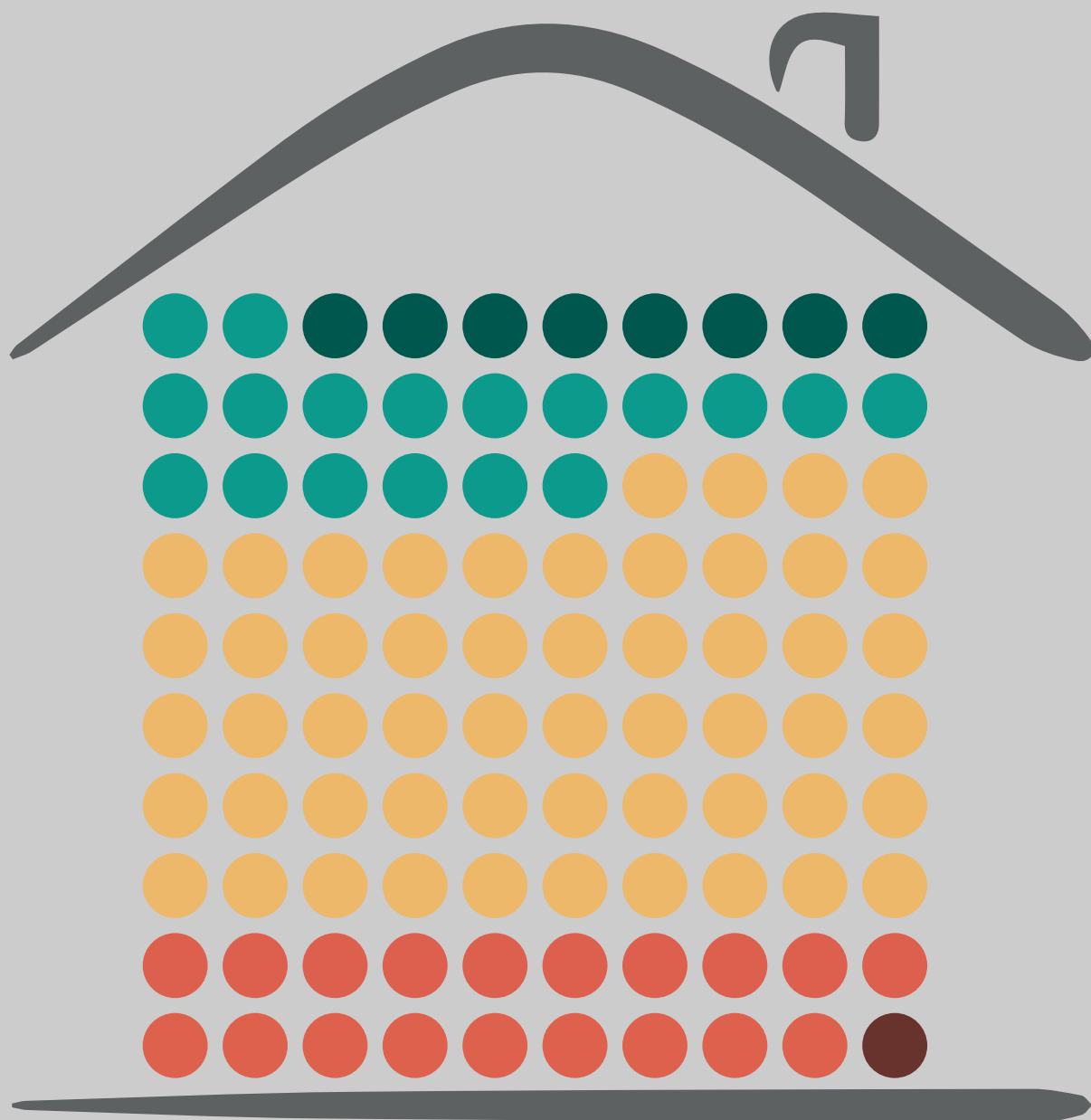


A HOUSING DESIGN AUDIT FOR ENGLAND



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Place Alliance advocates for place quality. It is founded on the idea that through evidence and collaboration, we can establish a culture whereby the quality of place becomes an everyday national and local priority. Place Alliance is open to all and brings together organisations and individuals who share the belief that the quality of our built environment has a profound influence on people's lives.

CPRE is the countryside charity that campaigns to promote, enhance and protect the countryside for everyone's benefit, wherever they live. With a local CPRE in every county, we work with communities, businesses and government to find positive and lasting ways to help the countryside thrive – today and for generations to come.

An electronic version of this publication, as well as other documents from the Place Alliance research, are available for download from the website at www.placealliance.org.uk

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FOREWORD

With the drive to deliver more homes across the country has come a loud call for those developments to be of a high standard of design in order to deliver high quality, liveable and sustainable environments for residents. Research has consistently shown that high quality design makes new residential developments more acceptable to local communities and delivers huge value to all.

Housing design audits represent systematic approaches to assess the design quality of the external residential environment. This new audit evaluates the design of 142 large-scale housing-led development projects across England against seventeen design considerations. It provides enough data for comparisons to be made regionally and against the results of previous housing design audits conducted over a decade ago. It establishes a new baseline from which to measure progress on housing design quality in the future.

Whilst some limited progress has been made in some regions, overwhelmingly the message is that the design of new housing environments in England are 'mediocre' or 'poor'. Collectively, we need to significantly raise our game if we are to create the sorts of places that future generations will feel proud to call home.

1.

FINDINGS AND RECOMMENDATIONS

Based on a design audit of 142 housing developments across England and correlations with data on market, contextual and design governance factors, a number of conclusions were drawn about the type of housing that is being delivered, what is going right and wrong, and why there is such a variation in practice across the country.

Drawing from the findings it is possible to make a number of recommendations for Government, Industry and Local Government.

The nineteen key findings and eighteen recommendations from the study are summarised on the following pages.

WHAT ARE WE DELIVERING?



A small improvement

There has been a small overall improvement in housing design quality nationally since the last audits that were conducted between 2004 and 2007¹

But new housing design is overwhelmingly 'mediocre' or 'poor'

Because the improvement is from a low base, today the design of new housing developments are still overwhelmingly 'mediocre' or 'poor' (three quarters of the audited projects).

Many schemes should have been refused

One in five of the audited schemes should have been refused planning permission outright. The design of many others should have been improved before relevant permissions were granted.

The potential exists for good design everywhere

The wide distribution of 'good' and 'poor' scores across the country shows that it is clearly possible to deliver high quality housing environments (and substandard ones) right across the country.

Very patchy practice

Regionally the picture is patchy. The most improved region was the West Midlands, with the South East and Greater London (the best performing region) also showing very significant improvements. If these three best performing regions are stripped out, then the small national gain largely disappears. The East Midlands and South West scored least well, and significantly lower than the English average.

Resident satisfaction contrasts with community dissatisfaction

Whilst new residents are generally happy with the environments around their new homes, this contrasts strongly with the views of local communities (as represented by their local councillors) who regret what they see as too much overdevelopment and a loss of local character. Both residents and communities see a negative impact from unduly car and roads dominated environments.

¹ The previous audits reviewed housing schemes built between 2001 and 2006, following which, until 2011, there was a strong national push to improve the quality of new housing design (see 2.1). One explanation for the small improvement is an ongoing legacy from that period.

WHAT ARE WE GETTING RIGHT AND WRONG?



Designing for safety and security ✓

Of the seventeen design considerations, designing for safety and security fared best, suggesting that the Secured by design parameters of recent decades have been successfully mainstreamed across much of the country.

A variety of housing types ✓

Most of the schemes assessed – even those scoring predominantly in the poor and very poor categories – tended to provide a range of housing types, both physically in their size and design and with a well integrated mix of tenures.

Highways, bins and parking ✗

The least successful design elements nationally relate to overly engineered highways infrastructure and the poor integration of storage, bins and car parking. These problems led to unattractive and unfriendly environments dominated by large areas of hard surfaces (tarmac or brick paviours), parked cars and bins.

Character and sense of place ✗

Low-scoring schemes performed especially poorly in the categories of the architectural response to the context and establishing a positive new character for development. Developments often had little distinguishing personality or 'sense of place', with public, open and play spaces being both poorly designed and located for social interaction. Housing units are frequently of an obviously standard type with little attempt to create something distinctive.

Streets, connections and amenities ✗

Some design considerations were marked by a broad variation in practice nationally. These include how well streets are defined by houses and the designed landscape, and whether streets connect up together and with their surroundings. Also whether developments are pedestrian, cycle and public transport friendly and conveniently served by local facilities and amenities.

Walkability and car-dependence ✗

The combination of the preceding factors influence how 'walkable' or car-dependent developments are likely to be. Many developments are failing in this regard with likely negative health, social and environmental implications.

Environmental impacts ✗

Whilst the majority of schemes are achieving the basic minimum energy efficiency requirements set out in legislation², significant numbers are still falling below. This, combined with the known and persistent performance gap between 'designed' and 'as built' energy performance in new homes and the failure to deliver a green and bio-diverse landscape in many projects, amounts to a sub-standard response to the environmental challenges we face.

² Recognised as too low by Government in their proposals for a far more ambitious Future Homes Standard to cut carbon emissions.

WHY SUCH A VARIATION IN PRACTICE?



Less-affluent communities get worse design

In every region better designed schemes achieve higher sales values amounting to a 75% uplift nationally (and poorly designed schemes lower values). But there is a continued trend (by a factor of ten) towards delivering sub-standard design outcomes for less affluent communities.

Better design can be afforded, but we don't do it

Standard housebuilding development models undoubtedly make it easier to invest in better design when development values are higher. But just because values are low, does not mean that good design cannot be afforded. The cost factors separating 'good' from 'poor' design are likely to be a relatively small proportion of total development value (across all markets) and low value locations may anyway show a higher return on investment and be more profitable to develop given the lower cost of land. Indeed, a minority of schemes with low market value buck the trend and achieve 'good' and 'very good' design outcomes whilst high value schemes sometimes deliver only 'mediocre' or 'poor' design results.

Large developers are inconsistent

Design audit scores for most large developers vary right across the audit scale. The practices, priorities and inconsistencies within and between housebuilders are very significant with regard to the quality of housing developments that are being realised.

We are not good at building at lower densities and on greenfields

Audited design outcomes scored progressively more poorly as projects moved away from the urban core and reduced in density, and if they were built on greenfield, as opposed to brownfield, sites. The additional constraints imposed by a stronger pre-existing urban context – often with existing infrastructure, heritage and natural assets, and a street network to plug into – encourage a more sensitive design response.

Inconsistent use of proactive site-specific design governance

To achieve 'good' or 'very good' outcomes requires more than a passive check against a generic checklist of design principles; it requires a proactive and site-specific process of guidance and accompanying peer review. The most effective design governance tools are design codes and design review but they are used far less than other more generic approaches.

Poor design is getting through on appeal

If housing numbers have not been met locally then the audit revealed some evidence that poor design is being approved on appeal. This fatally undermines the Government's own policy on design in the *National Planning Policy Framework* (NPPF). It sends a message that design quality does not matter.

FOR HOUSEBUILDERS



A big leap needs to be made

Whilst a small overall improvement in the design of external residential environments was detected, this comes from a low base and is very patchy: geographically, between different housebuilders, and even across the regional operations of individual housebuilders. The vital importance of good design to the industry as a whole with regard to the building of a positive reputation, encouraging acceptance of new housing locally, and easing the path towards regulatory permissions, has still not been accepted. From small scale easy wins, like dealing adequately with bin storage, to more complex challenges, such as injecting character into streets and making them walkable, a big leap needs to be made to higher quality design by the industry as a whole.

A new ethical approach to design

The largest housebuilders should set the ethical standards for the industry at large. They are building developments which will have profound impacts for many decades, on the places and communities they help to shape, on the social wellbeing and health outcomes of their customers and future occupants, and on the environment at large. The negative impacts of poor design are well known and understood. A responsible and ethical approach for housebuilders is to seek net gains on all these fronts.

Invest in an internal design infrastructure

Housebuilders should invest in their own internal design governance teams and processes in order to set higher ambitions for design in whichever sub-market they are building for. Large housebuilders should consider mechanisms for internal learning and coordination on design, notably for bringing all their regional operations and subsidiaries up to the standards of the best.

