed realisation of a high quality public realm, on the ground floor spaces and uses and on the character and identity of facades and public spaces. In Guildford, unusually, the new code will be paired back and specifically designed to engage the community, building on both a masterplan and on an existing strategic design code for the whole site.

Elsewhere, only concepts, loose frameworks or ageing masterplans (in need of updating) existed, and in these cases – somewhat unusually – the codes are being prepared in advance of a more detailed vision. In such cases the coding in effect becomes the vision, within whose parameters specific schemes will later be prepared.

6.3 Selecting qualities to be coded for

Many of the pilot authorities are using the ten characteristics of well designed places from the National Design Guide as a starting point for considering the qualities they wish to code for. North West Leicestershire, for example initially mapped the various elements of their recently adopted authority-wide SPD to the ten principles (Figure 10). The work is being informed by a series of site visits to understand what is working and what is not in different places around the authority.

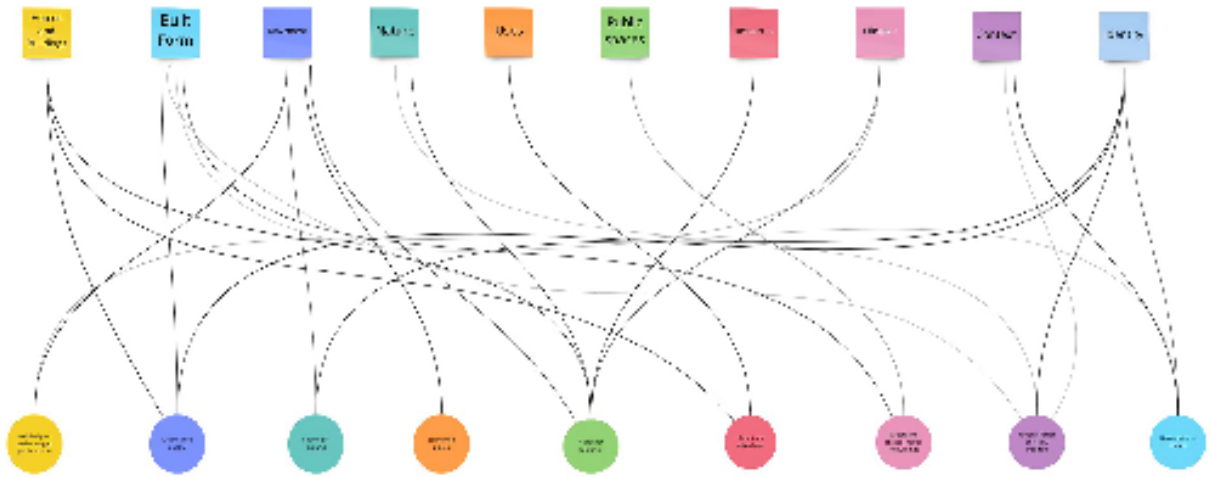


Figure 10: Mapping existing authority-wide guidance against the ten characteristics of well designed places in North-West Leicestershire

Typically, the process involves "making the principles their own", by tweaking the wording and emphasising key aspects that locally are considered most important, in one case, for example, changing the meta-categories of climate, community and character to community, character, biodiversity and sustainability.

Fundamental design qualities

Most authorities had a clear idea of what for them were the fundamental qualities that they wished to code for, and in this way most saw a hierarchy from those issues that were vital to prioritise early as they impacted on viability, to those issues that it was nice to control, but could be worried about later. These aspirations are captured in an extended quote:

"Companies like ***** codify business as usual. They prefer to negotiate a design without a design code. The volume house builders want to build as they have done everywhere else so they submit a masterplan first then do a design code that suits them. The aim is to fix the basics in a design code, for example, plan for connected streets in a movement network but most volume house builders just want to build cul-de-sacs with private drives – a

design code could really help because the planners would take those decisions out of the hands of the house builders and ensuring design requirements are factored into land pricing decisions"

For some pilots, the fundamentals were those issues that most frequently go wrong in developments, starting with the structure of new developments – "More often than not, developments are ignorant to the site and its context, disconnected rather than connected, car biased rather than pedestrian biased, with no sense of local identity or other distinctive characteristics". But these issues also extended to more detailed concerns like bins, parking, inclusive design, biodiversity, surface water management, and so forth.

Local character

The question of local character and context was seen as fundamental by most pilots, encompassing aspects of identity and built form – "What it looks like and how it fits in". In rural and suburban settings, the fundamental character-giving element was seen as the landscape, both as regards how developments incorporated green infrastructure and integrated with the landscape, but also in terms of the connectedness to it. In Mid Devon, a strong set of themes emerged following a workshop with councillors of which the first was seen as the most important given the failure to consider landscape properly in rural areas:

- Integration between built form with landscape - settlements need to sit within the landscape
- Distinctiveness and character (particularly landscape character)
- Places need to be connected sustainably
- Naturally healthy
- Thriving locally

Local character was often seen as a priority for elected members, and a key aim of a number of pilots was to achieve buy-in from them, particularly in terms of issues such as density and height in more urban locations, in order that they would back the codes later and accept a more systemised, rather than negotiated, approach to decision-making. In more urban areas the historic built context was viewed as particularly important, including such issues as building line, building forms and curtilage, although not repetition and pastiche.

Shaping process as well as product

Following the lead provided in the NMDC with its three-stage process, a number of the pilots noted the desire to code for desirable process as well as product. One authority that is routinely presented with masterplans as fait accompli noted – "If we had something to point to which sets out the process that we expect applicants to follow, and layout plan is stage 4, then the planner can say sorry, you need to do stages 1, 2 and 3 first - that would have a massive impact". Others noted the need to consider developments over time, and not only to code for day one, but also for issues impacting on the long-term stewardship of places.

How codes would be used was also a matter of considerable debate. Whilst some pilots were keen to slim codes down in order to emphasise the fundamentals of good place making, others saw the code as "a bit of a one stop shop for developers. If they can get as much information into a code as possible then the developers don't need to refer to a lot of different documents. Hopefully then issues won't be overlooked". This raised the essential choice between providing all the information in one location in a convenient, but large, code versus having multiple smaller documents and the danger of repeating information in more than one place.

A related issue concerned the degree to which design issues could be captured in and expressed through target-based metrics, rather than as qualities to be interpreted by decision-makers. Qualities lending themselves to such treatment included: density ranges / movement targets / land use mixes / plot and grain / street patterns / open space / landscape and nature quantum / boundary treatments / energy use. The last of these was firmly linked by a number of pilots to the new agendas of achieving zero carbon in new developments, as well as to achieving more mixed and integrated living environments incorporating living local principles.

6.4 The question of beauty

When asked specifically whether the qualities they would code for included beauty as recently emphasised in the National Planning Policy Framework, responses fell into three categories, and these issues will be further investigated during the Phase two pilots:

Beauty can be challenging to specify

A number of teams suggested that they preferred not to use the term beauty because they found it difficult to objectively specify. Most commonly this was expressed in variations of the argument that beauty is in the eye of the beholder – "Beauty means different things to different people and it will change depending on who is looking at a particular development and what their view of beauty is". In Herefordshire, particular objections were raised by parishioners to the use of the word 'ugly' when talking about residents' homes. The terms characteristic and uncharacteristic were used instead.

When teams raised the issue of beauty with communities, they were often challenged to define "what beauty might mean and how to define it" with a tendency to equate the term solely to architectural style. In Guildford this led to disagreements about what sorts of buildings should be on the site, with debates about contemporary versus more traditional styles, although ultimately an agreement was reached that "this should be a place that was 'of its time' and that had a distinct identity".

Character, identity and the enduring qualities of place

Most teams felt that whilst places could be beautiful and that beauty might be a consequence of their decision-making and was a worthy objective as articulated in the NPPF, to get there it was important to focus on character and identity. Building a strong character and identity in a place was seen as avoiding the generic solutions of some housebuilders and this would deliver the qualities that might ultimately amount to beauty. This might mean responding to landscape character and distinctiveness as much as to the built forms.

A number of teams preferred to think in terms of 'quality' because this extended to fundamental aspects such as the desired experience of living in places and whether they would be "sustainable, green, connected, zero carbon, and liveable", particularly if coding was being brought forward to an earlier (pre-development interest) stage of the development process. Elsewhere, questions of longevity, flexibility, and adaptability over time, were seen as fundamental qualities that in time could lead to beauty by focussing on the enduring qualities of place.

Beauty may require flexibility for innovation

Some felt that the pursuit of beauty might be incompatible with a further objective of coding, to establish a more consistent and formulaic approach to development – "If you want something that is formulaic and absolutely nailed down there is only so far you can take that A code will consistently deliver something quite similar or the exact same thing over and over again. Well, to be honest, that's what the volume house builders are already doing, and we don't like it. I don't think one can formulate for beauty".

In the view of these teams, allowing flexibility for creative responses to sites to emerge would be more likely to elicit beauty rather than trying to specify every detail. This was seen as particularly important in places where the general standard of design was low and raising the bar, rather than necessarily delivering design excellence, was seen as a first realistic objective – "to set the bar for the code at a more humdrum level because that would be good enough in most cases, even though that might hinder the best schemes coming forward". Leeds used the example of a well-designed taller building that might be desirable in many locations but which they felt they could not routinely trust developers to deliver through including such building types in a code. In such circumstances a degree of flexibility is required to avoid uniformity across a whole municipality and in order not to quash creativity.

7. ENGAGEMENT AND ANALYSIS

7.1 Engaging the local community

While most pilots wanted to avoid what one interviewee called "a document that needs a highly qualified design professional to interpret it", approaches to engagement varied considerably, largely depending on the starting point. Given the constrained timescale of the pilots and the desire to move rapidly to coding, some teams decided to draw on pre-existing recent community engagement, either in relation to the particular sites being coded (e.g. the pre-existing masterplan) or wider policy / guidance frameworks such as local plans. In such cases engagement was focussed largely on non-community stakeholders, and notably officers and councillors (see 7.3).

Engaging defined groups

Rather than instigating a broad based and open public engagement exercise, several pilots opted for a more focussed exercise, working with groups that were already engaged in some way with the localities being coded. Sometimes this was seen as a precursor to wider engagement further down the line. These groups variously included pre-existing parish working groups, community representatives (e.g. a community liaison group in Colchester and Tendring and the Community Review Panel in Southwark) and established neighbourhood groups. The Ouseburn Trust (Newcastle), for example, had been engaged in various meetings, two on-site walking audits and a series of workshops. The Trust have also prepared their own inputs into the process, for example feeding what they see as good and bad in the area into the baseline.

In the case of Leeds and Herefordshire, the possibility of neighbourhood planning groups taking on the task of design coding in their areas was under active consideration as a means of i) engaging communities in the process ii) addressing the resource constraints faced by local authorities wishing to code across their territories. These groups had been engaged in the pilot in order to test out the emerging templates, their comprehension, and the actual practicalities of undertaking coding tasks.

Traditional and technological engagement

Where decisions had been taken to engage more widely, pilot teams had to decide which approaches to take, bearing in mind that the process was being conducted during the later phases of the coronavirus pandemic. Despite the context, a number of the pilots were able to utilise traditional engagement techniques, notably exhibition and survey, consultation events (e.g. in the Bootle shopping centre), and schools events. In these cases, the questions were often generalised and basic, for example in Nuneaton and Bedworth questions were focussed on trying to determine community preferences in an area dominated by standard housebuilder products.

Online workshops, dedicated websites, digital questionnaires and digital platforms for public engagement such as Commonplace and the IRYS app were used or trialled (Figure 11). Sometimes these were used in isolation and sometimes in parallel with traditional approaches (see 7.2).

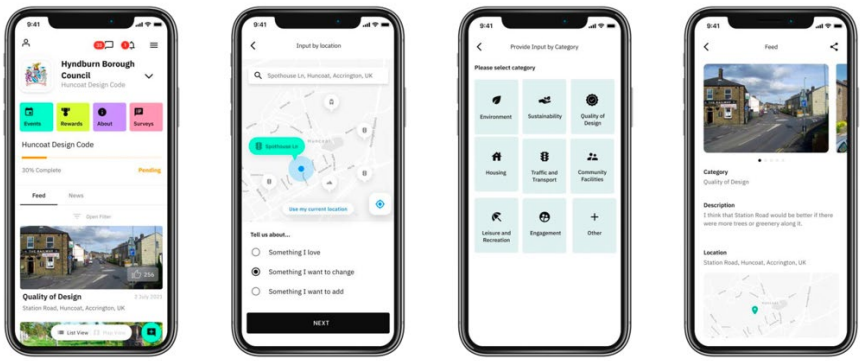


Figure 11: Huncoat design project pages on the IRYS app

Combining approaches and engaging processes

Whether traditional or technological, the challenges of poor engagement remained, alongside, in some localities, difficulties in getting the community to look beyond their opposition to development per se – "some of the residents don't want development at all, whether it is beautiful or not". In such cases, over-reliance on single forms of passive engagement tended to lead to lower response rates and to more basic responses with residents failing to focus on the holistic built environment and obsessing instead on day-to-day concerns such as the quantity of car parking.

In Colchester and Tendring, engagement is being encouraged through a combination of an interactive engagement website, briefings, workshops and community drops-in, a heavily promoted freepost questionnaire, and blogs, e-newsletters and making good use of grass roots networks and community groups. In Hyndburn, walking workshops were used, taking residents around Huncoat to Identify places that people liked and places they didn't. And in Southwark a public exhibition and an art and design 'pattern' workshop will be run alongside online engagement. These forms of more engaging exercise were being used to encourage wider involvement and to dig deeper into public preferences, beyond the immediate concerns associated with any new development.

Inclusive processes?

The different engagement activities ranged in how inclusive they were. Whilst a minority of the pilots went out of their way to extend their engagement activities to the widest range of societal groups, from children upwards, and were focussed on being highly inclusive in how documents were expressed (avoiding complex language and translating into other languages), for most the time limitations and pandemic context (consultation online) limited how far they could go. Others were realistic that the contexts they were dealing with had relatively few interested parties amongst the public (e.g. city centre locations where businesses rather than residents formed the consultee base) or felt that technical design code documents were unlikely to attract major public interest (Figure 12).

Figure 12: In Nuneaton and Bedworth boards establishing aspirations and possibilities for the Arbury greenfield site were used in an attempt to engage the community

7.2 Measuring community preferences on design

Some pilots attempted to go further than typical engagement exercises, and alongside opinions on the coding processes and outcomes, attempted to find means to measure community preferences on design and specifically to move beyond the standard "responses from the vocal minority" relating to matters such as parking and congestion. Equally, there was a strong sense that in doing this work it was important to focus more on placemaking rather than getting "side-tracked dealing with only aesthetic or stylistic preferences".

Approaches were broad and often innovative and included:

- Collecting photos and associated narratives of 'likes' and 'dislikes' through a community liaison group and via an engagement website to be subjected to sentiment analysis
- Online mapping of preferences relating to heights, uses, types of houses, and examples
- Geo-located on-line comments made in real time about sites through an online portal, with likes and dislikes and commentaries
- Picture preference voting using an in-house community engagement app or other means (Figure 13)
- Physical exhibition of similar places and elements relevant to the site with recorded public preferences.

Figure 13: 'Likes' and 'dislikes' for the Tendring and Colchester Borders Garden Community

The Commonplace public engagement platform was used by two pilots and proved to be a valuable means of coordinating comments whilst at the same time facilitating communication with the public via a news section to encourage ongoing engagement, for example by letting respondents know what is happening as a consequence of the feedback. Dacorum were pleased to have received 481 responses through Commonplace. Herefordshire noted that a single Commonplace licence for one parish cost £2,500, and to repeat across the whole authority would cost £300,000. Partly for this reason the authority was trialling four different means to gauge public preferences, each care of a 15 person parish team:

- Walking tour with discussion
- Photographic survey and poll
- Commonplace
- Placecheck (the online structured analysis tool)

7.3 Engaging stakeholders

Alongside the community, pilots were engaging with a wide range of policy and development interest stakeholders. As one interviewee commented – "It is not massively difficult to produce a code per se. What is difficult is bringing everyone along with you". Three sets of stakeholders needed to be engaged.

Internal (political and policy)

The first set of stakeholders were internal to the local authorities. The involvement of councillors varied, but in a number of authorities the councillors with requisite responsibility (e.g. cabinet members and ward councillors) were keen to be involved. In one authority where the site transects two wards, this meant engaging with six councillors. Some argued that "engaging with members can create delays and administration", although could not be ignored as inevitably the process was a political one.

Pilot teams often had to engage with the range of other local authority departments and responsibilities that would be affected by the coding. In some this merely meant consulting with them, for example and crucially, with development management colleagues. Elsewhere this engagement was more hands-on, including conducting place audits and walking tours with these groups, including housing and highways.