Resident satisfaction should not be taken as a sign that all is OK

The emotional investment in a new home masks the downsides of poor design for residents. In particular lower density suburban and rural schemes are failing to exploit the space and landscape advantages of their contexts. These reflect potential qualities that new residents strongly value and reveal the need for a greater focus on designing well in low density locations.

Examine the economics of housing design

The factors impacting on design and their economic implications for viability are poorly understood and opaque. The industry, in partnership with others, should commission and publish research into the economics of housing design in order that design decision-making can be better understood.

FOR LOCAL AUTHORITIES (PLANNING AND HIGHWAYS)



Set very clear aspirations for sites (in advance):

All design governance tools help to deliver better design outcomes and it is far better to use them than not. However, the use of proactive tools that encompass design aspirations for specific sites – notably design codes – are the most effective means to positively influence design quality. Such tools give greater certainty for housebuilders and communities, but their use and the sorts of design ambitions that they will espouse should be made clear in policy, well in advance of sites coming forward for development.

Design review for all major housing schemes

Local authorities should themselves establish or externally commission a design review panel as a chargeable service and all major housing projects should be subject to a programme of design review. Advice on how to do this can be found in *Reviewing Design Review*⁴.

Deal once and for all with the highways / planning disconnect

Highways authorities should take responsibility for their part in creating positive streets and places, not simply roads and infrastructure. Highways design and adoption functions should work in a wholly integrated manner with planning (development management), perhaps through the establishment of multi-disciplinary urban design teams (across authorities in two tier areas), and by involving highways authorities in the commissioning of design review.

Refuse sub-standard schemes on design grounds

The NPPF is very clear in its advice that “good design is a key aspect of sustainable development”. Consequently ‘poor’ and even ‘mediocre’ design is not sustainable and falls foul of the NPPF’s ‘Presumption in favour of sustainable development’. Local planning authorities need to have the courage of their convictions and set clear local aspirations by refusing schemes that do not meet their published design standards.

Consider the parts and the whole when delivering quality

Some well designed large schemes are being undermined by a failure to give reserved matters applications adequate scrutiny or through poor phasing strategies resulting in the delivery of disconnected parcels of residential only development. Delivery of design quality requires both the whole and the parts to be properly scrutinised by local planning authorities at all stages during the design and delivery process.

⁴ Reviewing Design Review in London <http://placealliance.org.uk/research/design-review/>

FOR GOVERNMENT



Be more prescriptive on density

The clear benefits of designing at higher (not high) densities is apparent. The best schemes averaged 56 dwellings / hectare, approaching double the current national average of 31 dwellings / hectare³. Instead the current national average for density is almost exactly the average density of schemes scoring 'poor' in the audit (32 dwellings / hectare). Government should be more prescriptive in seeking more urban densities (compatible with other contextual factors) in the NPPF, densities of at least 50dph that are able to support public transport, and a mix of uses and local facilities.

Seek to spread learning from the best practice and publicise it

Work with the industry to seek out, and proactively showcase good design by volume housebuilders, for example through online case studies and dedicated national housing design guidance (covering matters from detail design e.g. the design of bins and storage to strategic urban design concerns relating to the location and connectivity of housing).

Understand design in less affluent contexts

Commission research into delivering design quality in less affluent areas, including on how standard housing units can be used in more creative ways to deliver distinctive places, and how local authorities can become more engaged in delivery through public / private partnerships or other means.

Issue guidance on the design of parking

How parking is handled can make or break the design of residential environments. National research on the successful integration of parking across different densities should be commissioned as the basis for guidance to be adopted on the subject nationally and locally.

Publicise the rejection at appeal of poor quality schemes

More forcefully advise the Planning Inspectorate to reject schemes that do not live up to the design aspirations as set out in the NPPF – regardless of whether local housing targets have been met or not – and publicise these decisions.

Require a place-first approach to highways design

Highways authorities should be required to take a 'place first' approach when dealing with the design and adoption of highways. This could begin by requiring highways authorities to adopt the *Manual for Streets* or an equivalent place-focussed guidance on highways design and by issuing national guidance on what it is reasonable to charge for adopting trees and other landscape elements.

³ Land use change statistics 2017/18, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/805435/Land_Use_Change_Statistics_England_2017-18.pdf

Continue to audit progress

A Housing Design Audit for England provides a new baseline from which to measure progress on the design of housing, but the Place Alliance will struggle to repeat the exercise given the resource implications and the reliance on voluntary input. The Government has a duty to monitor the design quality of the residential sector and should fund its own repeat audit no later than 2024.

Audit small housebuilders and social housebuilders:

A Housing Design Audit for England has focussed on the products of the large volume housebuilders. The work of other key sectors has been omitted but could valuably provide the basis for other follow up audits.



2.0

HOUSING DESIGN QUALITY, THE NEED FOR A NATIONAL AUDIT

This is the first national audit of housing design quality, although audits are a well established method used to evaluate the design quality of residential developments. This section discusses how audits have been used in the past, the need once again to use the approach today, and how exactly the audit was conducted.

At the heart of the audit are seventeen design considerations. These are set out alongside the approach taken to answering why there is a variation in practice across the country.





2.1 Housing design quality, forwards or backwards?

England has a proud history of housing design and development from the Garden Cities onwards, but also a recent history about which Ministers have argued we need to do better: better with regards to the significant increases in housing numbers we need, and better in terms of in how new housing developments are designed. In October 2018, the then Minister for Housing argued:

“Design, alongside volume, is a key part of getting the wind of public opinion behind the very large-scale housebuilding that we want.”

It’s not just building volume but neighbourhoods. It can’t just be a soulless set of houses. I would like to see both councils and developers conspire to build the conservation areas of the future”.

The period prior to the financial crisis in 2008 and its aftermath witnessed a concerted national effort to engage with the design of volume housebuilding in England, including a focus spearheaded by the Commission for Architecture and the Built Environment (CABE) to encourage the nation’s housebuilders to improve their ‘product’, notably with regard to the design of the external residential environment. The effort included encouraging highways and planning authorities to up their game and to move away from the standards dominated and land hungry layouts of much suburban housing development.

The period following the financial crisis saw the nation’s attention switch to immediate and pressing economic concerns. Through much of this period successive Governments were less focussed on issues of design quality, and in 2017 research conducted by the Place Alliance revealed that austerity in local government had led to an exodus of urban design staff⁵.

Recently, however, the emphasis of Government has changed, and as well as sponsoring the Building Better Building Beautiful Commission, they have published a National Design Guide and built a capacity within the Ministry of Housing, Communities and Local Government to take the agenda forward.

Increasingly there have been conflicting, largely anecdotal, accounts over the standard of new housing development. Whilst some argue that the lessons of good placemaking were never lost and the design of new external residential environments continue to improve from the CABE days, others see a rowing back on gains made during the previous decade. A Place Alliance survey of local councillors’ attitudes to housing design reflected both perspectives (see 6.1 and 6.2). Whilst a small majority of local politicians felt there had been a continuing improvement in the design of new housing areas – albeit from a low base – a sizable minority were disparaging in the extreme. Concerns of councillors focus around the failure of new developments to respond to local character, and the negative impact, as they saw it, of a perceived drive to increase housing densities across the country⁶.

2.2 The first audits (2004-7) - ‘An uncompromising and unflattering picture’

Frustrated by similarly conflicting views in the early 2000s, in 2004 CABE undertook what it termed a ‘Housing audit’. This systematically looked at the quality of market housing completed between 2001 and 2003 and covered London, the South East and the East of England. In subsequent years – 2005 and 2006 – separate audits covering the North East, North West and Yorkshire & Humber, and then the East Midlands, West Midlands and the South West were published. A separate audit of social housing followed a little later and was published after the withdrawal of public funding from CABE.

⁵ Carmona M & Giordano V (2017) Design skills in English local authorities, Place Alliance & Urban Design Group, https://bit.ly/PA_SkillsReport2017

⁶ Carmona M, Giordano V & Gusseinova A (2019) Councillors’ attitudes to residential design, Place Alliance, http://bit.ly/PA_CouncillorsReport2019

This first wave of audits⁷ used the then 'Building for Life' (BfL) criteria as the tool to measure quality.

The first audit showed a generally low occurrence of good or very good design against 16 of BfL's then 20 criteria, including a general dominance of highways at the expense of streets and public space. The audit sparked immediate national headlines because, as a CABI Director later recalled: *"the quality of housing in this country was shocking and created a sense of urgency around the problem"*⁸. The final audit suggested that fewer than 18% of schemes could be classed as good or very good design, and 29% were so poor that they should not have received planning permission. At the time CABI commented:

*"[The audit] paints an uncompromising and unflattering picture of the quality of new housing built over the past five years. There is far too much development that is not up to standard ... and far too little that is exemplary in design terms. In short, there is a long way to go before new housing is something of which we can be proud"*⁹.

The housing audits were quickly taken up by Government, local authorities and others who consistently used them to argue that housing design needed to improve. A number of the larger housebuilders also came publicly on board and fundamentally switched their approach to support better design as a result. If CABI had retained its Government funding, it had planned to re-run the audits starting in 2011.

⁷ CABI (2007) Housing audit, Assessing the design quality of new housing in the East Midlands, West Midlands and the South West, London, CABI; CABI (2006) Assessing the design quality of new homes in the North East, North West and Yorkshire & Humber, London, CABI; CABI (2004) Housing Audit, Assessing the Design Quality of New Homes, London, the South East and the East of England, London, CABI

⁸ Quoted in Carmona M, de Magalhães C & Natarajan L (2017) Design Governance, The CABI Experiment, London, Routledge

⁹ CABI (2007) Housing audit, Assessing the design quality of new housing in the East Midlands, West Midlands and the South West, London: CABI



2.3 A new audit, and the first all England audit

Whilst austerity remains a fact of life within local government, recently there has been a strong resurgence of interest amongst Government and its agencies (notably Homes England) about the importance of design quality. The revised National Planning Policy Framework (NPPF) of February 2019 states:

“The creation of high quality buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities”.

And:

“Permission should be refused for development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions”.

Although similar wording was included in the 2012 NPPF, the desire for better design in new housing development is now being pursued with greater urgency. Amongst other reasons for this change in emphasis seems to be a concern that communities around the country will continue to resist much needed housing development unless the quality of design radically improves. Rightly or wrongly, the old familiar refrain of ‘concreting over the countryside’ is never far away.

Recognising that the moment was right to systematically evaluate the state of housing design through a new housing audit, the Place Alliance in partnership with the CPRE has harnessed the support of a diverse range of organisations. These include: the Home Builders Federation, Civic Voice, Urban Design Group, Academy of Urbanism, Design Council, UK Green Building Council, and the Chartered Institute of Highways and Transportation. The work is underpinned by voluntary input from Arup, JTP, Spawforths and URBED and a network of specially trained professional volunteers across the country.

Using broadly the same methodology as the earlier regional housing audits conducted by CABE, the aims of the new audit were as follows:

1. To evaluate the external design quality of new housing developments across England
2. To establish the range in practice and how that varies from region to region
3. To understand some of the design governance, market and contextual factors that lead to variations in practice
4. To establish a new baseline against which to measure progress on the design quality of new housing developments in the future.

2.4 The external built environment – delivering ‘place quality’ and ‘place value’

With one exception, the housing design audit was limited to design considerations concerned with the external built environment. In other words, it deals with how new ‘places’ are shaped and with the quality of those places.

Place Alliance research published in *Place Value and the Ladder of Place Quality*¹⁰ revealed how ‘place quality’ defined by factors such as greenness, a mix of uses, low levels of vehicular traffic, pedestrian and cycle friendly design, compact and connected patterns of development, and good access to public transport, can have dramatic impacts on the health, social, economic and environmental outcomes associated with development. Moreover this ‘place value’ is profound, universal and impacts on everyone. It is delivered by how well projects address the sorts of design considerations that are the focus of the audit.

Seventeen of these design considerations were audited across four categories as shown in the table on the right.

¹⁰ Carmona M (2019) Place Value, and the Ladder of Place Quality, Place Alliance, <http://placealliance.org.uk/research/place-value/>



ENVIRONMENT & COMMUNITY

1. Community facilities - Does the development provide (or is it close to) community facilities, such as a school, parks, play areas, shops, pubs or cafés?
2. Housing types - Is there a mix of housing types to meet varied local needs?
3. Public transport - Does the development have easy access to public transport?
4. Environmental impact - Does the development have a low environmental impact?



PLACE CHARACTER

5. Architectural response - Is the design specific to the scheme and responsive to the locality?
6. Existing and new landscape - Does the scheme exploit existing landscape or topography and create a new bio-diverse landscape?
7. Character of the development - Does the scheme feel like a place with a distinctive character?
8. Street legibility - Do the buildings and layout make it easy to find your way around?
9. Street definition - Are streets defined by a well-structured building layout?



STREETS, PARKING AND PEDESTRIAN EXPERIENCE

10. Highway design - Does the building layout take priority over the road, so that highways do not dominate?
11. Car parking - Is the car parking well integrated and situated, so it supports the street scene?
12. Pedestrian and cycle friendly - Are the streets pedestrian and cycle friendly?
13. Connectivity within the developments and with the surrounding developments - Does the street layout connect up internally and integrate with existing streets, paths and surrounding development?
14. Safety and security - Are open spaces, play areas and streets overlooked and do they feel safe?



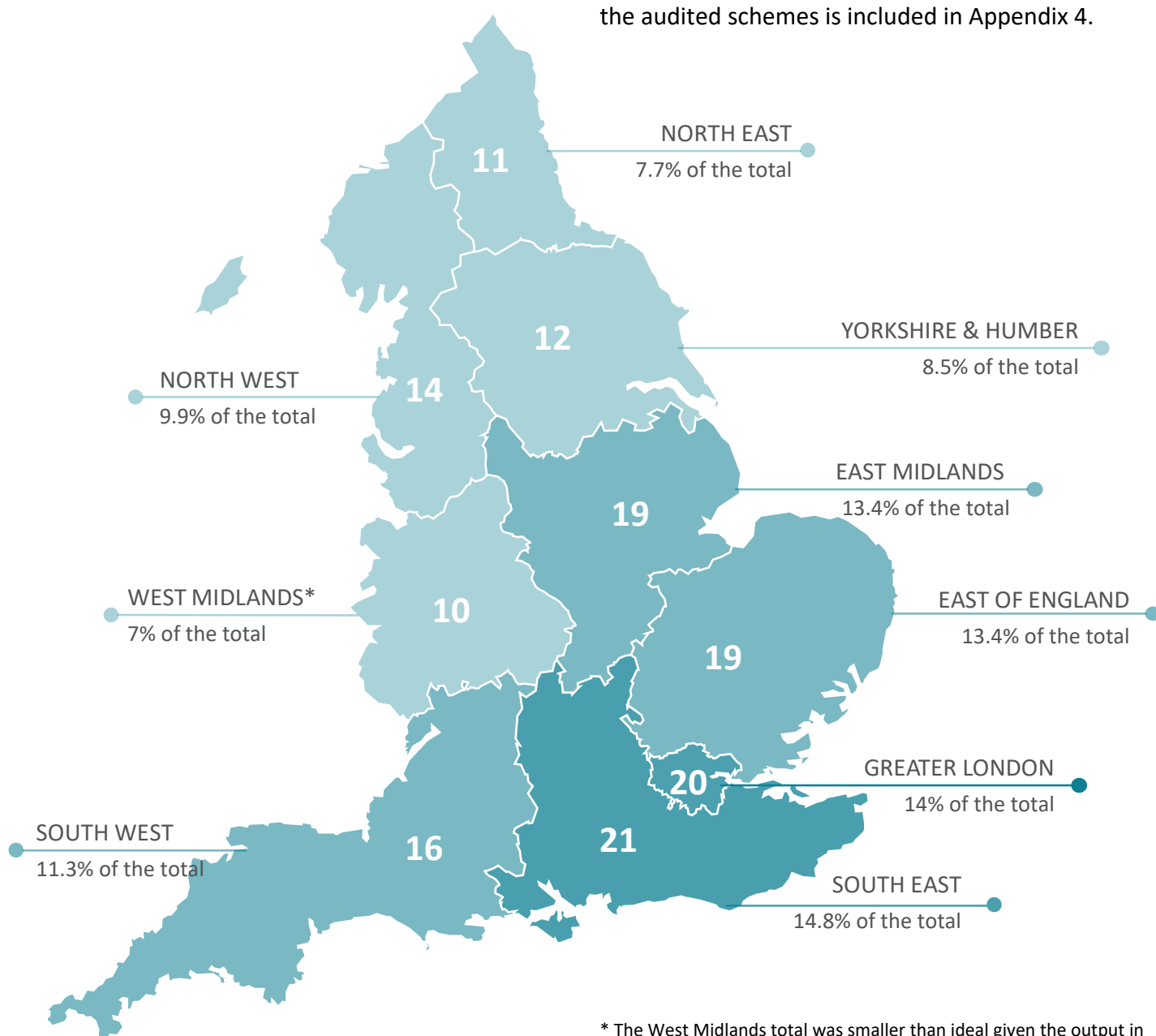
DETAILED DESIGN AND MANAGEMENT

15. Public, open and play spaces - Are public, open and play spaces well designed and do they have suitable management arrangements in place?
16. Architectural quality - Do the buildings exhibit architectural quality?
17. Storage and bins - Are storage spaces well designed and do they integrate well within the development?

Whilst the internal design of homes (e.g. space standards, internal layout, construction standards, and so forth) is vitally important, the audit methodology did not allow for the gathering of data on these issues, nor was that the intended focus of this research (or of previous audits). The one exception was Environmental impact, as measured in the audit through national Energy Performance Certificate (EPC) data¹¹. Given the climate crisis that is now materialising, it was considered that inclusion of this element was critical.

2.5 Inclusions and omissions

If anything, the ambition for the housing audit this time around was even greater than before, with the audit covering the whole country (England) whilst evaluating more schemes – 142 in total – in order that meaningful regional comparisons could be made. Regionally, the number of projects chosen broadly reflect the differential outputs of the housebuilding industry across the country, with a slight bias towards London, the South East and the East of England where output is highest. A full list of the audited schemes is included in Appendix 4.



* The West Midlands total was smaller than ideal given the output in this region

11 <https://www.epcregister.com>

The audit does not cover every type of new housing development, instead schemes were selected that reflect the 'typical' volume housebuilder's product. This means that schemes dominated by the largest (by volume) housebuilders in each region were chosen with the top and bottom 10% of schemes (by value) omitted. According to the Government, between them, the largest developers build about 60% of new private homes in the UK¹². In the schemes selected, they often worked with a social housing partner.

Larger schemes (of at least 50 units)¹³ and which had been built between April 2014 and April 2019 were audited. Although some of the largest projects had development histories that dated back before this period, the phases audited were permissioned in the context of the 2012 NPPF. Small schemes (less than 50 units), schemes solely built for social housing, conversion projects (e.g. under permitted development rights), one-off tower blocks, and self-build, communal or one-off houses were not included in the audit.

Within these parameters, schemes were chosen randomly from a long list of eligible projects after consulting housebuilder websites. Some clustering of projects was necessary to ensure efficient auditing by volunteers. Sieving also occurred to ensure that the selection encompassed a variety of housebuilders in each region, a balanced range of brownfield and greenfield projects, projects in inner-urban, suburban and more rural settings, and projects originating from a diverse range of different socio-economic contexts. Schemes from town / city centre locations were excluded.



¹² Department for Communities and Local Government (2017) Fixing Our Broken Housing Market, London, HM Government, Cm 9352

¹³ The average size of schemes audited was 382 units and the average site size was 11 hectares

2.6 A rigorous analysis

For each development the seventeen design considerations were audited on site by a network of trained professional auditors. Each design consideration was expressed on a proforma. First – as already set out above – as a question. Second, as a series of more detailed sub-criteria in order to help the auditors make a reasoned and balanced judgement against each issue. Some design considerations required auditors to conduct research before attending the site, and this was done through accessing the Design and Access Statement for each project via the relevant local authority planning portals, and through consulting other relevant online sources including those relating to the provision and frequency of public transport.

The design considerations were broadly the same as in the previous audits, although they have been edited and updated to reflect changes to practice and expectations since the original audits. The full range of design considerations and their sub-criteria are discussed in Section 4.0 of this report. To ensure rigour in the conduct of each audit, auditors were trained (by UCL), and the topics and sub-criteria were tested to ensure – as far as possible – that they were objective and could be reliably and consistently evaluated on site. Each design consideration was scored on a five point scale ranging from ‘very good’ to ‘very poor’. To obtain aggregate scores for projects, the thresholds used in previous audits were applied:

Very Good	AN OVERALL SCORE OF MORE THAN 80% OF THE TOTAL AVAILABLE SCORE The schemes demonstrate a commitment to high-quality design and good place-making. These schemes will have addressed most of the audit criteria to a very high standard.
Good	AN OVERALL SCORE OF MORE THAN 70% OF THE TOTAL AVAILABLE SCORE The schemes demonstrate good design and will have a good score for most of the audit criteria.
Mediocre	AN OVERALL SCORE OF MORE THAN 50% OF THE TOTAL AVAILABLE SCORE Missed opportunities to address the design criteria but will not have addressed all of the audit criteria in a consistently positive way*.
Poor	AN OVERALL SCORE OF MORE THAN 40% OF THE TOTAL AVAILABLE SCORE Has not begun to address the design criteria and will have achieved negative scores in most of the audit criteria.
Very Poor	AN OVERALL SCORE OF LESS THAN 40% OF THE TOTAL AVAILABLE SCORE Featuring poor and very poor scores across almost all of the audit criteria**.

* The term ‘mediocre’ was favoured over ‘average’ (as previously used in the CABE audits) because mediocre better reflects the idea of an unexceptional level of quality, whereas average is a mathematical statement of the mean which may be good or bad

** A very poor category was not included in the CABE audits, but was added here for consistency with the five point scoring system used by auditors in the field

To try and minimise inevitable variation in how individual auditors scored projects, first, auditors were asked to back up their individual judgments against the design considerations with photographic evidence to substantiate their choices. Space was also provided on the proforma for auditors to separately score or comment on the sub-criteria if they chose to do so, although only the headline score for the design consideration as a whole was analysed. Second, an Advisory Group was established with the role of advising on the methodology and acting as an independent quality control mechanism charged with looking across the individual audit results to ensure they had been conducted consistently and reliably¹⁴.

One of the advantages of using many auditors from across the country (as opposed to all from one consultancy, as the previous audits had done) was that audits could be more sensitive to regional variations in practice. This is because auditors largely focussed on developments in areas in which they worked. The practice avoided, for example, situations where auditors were judging low density housing in Wakefield when all their experience was with delivering high density housing in Wandsworth. Appropriate safeguards were put in place to ensure that auditors did not evaluate schemes they had been involved in.



AUDITORS BEING TRAINED AT EBSFLEET IN ONE OF THREE TRAINING SESSIONS ORGANISED BY UCL

¹⁴ This process followed the model used in university external examinations, with twenty anonymous projects chosen at random from the higher, middle and lower scoring categories, with the advisory group asked to moderate the overall scoring, if necessary, not that of individual schemes or auditors.