External (authorities and agencies)

Beyond internal stakeholders, authorities critically needed to engage with other authorities, notably with county highways authorities and other relevant services (e.g. ecology) in two tier areas, and with town and parish councils where impacted. In addition, a wide range of other national agencies were involved across the pilots, including Homes England, the Woodlands Trust, the Canals and Rivers Trust and critical local players such as various police authorities, design review panels, the National Forest Company and the Ouseburn Trust. Newcastle was the only pilot to involve a university, in that case on 3D modelling and hosting a workshop on 'Ouseburnness'

Landowners and developers

The final set of critical stakeholders were those with a development interest in the areas being coded. The extent to which this occurred depended on whether coding focused on particular sites or was more general (authority-wide). It included major landowners, private developers and social registered housing providers. In some cases these stakeholders were simply being invited to feed into consultation efforts; elsewhere local house builders were invited to undertake site visits with coding teams and eventually to try out and "to try to break" the codes being prepared. The hope was that by engaging developers in a more general way that "the discussion would be less difficult or 'loaded' than talking about a specific site or place".

7.4 Character analysis

As with the engagement activities, the degree of character analysis conducted by the pilots depended on what was already available. A number of the pilots had already conducted (or had access to) character analysis for existing design guides, or specifically for the areas (e.g. conservation area appraisals) or sites being coded. In these cases further character analysis was not a priority, particularly in one case where the view was "The local area is not very characterful" (Figure 14).

Elsewhere, character analysis was an early priority as a feed into the baseline information required to code. This began with a physical analysis of existing built environment and local landscape qualities, including any historic characteristics of note, or, in their absence, what was positive about places with less obvious character. In some cases this captured architectural style whilst elsewhere the subject was deliberately avoided. In Newcastle the Northumbria University virtual Newcastle Gateshead 3D model was being used to accurately model the area being coded in order that scale and other parameters can be modulated at the testing phase and individual proposals visualised.

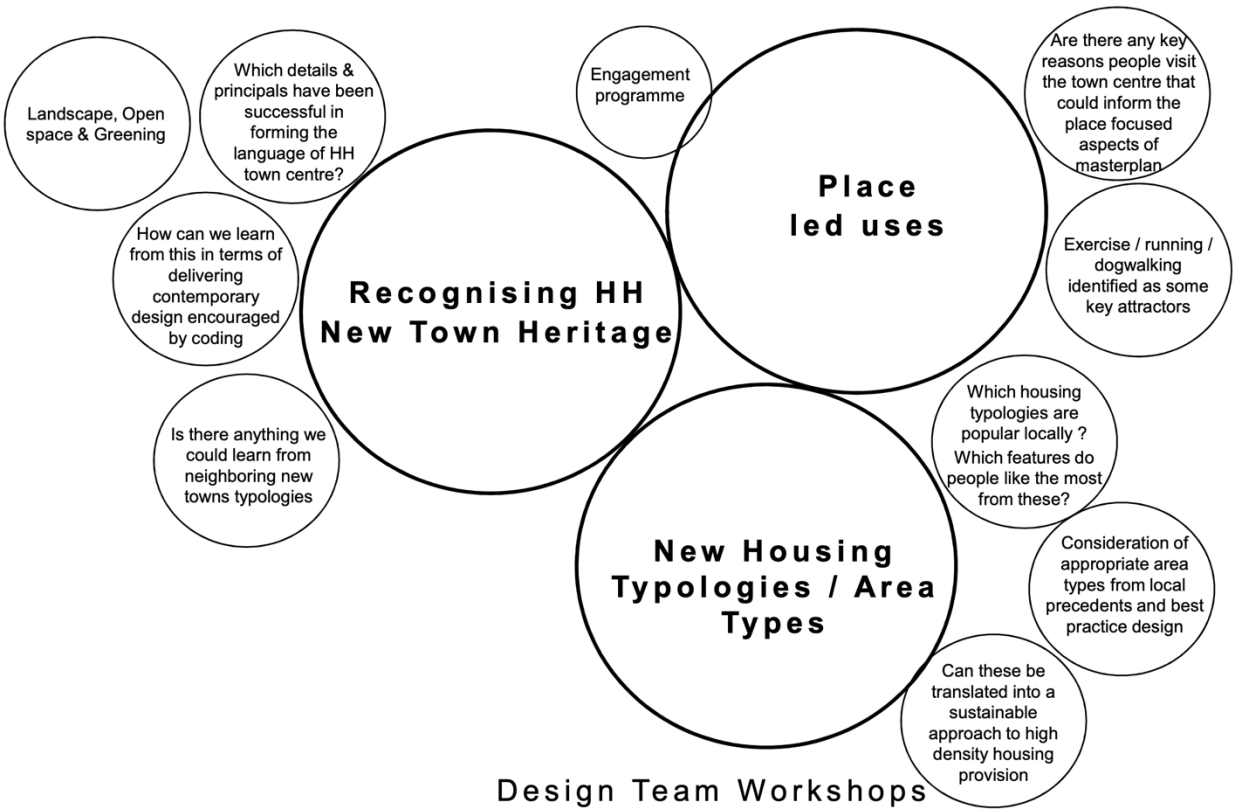
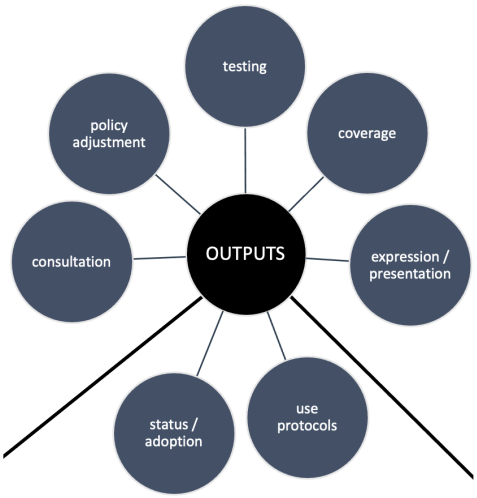


Figure 14: Hemel Hempstead, town centre analysis leading to emerging themes for coding

The scale of analysis varied with the scale of planned coding. At the larger spatial scales pilot authorities followed the NMDC identification of area types as a starting point for analysis. At the smaller site-specific scales, this area analysis was unnecessary. In all cases there was a sense that more measurable things such as building lines and density were easier to identify and record, whilst experiential qualities were much harder, including a sense of safety, walkability or how inviting places were. In these areas combining character analysis with public engagement was key in order to capture perceptions of places as part of their definable qualities – "it is not just about the physical form, it is about what stimulates the senses – for example, the sense of smell from the farm in the middle of this industrial area. There needs to be a natural teasing out of those issues from the character analysis".

Outputs (the codes and other outputs)



8. COVERAGE OF DESIGN CONCERNS

8.1 The pilot outputs

The pilot programme was deliberately designed as a flexible experimental process, and not all pilots set out to produce design codes by the end of it. Instead, they aimed to test part of the coding process or, in the six months, to go just part the way along the road to producing a code (Table 3). The focus of others evolved during the process, with the team at Guildford, for example, deciding to create a community design code as a simpler and more accessible response to the local engagement they had conducted. On completion eight design codes had been completed and the content of these was analysed, analysis that fed into the discussion below.

Pilot	Output	Design code?
Buckinghamshire	very early sketches / principles	no
Colchester and Tendring	strategic vision (high level principles)	no
Dacorum	town centre site design code	yes
Guildford	urban village community design code	yes
Herefordshire	guidance for preparing codes	no
Hyndburn	draft Huncoat design code	yes
Leeds	analysis only	no
Mid Devon	area types and some code content	no
Newcastle	design code principles	Yes
Nuneaton & Bedworth	Arbury design code	yes
North West Leicestershire	revised design guide	yes
Portsmouth Debenhams site	city centre design code	yes
Portsmouth Estate Renewal, Horatia and Leamington	strategy for code production	no
Sefton	coding toolkit	yes
Southwark	draft design code	yes

Table 3: Outputs of the pilot teams

Given the variable nature of the outputs as regards their focus and content, the following analysis draws more heavily on some pilots for examples, whilst the term coding is used to cover the range of outputs produced by all pilots even if they did not actually deliver a design code.

8.2 Structuring design codes

A key early decision for pilots was how to structure their design codes and related outputs.

Following a pre-determined structure

About half of the teams tried to stick closely to approaches recommended in the NMDC, structuring their codes according that of the NMDC itself`: analysis, vision and code. The team at Hyndburn, for example, adopted the following structure: Introduction – why we need the design code; the context; six different character areas; site wide detailed codes; and delivery and implementation. Many incorporate simplified versions of the ten Characteristics of Well Designed Places from the National Design guide, including Nuneaton and Bedworth with four main headings: Open Space and Nature, Movement and Connectivity, Built Form, and Character Narrative. For them, issues such as identity could then be dealt with as cross-cutting themes.

In a minority of cases a pre-existing structure had already been established in an existing framework and it made sense to simply follow that. Southwark's Area Action Plan, for example, suggested sections on analysis, history, the area today, and coding against seven parameters.

Letting the process guide

Rather than adopting a pre-conceived framework from elsewhere, others let the process guide them. For example, the community engagement in Guildford – "We have specifically only included design principles that

were mentioned by the community via the community review panel within the sessions that we held with them so it very much reflects that moment in time". In Dacorum, the team's understanding of the issues the site presented led to a focus on built form, identity and use. Within this structure, each set of codes is hung off a key plan (regulatory plan) "to make it really simple for developers or applicants in following the code" (Figure 15).

Figure 15: Identity Key Plan, Dacorum

Figure 16: How to read the strategic vision for Colchester Borders Garden Community

The work at Colchester and Tendering focussed on the production of a strategic vision for the Colchester Borders Garden Community rather than a design code and in this on defining high level key themes that came out of their consultation work. Each theme sets out a vision statement, strategic principles and then defines how each principle will be achieved with illustrations, statistics and figures that back up the statements. This is clearly explained at the start and will, in time, underpin code production (Figure 16, https://talk.tcbgardencommunity.co.uk/12145/widgets/41917/documents/23931).

Structuring a process (not a code)

Other pilots focussed on the process that others should follow. Herefordshire focussed on the preparation of a series of guidance notes and checklists to allow parish councils to create their own design codes, for example focussing on conducting community engagement, understanding movement, capturing cultural heritage in the baseline assessment, advice on different settlement types and so on. The intention is to compile these into a 'how to' master folder giving all parishes the same information and adding additional notes as enquiries come through. This approach the authority previously used to guide parishes in the production of Neighbourhood Plans.

Similarly, the Portsmouth Horatia and Leamington team wished to define a repeatable process and design pathway for all the City's estate renewal projects. As each estate in the city possesses its own characteristics and qualities requiring sometimes very different design responses, the NMDC structure was used to explore the kinds of things that might be coded and the potential common problems that need to be addressed in many estates, such as leftover spaces, public/private interfaces, and so on.

8.3 Relating to area types

Relating their coding to area types was one of the most challenging aspects of their work for many of the pilots – "This is the area that we struggled with most in the NMDC as a whole" – with some feeling that it was neither relevant nor appropriate given the scale they were working at or the nature of the code / outputs they were producing – "We don't see the point of categorising it because it is not going to be replicable". Instances where area types were not considered relevant included:

- Areas with particular characteristics that meant their coding was quite unique and not transferable
- Borough-wide guides where the emphasis was on the formation of generic principles for a whole local authority rather than its parts
- Sites that were not large enough for area types or where only a single phase is being coded
- Relating to developments that were defining new character qualities, perhaps because surrounding areas suffered from weak or negative character.

Some confusion was also apparent about how area types should relate to coding at the site-specific scale, the scale at which most pilots were active. As one interviewee put it: "We were a little unclear whether the intention of the NMDC is that phase 1 should be considered as an area type within the masterplan or whether the wider masterplan as a whole is an area type within the borough, which would make more sense". This confusion was widespread. None of the pilots used area types as envisaged in the NMDC, with no authority-wide 'Coding Plans' included in any of the eight design codes produced. Although the term was used in Huncoat for its regulatory plan. Those using area types varied in how they used them.

One area type

The pilot teams focussing on single sites or larger areas of unified character tended to see their coding relating to one area type such as 'High rise city' in Southwark, 'Linear infrastructure' in Sefton, 'Town centre' in Portsmouth Debenhams, 'Estate renewal' in Portsmouth using Horatia and Leamington site as a case study, and so forth. The principles from these may later inform a more general area type within their local authorities. For example, the aim is to turn the learning from the Horatia and Leamington site into a 'how to guide' and to inform Portsmouth's

design commissioning processes to ensure that there is an expectation of a high standard of community consultation in all briefs and competitive tendering processes.

A few area types

Some pilots revealed a small number of area types, but did not find the exercise particularly enlightening. In Newcastle, the Ouseburn conservation area has five character areas and the team debated whether it might be better to have a single new area type to describe the whole of Ouseburn, In fact, as the proposed new build is largely concentrated in just one of the character areas, they concluded that "To apply the code to the rest of the area would have wasted a lot of time and effort in an area that is already protected". The team in Hyndburn had managed to identify just three area types, and noted that in a largely suburban area there was not much difference between them.

Many area types

A small minority of the pilots planned to use area types at an authority-wide scale. Leeds focussed on testing the process of identifying area types at the city-wide scale (see Figure 7), and whilst they managed to use GIS and basic character analysis to define nine area types, they "found major challenges including the need to code areas of poor quality that required a totally new character rather than replication of the existing, or areas subject to large scale development that would itself impose a new character".

An area analysis was done for the whole of Nuneaton and Bedworth (see Figure 17) the results from which fed into the urban form chapter but wasn't then used to code the site. The authority considered preparing a code for the whole borough but based on the challenges of coding for a single large site concluded that "anything broader wouldn't be that meaningful" and instead "that strategic allocation sites on a scale similar to this one would be best with their own design codes".

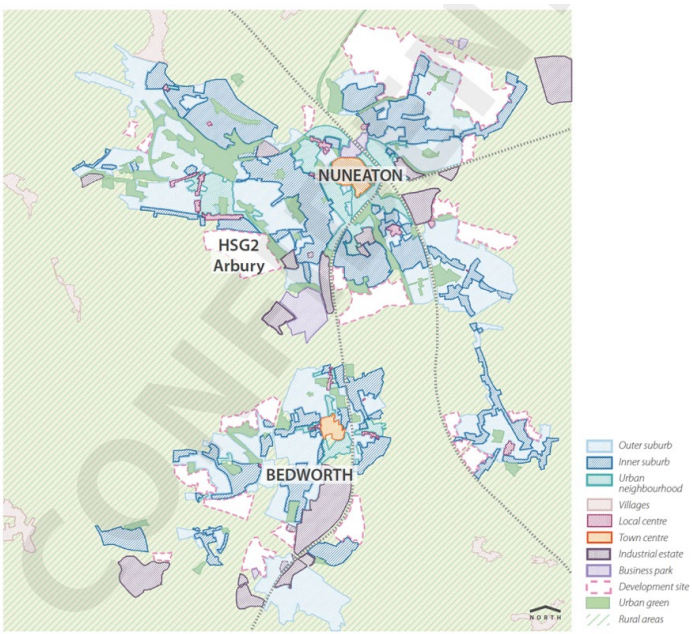


Figure 17: Area types, Nuneaton and Bedworth

Mixing it up

Mid Devon drew from the NMDC typologies and added local typologies to develop a range of 18 area types that expanded the number of rural typologies (Figure 18). In doing so they concluded that many settlements in the district have a much finer grain of types than anticipated, with most containing overlapping mixes. Similar findings were revealed when looked at as functional designations (e.g. movement corridors) or in terms of planning allocations.

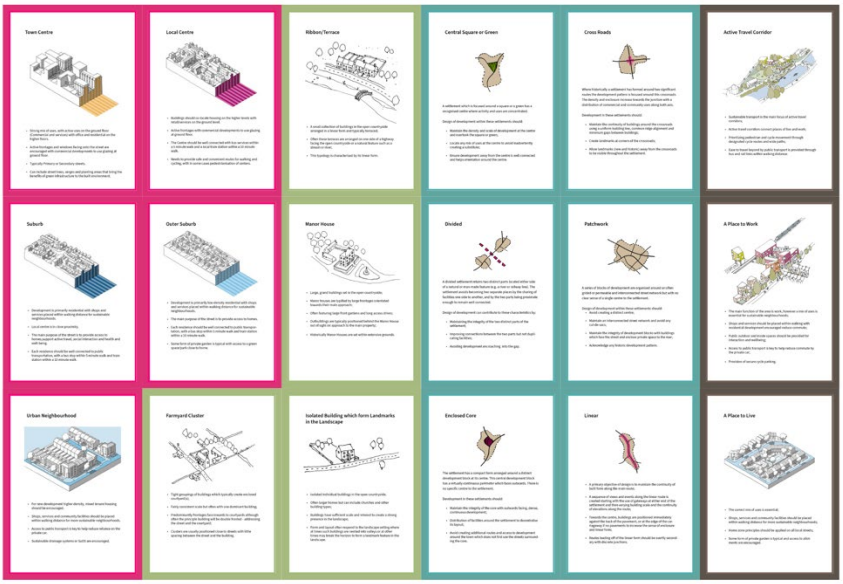


Figure 18: Eighteen area types covering Mid Devon

The team concluded that rather than a list of discreet area types, types could be applied as a series of layers that overlap so that a plot on a village street might be suburban, it might be framing a village green and may also be on a major route. This complexity was confirmed in the public consultation, with residents often arguing that where they lived was simply one area type (Figure 19). It also helped to overcome the tricky issue of dealing with the boundaries between area types. Like other pilots, the complexity in reliably defining and using area types to code persuaded the team that it would be better to focus on large sites or areas of change, rather than trying to code whole settlements.