2.7 The what and the why?

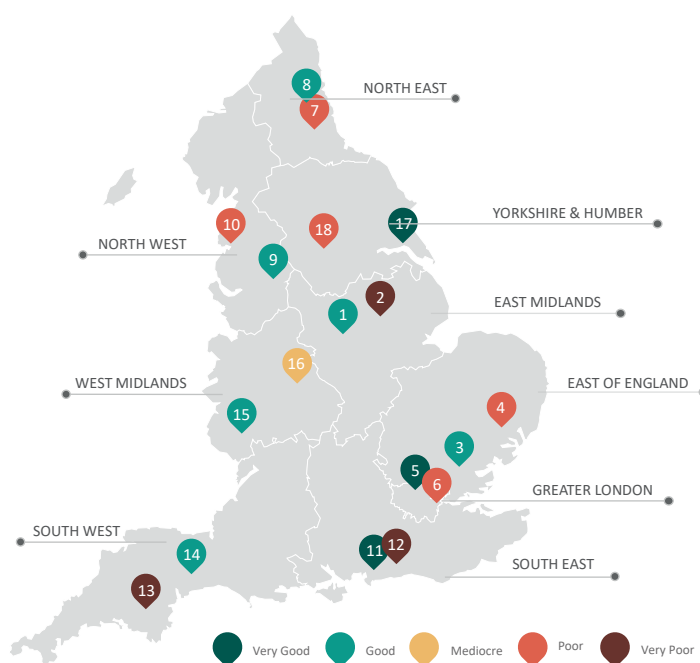
Whilst the audit itself focussed on ‘what’ has been delivered in recent years, a small parallel project funded separately by a UCL Laidlaw Scholarship grant aimed to interrogate ‘why’ projects scored differently. This project used the planning portals of each local planning authority to gather information on the design governance arrangements used locally to inform decision-making on design. In particular the decision-letters of local authorities and the design and access statements submitted by applicants were invaluable sources of information about design decision-making processes and the sources of guidance that had been used. Beyond policies in local plans (which are always referenced) reference to the use of / guidance from the following sources was noted:

1. National planning guidance
2. National highways design guidance
3. Design policies in neighbourhood plans
4. Supplementary planning guidance / documents (SPG / SPD)
5. Design codes
6. Design review
7. Building for Life 12
8. Community consultation / participation processes
9. Pre-application discussions

This data from 134 schemes (eight did not have sufficient data online to include in this part of the analysis) was then correlated with the audit results to determine if any patterns could be detected. Further correlations were made against market and contextual factors in order to better understand the influence of these factors on design outcomes. This stage of the work was greatly assisted by the availability of online data which was not nearly so readily available at the time of the original audits.

Finally, 18 case studies were chosen from the original list of 142 schemes, two for each region and chosen to illustrate good vs poor examples of design quality scores and a range of development contexts: greenfield / brownfield, urban / suburban / rural, and so on (see Appendix 2). The case studies were also selected on the basis of size, so that there was a range of large and smaller schemes. The purpose of the case studies was largely to determine the impact that local authority design governance processes had on the designed outcomes as audited. These have been anonymised and are included in batches throughout this report where they help to illustrate the design considerations that were audited.

What follows is a presentation of the results of this first ever Housing Design Audit for the whole of England.



CASE STUDIES AND THEIR LOCATIONS

CASE STUDY 1

REGION: GREATER LONDON - HOMES: 70

HOUSING AUDIT SCORE



72

ACORN CLASS



1 B 8

URBANITY



SUBURBAN

SITE HISTORY



BROWNFIELD

THE DEVELOPMENT

This site, surrounded on four sides by a mix of residential, commercial and retail buildings, offers a mix of tenures (28.6% affordable) and housing types, including 10% of dwellings designed to accessible wheelchair standards.

SELECTED AUDIT OBSERVATIONS

- Well integrated with the area around, but clearly distinct and legible
- Excellent access to healthcare and community facilities, including a new community hub on site – a multi-functional space suitable for working, community meetings, nursery, celebrations etc.
- High quality play space caters for ages 0-12 years, with sufficient private amenity space as well – houses have spacious back gardens and flats have private balconies
- An obvious sense of pride in maintaining the landscape in the front of the houses
- Variety of housing types and tenures – detached, semi-detached, terraced houses and a small block of flats
- Buildings turn the corners well, and are simply but well detailed with high quality materials and solar panels
- Good integration of parking with the homes and in the streets

PLANNING PROCESS

The scheme was developed following a public forum and pre-application discussion. After receiving outline planning permission, the development went through a detailed design process with two reserved matters applications, providing details of the external appearance and landscape design. A material amendment application varied the layout and building heights. A particular focus was the design of the community hub which was carefully negotiated with the council's single design officer. Reference was made during the design process to various supplementary planning guides (including one on sustainable design and construction) and to a range of nationally published standards.



ENVIRONMENT & COMMUNITY
Score: 4.25



PLACE CHARACTER
Score: 4.75



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 4.75



DETAILED DESIGN AND MANAGEMENT
Score: 3.25



CASE STUDY 2

REGION: EAST MIDLANDS - HOMES: 104

HOUSING AUDIT SCORE



35

ACORN CLASS



3 F 23

URBANITY



RURAL

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

The case study site forms part of the larger new free-standing settlement comprising housing, a primary school, community buildings, shops, and public open space. The scheme consists of 104 dwellings, of which 18 are affordable.

SELECTED AUDIT OBSERVATIONS

- The scheme provides a reasonable mix of housing types - including semi-detached, detached and terraced houses - and sizes, ranging from 2- to 5- bedroom dwellings.
- Access to community facilities at a neighbouring local centre within a 10-minute walk.
- It is possible to identify the tenures from the appearance of the dwellings, with the affordable units distributed within 3 main clusters.
- The development is structured with two main access points which feed into a number of cul de sacs that serve shared private drives; parking and access arrangements are problematic in places.
- An area of public open space with a local play area is situated in the North West corner of the scheme; however this is adjacent to a main road junction and poorly overlooked.
- The townscape and landscape qualities of the scheme are poor.

PLANNING PROCESS

The case study site forms part of a wider new free-standing settlement. Development within the wider settlement is shaped by a number of policies, which includes an approved design guidance document that aims to prescribe the urban design specifications and characteristics of the different parcels of land to be developed within the new settlement. This covers building typologies, structure and density of the proposals, the emphasis on soft landscape, and the approach to visually screening off-street parking. The key policy aspirations at local and County level emphasise the importance of the townscape qualities of the streets and spaces within the development as 'places' in their own right and seek to enable development with a distinctive shape or form that favours pedestrians rather than car users. Whilst the proposals underwent a number of changes in response to a process of engagement with the local Council, Parish Council and other stakeholder groups, the scheme has not been successful at reflecting the overarching policy aspirations for high quality residential streetscapes.



ENVIRONMENT & COMMUNITY
Score: 2.50



PLACE CHARACTER
Score: 2.00



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 2.75



DETAILED DESIGN AND MANAGEMENT
Score: 1.50



CASE STUDY 3

REGION: NORTH EAST - HOMES: 199

HOUSING AUDIT SCORE



63

ACORN CLASS



1 J 33

URBANITY



SUBURBAN

SITE HISTORY



BROWNFIELD

THE DEVELOPMENT

This brownfield redevelopment project comprises 199 dwellings, including affordable housing provision and community open space.

SELECTED AUDIT OBSERVATIONS

- Development provides a good mix of housing types, alongside the integration of different tenures in a manner that obscures their tenure identity.
- Good access to community facilities.
- Good connectivity within and around the development.
- The public open spaces and play spaces on the site are very well designed and maintained thereby increasing their recreational and social value.
- Arrangements for bin storage are problematic, with a negative impact on the street scene.
- The development possesses high architectural quality, with interesting façades and the use of creative building materials, contributing to an overall distinctive character.

PLANNING PROCESS

The case study reflects the influence of local policy aspirations to a good degree. Pre-application discussions with the Council and consultations with the local community took place during the development of the proposal. Whilst there was general support for the development, there were concerns regarding the impact on amenity and privacy of the neighbouring residential properties, in addition to concerns about increased road traffic and flooding. Following an initial refusal, and subsequent appeal process, building heights in sensitive areas of the site were reduced and the total number of proposed dwellings was reduced in order to safeguard neighbouring amenity and privacy. The quantum of open space within the centre of the site was also doubled in size, which helped to contribute to the quality of the resulting development.



ENVIRONMENT & COMMUNITY
Score: 4.00



PLACE CHARACTER
Score: 4.75



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 4.75



DETAILED DESIGN AND MANAGEMENT
Score: 2.50



3.0

HOUSING DESIGN QUALITY

WHAT ARE WE DELIVERING?

In this section the main results from the audit are presented.

First the national and then the regional picture is discussed, with findings compared to the earlier housing design audits. Given that the methodologies are comparable it is possible to see where improvements have been made and where not. The picture is a patchy one.



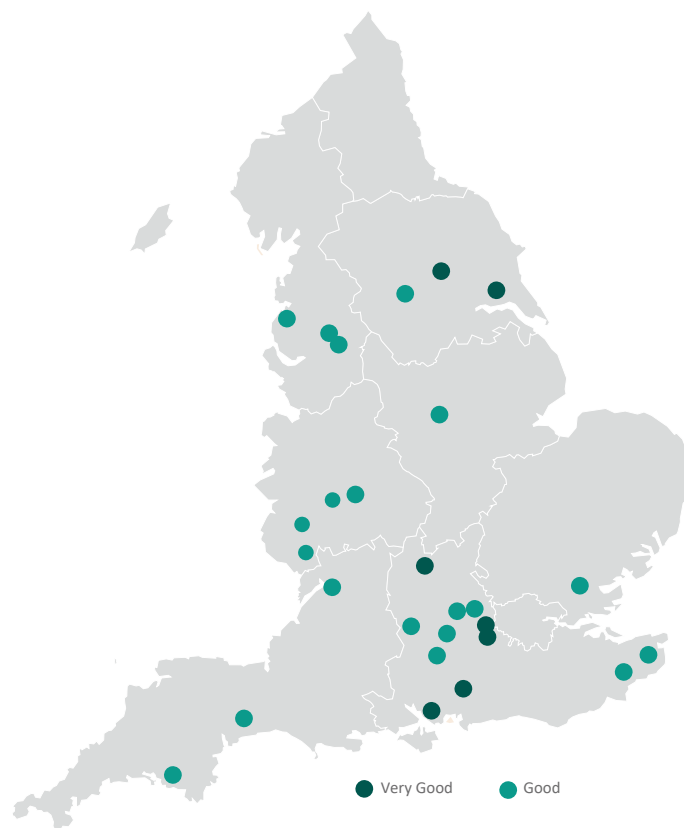


3.1 A 'mediocre' national picture

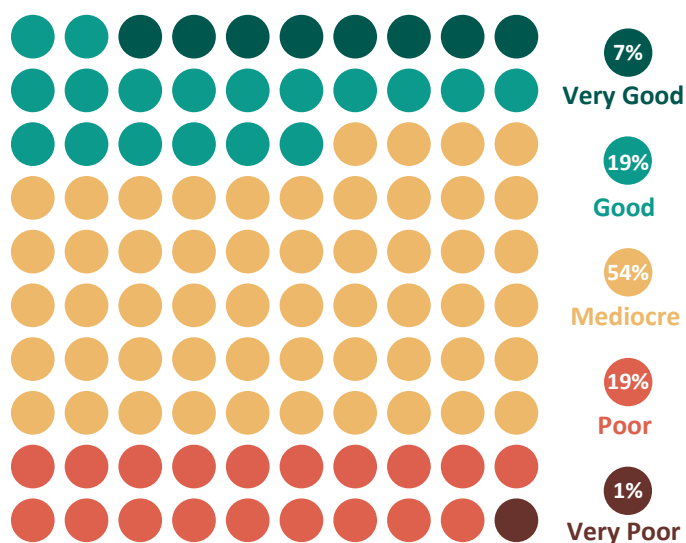
Nationally, the picture is largely of new housing development that is overwhelmingly mediocre or poor (three quarters of projects) with good or very good schemes constituting just a quarter (37 out of 142) of the developments.

Following advice set out in the NPPF (2012 and 2019), over one in five of the audited schemes – those scoring poor and very poor – should have been refused planning permission outright. Given that the national aspiration is for “good design” as “a key aspect of sustainable development”, the mediocre projects – over half the audited total – fail the national threshold of schemes likely to prove acceptable to their communities. The design of these schemes should certainly have been improved before relevant permissions were granted.

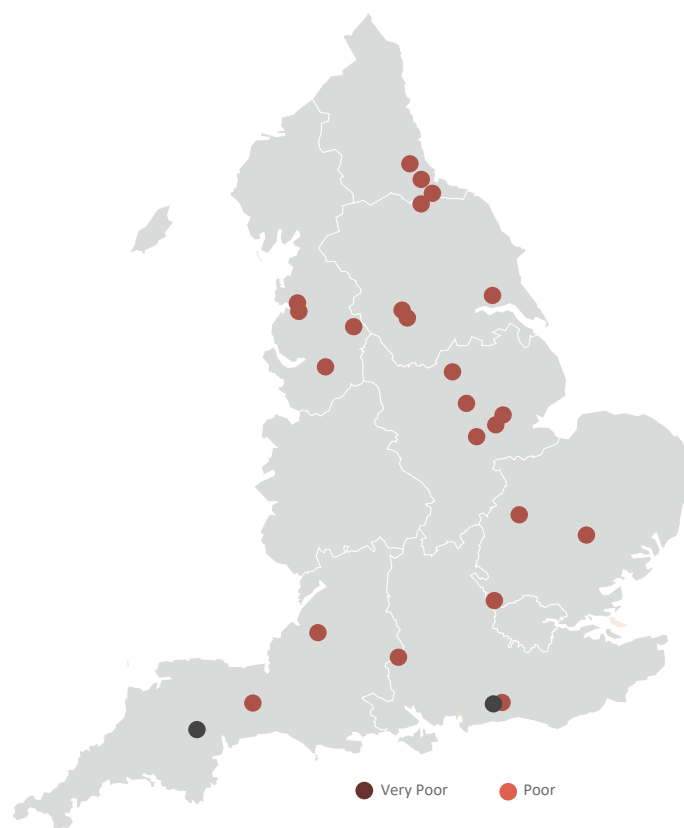
Mapping the scores nationally shows that the best and worst scores are widely distributed. It is clearly possible to deliver both high quality design and placemaking, as well as poor quality, across the country, in all regions.



THE LOCATION OF GOOD/VERY GOOD SCHEMES



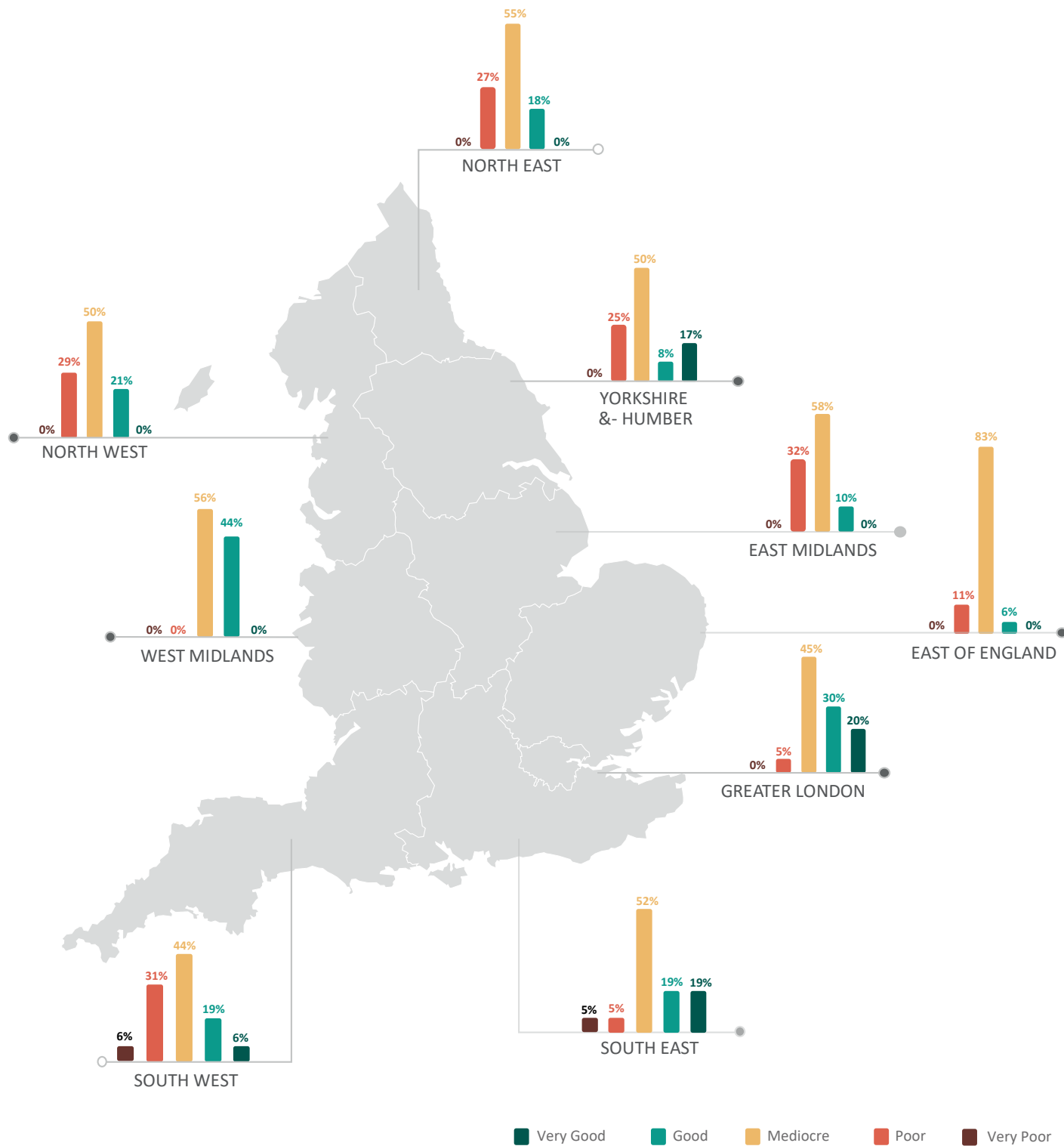
THE NATIONAL PICTURE



THE LOCATION OF POOR/VERY POOR SCHEMES

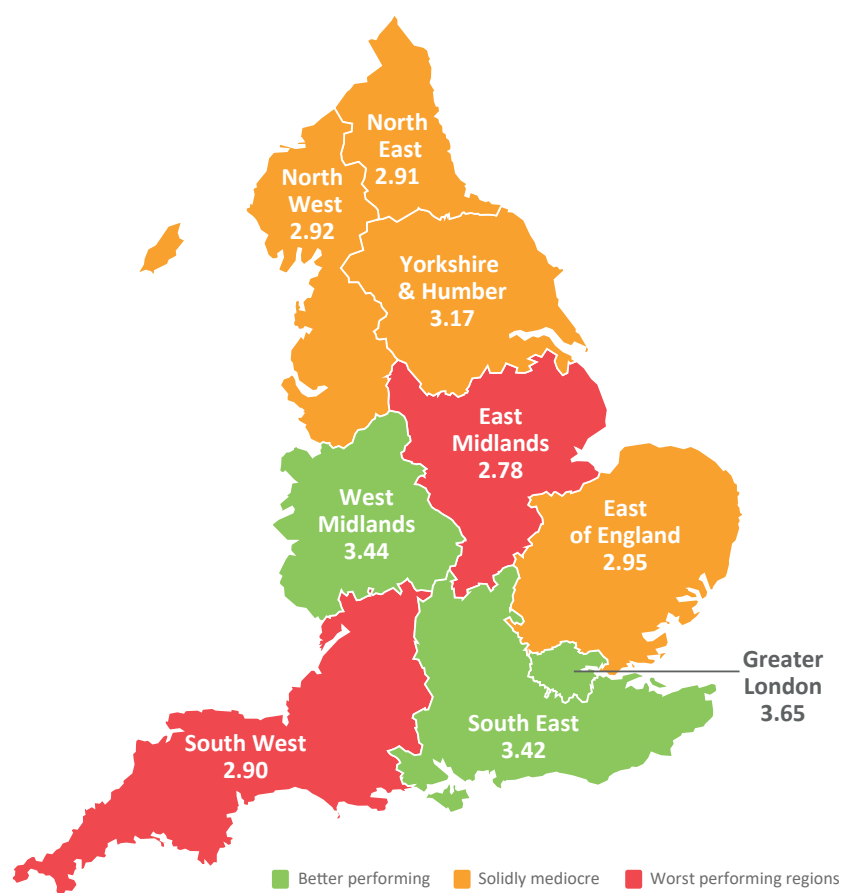
3.2 A varied regional picture

Examined regionally, there was considerable variation in the housing quality profiles achieved.



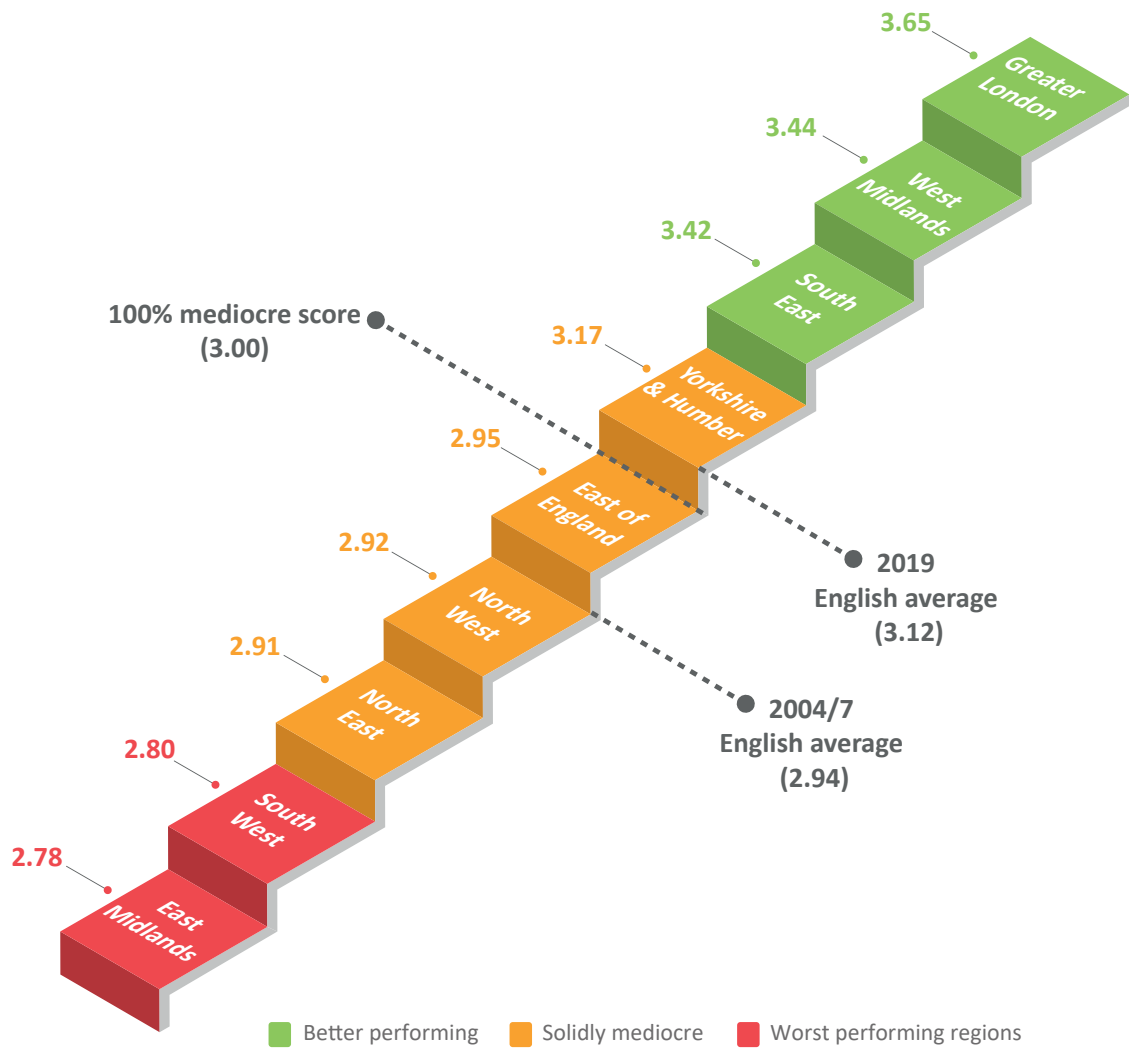
The regions broadly split into three types:

Worst performing regions	Solidly mediocre	Better performing regions
Some regions exhibited results significantly skewed towards the lower scoring categories. The East Midlands and South West, can be included here as both scored significantly lower than the English average. Notably each of these regions featured many poor and very poor scoring schemes with respectively 37 and 32% in these combined categories.	Whilst all regions were dominated by mediocre scores, in some regions good and poor scores were balanced around the mediocre mark. The North East, North West, East of England and Yorkshire & Humber are of this type and scored just below the English average, with Yorkshire & Humber scoring above (with two out of its 12 schemes scoring very good).	Other regions skewed significantly towards the higher scoring categories. These included the South East, West Midlands and particularly Greater London. These regions all scored significantly better than the English average with, respectively 38, 44 and 50% of schemes across the two highest categories.