Figure 19: In reality area types layer and overlap in complex ways that are difficult to code

8.4 The content of codes

The response of pilot teams to the ten Characteristics of Well Designed Places in the National Design Guide varied, with some systematically working their way through all ten in an attempt to cover matters comprehensively. Others began with an already agreed framework of design principles, or adopted one that their consultant advisors recommended, although, as one interviewee commented: "it is really helpful if you don't have a preconceived understanding or experience of coding so that you can look at those topics in the NMDC afresh".

As previously noted (see 5.3), some pilots struggled to relate the national guidance to their own local circumstances, particularly on sensitive matters such as density, parking, or the emphasis required on landscape in rural areas. Most spent a considerable amount of time ensuring that the matters listed in the national guide were appropriately related to local circumstances. This resulted in attempts to reduce the size and content of codes.

Too many criteria

Many of the pilots attempted to simplify the national principles. In general this meant removing or collapsing some of the more technical and construction-related principles, notably resources, homes & buildings and lifespan. One team argued, for example, that they wanted to focus on ground floor character and shaping the identity of the new area, but could not cover everything – "If you look to apply every policy and guidance, you'd over-complicate things". This reflected a common feeling that ten sets of issues were too much to grapple with at the stage that most pilots were at, and in a manner that would engage communities. In doing so authorities also took the opportunity to reorganise issues into what they viewed as a more logical structure with less duplication, for example bringing public realm together with streets and connectivity with movement.

Authority-wide and area-based or site-specific codes

A common approach was to collapse these issues into an overarching 'sustainability' theme and to look to other forms of guidance to cover the detail. In. Herefordshire, for example, the guidance being prepared for parish level coding teams concentrates on movement, identity, built form and nature, and authority-wide guidance will focus on more strategic and technical issues, including the council's proposed Environmental Building Standards SPD. In Buckinghamshire the plan is to split their guidance between the A codes and the B codes with A codes dealing with authority-wide issues that occur everywhere, whilst B codes will deal with matters requiring a greater degree of localisation, such as height, density and materials.

Struggling to code …

As well as lifespan and resources, which were often removed on the grounds of being too detailed for planning guidance, different pilot teams struggled with different issues. These varied but included:

- Context, given the variety of contexts in some areas, but also given the distinction between issues to code and background concerns
- Health and well-being, which were seen by some as potentially overcomplicating coding
- Challenging highways issues as Highways Authorities were not always fully engaged (see 10.4)
- Edge conditions relating to site-specific codes where sometimes character could change dramatically
- Detailed architectural design issues, including guidance on fenestration or materials with significant impacts on viability
- Beauty, which, for some "felt very uncomfortable to start talking about", but which tended to resolve itself by moving beyond a narrow aesthetic view of the subject to a broader more holistic concern over the 'beauty of place' (see 13.3).

Herefordshire, who were working closely with parish teams to trial their guidance, noted that "the parishes struggled with active travel and movement and public and private space, whereas built form and identity were easier to grasp as they were seen as the core of design". A note of caution is therefore appropriate here, that what might be seen as appropriate and straightforward to code by one group may not be seen as such by the next.

9. COMMUNICATING CODING

9.1 Illustrations vs. text

Across the pilots a concerted effort was made to deliver attractive, accessible outputs that could engage a range of audiences, including local communities. At the same time the codes needed to be useable and defendable in planning terms and so careful drafting and illustration was required. The balance between images and text varied from document to document, with most attempting to achieve a greater emphasis on illustrations than they typically used in previous policy and guidance, although only North West Leicestershire adopted a specific target, of achieving a 50/50 balance between text and illustration.

There, as elsewhere, positive imagery was favoured in order to direct and inspire users to achieve better designed outcomes. North West Leicestershire, for example, included short, largely visual, case studies at the end of each section of their revised authority-wide guide (Figure 20).

Figure 20: Inspirational case studies establish aspirations and show what is possible, North West Leicestershire

There was also a tension felt across the pilots between keeping illustrations reasonably generic in order not to be overly specific about what is expected – "we are trying to keep it generic. We are using illustrative images but we are not saying that the development has to be done exactly as shown" – and being place-specific – "the trick is to try and weave together text and visual elements to be specific to a place not anywhere town". Often this came down to trying to convey a desirable look and feel for new development in illustrations, whilst being clear in text that illustrations were just that, illustrative

More is less or less is more?

Pilots were themselves often in two minds about the relative balance between illustration and text. Most conspicuously tried to keep text down although were aware that in the planning world, text tended to be more defensible than illustration. In part this explained why previous design guidance in a number of the pilot authorities had been so text heavy.

Some felt that the public tended to respond better to visual material in guidance rather than to words, but others noted that residents can struggle to understand what is meant by 'indicative' illustration and tend to "focus on how every line relates to where they live" meaning that text was easier for them to understand. There was also a tendency to rely more heavily on text in cases where schemes were in the very early phases of their evolution (with no masterplan) or where more generic guidance was being offered. All were clear that the balance between text and illustration needed carefully thinking through with both modes of communicating supporting each other.

Creating graphic content

Different forms of illustrative materials were apparent in the codes, from concept diagrams, to regulating plans, to coded principles, to precedent images. Most codes included a mix of two and three dimensional images, with precedents often drawn from community and stakeholder workshops (Figure 21). A broad selection of these graphics is included in Appendix 2.

Figure 21: Mix of illustrative elements for Ouseburn

A key task was to make the documents as accessible as possible, with one pilot even arguing that "the take-home message is that public education and communication is needed about the design code to help in understanding it". Variously pilots adopted the following principles:

- Making the stats and figures as punchy as possible
- Avoiding text that was too small
- Annotating all images so that it is clear what is important in each
- Colour coding for visual accessibility, for those with colour-blindness
- Keeping diagrams clear and simple (Figure 22)
- Using A4 formats to facilitate home printing

Whilst aspiring to create graphically high quality documents, pilots were also realistic that creating graphic content was expensive and takes more time to prepare than written content. There was also a concern in rural areas that graphically heavy documents could be too heavy to download in areas where internet connections are less reliable.

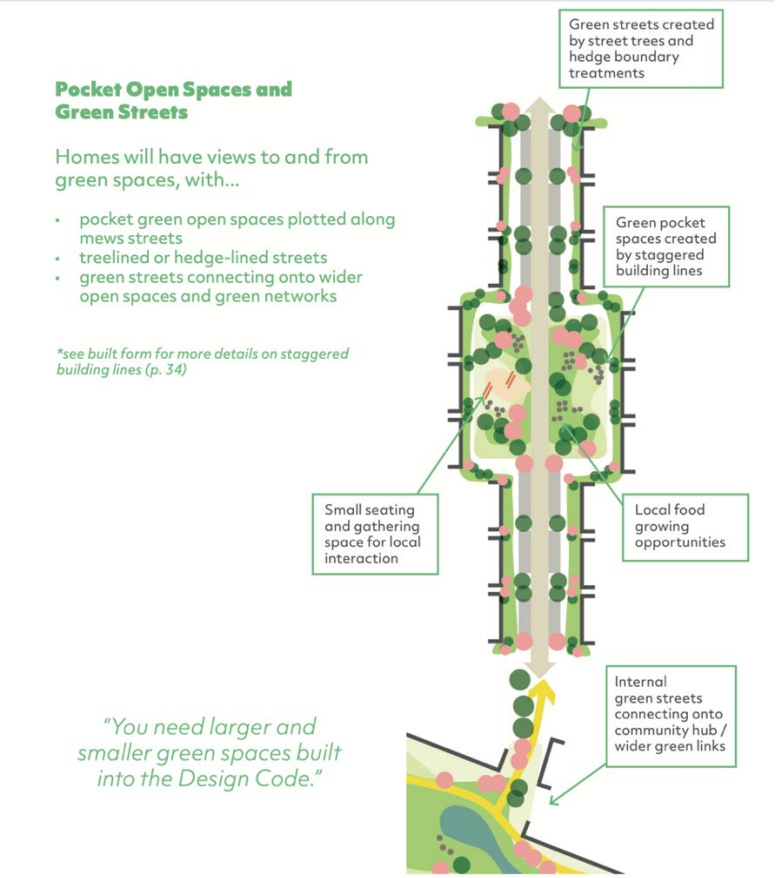


Figure 22: The Guildford Community Code uses clear and simple diagrams for a lay audience to understand

Process and product

Some pilot teams were particularly concerned that their guidance should clearly set out the 'right process' as well as their 'product aspirations' – "we have got to strongly codify the design process because often the product is wrong because the process is wrong. The applicants are not doing the basics, for example developers failing to visit sites and prepare an opportunities and constraints report before attempting a layout". This was a particular concern in Buckinghamshire where a simple snakes and ladders diagram generated at their first coding workshop was being used to represent this idea (Figure 23).

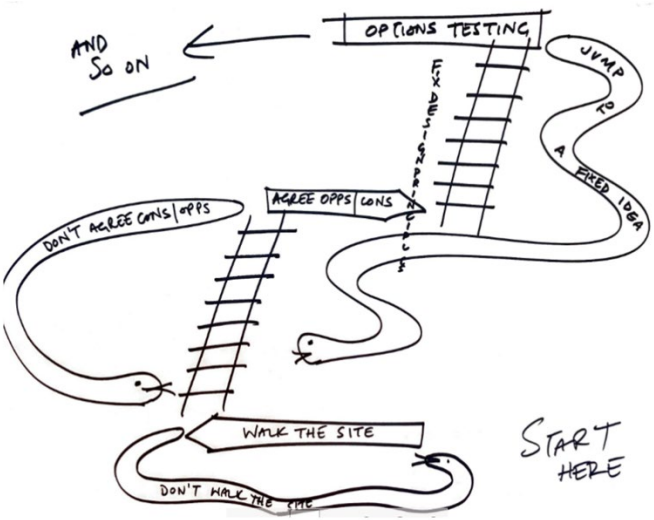


Figure 23: Design process snakes and ladders

9.2 Clarity vs. level of detail

Pilots had to balance what they saw as competing demands relating to the length of their documents as a consequence of the detail they were including. One interviewee commented "The value of the message is inversely proportional to its length" and another "Clarity normally requires detailed prescription". The challenge was summed up by a third as follows "It is not easy to have something succinct and concise but also contains enough detail that a developer knows exactly what you need them to do".

Pilots tended to focus on two separate audiences – development managers and the community. Some argued that development managers "have to be able to own, understand and be able to use design codes without assistance. We have to write with that goal in mind and speak in a language that they understand – avoid the fancy words, the complicated explanations. It needs to be absolutely crystal clear. If we make this too hard for them then they just won't use it". Another noted that "planning is full of documents that nobody reads so this needs to be much more practical and useable".

Seemingly complementary to these aspirations, those focussed on a community audience also aimed to create documents that were digestible, readable, and attractive, filtered, in Sefton, through the lens of would a lay person understand it. In Herefordshire careful testing of the wording of the various guides to coding that they produced occurred using the lay representatives of four parishes. The result was that issues that parishes did not understand, for example those relating to movement, were either further explained or removed.

Emphasising what is important

In almost all the codes, a balance needed to be struck between background explanation, high level principles and the specifics of coding, and the balance between these elements was determined by how far along in the design / development process the pilots were, and how all-encompassing their code needed to be. Codes ranged in size from 38 pages, in the case of Southwark, to 134 pages in North West Leicestershire (although the scale of what these codes covered were very different).

In order to reduce the size of codes and increase their clarity, or otherwise cut through the detail in order to identify the most important issues, pilot teams often found ways to pull out the key 'must haves' in the text or graphically saying "this is the code and this bit is important" (Figure 24).

Figure 24: For the Portsmouth Debenhams site, the codes are contained in purple boxes throughout the document

Whilst pilots generally aspired to produce codes that were more visual and not too long, they were also realistic that there was a lot of ground to cover if all of the ten Characteristics of Well Designed Places were to be adequately covered and at the same time "tick all the boxes for developers, planning people and other professionals as well as the community". The result were codes that were often longer than originally intended with a level of detail required to explain both the process and the design aspirations.

Avoiding duplication

One means to avoid overly long codes was to focus only on issues not already adequately covered elsewhere, for example in the highway standards of the Highway's Authority or in other planning documents. In this respect, a number of the pilots were already building on existing guidance already in place.

These codes could be what one pilot called 'hybrids' with high level principles mixed with more detailed coding where issues were either considered vitally important or were not adequately covered elsewhere – "we were more specific on height parameters and what we wanted to have happen at street level. On biodiversity and things like that, we have just put in a punchy one liner because these are the sort of things that we can deal with on a case-by-case basis as we move forward".

The question of precision

When asked whether they needed to communicate their codes with legal precision in order that they were defendable in the future, most felt that precision in language (precise English) rather than legal precision was the key issue, given that codes largely gained their status from being in conformity with adopted Development Planning Documents (DPDs) or through a resolution of the council following consultation. In that respect conformity was the main concern which necessitated a certain amount of what one interviewee called "planning speak". In two pilots, however, legal opinions were going to be sought on the text in case it was ever challenged in a judicial review or at appeal – "They will go through the code with a fine tooth comb". This created its own challenges when the aim was also to garner local support for codes.

Newcastle had noted the need for a glossary "to define what it is that we are actually saying and not leaving it open to interpretation". For example, "The term 'landmark building' means different things to different people – to some people it means a tall building but to others it just means distinctive", thus necessitating the need for a clear definition.

9.3 Flexibility vs. prescription

Pilot teams varied significantly in how prescriptive they wished their codes to be. Broadly they divided into three types.

Those seeking certainty

A minority of codes were focussed on achieving absolute certainly on the issues that were subject to coding. Sometimes this was because local residents were concerned that developers had too much wriggle room with current policies in order to bypass agreed design commitments. In Guildford, for example, the decision was taken to only include mandatory issues in the code which makes it clear that everything within it – all the text – is a requirement, although the diagrams and illustrations are only illustrative.

Portsmouth was also moving in this direction, having determined that codes which were immediately useable to development managers and developers alike, focussed on those aspects that were mandatory. Buckinghamshire likened this to a design code akin to the Highways Code – "It doesn't have a lot of weasel words; you always know what you should be doing in any given circumstance. We have got to code light but we have got to code hard".

Those seeking flexibility

For a variety of reasons, some pilots were seeking greater flexibility in their approach to coding:

- There was a desire to avoid everything looking the same which some argued was a danger if coding was too tight. In Mid Devon, for example, the layering of different typologies allowed greater flexibility as elements could be chosen from different types, whilst still delivering something that met the overall aspirations for better design
- Some worried about viability concerns, particularly if codes were applied too early in the process before development interest had been properly tested
- Others felt that principles rather than prescription should be the objective, and that codes that reduced the flexibility for pre-application discussions might be counter-productive (Figure 25).

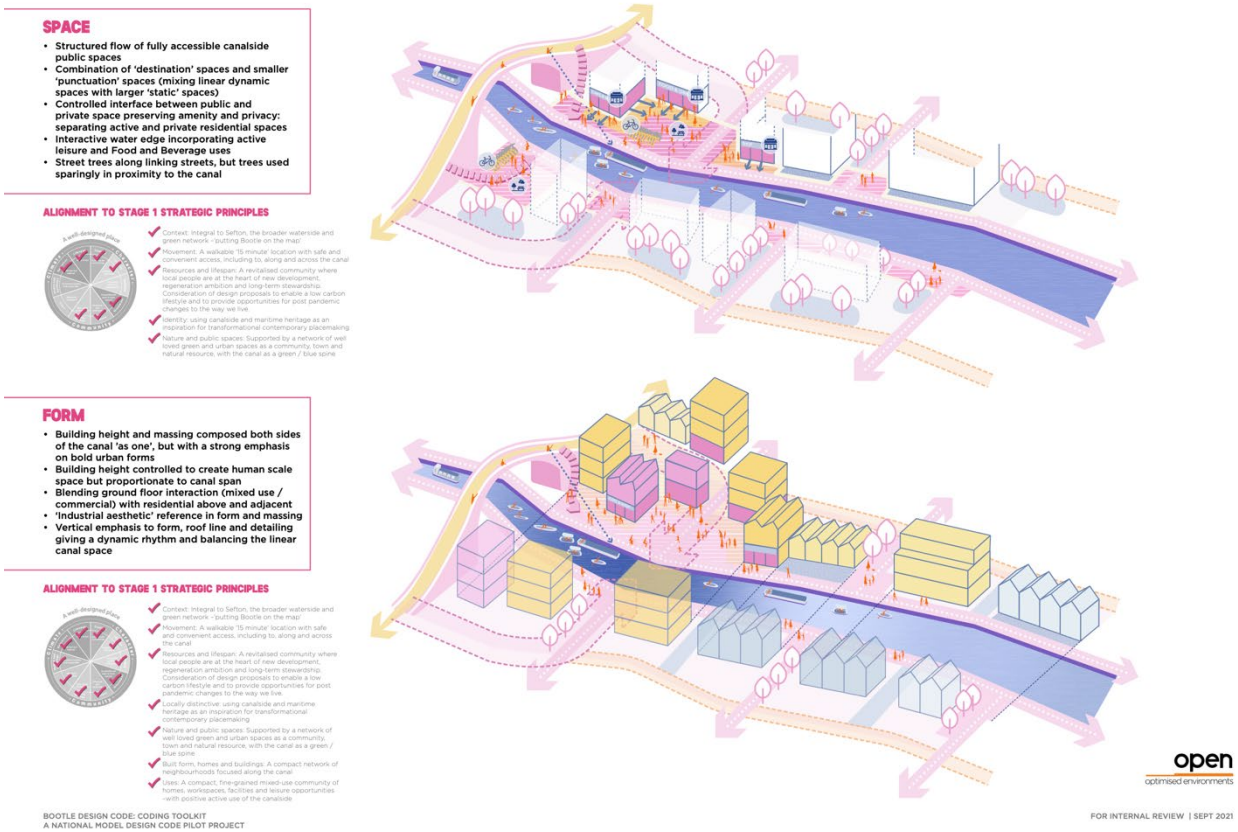


Figure 25: Flexible principles in the Bootle canal side corridor

Those seeking a balance

Most teams sought to strike a balance between prescription and flexibility depending on what was being coded. Various issues were identified across the pilots for rigid coding, including: heights, quantum (density), uses, parking including parking ratios vs. front garden space, dimensions for bin access, and access for pedestrians and cyclists. Aesthetic issues were more often coded with a greater degree of flexibility, for example, in Hyndburn there was little consensus in the team about roof pitches, whilst in Dacorum the language was looser around issues of appearance and materials, as long as the latter were "brick and masonry". Others simply found some issues easier to be prescriptive about. In Southwark, for example, the codes for land uses are noticeably stricter than those for nature (Figure 26).

Figure 26: The land use codes for Hatcham and Ilderton Roads notably include a requirement that 45 Degree chamfered corners should be included on all road intersections.

Prescribing process not outcome

For those pilot authorities who weren't producing codes but instead guidance on code production, the overall aim was to have a standardised process within their authorities but within that to have a flexibility for each parish (in Herefordshire) or estate renewal team (within Portsmouth) to be able to produce their own design code in a manner that reflects local circumstances. In Herefordshire the approach echoed their success with Neighbourhood Plans, setting a prescribed way of doing it without saying 'this is good or bad' – "In the past some parishes have been quite prescriptive e.g. no leylandii, and others much less so".

9.4 Expressing codes: 'Musts', 'shoulds' and 'coulds'

How codes were expressed was perceived to play a significant role in determining whether they were perceived as mandatory, advisory or simply illustrative. Most attempted to adopt clear language protocols to ensure that readers understood the relative importance of different elements within their codes. The importance of this was emphasised in Hyndburn where one interviewee commented – "if you say it 'should' have, and it is only recommended, developers won't do it". Thus critical issues should be expressed as 'must haves', meaning "we want you to do it and it is mandatory" whilst 'should haves' are seen as 'expected' not advisory – "it is not just good practice and we would very much like you to do it".

Some felt that it was generally easier to code for the 'must', 'will' or 'require' issues, as 'shoulds' tended to relate to less tangible aspirations e.g. that schemes should be beautiful, or to the large scale more 'wicked' problems e.g. solving public transport accessibility. Others distinguished between generic 'should' and 'could' issues whilst 'musts' were seen as specific to the place reflecting known issues that needed to be dealt with. The content analysis revealed that the relative balance between modal verbs varied considerably across the design codes produced during the pilot programme, although together 'must', 'will' and 'required' tended to be heavily favoured over 'should' which were in turn favoured over 'could' which were only use infrequently.

Adding caveats

Different pilots brought their own interpretations to these matters. Southwark, for example, adopted a system where most of the codes were considered a requirement and are worded as 'must', but the way they were reached were defined in advisory or illustrative elements of the code as 'coulds'and 'shoulds'. While these elements are expected to be achieved, acknowledging the challenges in the area, there is a degree of flexibility if a particular site is clearly unable to deliver a specific code. For example, the off street undercroft servicing yard was a "must comply with the following requirements" mandatory element, but how to secure it in each case was left to "a pre-app meeting when you set out priorities and then you set out how they could respond to meet those priorities".

Newcastle started off with 'must' in as many areas as possible, but, following testing with policy colleagues, expect to refine the wording. "For example, the height parameters guide new build specifying 6-7 storeys in certain areas, but we may need some flexibility if a comprehensive scheme pushed that further. Ultimately it would need to demonstrate it would be appropriate in context". In such cases the wording 'should' might be inserted or, more likely 'must' will be caveated – "So the caveat might be 'ensure amenity, overlooking, shadowing, daylight/sunlight, wind, and micro-climate are all protected as part of the increasing height".

Constructive ambiguity (or not)

Most pilots felt that it was important to clearly define what was or was not expected. The Arbury Design Code, for example, for Nuneaton and Bedworth includes instructions on how to interpret advisory and mandatory elements. Then throughout the text, boxes clearly state which elements are mandatory (Figure 27).

Newcastle, by contrast, chose a policy of constructive ambiguity by placing mandatory and advisory elements in the same boxes in order that developers did not simply cherry-pick what they want to do – "We haven't wanted to highlight or signpost the 'musts' in any special way. There are boxes but all the elements are included. We want the developers to buy into the whole scheme".

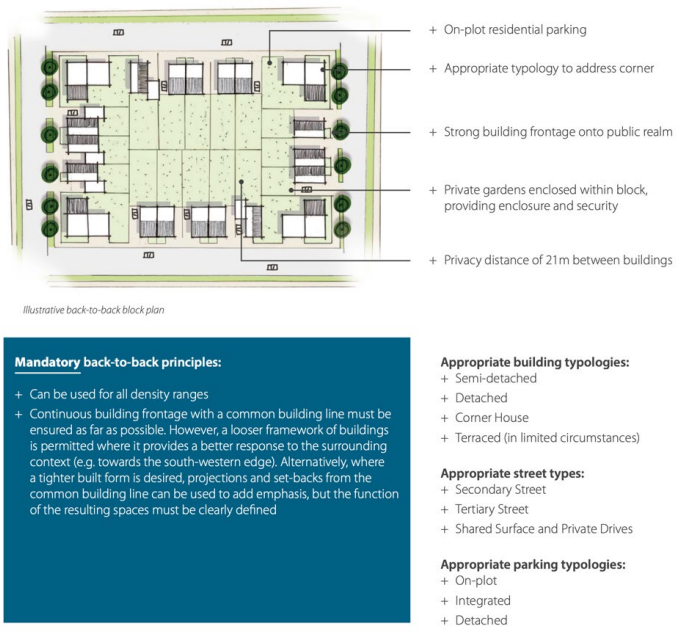


Figure 27: Boxed mandatory elements, Nuneaton & Bedworth

Others chose various tiered approaches. In Sefton drawings were used to illustrate 'could' scenarios (see Figure 25), whilst in Dacorum the Key (framework) plans are the 'musts' so required to be very clear – "They are the elements that you can really refer to when deciding on a planning refusal" (see Figure 28).

10. CONSULTATION, TESTING AND ADOPTION

10.1 Consulting on codes

The pilot teams were asked whether, beyond any formative engagement (see 7.1, 7.2 and 7.3), how they anticipate consulting the local community and key stakeholders on the content of their codes?

Consulting residents

For some pilots this was seen as part of an ongoing engagement process. In Buckinghamshire, for example, a website – bucks.place (Figure 28) – has been set up to engage the public by inviting them to submit photos and comments on where they live. The intention is that this new resource will be used in the future for formal consultation on the emerging code. In Guildford following completion of the Community Code positive views were received from the Community Panel that had fed in to its original creation.

Figure 28: bucks.place provides an ongoing engagement platform as a legacy of the pilot exercise

Most of the teams planned some formal consultation as part of anticipated testing and adoption processes. Sometimes these were seen as free-standing processes, and sometimes piggy-backing on existing and planned consultations relating to emerging local plans and area action plans. In Herefordshire, a consultation statement had been produced as one of the outputs setting out how this should occur in the future as parishes bring forward design codes.

Consulting stakeholders

Only one pilot had already consulted on their code – Southwark – whose face to face engagement with local businesses and churchgoers, using a local business unit, built on the earlier trust developed amongst stakeholders when the design team were routinely 'present' and knocking on doors to build connections with key local businesses (Figure 29). Elsewhere, including Colchester and Tendring, this was simply seen as part of the on-going conversations that needed to happen on large developments.

Figure 29: Consulting local stakeholders on the Hatcham and Ilderton Code, Southwark

Portsmouth had used the opportunity of the pilots to set up an internal Estate Renewal Working Group which will be continued once the coding process is concluded. The group provides a ready vehicle for further refining the document and discussing future codes relating to other estate renewal projects. Other pilots had plans to reach out widely both within and beyond their organisations in order to get feedback on their codes. Consultees included: highways authorities, landowners and developers, Natural England, Homes England and Historic England, local water companies, the NHS, other local authority departments such as parks and open spaces, waste management, housing and education, and the full range of statutory consultees. In a couple of cases stakeholders were being invited for walkabouts in order to help them understand the code and secure more focussed feedback.

10.2 Testing codes

In part, gaining feedback on the draft codes through formal consultation processes represents a form of testing of their content. In addition, pilots were planning more proactive testing of code content. A number of approaches were being adopted:

- Code breaking: the Buckinghamshire team had a specific 'code breaking' workshop scheduled at which a range of stakeholders, including local developers, legal experts, designers and others would seek to test out the code in order to reveal its strengths and weaknesses prior to a subsequent refinement process
- Testing against project submissions: a number of teams planned to test their codes against project submissions, either live submissions made during the code preparation process, historic applications or dummy applications
- Testing with development management: most common were teams that intended to use the expertise of development management colleagues to test their codes. In Dacorum a dedicated development management workshop was being planned to bring focus to the exercise
- Testing with the community: In some pilots, community input was central to code preparation and an ongoing testing role was foreseen. Herefordshire is a case-in-point, where four parish councils were used at each stage to test the content of the code and sense-check it

- Market / viability testing: In two pilots the costs of their coding aspirations were being tested. Hyndburn were running a cost estimate on the likely difference in cost if only the 'must haves' were delivered as against both the 'must' and 'should haves'. The exercise revealed "the difference is not so much, not even 10% in the uplift". In Newcastle, the council's property team was engaged in some soft viability testing before they began thinking about engaging with developers on the chosen site, possibly through a joint venture.

10.3 Adopting codes

The pilots were actively considering how they would give their design codes appropriate status once they had been refined and completed. Three options existed: i) adoption as informal guidance; ii) formal adoption as a Supplementary Planning Document (SPD) or iii) formal adoption as a Development Plan Document (DPD). With each step the status of the resulting code would increase but at the expense of the time, resources and risk required to get through the process and at the expense of the ease with which it can be revised later. The two Councils responsible for the Tendring Colchester Borders Garden Community were actively considering this and specifically "how best to prepare a layered set of design guidance / control mechanisms that are appropriate at different stages of plan making (see Figure 30).

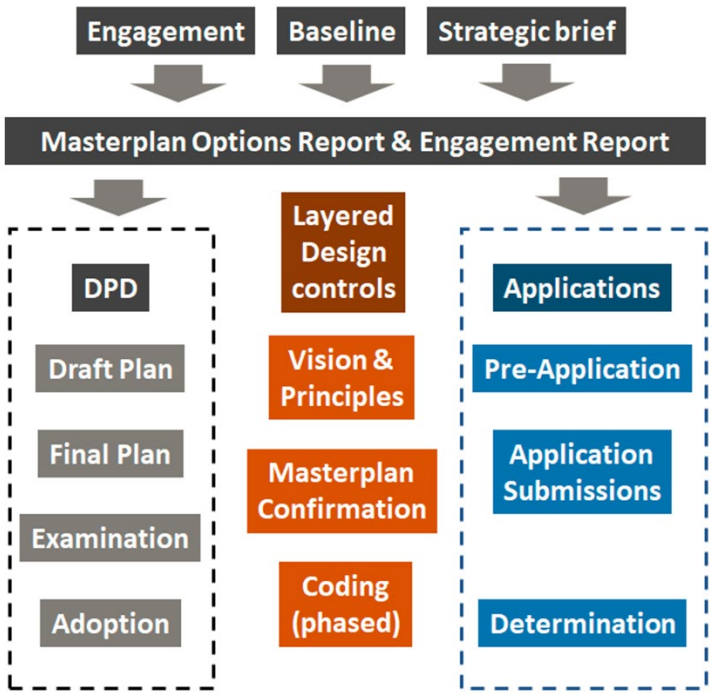


Figure 30: Anticipated layered design guidance, Colchester and Tendring

Informal guidance

For some pilots, the attraction of getting their codes quickly into active use trumped the benefits of increasing their status through formal adoption. Mid-Devon, for example, liked "the idea of adopting far earlier so that site allocations are informed by coding" as well as eventual development management. It was also appropriate in cases where design ideas were likely to continue to evolve. In the case of Nuneaton and Bedworth, the early use of site-based coding (prior to masterplanning) meant, for example, that the code was based on an 'illustrative concept framework' to enable principles to be tested and fixed around scale, open spaces, corridors, the relationship to context, the number of homes and their density, etc. (Figure 31). However, because this was provisional the authority felt it was too early to formally adopt. In the various pilots going down this route, the process typically involved consultation followed by a council resolution to adopt the guidance.

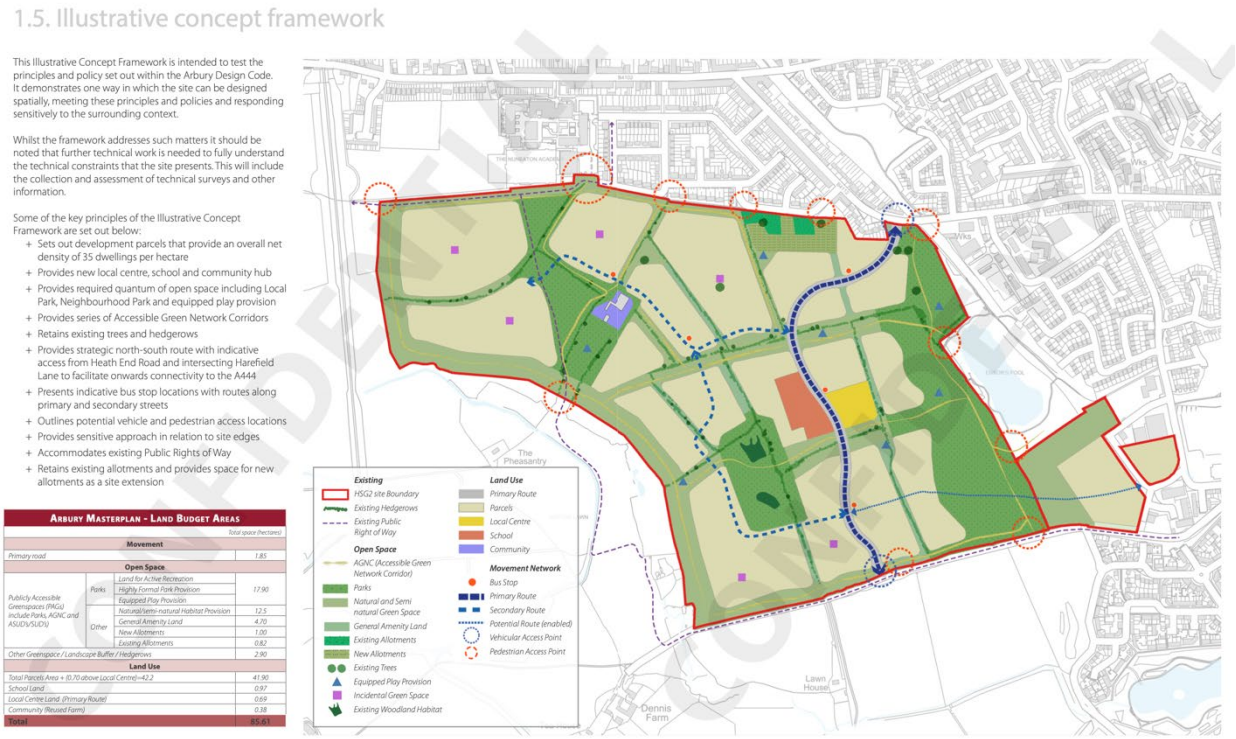


Figure 31: Arbury illustrative concept framework

Formal SPD

The majority of pilot authorities intended to go down the adoption as formal SPD route, and some of these, in the meantime, intended to use their draft design codes for development management. Buckinghamshire took the view "we will have a formal public consultation regardless because it allows us to put weight on the document, it may then be SDP, part of the local plan or just guidance, ether in whole or part".