ENGLISH REGIONS BY AVERAGE DESIGN AUDIT SCORE

When average design audit scores were calculated for each region, Greater London was shown to be the highest performing region (3.65) and the East Midlands the lowest (2.78). The English average was 3.12, just above the 3.00 mark that would denote a 100% mediocre score.



ENGLISH REGIONS BY AVERAGE DESIGN AUDIT SCORE

3.3 A minimal and patchy improvement over 15 years

Comparing the 2019 results to those published by CABE between 2004 and 2007, the results suggest that there has been a small overall improvement in housing design quality nationally. As a measure of this, the average design audit score rose across the fifteen years from 2.94 to 3.12; representing 7.7% uplift in quality. Whilst welcome, given the very low base on which these results build – reported at the time as “an uncompromising and unflattering picture of the quality of new housing” (see 2.2) – such a minimal improvement is disappointing.

The comparative figures reveal similar profiles in the regions with each dominated by the mediocre category (around half of schemes), with a small reduction in schemes across the two ‘poor’ categories (down 8%) matched by an increase across the two ‘good’ categories (up 9%).

The results show that all the regions, with the exception of the East of England have improved their percentage of schemes in the good / very good categories, with Yorkshire & Humber, West Midlands and Greater London showing significant improvements. At the other end of the scale, the

2004-7 CABE REGIONAL HOUSING AUDITS						2019 A HOUSING DESIGN AUDIT FOR ENGLAND					
	Poor & Very Poor %	Mediocre %	Good %	Very Good %	Difference between 2004-7 and 2019 in combined Poor /Very Poor scores	Poor %	Very Poor %	Mediocre %	Good %	Very Good %	Difference between 2004-6 and 2019 in combined Good /Very Good scores
England	29	53	13	5	- 9% ▼	1	19	54	19	7	8% ▲
North East	31	63	3	3	- 4% ▼	0	27	55	18	0	12% ▲
North West	24	62	7	7	5% ▲	0	29	50	21	0	7% ▲
Yorkshire & Humber	14	86	0	0	11% ▲	0	25	50	8	17	25% ▲
East Midlands	55	42	0	3	- 23% ▼	0	32	58	10	0	7% ▲
West Midlands	47	38	12	3	- 47% ▼	0	0	56	44	0	29% ▲
East of England	27	60	9	3	- 16% ▼	0	11	83	6	0	- 6% ▼
Greater London*	15	69	6	12	- 10% ▼	0	5	45	30	20	32% ▲
South East	22	51	22	3	- 12% ▼	5	5	52	19	19	13% ▲
South West	18	76	6	0	19% ▲	6	31	44	19	0	13% ▲

REGIONAL COMPARISON OF THE AUDIT RESULTS

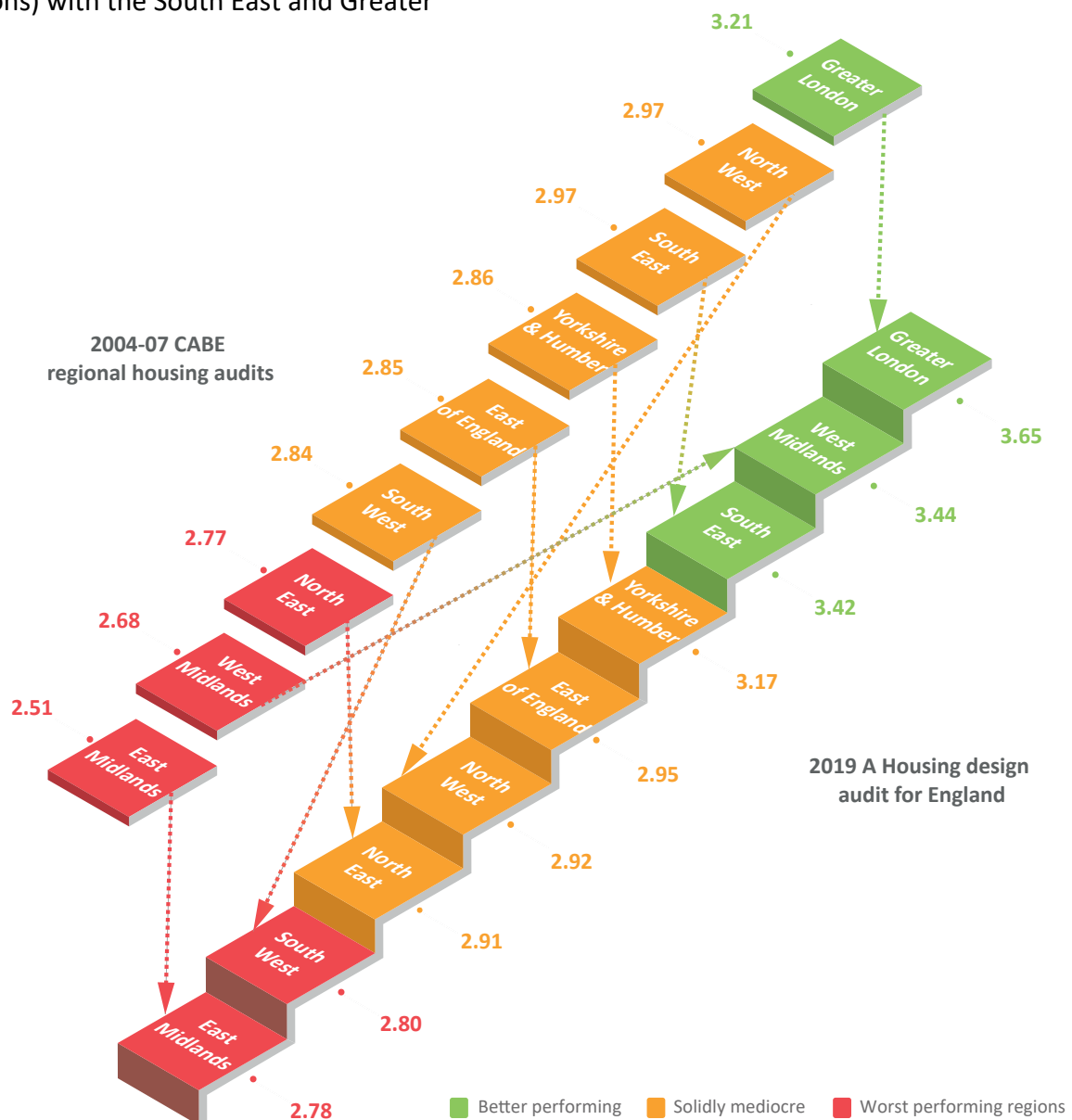
*In CABE, 2004, Housing Audit, Assessing the Design Quality of New Homes, London, the South East and the East of England the figures for London add up to 102%

North West, South West and Yorkshire & Humber each show disappointing increases in numbers of schemes falling into poor / very poor categories. By contrast the East Midlands and especially the West Midlands demonstrated substantial falls.

When examined using average design audit scores, seven out of the nine regions show an improved score, while two demonstrate minor reductions. Most improved, by some margin, was the West Midlands (although from a smaller sample size than other regions) with the South East and Greater

London also showing a very significant improvement. Positively, Greater London is no longer the only region above the 3.00 (100% mediocre) mark.

Whilst there has been a small overall improvement nationally, the regional picture demonstrates that this is patchy. If the three best performing regions are stripped out, then any improvement at the national level largely disappears.



2004/7 AND 2019 COMPARISON OF ENGLISH REGIONS BY AVERAGE SCORE

CASE STUDY 4

REGION: NORTH WEST - HOMES: 83

HOUSING AUDIT SCORE



41

ACORN CLASS



3 J 33

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

This brownfield development project comprises 83 dwellings with no affordable units and a landscaped open area.

SELECTED AUDIT OBSERVATIONS

- Scheme provides a very limited range of housing types and sizes – properties are either semi-detached or detached, and all have either 3- or 4-bedrooms.
- No local community facilities within the development.
- The development aims to reflect a 'village' typology; there are five 'character areas', one of which is identified as the 'village green', with open space and larger housing.
- The architectural design of the development is very standardised, with a limited variety of architectural treatments and materials.
- The pedestrian environment is poor; vehicles take priority within the site, and the design and materials used for the pavements are inconsistent.
- Access from the main road is adequate, but there is a very poor connectivity to surrounding areas.
- Opportunities for play and sociability are limited as the landscape of the open areas is limited to an area of grass and lacks play features.

PLANNING PROCESS

The case study site was formerly in use as farmland. An initial planning application for development of the site was refused due to the lack of affordable housing and public open space provision, alongside concerns that the development would be piecemeal and would compromise the rural character of the local area. A second outline planning application was submitted the following year; pre-application engagement with council officers and public consultation was undertaken as part of the process, which resulted in non-determination and appeal. Upon review by the Planning Inspectorate, it was established that due to increasing demand for housing in the locality, greenfield land beyond the urban development boundary would need to be developed. Permission for the development was subsequently granted by the Planning Inspector as part of the appeal, which was heavily influenced by the need to meet housing requirements in the face of under-delivery of housing in the area. It was hoped that the development would help to support the sustainable growth of the area.



ENVIRONMENT & COMMUNITY
Score: 2.75



PLACE CHARACTER
Score: 2.75



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 2.75



DETAILED DESIGN AND MANAGEMENT
Score: 2.25



CASE STUDY 5

REGION: EAST OF ENGLAND - HOMES: 184

HOUSING AUDIT SCORE



67

ACORN CLASS



1 B 4

URBANITY



SUBURBAN

SITE HISTORY



BROWNFIELD

THE DEVELOPMENT

Located at the periphery of an existing neighbourhood, this initial phase of a larger residential expansion project comprises 184 dwellings, of which 27% are affordable.

SELECTED AUDIT OBSERVATIONS

- Successfully provides a good mix of housing types and sizes, from 1- to 5- bedroom dwellings.
- Good access to community facilities.
- It is possible to identify the tenures from the appearance as the affordable units clearly clustered within the site.
- The public open spaces and play spaces on the site are very well designed and maintained, thereby maximising their recreational and social value.
- Provision for pedestrians and cyclists helps to reduce conflicts between different modes of travel.
- The development possesses high architectural quality, with interesting façades and the use of creative building materials. This gives the development an overall distinctive character and identity.

PLANNING PROCESS

The case study site forms part of a larger proposed new neighbourhood that seeks to meet increasing local housing and employment needs in a sustainable manner. Due to the scale of the proposed new neighbourhood, the land was divided into four different zones with different design teams, and proposals were developed in a coordinated way to ensure a good balance of diversity and coherence. The case study site is the first zone to come forward. The proposals for the site were formulated in line with key local and national policy and guidance documents and were refined through a process of engagement with the City Council, County Council, local community and other stakeholder groups, and through design review. The success of the scheme reflects the developer's aspirations to deliver a sustainable community through offering a range of tenures and dwelling sizes across the development, building to high environmental standards, and integrating Sustainable Urban Drainage systems into the proposals. Local distinctiveness and high-quality townscape and landscape also contribute to the overall quality of the project.



ENVIRONMENT & COMMUNITY
Score: 4.25



PLACE CHARACTER
Score: 4.75



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 4.75



DETAILED DESIGN AND MANAGEMENT
Score: 3.25



CASE STUDY 6

REGION: YORKSHIRE & HUMBER - HOMES: 187

HOUSING AUDIT SCORE



37

ACORN CLASS



3 G 26

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

The case study site comprises 187 dwellings and associated open space, and forms phase three of a wider brownfield redevelopment project.

SELECTED AUDIT OBSERVATIONS

- A reasonable range of housing sizes have been provided, including 2-, 3- and 4-bedroom houses.
- The development provides good access to community facilities, with opportunities to work locally.
- Affordable housing provision has been included within the development and, to some degree, the integration of different tenures has been done in a manner that obscures their tenure identity.
- The architectural design of the housing lacks visual interest or distinctiveness and is not site-specific.
- Street legibility and connectivity is poor, meaning that the scheme is not easily navigable by pedestrians.
- The provision of car parking is poor, with a lack of integration of parking spaces and garages. Consequently, parking severely undermines the street scene.
- The public open space provided is well maintained and maximises play potential and sociability.