Formal DPD

A small number of cases planned to tie the adoption of codes to processes already underway to adopt area action plans as formal DPDs. In Herefordshire, the guidance for parishes envisaged that design codes would be twin tracked with the revision and / or adoption of future Neighbourhood Plans across the county, although would not themselves go through examination and referendum. Instead, the council would seek to adopt each code as a cabinet member decision, alongside the formal neighbourhood plan process.

10.4 Impacting other policy and guidance

The pilots were asked whether other policy, guidance or design documents would need to be updated once codes are complete, and how this would relate to the standards and guidance used by highways authorities.

Planning policy and guidance

Pilot teams were evenly split between those that felt codes would primarily need to respond to existing policy and guidance – "We have tried to ensure that they don't conflict with any other SPDs" – and those that expected existing policy and guidance to be revised to respond to the codes – "we are looking to set an umbrella framework of design coding policy in the local plan for the codes themselves to fit in underneath". The former camp included authorities who were already confident in their local plan and expected new guidance to align with it, rather than test it.

On this issue there was a sense that not everything should be in the code (see 9.2). One interviewee noted "There is the nervousness that if you don't put something into the code, the developer is not going to do it", but "The

code and all the other design guidance documents have a particular job or role, and some have more weight than others. As long as you reference them in the code, then the developers would still have to cover those aspects".

Other teams with local plans still in their evolutionary phase or looking to adopt dedicated area action plans saw this as an opportunity to use the learning from the pilots to inform their plans or "to set an umbrella framework for design coding in the local plan". In these cases a key issue for councils was how much detail should sit in the plan and how much outside in design codes or other documents. In the case of the Area Action Plan being developed for Old Kent Road (Southwark), the decision had been taken to include a two page summary of the Code within it. In Leeds, where the pilot programme had not produced a code, the feeling was that the authority may want to update all their adopted design guidance to incorporate design coding, and so – "Updating may be an issue across the board".

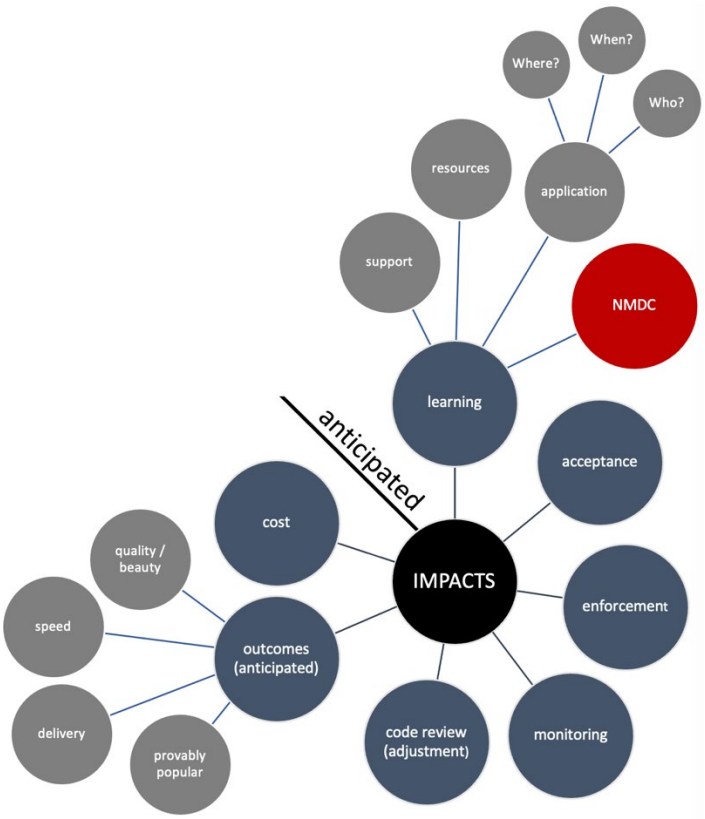
The highways question

Turning to the relationship of the design codes to the guidance and standards used by highways authorities, the stark but overlapping division in responsibilities was apparent across the pilots. Teams were at pains to point out that what was being created were planning documents to be adopted by the planning authority and not the highways authority (even if the two were in the same council). This meant that coding teams were having to use pre-existing guidance and standards if they wished the resulting streets to be adopted.

Whilst officers from respective highways authorities had been involved in many of the pilots, typically this was a marginal involvement, particularly where principles being discussed were of a more strategic, less detailed, nature. Some confirmed it was "Unknown how pragmatic highways will be with regard the code", and in most pilots detailed discussions were yet to happen and perhaps would not until applications for actual development proposals were received. In Nuneaton and Bedworth the highways authority – Warwickshire – had already let it be known that they would not be adopting streets that followed key elements in the emerging design codes, notably shared surfaces and home zones. Only Colchester and Tendring had put in place a governance structure to allow joint decision-making between both district authorities and the County Council, in this case reflecting the joint investment of all three authorities in the scheme.

One interviewee espoused a feeling shared by many: "This is incredibly frustrating." In that case, she continued "Highways are under an instruction to reduce adoptable extent so this impacts the road designs that they will want to accept in new development. As a result, cul-de-sacs are their preferred solution which does not match our urban design preferences".

Anticipated impacts



11. ASSESSMENT AND APPROVALS

11.1 Using codes in development management

Each of the pilots was primarily interested in producing tools that were usable and would have a direct impact on the quality of schemes making their way through development management. As one interviewee commented "The focus has got to be on planning officers taking a greater role in shaping places. By using the design code, they will be guiding proposals in a more positive, placemaking direction rather than just doing an assessment against policy". In doing so, raising their confidence to address design concerns.

Pre and post-app

Codes were seen as potentially valuable tools across the range of processes in which development management engages, and notably in conducting pre-application discussions and in assessing formally submitted proposals for planning permission – "Anything within the Huncoat Garden Village will need to use the code" (Figure 32). For their part, applicants for planning permission would be expected to reference design codes in design and access statements, making it clear how they have met the stipulations in codes.

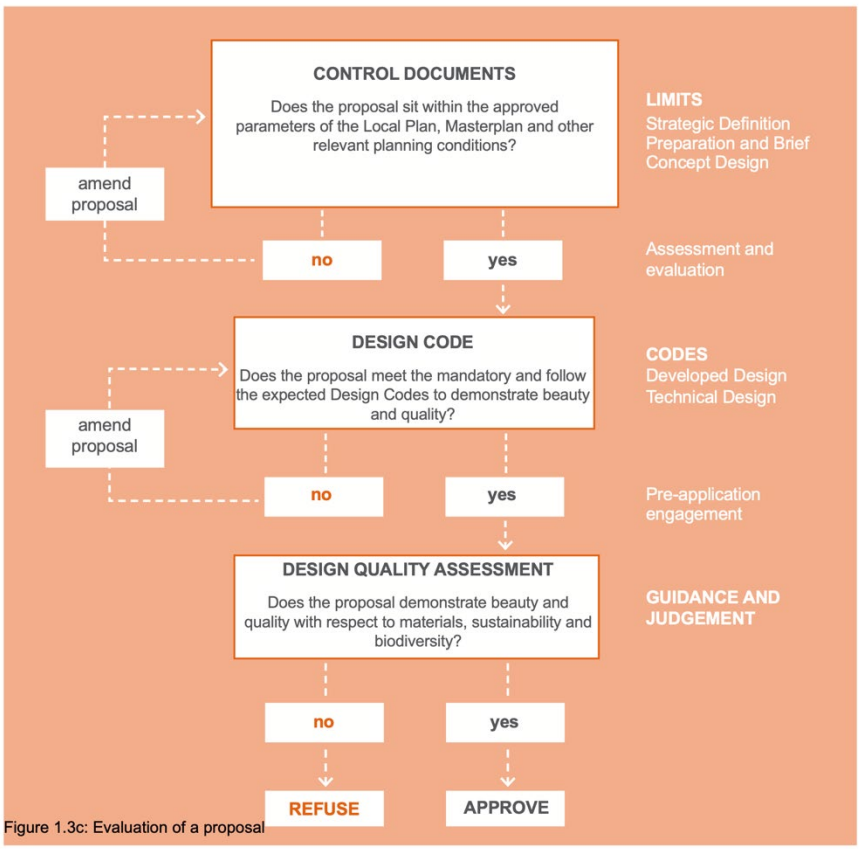


Figure 32: Huncoat Garden Village Design Code, evaluation of proposals

In Dacorum the hope is eventually to turn the code into a digital tracker that officers and applicants can interactively use – "a framework that officers can use and take to the table when assessing design". North West Leicestershire are considering whether to make their guide into a scoring / compliance tool, and will require development management to use it as their rationale in recommending refusal or approval. A performance target is already set that 90% of schemes must meet the aspirations of the design guide. In Herefordshire where development managers are already using neighbourhood development plans (alongside other tools) to evaluate each application, all delegated authority or committee reports currently include a section focussing on compliance. In the future "there will be an additional box to write about the Design Code in relation to the application".

Similarly, development management officers at Hyndburn will be expected to check that the design principles for Huncoat Street, Open Space, and House, have all been respected, potentially using the tick box checklists scattered throughout the code to ensure coverage of all the issues. There, however, given the complexity of the code (currently 117 pages), its authors are realistic that "this is going to be quite challenging. The amount of time that it would take to go through this would be substantial". A key exercise will therefore be to determine what aspects and sections can be removed or simplified "to make the design code easier to use for development managers". In Nuneaton & Bedworth, the Arbury code includes a simple compliance checklist as an appendix, with 30 boxes to tick, each representing a basket of design issues (see Figure 34). Elsewhere, pilot codes were already being used informally to evaluate applications, although with reduced weight given their pre- adoption status.

Advising on process

Some pilots hoped that the use of codes would begin even before applications were received, by setting out the 'right' processes to follow in order to deliver better design outcomes. The aspiration in Buckinghamshire, for example, is that the design code could help in defining what some of these questions could be that development managers should ask – "What a lot of planning officers say is that they are not confident in design, they don't know what the right answers are here. You don't need to know the answers, you just have to ask the questions such as have you visited the site, tell me about the site, this will trigger a better design response".

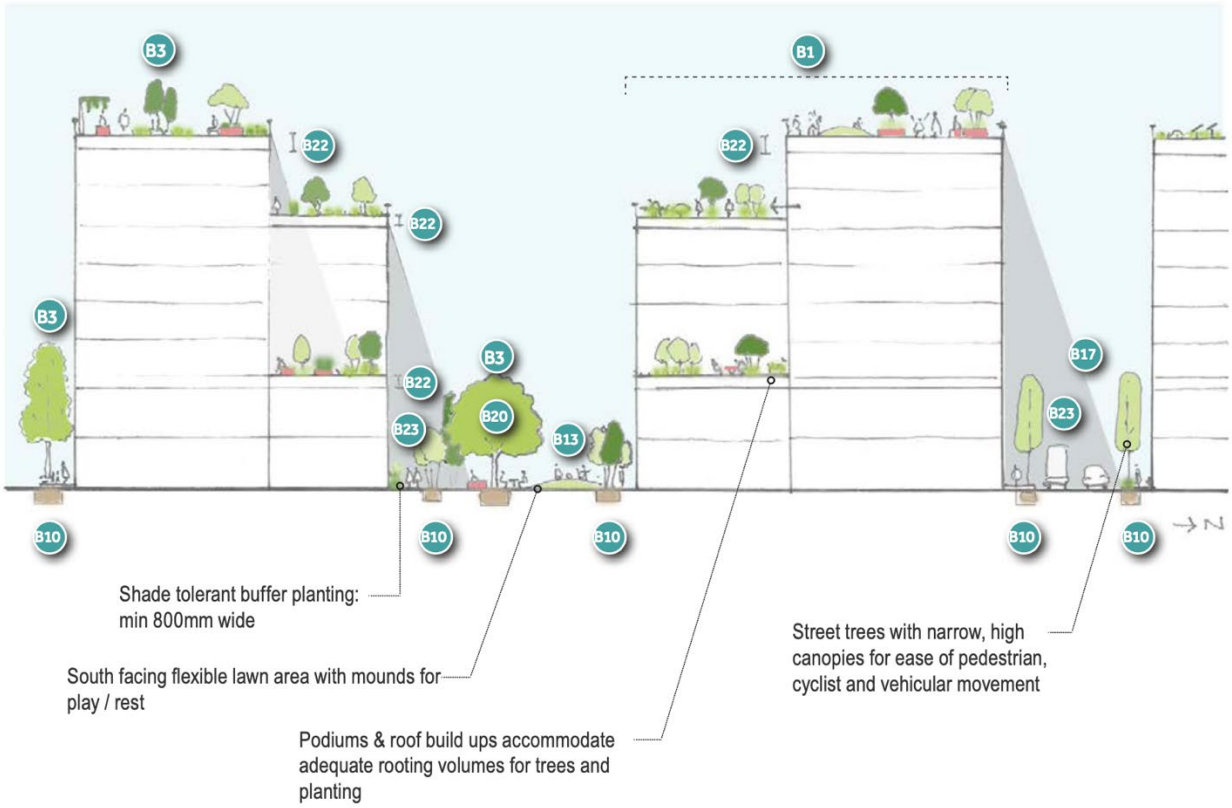
In a different way, other codes also set out advice on process. Newcastle, for example, propose to produce a Planning Requirements chapter which will set out what the local authority would expect regarding section 106 processes; advise on using the VNG (3D) model to test schemes coming forward; and the use of local design review – "Anything that really adds or helps give weight to the design process".

11.2 Using codes in other regulatory processes

Pilots were at pains to point out that their design codes were planning documents (see 10.4) – "we have not tied this into any other approvals processes – section 278, section 106, or section 38". Nevertheless, efforts had been made by some teams to integrate other regulatory – particularly engineering – concerns in order to avoid obvious conflicts, and "so that design is not seen as something separate to engineering". This, however, needed to be something that other stakeholders were comfortable with, bearing in mind that many already had their own published guidance and standards and other regulatory processes had their own trajectories. It also depended on where, in the development process, codes were perceived as acting.

For some, codes were setting out the high level strategic properties of sites, to likely be used in connection with the making and consideration of outline planning applications – "We anticipate compliance with the design code coming with an outline planning application, either within or supporting a Design & Access Statement", and more detailed engineering concerns were perceived as more detailed considerations, typically held over as reserved matters and outside the scope of their codes. For others, the reverse was the case. In Buckinghamshire, for example, the aspiration was for the code to integrate highways and drainage issues – "If compliance with the code will get you planning but also through the highways adoption process, then developers are going to comply with it".

SUDs and drainage were more often considered integral elements for codes to deliver rather than detailed highways design (Figure 33). Secured by design was also considered integral to coding, but matters dealt with by Building Regulations were not.



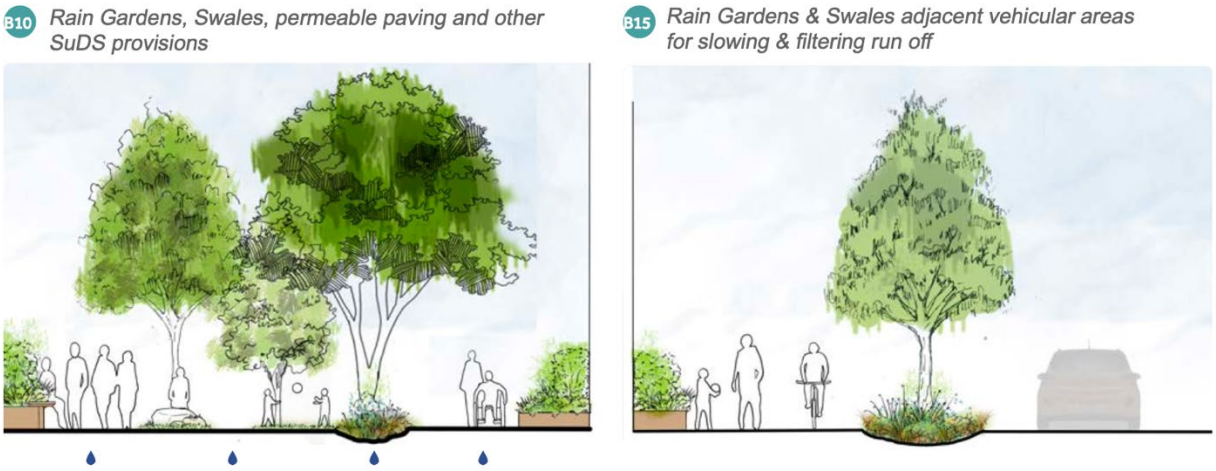


Figure 33: The Hatcham and Ilderton Roads Code requires that SUDS, including blue roofs, rain gardens and permeable paving should be accommodated

11.3 Knowledge and skills to administer codes

Pilot teams had already been asked about the skills required to create codes (see 4.2). A related issue was the skills required to administer them and here opinion was divided depending on local circumstances.