PLANNING PROCESS

The initial outline planning permission for the wider development was granted, and over the following three years, a number of subsequent applications and reserved matters applications were submitted and approved which sought to successively increase the number of units accommodated overall, and also within the individual phases of the development. During the planning process, reference was made to a suite of policy documents and guidance, from national to local level, and pre-application engagement was undertaken with council officers, the police and local residents, which informed the final proposals. Whilst there was a significant focus on pedestrian friendliness within key policies and strategies, alongside the inclusion of Home Zone principles (traffic calmed streets), this has failed to result in the creation of a high-quality and characterful residential environment.



ENVIRONMENT & COMMUNITY
Score: 2.75



PLACE CHARACTER
Score: 2.50



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 2.50



DETAILED DESIGN AND MANAGEMENT
Score: 1.50



CASE STUDY 7

REGION: WEST MIDLANDS - HOMES: 249

HOUSING AUDIT SCORE



44

ACORN CLASS



4 L 38

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

This greenfield development project is located at the north-western edge of the city and comprises 249 dwellings, including 45 affordable units.

SELECTED AUDIT OBSERVATIONS

- A limited range of housing sizes have been provided, which are predominantly 2- and 3-bedroom houses, alongside a limited number of 4-bedroom houses.
- The development includes 45 affordable units and the integration of different tenures in a manner that obscures their tenure identity.
- Relatively easy access to nearby community facilities, open spaces and employment opportunities.
- Good access to well-established public transport, with a frequent bus service and a short walking time to bus stops
- The design and management of the public open space provided is generally poor, thereby limiting the recreational and social value of such spaces. Minimal street trees are provided.
- Highway design is fairly poor; only secondary streets within the development are pedestrian friendly to some degree.
- The architectural design of the housing lacks creativity, visual interest or distinctiveness and is not site-specific.
- The development is safe and secure, with streets and spaces easily overlooked and a good provision of street lighting.

PLANNING PROCESS

The development proposal was compliant with both national and local planning policies and guidance, relating to high quality design, a good standard of amenity for residents, and a focus on sustainable economic growth through the provision of new homes. The design and layout of the scheme underwent extensive pre-application discussions with members of the city council and other stakeholders. Community involvement was an important part of the pre-application process including a preview consultation session with schools, community groups and members of the city council, followed by a public exhibition; views that were used to inform the proposals. Sustainability was a core part of the proposal with the intention of promoting sustainable transport modes, integrating a Sustainable Urban Drainage system into the development and adopting an energy efficient approach to building design. Whilst it can be seen that the development has been successful in a number of ways, the lack of distinctiveness, character and townscape quality within the streets and spaces of the area resulted in an average outcome overall.



ENVIRONMENT & COMMUNITY
Score: 4.25



PLACE CHARACTER
Score: 4.75



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 4.75



DETAILED DESIGN AND MANAGEMENT
Score: 3.25



4.0

WHAT ARE WE GETTING RIGHT AND WRONG?

In this section the report drills down into the seventeen design considerations to uncover what the audit revealed about each.

The headline national figures are broken down regionally where appropriate, and considerations are discussed in relation to one another and any wider contextual factors to which they relate.





4.1 Problematic, challenging and successful

The headline findings give the big picture, but hidden beneath is a wealth of detail about which aspects of design are systematically got right and which wrong. Audited schemes were assessed against the seventeen categories of design considerations under the following four headings:



A: ENVIRONMENT AND COMMUNITY

A1 Community facilities, A2 Housing types, A3 Public transport, A4 Environmental impact



B: PLACE CHARACTER

B1 Architectural response, B2 Existing and new landscape, B3 Character of development, B4 Street legibility, B5 Street definition



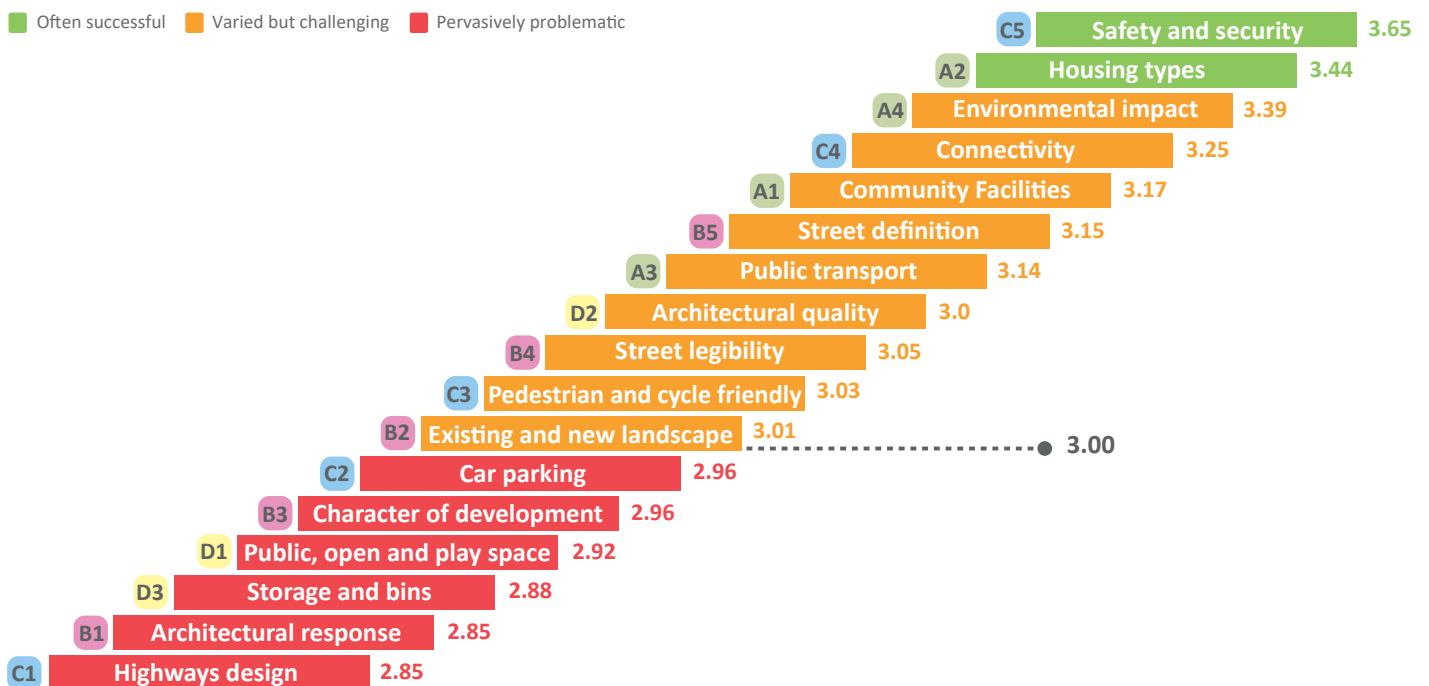
C: STREETS, PARKING AND PEDESTRIAN EXPERIENCE

C1 Highways design, C2 Car parking, C3 Pedestrian and cycle friendly, C4 Connectivity within and to surrounding developments, C5 Safety and security



D: DETAILED DESIGN AND MANAGEMENT

D1 Public, open and play spaces, D2 Architectural quality, D3 Storage and bins



SEVENTEEN DESIGN CONSIDERATIONS COMPARED BY AVERAGE SCORE

By comparing the average score in each category it is possible to determine relative success against the different design considerations. Again, three divisions could be identified:

Pervasively problematic

Six design considerations ranked below the 3.00 mark, meaning that they were more often than not problematic. The dominance of storage and bins, overly engineered highways infrastructure, and car parking were amongst the most pervasive of problematic concerns, leading to environments dominated by large areas of hard unattractive surfaces (tarmac or brick pavements), parked cars and bins. Public, open and play spaces were often poorly located and designed and failed to create a social focus. Housing units were frequently of a standard type with little obvious reference to the local context or little attempt to create something distinctive. Low-scoring schemes performed especially poorly in the categories of architectural response and character of development. All these elements undermined the quality and character of the environment which often had little distinguishing personality or 'sense of place'.

Varied but challenging

Varied but challenging – Nine design considerations sat above the 3.00 mark but were marked by a broader variation in practice nationally. A number of these – street legibility, street definition and connectivity – relate broadly to how schemes are laid out spatially, notably how streets are defined by houses and connect up together and with their surroundings, and how easy it is to navigate the street environment. Other factors – pedestrian and cycle friendly, public transport and the availability of local facilities – determine, to a large degree, the extent to which inhabitants are likely to rely on their private cars. All these elements have a significant impact on the 'walkability' of developments with strong health and social impacts on residents. Many developments are failing in this regard.

The architectural quality and existing and new landscape quality of schemes also fell into this category with a wide variation in practice evident, both with regard to the detail and integrity of architectural solutions, and the balance of green elements (including street trees) with the hard landscape. Environmental impact, as measured through energy efficiency measures, sat at the top end of this category, with most schemes achieving the minimum required by the Building Regulations, but with relatively few seeking to go much beyond.

Often successful

Two considerations scored noticeably better. Best of all was safety and security, suggesting that the 'secured by design' parameters of recent decades have been successfully mainstreamed in much of the country. Schemes were also typically successful at integrating a variety of housing types. This suggested that local needs were being balanced with market concerns when projects are being planned and developed, often with social housing being successfully integrated into the mix.

The next sections break down these results according to the seventeen design considerations in their four categories.



4.2 Environment & community

The first group of design considerations focus broadly on establishing a sustainable place. If new housing is to be the heart of a real, living and diverse community rather than an isolated, unsustainable, single-use and mono-cultural enclave, then factors such as a mix of uses, connectivity to public transport, a variety of housing types, and design for reduced energy, will all be critical. The first two, in particular, are amongst the most fundamental issues when it comes to delivering 'place value' – economically, socially, environmentally and through enhanced health outcomes.

Collectively these factors scored better than the other categories of design concerns, perhaps pointing to a planning system (assisted by the building regulations) that is more confident in dealing with these more tangible considerations.

Often successful Varied but challenging Pervasively problematic



ENVIRONMENT AND COMMUNITY CONSIDERATIONS



A1

A2

A3

A4

4.2.1 Community facilities

Does the development provide (or is it close to) community facilities, such as a school, parks, play areas, shops, pubs or cafes?

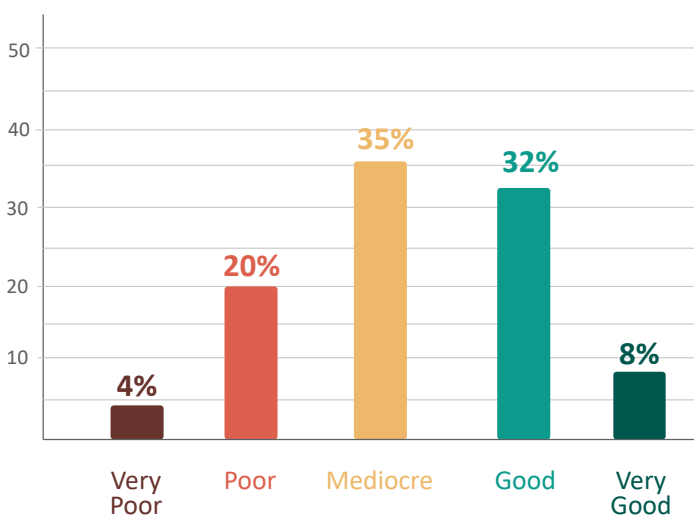
- All residents can access community facilities easily, including well located open and play spaces
- There are opportunities to work and to establish businesses locally
- The facilities are well integrated into the urban fabric which has the potential for adaptability (between uses) in the future

Good access to local facilities and amenities is critical to encouraging residents out of their cars by giving them the opportunities to shop, play, work, learn and socialise locally. Schemes that were well integrated with the existing built fabric in or adjacent to already built up areas with a mix of uses tended to score well as long as connections to these facilities were available and obvious. Where this was not the case, particularly if developments were relatively small, scores were far less satisfactory, although some exemplary projects were apparent where housing had been planned around or in relation to a clear centre with local facilities and amenities. Establishing a built fabric with the potential for adaptability between uses over time was extremely rare.