Need to upskill

Although some design codes, such as Dacorum's, had been deliberately designed so that any planning officer could understand them and would have the skills to administer them, the largest group of authorities were realistic that they would struggle to deliver the more design focussed development management process that design codes demanded. This translated into an ambition in some authorities to recruit design specialists, when available (one authority had advertised three times and still not filled a post). Elsewhere, the focus would be on design training

for existing development management staff. Some of this would focus directly on the new codes (their content and how they should be used) and some on raising design knowledge generally – "We should start doing more visits specially to see schemes in other boroughs, higher density schemes that are good and to explore particular issues like materials or scale". The aspiration was expressed by one interviewee as – "We are training them to think a bit more like urban designers"

Need to bring in skills

A smaller group were clear that they didn't have the skills in-house to administer their codes and were resigned to pull in design expertise from outside in order to help them. In Colchester and Tendring this simply reflected the size of the Garden Community being planned which far outstripped their normal dealings with much smaller applications. Use of a dedicated delivery team (including external design advice) was consequently part of the business case. In Guildford, there were no design skills inhouse, but someone was to be given the responsibility of overseeing the process of calling in external advice as and when required.

Already well placed

The larger metropolitan authorities – Leeds, Newcastle and Southwark – contrasted with many others in feeling well placed to administer codes. Indeed, it was already routine practice for development managers to receive the specialist assistance they needed on urban design, conservation, transport, environmental health, and landscape and ecology, trees, and other matters that required more specialist input – "having a design code doesn't really change that process". Even here, however, there was a recognition that the day to day awareness of any new codes amongst development management officers would be important, and that training would be required.

Skills but no time

A final small group felt that they had the knowledge and the skills in-house to deal with the codes, but the problem was the additional time this would require – "you could make it as simple as can be but if the design code is an extra task, they may or may not use it, because they simply do not have the time". For these authorities, the challenge was to create codes that would save rather than take time for officers to apply – "If you have a design code, you might not need a huge amount of design input because the idea is that the design code saves time and provides clarity in that it is front-loading the level and quality of design".

Design review

When asked if design review would play a role in interpreting the codes in relation specific planning applications, the teams were evenly divided. Whilst some intended to tie the use of design review to the code as part of the process promoted in their code, others (who did not routinely use design review) saw no need.

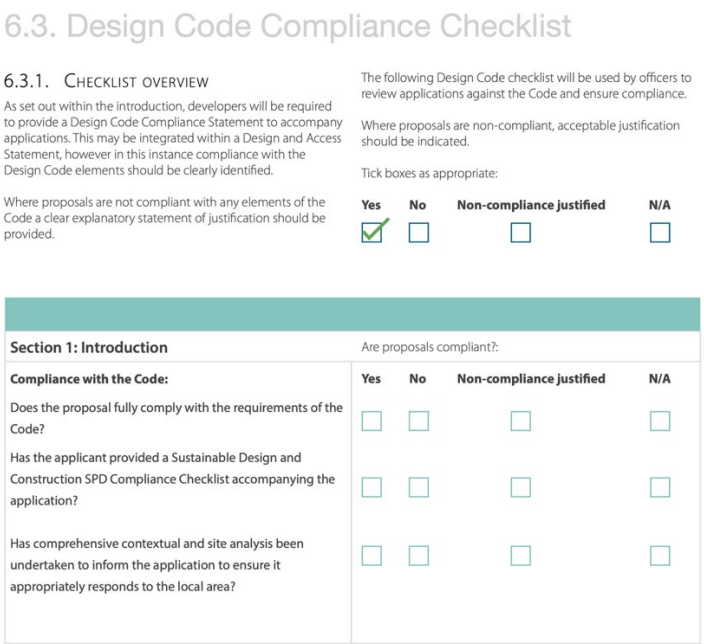
12. DELIVERY AND BEYOND

12.1 Enforcing compliance

Coding teams were generally still in the coding phase, although that was being done with implementation in mind. When asked, beyond the approvals process, who would be responsible for monitoring the delivery of codes against what was being delivered on the ground, most pilot teams pointed to their development management and enforcement colleagues and to the "usual processes" for such things. Some noted that following the hiatus of the lockdowns, increasingly staff were getting out on site to ensure compliance, and that this would continue much as before without any special provisions to reflect the increased emphasis on design quality.

In some authorities there remained a concern that, despite all their work, the aspiration for delivering design quality remained vulnerable to other factors – "PINS will simply ride roughshod over all the work if the five year supply is not in place". Others hoped to overcome this by engaging housebuilders directly to ensure they were aware of the new design expectations and did not attempt to circumvent them. Others still, hoped that their codes had created a structure to make it easy to enforce the delivery of design quality where required, for example by pulling out clearly the 'shoulds' and 'musts' (see 9.4) or by using the compliance checklists built into codes

To facilitate this, Dacorum were anticipating building in an interactive compliance checklist into the ESRI website that was being constructed – "The idea is that you click on it and it sets the codes that you really need to comply with" – or alternatively a digital tracker that could be sent to the applicant in order to justify whether and how they have complied with the code" (see 11.1). Less high tech, Nuneaton & Bedworth will require a compliance statement with applications subject to the design code. Development managers will then use the compliance checklist (see 11.1) at the back of the Arbury Design Code to help them assess the compliance of the application. Hopefully this is a tool to identify areas where there is not compliance so they can focus on these aspects (Figure 34). In the larger local authority led schemes, tying the codes to the anticipated development agreements will provide a further contract-based means of enforcing compliance.



6.3. Design Code Compliance Checklist

6.3.1. CHECKLIST OVERVIEW

As set out within the introduction, developers will be required to provide a Design Code Compliance Statement to accompany applications. This may be integrated within a Design and Access Statement, however in this instance compliance with the Design Code elements should be clearly identified.

Where proposals are not compliant with any elements of the Code a clear explanatory statement of justification should be provided.

The following Design Code checklist will be used by officers to review applications against the Code and ensure compliance.

Where proposals are non-compliant, acceptable justification should be indicated.

Tick boxes as appropriate:

Yes	No	Non-compliance justified	N/A
☑	☐	☐	☐

Section 1: Introduction	Are proposals compliant?:			
Compliance with the Code:	**Yes**	**No**	**Non-compliance justified**	**N/A**
Does the proposal fully comply with the requirements of the Code?	☐	☐	☐	☐
Has the applicant provided a Sustainable Design and Construction SPD Compliance Checklist accompanying the application?	☐	☐	☐	☐
Has comprehensive contextual and site analysis been undertaken to inform the application to ensure it appropriately responds to the local area?	☐	☐	☐	☐

Figure 34: Arbury design code compliance checklist (part only)

In general coding teams were confident that the use of design codes should make design-based compliance easier to monitor and enforce, by more clearly setting out expectations and the means to evaluate their post-application delivery.

12.2 Scope for negotiation

The use of design codes is built on an assumption that the provisions contained within them are more fixed, less discretionary and therefore less subject to negotiation. Nevertheless, in a planning system still defined by its discretionary nature, pilot teams were asked if their codes left scope to negotiate on design parameters with developers.

Always room for negotiation

Overwhelmingly the pilot teams felt that, despite the presence of the codes, there was always room for negotiation. One interviewee noted, "I am not naïve enough to think that we have thought of everything"; another that "the whole process rests with the art of negotiation and it still will even with a design code. I have heard some people talk about a design code as sacrosanct, but that is not how planning works. I don't think we are going to get design code compliant planning applications just because there is a design code", so negotiation will be necessary.

Some had deliberately gone down a more flexible path with their coding that encouraged dialogue with developers (particularly where there were multiple landowners), but gave local authorities a stronger hand when entering into those discussions (se 9.3) – "The code puts the council in a stronger position where they can push back on non-compliance on key elements".

Sometimes the scope of areas for possible negotiation was set out in the way that 'musts', 'shoulds' and 'coulds' had been used (see 9.4). Newcastle, for example are relaxed about heights and form (reflecting viability discussions with owners) but less so about public realm, with the coding attempting to ensure that public realm improvements are always paid for and delivered. Leeds noted that, in the city, "developers are very reluctant to change their standard house types on which the industry is built. But with the emphasis on placemaking they can now say 'now you can keep your house types but they are not going to be this close together, or this far apart, you have to look at making the spaces around them better as we have got to work on placemaking itself'. So the negotiation will be on placemaking, with the NMDC to back up those discussions"

Limiting negotiation

Some felt, however, that the more flexibility codes contained, the more development management officers would struggle to make judgments on design and had deliberately focussed on 'musts' in order to limit room for negotiation on those key issues. One interviewee argued "coding can sometimes be a very blunt tool but that is the flip side of how you raise quality when the volume of work exceeds the resources. By focussing on the most commonly occurring problems, the rest may not need to be coded. We can allow some discretion in the detail". The balance of judgement on where this scope for negotiation lay varied between the pilots, although all concluded that negotiation would (and should) remain.

12.3 Coding for post-completion management

Those pilot teams that had engaged the public in their work reported significant comments regarding long term management and maintenance and incremental change relating to factors such as bins, bikes, boundary treatments, landscape, parking, change of use (in central areas) and so forth. Interviewees were aware that too much flexibility can slowly undermine schemes, for example relating to boundary treatments, but most were hesitant about attempting to deal with such issues through coding – "a code can only code for the development and not what might happen in the future.

Most saw other mechanisms as being primarily responsible for dealing with ongoing management concerns, including conditions to planning permissions, Section 106 agreement, management companies, restrictions on permitted development rights, BIDs, and so forth. Codes were seen as having a role, however, in the teams dealing with the largest projects, where potentially the design code could provide the basis for planned

stewardship bodies to manage any assets held in common such as open spaces. These ongoing stewardship models were under active consideration but it was too early to determine what form they would take.

12.4 The evolution of design codes

Beyond the evolution of sites and places, codes may also need to evolve as circumstances change in the market, in policy, or in aspirations. The pilots were aware of this and some had factored it into their thinking:

- The usual process: Most expected their code to evolve over time but that revision would need to happen in a similar way to any other planning policy document, namely through the full formal processes, including public consultation.
- A dedicated process: A number of pilot teams had determined that their code (or their guidance for preparing codes) would set out a review process. In Hyndburn it was anticipated that over the 15 years it was likely to take to build out the project, the code would need to be reviewed every two to five years. The evolving guide on coding for estate renewal in Portsmouth similarly sets out that each code should have review triggers related to a time frame (e.g. five years) or delivery threshold (e.g. delivery of X units), while Guildford envisage using their Community Review Panel to review the code following the different phases of occupying Weyside Urban Village (Figure 35)
- A staged process: A final group saw coding as a staged process, with the initial coding setting out high level principles to be developed and refined in subsequent design codes that focus on a finer grain of details for whole sites or phases of development. In Buckinghamshire, a commitment has been made that after a year of finishing the county-wide 'A' code, it will be reviewed to see how it is working. Then a decision will be made about progressing with the 'B' codes focussing on key sites or areas in the county.

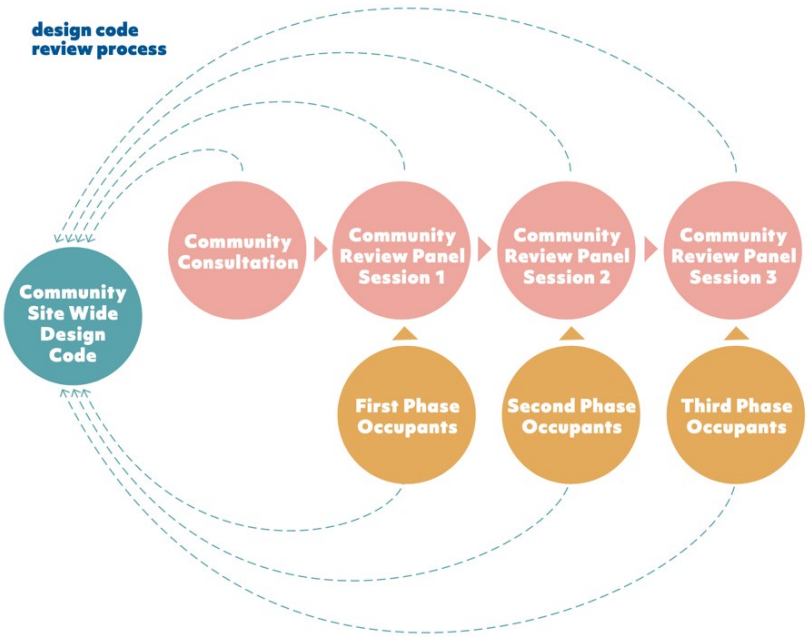


Figure 35: Weyside Urban Village Design Code review process

Only one team considered post-adoption formal review mechanisms impractical, arguing that the speed of market change and the challenges of getting amendments adopted made it easier to start again if codes needed revision. Other teams envisaged drawing on more or less formal sources of evidence to inform these processes. These ranged from monitoring development management and their experience using a code; to periodically formally cross checking decisions and appeals against the parameters in the code; to "Informally turning up to view things, which shows developers and their contractors that you are an interested authority, and will help to spot what is working and what isn't and will prompt discussions and amendments". What was clear was that for large sites and authority-wide codes, adoption of the first draft was not the end of the road.

13. EXPECTED OUTCOMES

13.1 Inclusive and popular design

When asked to anticipate how successful their design code processes were likely to be, interviewees were generally hopeful, but also realistic. The questions began by looking at how inclusive the processes had been and whether they were likely to lead to popular outcomes as a result.

Inclusivity

Success on this front depended on the aspirations of teams as well as on the nature and history of the places being coded. For some, the time pressures of the pilot programme itself (as well as the limitations exerted by the pandemic) left them struggling to conduct meaningful engagement. Elsewhere, authorities were struggling with populations entrenched in their positions opposed to all new housing as a consequence of living with many years of substandard development – "how do we get people to engage when they fundamentally don't agree with development happening on a site in the first place". In such places it was difficult to get a clear picture of what would be popular, and when guidance was dealing with whole authorities (as opposed to sites) even harder because people didn't feel directly affected – "for city-wide or higher level codes, it is harder to engage".

Nevertheless, significant efforts had been made by a number of the pilots to engage with their communities (see 7.1) and a number of the pilots felt that they had been able to cut through to gauge and subsequently reflect community views in their coding processes – "I don't see how we could have been more inclusive because we have taken their views into consideration, including images they have sent in for certain character elements". Teams were aware that they could always do more and that often they seemed to be talking to the same sorts of already informed and active groups rather than to a cross-section of society, with only Southwark going out of their way to "embed the different cultural patterns found in the area in the code's architectural language, with a workshop focussed specifically on this". Elsewhere, the presence of key community groups already active, notably the Ouseburn Trust in Newcastle and the Community Design Review panel in Guildford undoubtedly helped to get others involved – "The earlier you talk to the community, the smoother the ride is" – but how generally inclusive these groups were remains a concern (Figure 36).

Figure 36: Community review panel, Guildford

Provably popular

A belief existed that, in theory, "If People are engaged with properly and the outcomes relate to what people said then it should result in provably popular outcomes". However, the challenges with delivering an inclusive process

undermined 'proving' what might or might not be popular locally – "We struggled to get meaningful engagement and therefore to understand what would be popular locally", "most people don't engage".

The exercises tended to show that simply asking what people like or want tended to result in quite simplistic and unsurprising answers such as people liked greenspace (Figure 37), or answers that were unhelpful "in the context of expectations of what the code could say were realistic and deliverable". The challenges are illustrated by one set of engagements where "people got obsessed about two storeys and no more, even when shown that in their village there were three storey or even four storey buildings". As a consequence, "what was 'provably popular' on paper conflicted with requirements for achieving density to support local services and a viable development", suggesting that engagement may also need to be accompanied by a process of informing stakeholders about what is or is not possible in different circumstances. The larger schemes being coded anticipated that the extensive consultation they planned over many years should lead to popular outcomes simply by virtue of the time they would spend on it, a luxury not afforded to smaller developments or to authority-wide coding teams.

Figure 12: Places need to be designed to encouraged a sense of community with spaces for the community to meet and gather

	Why do people feel postive or mostly positive about a place?	
1	Close to Nature	41
2	Attractive	35
3	Sense of community	30
4	Important to the Character of Hemel	29
5	Feels safe	25

	Why do people feel neutral about a place?	
1	Dull/boring	8
2	Not Attractive	8
3	Pedestrian Friendly	6
4	No sense of community	5
5	Feels safe	4
	Other	4
	Congested	4

	Why do people feel negative or mostly negative about a place?	
1	Not Attractive	50
	Dull/boring	50
2	Feels unsafe	35
3	No sense of community	32
	Bad for Pedestrians	32
4	Other	17
5	No-one around	16

Figure 37: Summary of likes and dislikes in Hemel Hempstead

Local councillors were seen by some as a useful resource through which to filter evidence gathered on what was popular (although they tended also to represent narrow groups), with the quid-pro-quo that they themselves would have to adjust to dealing with design codes that would curtail their flexibility to refuse applications. Nevertheless, some argued they could be used as a useful proxy for public opinion in the absence of wider engagement, although this did not always result in findings that followed the practices recommended in the NMDC. As one team noted "Bringing members on a journey can be challenging. Members would favour sufficient parking around each block of flats rather than having outdoor space with landscaping, food growing, and play equipment that families would use, because that is what their constituents tell them they want" (Figure 38)

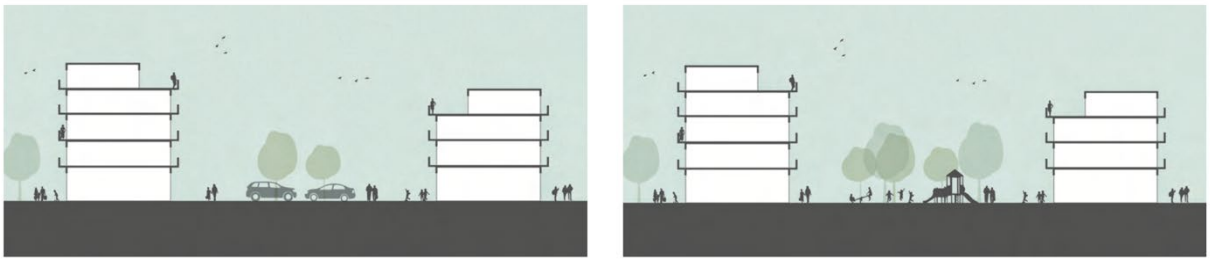


Figure A5: Courtyard parking integrated into landscaping

Figure A5: Future use of courtyard garden if car dependence reduces.

Figure 38: In Dacorum codes envisage before and after scenarios – before and after car dependence

13.2 Influencing developer practices

The pilot teams were asked to reflect on the likely impact the codes would have on the practices of developers in their areas in the light of feedback they had received on what they were doing.

A mixed picture

Some argued that developers "are a mixed bag as a group, and those that do developments of high quality will welcome the codes, but those that don't won't and some won't change what they do at all". Despite this, most pilots who had engaged with development interests were pleased about the largely positive feedback that they had received. In different teams this feedback had been received from housebuilders, landowners, land agents and internally within some council's property teams. In Southwark, for example, developers "appear very positive about current versions of the code which is helping them understand what the council is looking for. In Nuneaton & Bedworth the landowner was also supportive of the code, seeing it as aligning with their own legacy aspirations, notably by ensuring that developers are required to work together in a more holistic and coordinated manner.

Despite the positive feedback received by many, a cynicism persisted about whether this positivity would last. As one interviewee commented "everyone says they are on board with it on the surface, but when it actually comes down to it, will it affect their bottom line and viability and their profit margins – that is when they might not be as engaged. But that will come down to each developer". In Newcastle, for example, the council are expecting some developers to challenge the code, despite "There being a lot of good developers that we work with who will take it on board".

Delivering greater certainty

Most were realistic that for developers it came down to a cost-benefit calculation. As one interviewee commented "If they see that the design code will help to unlock consents for them, and they are given a bit of an insurance that we are going to be pragmatic about how it is being used, I think they will buy into it". Most were clear that the key benefit of codes was in establishing certainty of local authority design aspirations – "A lot of developers want the Council to tell them what the Council is looking for and this design code helps" – perceiving that this would help to unlock development interest, encouraging more developers to come forward.

Some noted, however, that this was dependent on preparing design codes that could be delivered in local markets, in other words they had viability built-in, and that they were consistently implemented in order to ensure a level playing field between developers – "If a developer can see that you have thought about it in a way that is viable they are much more likely to be on board as they can see the advantages of building something that will be in line with community aspirations. They will get a smoother ride through the planning process". Others felt that if you put a design code into an area then ultimately it would lead to an adjustment in land value to reflect the design aspirations – "The only variable on any scheme is the land value – build costs are build costs, the margins are fixed for all developers, overheads are overheads, and the sales prices are whatever the sales prices command in that area".

This implied establishing codes early and then consistently applying those parameters. Moving beyond what one council noted that had been criticised for, namely "only offering a critique of applicant's schemes rather than proposing what they wanted to see".

13.3 Securing design quality (and beauty)

The primary rationale for pilots embarking on their coding journeys was the drive to achieve better quality design outcomes (see 3.1). But for some this was just the latest stage on a journey that preceded the pilot programme that, in a few cases, extended back many years. Sometimes this journey had been embarked on only recently, but in all cases was backed by high level political and executive interest within the respective authorities to do better on design quality. Within this context, a perception existed that the changing national policy context on design was very helpful, and design codes would offer the 'delivery tool' to ensure aspirations are complied with – "You can never have any sort of guarantees but that is the benchmark that has been set so I would hope that better design outcomes are what we will get using the design code".

An ongoing journey

For others, this was just the start of a process and a realism existed about the work ahead – "If you set the right criteria based on local engagement and you measure up against those you should get better outcomes. But the amount of work to get that certainty in a place as varied as this requires that each place would need to have its own design code. There is a lot of work needed to get there". There was also a sense that design codes weren't just tools for local authorities to use, discussions with landowners had often been positive about design codes and fitted well within the longer-term perspective taken by some about creating a real place that returns value to them over time.

Returning to the question of beauty

The use of the term beauty at the end of the pilots programme divided opinion as it had done at the start (see 6.4) with most teams finding its use unhelpful and generally to be avoided – "Beauty is subjective. Coding targets design quality rather than beauty". Some even argued that its use was already leading to greater uncertainty in planning as "whether something was beautiful or not was being endlessly debated". For these teams, their codes aimed to counter this by ensuring that compliance with the code focussed on more objective dimensions of design quality and beauty such as the street level and ground floor experience of users.

Others were more pragmatic whilst (often) still avoiding the term – "the code aims at creating something which is appropriate, which has local identity, character that is distinctly from here, and those elements are obviously important parts of the idea of beauty. These elements of the code are supporting that aspiration but in themselves cannot guarantee it". In these cases, it came back to what was required and what was aspired to in the code, with greater flexibility around some issues than others (see 9.3) and with many of the more architectural concerns that fed into discussions of beauty featuring in the latter rather than the former.

13.4 Time (to code) and speed (of delivery)

Two temporal outcomes were explored with the pilots, the time (and associated resource) commitments required to code, and the expected impacts that would have on the speed of the planning process going forward.

Time to code

The anticipated resources available to code were discussed at the start of the coding process (see 4.3). Returning to this issue at the end of the pilot programme revealed that most coding teams had spent longer on their coding exercises than they had originally anticipated. For some it was marginally more time consuming and for others significantly more, with coding projected to continue well past the six month deadline set by the programme.

Whilst the team behind the Tendring Colchester Borders Garden Community noted that "coding was only a very small proportion of the cost" required to get such a project off the ground, most felt as interviewee articulated,

that "this positive tool would need to be backed up by resources at a national level" in order to roll it out properly. Many interviewees made similar points: "If we were to do another code, I don't know how I would staff it and there is no budget for it"; "If we want to do another design code, we would need to get another consultant in and budget for a 12 month process"; "There isn't enough resource in the council for authority-wide coding even if the whole planning team was working on it full time to produce codes".

Others noted that despite the greater time required to code than originally anticipated, there had also been greater (unanticipated) benefits. Across the pilots these included:

- Prompting discussions within local planning authorities about internal upskilling
- Progressing work in tandem with the design code that will ultimately help to bring development forward
- Being better placed to produce design codes in the future, having been through the process once and learned a great deal
- Anticipating saving resources over the long run through a smoother planning decisions process.

The question of speed

Picking up on this final issue, when asked if the presence of a code would speed up the time taken to get projects through the planning system, overwhelmingly the answer was that it would speed up the processing and approving of applications. One interviewee described codes as "a collaborative upfront investment in ambition and quality from all stakeholders to smooth the process". Various reasons were cited for this:

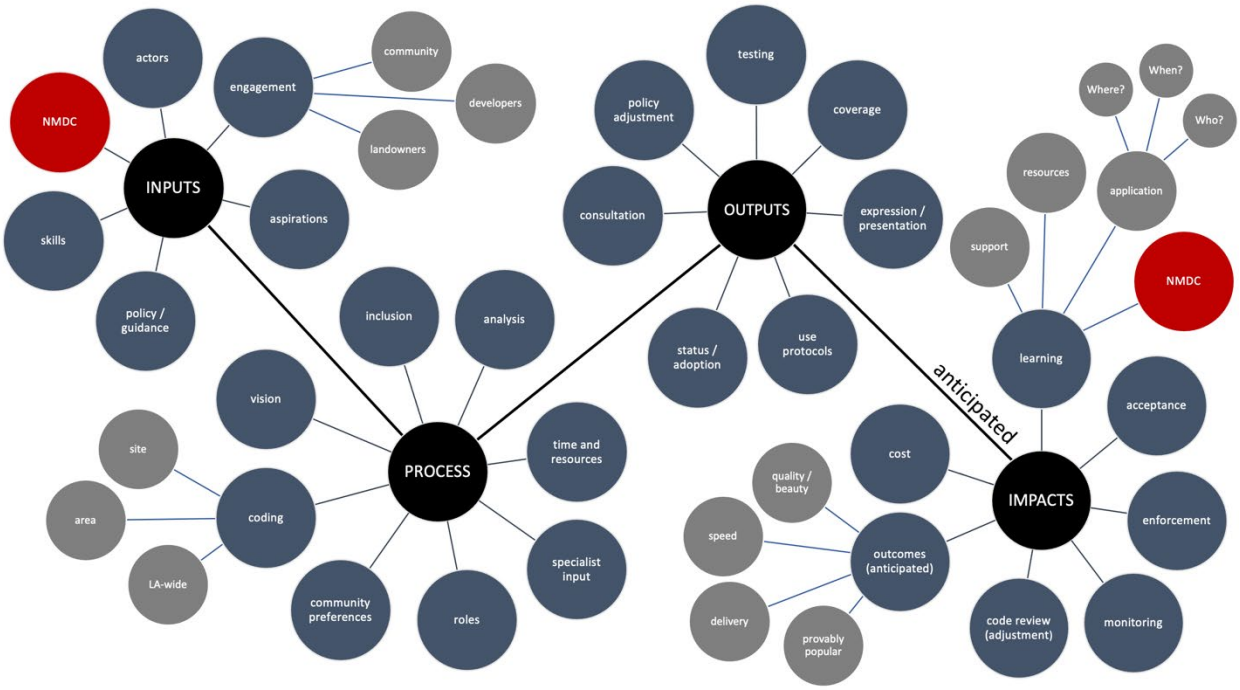
- Codes can act as a catalyst to speed up development proposals coming forward on key sites because they establish certainty and levels of ambition early on
- Codes will short cut the dialogue at the start of the development process, providing more guidance at the pre-app stage
- Codes will clarify how to interpret design considerations, facilitating smoother negotiations, for example the parameters of character to assess schemes. In turn this will "allow the 'triangle' of parties [communities / developers / planners] to better understand what is expected"
- Codes can speed up the consideration of detailed technical design concerns at the end of negotiations

Whilst this was a perception widely shared, teams were realistic that greater speed could not be guaranteed – "some developers are just not interested in any policy and guidance and will do all they can to battle their way through the system", and some sites were just very complex and took time to process, no matter what guidance was available. There was also the issue raised by a minority of pilot teams that unduly complex codes might themselves add a new layer of complexity and delay. As one interviewee commented – "that would be very unfortunate, so comes back to the question of how practical and simple the design code is to use".

13.5 Would you do it again

Finally, each pilot team was asked for a yes or no answer to the following question: Given a free choice, would you choose to use design coding again. 14 out of 15 said yes. The final team, who had not produced a code, were as yet unable to answer the question.

Detailed findings



14. FINDINGS AND LESSONS FROM THE PILOTS

14.1 Detailed findings

The monitoring and evaluation revealed important findings across all stages of the design codes preparation process as well as, projecting forward, about how they can be used. Below (14.3) are lessons that the pilot teams drew themselves about their work, and their collective advice on strengthening the NMDC. Before that, findings from analysis of the Phase one pilots are summarised. These follow the structure of parts 3-13 of this report and more detail can be found on any of the bullet points by referring to the relevant sub-sections indicated in the brackets.

It is important to note that these findings are made in the context of the experience of the 15 pilot teams analysed and do not necessarily represent definitive judgments about all design coding processes. The Phase two pilots will examine aspects of the findings in greater depth.

14.2 Input findings

The decision to code

- Motivations for choosing design coding focussed primarily on the desire to improve design outcomes. Secondary motivations included improving the predictability with which those outcomes are delivered, raising expectations locally about the quality of design that should be expected, and delivering more effective processes of urban design governance (3.1)
- Pilots had little faith in existing authority-wide policy, guidance and development management to improve design outcomes, and none had any experience of the preparation of design coding up-front, prior to development proposals coming forward from development interests (3.2)
- Authority-wide coding can tackle common authority-wide design problems and is of value in the absence of capacity to take a site-specific approach. Site-specific approaches were used to optimise the responsiveness to local conditions and character while area-based coding can capture multiple smaller sites within an area of uniform character that can benefit from a shared set of design parameters (3.3)

Skills and resources

- Diverse multi-disciplinary knowledge and skills – led by urban design – were required to code. The art of writing codes was in striking the right balance between all the competing areas of expertise and the input and the interests they represent (4.1)
- Complex partnerships of local authority players often fed into the code production process, including, critically, from highways, planning policy and development management. This required director level overview, political support and dedicated project management (of the code production), including close supervision of consultant inputs (4.1)
- Most local authorities without in-house urban design capacity were reliant on consultants to lead design coding. Skills were most often lacking in areas of urban design, graphic presentation and communication, and in the areas of viability and digital engagement (4.2)
- The time required to code depended on its scope and the size and complexity of the area being coded, but was predicted in the pilots to range from 60 to over 200 days of professional input (4.3)
- Codes were typically seen as part of a larger policy-making or project-shaping effort, drawing from previous work and feeding into future work. They were therefore not entirely an 'additional' cost, particularly when off-set by the predicted more streamlined and less confrontational development management process (4.4)
- Without dedicated funding, most authorities felt they would need to revert to relying on developers to commission and produce design codes for their sites, or would cut into funding set aside for local plan production. Under such circumstance, the pilots believed that codes would necessarily be produced more slowly and retrospectively, if at all (4.4)

Policy and guidance

- Design codes fit within a policy hierarchy which cascades from more general strategic policy to the detailed and deliverable parameters contained in design codes. Providing hooks in local plan policy for coding was believed to give them status, whether ultimately and formally part of the development plan or adopted as SPD or submitted as part of a planning application (5.1)
- Highways design remains a challenging issue for many of the pilots, with some highways colleagues reluctant to engage with design coding. They believed that without highways firmly onboard and committed to improved placemaking, coding is unlikely to be successful (5.2)
- Alignment with national guidance was seen as leading to more defensible local coding, reinforcing challenging policy positions (e.g. on parking and density), and offered a valuable starting point for local authorities who nevertheless appreciate the flexibility to relate principles and processes to local circumstances (5.3)

14.3 Process findings

The design coding process

- The pilots tested a range of forms and scales of design coding and collectively suggested that there is no one-size-fits-all coding process. Instead, pilot teams have been able to successfully adapt suggested NMDC processes to local circumstances (6.1)
- Building early commitment to the code amongst stakeholders and a common understanding of the process and desired outcomes was an important phase in the pilots' code development. The time required for training, notably of development management staff, should not be underestimated (6.1)
- A wide range of analysis and data fed into identifying area types, with the Pilots revealing that meaningful design codes required a clear understanding of the fine grained complexity, variation and constraints that characterise most urban areas. Pilots opting for authority-wide coding need first to determine if they wished to define area types at a very detailed level, or if they preferred to opt for higher-level, more flexible and less specific guidance (6.1)
- Engagement that moved beyond basic 'likes' and 'dislikes' involved time, resources and commitment that should not be underestimated, taking those who were engaging on a journey from analysis, to vision, to coding and testing (6.1)
- Deciding what goes into coding and what is reserved for other instruments (e.g. policy, masterplan, SPD, building control, etc.) was a key task. In areas where neighbourhood plans were in place, determining how coding related to neighbourhood plans was important (6.1)
- Over recent decades, site-specific design codes have tended to be produced as delivery tools for an already agreed masterplan. Reversing this process in some of the pilots and preparing design codes in advance of the site-based vision placed the code in the position of a vision-defining rather than a vision-delivery tool (6.2)
- The pilots suggested that there is a hierarchy from the fundamental design qualities that need to be prioritised early as they impact on viability, to those that are nice to influence but can be worried about later. They concluded that former should be the priority for coding (6.3)
- Local character is a fundamental concern for most local politicians, and pilots believed needed to be captured in coding in order for councillors to embrace a more systemised, rather than negotiated, approach to decision-making. This typically related to concerns such as landscape, density, height and building line (6.3)
- Some qualities were found to be more amenable to expression as target metrics than others. Examples included density ranges / movement targets / land use mixes / plot and grain / street patterns / open space / landscape and nature quantums / boundary treatments / energy use (6.3)
- The strong preference amongst the pilot teams was to define character, identity and the enduring qualities of place, instead of attempting to define the components of beauty. Rather than trying to tie

everything down, there was also generally a desire to leave enough flexibility for creative designers to interpret the parameters and, hopefully, create beautiful design solutions (6.4)

Engagement and analysis

- Alongside open and inclusive engagement exercises, pilots found that focussed work with already engaged groups (e.g. neighbourhood groups and resident societies) can provide an informative and effective means of tapping into local knowledge and achieving a more in-depth engagement on design (7.1)
- Over-reliance on single forms of passive engagement tended to lead to lower response rates and to more basic responses with residents failing to focus on the holistic built environment. Combining traditional and technological means of interactive engagement around issues of genuine public interest tended to facilitate wider and more inclusive engagement, as did focussing on vision-making rather technical concerns (7.1)
- The pilots found that to meaningfully gauge public preferences on design, it was important to guide the conversation away from stylistic considerations to focus on fundamental placemaking issues (7.2)
- Coding touches on the responsibilities of a wide range of stakeholders with diverse policy, development and representative interests, and bringing all relevant parties along with the coding process represented a key task of the coding teams. Typically this required engaging early and often with these parties, ideally starting by visiting existing developments to assess locally what has worked and what not (7.3)
- The scale of character analysis varied with the scale of planned coding, as did the applicability of area types as a desirable starting point for analysis. In all cases more measurable concerns such as building lines and density were easier to identify and record, whilst experiential qualities were much harder, although helped by combining character analysis with public engagement (7.4)

14.4 Output findings

Coverage of design concerns

- The pilots' design codes were structured in many ways, typically reflecting something of the process that the teams had gone through to create them and adopting simplified versions of the ten national Characteristics of Well Designed Places in order to articulate their content (8.2)
- Those pilots that focussed on preparing 'how to code' guides for local use emphasised the importance of rigorous process and understanding and addressing common problems in future design codes (8.2)
- The pilots revealed that the use of area-types was not always appropriate, notably in relation to coding conducted for areas of unified or negative quality, for site-specific coding, and in relation to authority-wide guides dealing with generic principles (8.3)
- Area types may overlap and mix, and more sophisticated approaches explored by the pilots, suggested that different area-types might be used in layers rather than individually (8.3)
- Teams typically prioritised coding for fundamental urban design parameters relating to the form, layout and use of new development, leaving more detailed construction related matters to other design governance processes and guidance, and aesthetic issues to a later stage (8.4)

Communicating coding

- The pilots suggested that there is no 'right' balance between text and illustration and both modes of communicating need to support each other to articulate clear and unequivocal design parameters that are not lost in an unnecessary volume of text. In doing this, illustrations were used to project the desired look and feel of development, whilst remaining illustrative (9.1)
- The codes were used to code for process as well as product, helping to ensure that developers follow a design process that is more likely to generate better designed outcomes (9.1)
- Pilots argued that the needs of different audiences (e.g. the community, development managers and development professionals) are compatible as they all need digestible, readable, precisely worded and

attractive codes, avoiding overly long explanations whilst containing enough detail to support decision-making and graphically emphasising 'must have' design principles (9.2)

- To reduce the length of design codes, some pilots produced hybrid codes that mix high level principles with detailed coding on selected issues only; those considered vitally important or that were not already dealt with elsewhere. Other issues can be dealt with through cross-referencing existing sources of guidance (9.2)
- The balance between prescription and flexibility was seen as dependant on what was being coded and the context. Issues seen as critical such as heights, quantum (density), uses, parking including parking ratios vs. front garden space, dimensions for bin access, and access for pedestrians and cyclists, all tended to be more rigidly coded whilst aesthetic issues were treated with greater flexibility, particularly where a greater variety of outcomes was favoured or where viability was a concern (9.3)
- Most pilot teams adopted clear language protocols to ensure that readers understood the relative importance of different elements within their codes – critical issues were expressed as 'must haves', meaning they are mandatory whilst 'should haves' were expected not advisory and 'could haves' were optional (9.4)
- The delivery of 'must haves' were sometimes usefully caveated with 'shoulds' or 'coulds' to demonstrate the different ways in which they could be delivered. At the site-specific scale, 'must haves' were beneficially brought together and reflected in framework or regulatory plans to make their implications crystal clear (9.4)

Consulting on codes

- Formal community and stakeholder consultation on codes was seen as a routine part of testing and adoption processes and may be free-standing or can piggy-back on other planned consultations. It can beneficially utilise networks built up during the formative engagement phases of code production (10.1).
- Testing codes was seen as a vital part of their refinement prior to adoption. Testing was variously being conducted against project submissions (past, present or fictitious), through critique of development managers, with community representatives, or via market and viability testing (10.2)
- Adoption was anticipated as either informal guidance or formally as a Supplementary Planning Document or as a Development Plan Document. With each step the status of the resulting code was believed to increase but at the expense of the time, resources and risk required to get it through the process and the ease with which codes could later be revised (10.3)
- Revising existing policy documents to provide policy hooks for design codes was seen as giving them status while cross-relating to other SPDs and DPDs in codes obviated the need to have everything covered in the code (10.4)
- Design codes were typically seen as planning documents to be adopted for planning purposes and highways guidance and standards were seen as related but separate, and too often conflicting. It was believed, however, to be possible to jointly adopt and implement design codes if the will and agreement was there (10.4)

14.5 Anticipated impact findings

Using codes in development management

- Design codes were seen as giving development managers the tools they needed to become active place-shapers, allowing conversations from the pre-application stage and through the formal assessment of proposals to be informed by a clear vision of design expectations (11.1)
- Compliance checklists, performance targets (against the code) and process guidance were all proposed to help development managers to challenge applicants and evaluate proposals in a proactive, timely and objective fashion (11.1)
- Pilots were aware that significant efforts needed to be made to integrate other (non-planning) regulatory concerns, notably highways and sustainable urban drainage, in order to avoid obvious conflicts (11.2)

- It was envisaged that development managers would need up-skilling to administer the new codes and to take on the more proactive role that it was anticipated they would play in delivering better design outcomes. They would also need to be assisted by those with more specialist design skills, either inside or outside of local authorities, with a potential enhanced role for design review (11.3)

Delivery and beyond

- It was believed that design codes could help to facilitate compliance with design-based commitments during the construction phases of development and that digital or analogue compliance checklists could facilitate this (12.1)
- The balance of judgement on where scope for negotiation on design codes should lie varied between pilots, and this was reflected in the wording of codes – e.g. on the balance and distribution of 'musts', 'shoulds' and 'coulds'. A strong sense existed that scope for negotiation should remain and that absolutely fixed design parameters would be unhelpful (12.2)
- Pilots believed that as the agreed record of quality principles for issues such as bins and bike storage, boundary treatments, landscape treatments and parking, there was a potential for design codes to play a role in the long-term management of major development projects by post-completion stewardship bodies and by planning enforcement (12.3)
- Changing external circumstances and experience in using design codes (what works and what doesn't) necessitates building in review processes, particularly for authority-wide codes or for those covering large sites or areas where development will spread over many years. Pilots variously envisaged formal review processes (every two to five years), or a staged process where detailed codes for each phase of a scheme would build upon and develop the high level principles in a more strategic overarching code (12.4)

Outcomes

- Despite significant attempts to engage communities by some pilot teams, the overall inclusivity of code production processes was often seen as limited (13.1).
- The pilots tended to show that simply asking what people like or want (what is popular) tended to result in quite simplistic and often unpractical answers. The most valuable engagement for the pilot teams involved a process of education in which the factors impacting on design decision-making and the trade-offs involved helped to inform community preferences (13.1)
- Landowners and developers who were engaged by the pilot teams seemed largely positive about the coding being generated, perceiving them as giving certainly about what was required and unlocking permissions. The proviso was that they should lead to schemes capable of being viably delivered whilst establishing a level playing field across local markets (13.2)
- Design codes were seen as 'delivery tools' to ensure design quality aspirations are complied with, but this was part of a long-term journey and the application of design principles needed to be consistent (13.3)
- Codes tended to prioritise what were seen as the more objective dimensions of design quality relating to urban layout and form and offer greater flexibility around aesthetic concerns (13.3)
- Coding was generally more time consuming than anticipated and pilots anticipated that the exercise could not be repeated without dedicated resources becoming available. Most, however, recognised this to be an upfront investment in creating a smoother and more streamlined delivery process and in delivering better designed development (13.4)
- Overwhelmingly pilot teams would choose to use design coding again to achieve their design aspirations (13.5)

14.6 Lessons identified by the pilot teams

The pilot teams were asked what overarching lessons they had learned by the interim phase of the design coding pilot programme. Collectively these are grouped under ten headings below, they represent only the common issues, with each suggested across a number of pilots:

1. Sending a clear message about design quality (and design coding) expectations

The pilots were united in their ambition to reinforce a clear message that they were serious about design quality. They believed that design coding offered a tangible demonstration of this as well as a real opportunity to bring design forward in the process – "so it is not just about spreadsheets and numbers but also about quality". Whether the production of design codes would also give confidence to local communities and overcome their scepticism when faced with the proposals of a powerful national house builder was yet to be seen, but the process had been helpful in numerous pilot authorities encouraging conversations between different council departments and raising the importance of design quality up the local political agenda. Moving forward there was a sense that the momentum needed to be maintained, not least by being clear in policy when design codes would be expected, and who would be responsible for producing them.

2. It takes time, skills and resources, particularly if engagement is required

A number of the pilots emphasised the steep learning curve required to produce design codes, even for those used to coding given the specific methodology being tested. Also that "National processes should not lead to a lazy application of coding", notably as regards the time to properly bring councillors, stakeholders and the community along with the process. On this, it was argued that while coding itself can be done relatively rapidly (depending on its scope and detail) teams should not underestimate the time and effort needed to properly engage communities prior to coding in order to deliver something that is locally relevant. Thus it helps to be clear about the area, scope of the coding, and extent of engagement from the start, with one pilot noting "it takes three months just to get set up" and so sorting out the resources, skills, staffing, and organisational barriers to the implementation of design coding is key. With few exceptions the pilots emphasised that beyond the pilot programme they are not set up to deliver design coding themselves – "in managing planning teams, we are not geared up to have this level of urban design expertise in-house and this level of design coding delivery".

3. Some places are more challenging and complex, but setting ambition is key

Whilst all contexts for coding have their challenges, and it takes time to properly understand them, some are inherently more complex than others given delivery constraints. Complex city centre locations, for example, with multiple ownerships make stakeholder engagement hard as different owners have very different timescales and aspirations, making coordination difficult. Likewise, there is a need to be realistic about delivery in deprived areas and coding needs to be sensitive to viability constraints, whilst remaining positive and ambitious, "even in low value areas to set a higher bar" and "gain a head of steam behind the need for change".

4. Understanding viability (at the start of the process)

Viability was an issue everywhere, with authorities keen to test how coding could be used to "Raise the bar on design quality before a developer prepares a planning application", thus building design ambitions early into the development process. Pilots were aware that development viability represents a major constraint, both as regards the mix of uses that locations could support, but also as regards the mix of housing typologies that i) people want and ii) that can realistically be provided in a context. Handling developer pressure on these issues was a key concern amongst pilots, with a sense that it is better to engage developers early in the process rather than later – "They want to be at the table – they don't want to be at the end of the process", in order to arrive at something that is both ambitious, in design terms, but also deliverable. On this front there was a skill keeping landowners and developers at the table and hearing the voice of the local community. "Developers want things to happen quickly and want certainty and being part of the process isn't always enough".

5. Balancing creativity with certainty, must-haves with nice-to-haves

Pilot teams were aware that in achieving greater certainly in design outcomes through the use of design codes, there was also a danger that more creative responses to contexts might be suppressed – "A balance is required between being clear and strong and encouraging innovation". The extent that this was an issue depended on the context given that for many authorities the aim was to deliver something that at least met minimum basic design

standards, rather than something that was necessarily innovative. The solution being pursued by some was to be clear and inflexible on the 'essential' coding parameters and more flexible elsewhere – "getting the right balance of the things we know we can codify and the things that we know are absolutely always required for quality. We need to stop at the right point to allow some flexibility and discretion to be able to deliver something that is uniquely wonderful".

6. Giving codes status

Authorities were realistic about the limitations of design codes and that working in isolation they would not provide a fool-proof solution to delivering design quality. There would always need to be a spatial vision for key sites in the form of a masterplan or urban design framework, and alignment with planning policy and highways standards in order to give the codes status and facilitate their delivery. Clear hooks in local plan policy, for example, give councillors the confidence to back design codes, so whether they are ultimately adopted or not, their status is clear. There is also the need for an upskilling process to give development managers and others a greater awareness of design codes and their relationship with other guidance and policy tools, alongside facilitating feedback from development managers on the process of implementation.

7. Don't reinvent the wheel

For a number of the coding teams, participation in the pilot programme with its constrained timescale and budget was only possible because of pre-existing work, notably in contextual analysis and community engagement. As one respondent argued "There is no need to reinvent the wheel, coding should instead draw from existing work", where available. Whilst recent analysis of this type was not always available, it was always possible to begin by seeing what has worked and what not in recently completed sites, particularly how people have adapted to live in them. In this way authorities were never starting from a clean slate. Some argued that this local learning should feed into a clear brief for commissioning codes in each authority, recognising where codes add value and where other forms of tool might be more appropriate – "design solutions need to be specific but processes can be transferable" and "a code in one location can become a template for others".

8. Clear local leadership, bringing stakeholders together

To move beyond the usual process – waiting until developers are in place then being led by them – requires strong place making leadership from chief executive, director and political levels – "having someone who can lead it, upskill and bring everything together". This "high level support is key to success, but needs building", for example through briefings for key members, local groups and stakeholders so that everyone is on message – "Bringing people along with you is important, being aware that people need time to digest tools, and making sure that they are engaged in learning the new process". Such high level support can cut through silo working, including sharing data, getting insights, and tapping into skills across local government, and not just in planning.

9. Community knowledge valuable but limited

Pilot authorities were convinced about the value of early engagement with communities in order to shape responses to particular contexts. Yet – "Communities only know what they know; there's a whole education process needed to help dealing with conceptual ideas/concepts" – a challenge made all the more difficult when there is no development proposal or even site to react to and instead the outcome is a largely technical and seemingly abstract set of parameters. Before they can engage with design, a time consuming process of building trust with and upskilling local communities (including councillors) on the purpose, use and limitations of design codes is required, many of whom have been intrinsically opposed to poorly designed new development. It requires explaining concepts in lay persons language, illustrating coding principles in a manner appropriate to the local context, and accepting the value of professional knowledge and leadership as well to guide and interpret community preferences. In this regard, there seems to be significant potential for neighbourhood planning groups to take on a role in the preparation of neighbourhood or site level design guides/codes – for example conducting analysis and engagement – and considerable enthusiasm amongst these groups to be involved.

10. Code at the most useful scale

Coding teams largely avoided the processes of area-type selection and analysis as recommended in the NMDC, seeing it as time consuming and unnecessary when the challenges associated with new residential design were often related to key areas and sites. As one team remarked "the approach to design codes will need to emerge in a proportionate and layered way – increasing scope and detail over time". Where authority-wide area-type analysis was conducted it was seen as too simplistic and tending towards coding that was generic rather than place-specific and to area-types that needed to be highly differentiated or layered. In this regard, "having a very strong characterisation which is evidence based that has been commissioned before you start the coding is very important" but the appropriate scale at which to commission this seems to be the scale at which design coding can most usefully be conducted, typically the site or defined area (e.g. neighbourhood) scale.