Whilst, nationally, this was one of the higher scoring categories, practice varied significantly across the country, with more densely developed regions – the West Midlands (3.60), Greater London, and the South East – doing significantly better than the national average whilst the East Midlands (2.62) lagged somewhat behind, followed by the North East and South West.



COMMUNITY FACILITIES (ALL ENGLAND)





A1

A2

A3

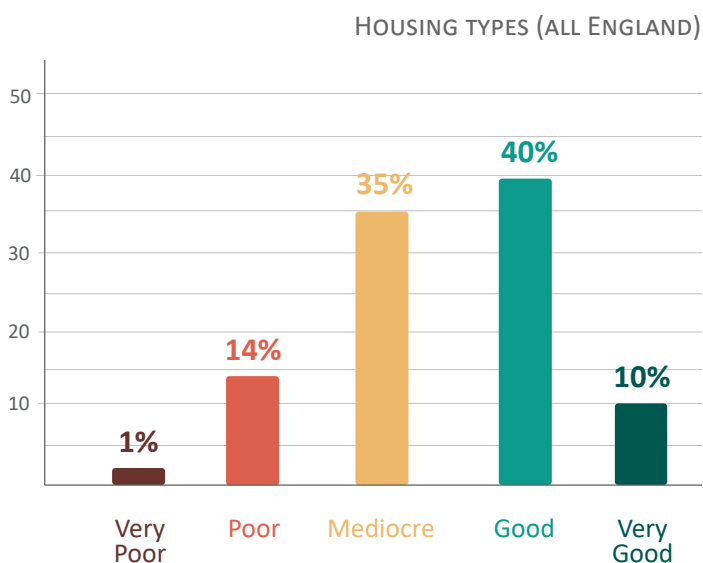
A4

4.2.2. Housing types

Is there a mix of housing types to meet varied local needs?¹⁵

- *A range of property sizes and types in order to encourage a mix of different households*
- *The design of homes and surrounding environment is tenure blind (tenure is not apparent from the appearance)*
- *Tenure distribution (if apparent) does not exacerbate disadvantage*

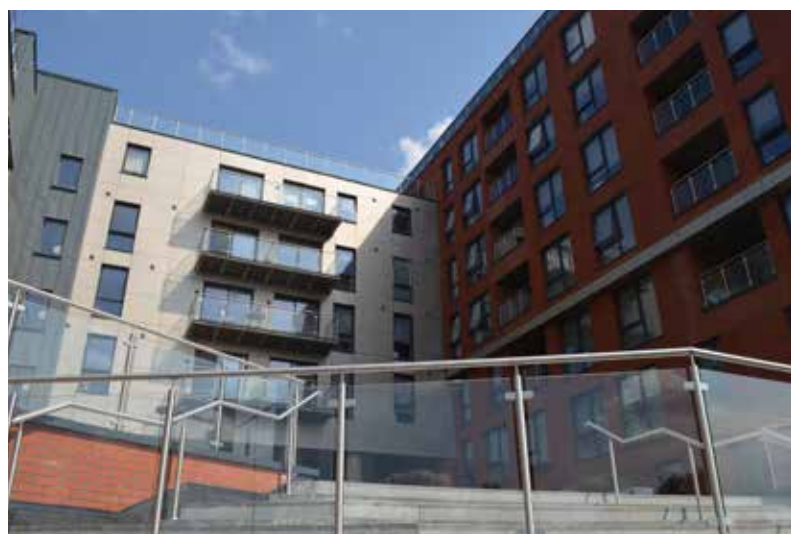
This was the design consideration achieving one of the best scores nationally with 50 per cent of schemes rated across the good and very good categories. Most of the schemes assessed – even those scoring predominantly in the poor and very poor categories – tended to provide a range of housing types, both physically in their size and design and with a well integrated mix of tenures, arguably representing a significant success for the efforts of local planning authorities. In the best projects it was difficult to tell the difference between tenures through their designs, although practice varied significantly in this regard. In some projects there was a clear preference amongst social housing providers to group their properties for ease of management, and this led to different maintenance



¹⁵ In common with previous audits, this design consideration did not include any assessment of (or judgment about) the relative proportion of 'affordable' housing over market housing. The proportion is a vital planning concern but not a design one. How the given mix – alongside different home sizes – is designed and integrated is, however, a design concern, and this was the focus of this consideration.

regimes, particularly in relation to the upkeep associated with garden spaces.

On this issue, practice across the regions varied considerably. Greater London was, for example, well above the national average with an average score of 4.05 whilst the North East was considerably lower at 2.88.





A1

A2

A3

A4

4.2.3 Public transport

Does the development have easy access to public transport?

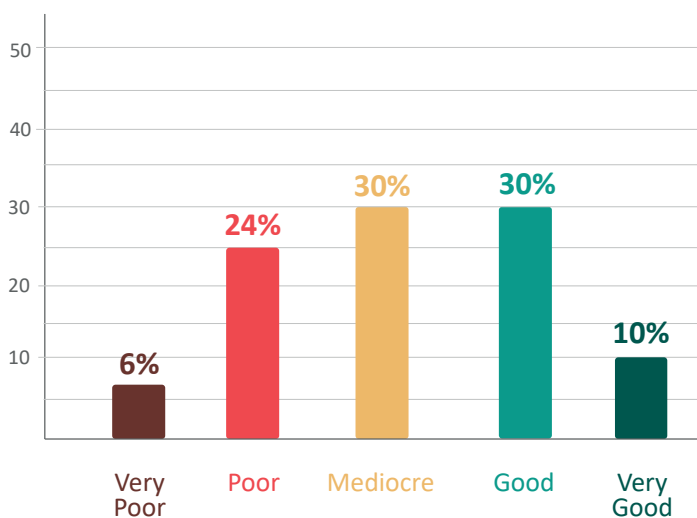
- *Good availability and frequency of public transport*
- *The development encourages more people to use public transport (quickest, safest, attractive and most convenient possible routes)*
- *Public transport stops are located in a convenient place for all development residents*

Public transport was the least successful of the four design considerations in this category with an average just above the national average score across the seventeen design considerations. This criterion readily distinguishes between developments delivered within urban settings where existing public transport infrastructure is likely to be already in place, as opposed to more suburban and rural settings where it is not. Despite this, the development of substantial new housing developments without, or with very little, access to public transport represents a major cause for concern given the advice in national policy that connects design with the achievement of sustainable development. In many areas, this is not happening, and suburban developments are being planned in isolation of each other and as car reliant dormitories.

Looked at regionally, practice varied more than for most other design considerations with the lowest performing regions – notably the East Midlands (2.51), followed by the South East, Yorkshire and Humber, South West and North East – tending towards building more car reliant developments than those with higher scores, notably the West Midlands (3.80) followed by the North West, and Greater London.



PUBLIC TRANSPORT (ALL ENGLAND)





A1

A2

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A4

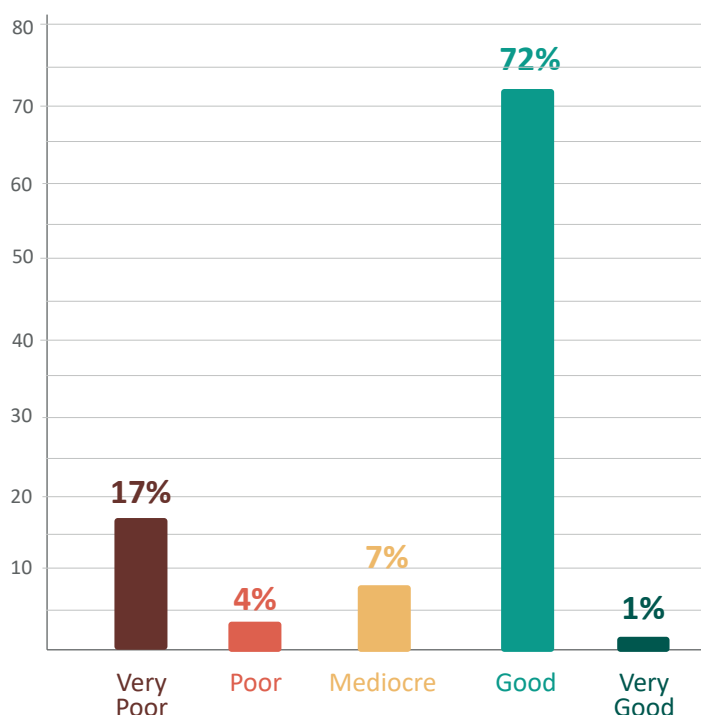
4.2.4 Environmental Impact

Does the development have a low environmental impact?

- Reflected in a high EPC energy efficiency rating
- Reflected in a high EPC environmental performance rating

The environmental impact of developments was the only design consideration that involved criteria related to the construction of homes as opposed to the design of the external residential environment. Assessment was based on nationally gathered Energy Performance Certificate (EPC) data which measures, separately, energy efficiency and environmental impact. On both counts New Homes are required nationally to meet an EPC rating of at least grade C (69-80). Consequently, a score below this (EPC D – 68 and below) was regarded as ‘very poor’ in the audit. A score at the lower end of the C range (69-74) – the absolute minimum allowed – received a ‘poor’ rating, and at the upper end (75-80), ‘mediocre’. Ratings of grade B (81-91) received a ‘good’ score and grade A (92+), a ‘very good’.

ENVIRONMENTAL IMPACT (ALL ENGLAND)

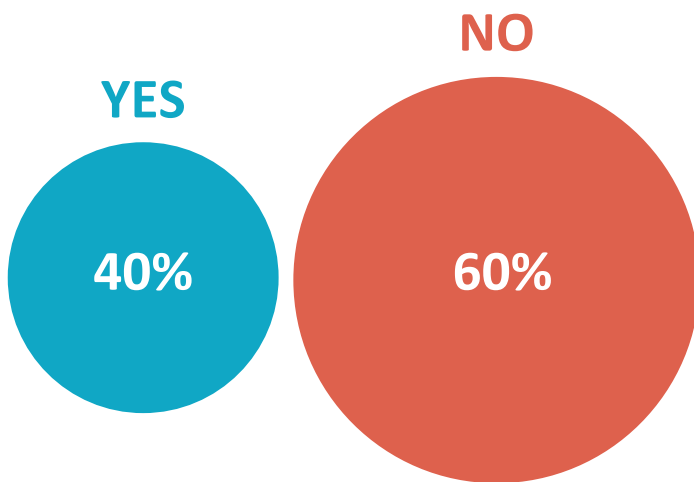


These factors fall outside of the discretionary planning system and are regulated instead by Building Regulations, which perhaps explains the much greater consistency between regions with only a small difference between the top scoring region (East Midlands, 3.46) and the lowest (Yorkshire & Humber, 3.17). More surprising was the fact that every region had at least some schemes (between 11 and 25%) in the ‘very poor’ category, leaving this design consideration below the two highest scoring design considerations. When the known ‘performance gap’ between the theoretical performance of new housing (as designed) and the actual performance (as built) is taken into account¹⁶, the already mediocre average of 3.39, seems sub-standard.

When schemes with Code for Sustainable Homes ratings were singled out, only 38 schemes were found. 12 schemes had Code 4 ratings (25% reduction in CO₂ emissions over building regulations) and 26 had code 3 (0% reduction in CO₂ emissions over building regulations). As the *Code for Sustainable Homes* was withdrawn by Government in 2015, the extent of coverage is not necessarily meaningful, but these figures suggest that new housing was considerably behind the aspirations of the Code before it was abolished. Those aspirations required that all new schemes would be at least level 3 by 2010 and level 6 (zero carbon) by 2016. The Code’s abolition is likely to have made matters worse. Whilst the numbers are small, it is notable that when correlated against the overall audit findings for design quality, projects with a higher Code for Sustainable Homes rating also had a higher design rating. Collectively level 4 homes scored 3.83 (with no schemes below mediocre) whilst code 3 homes scored 3.07 (just below the national average). A tentative conclusion is that better design quality – holistically – encompasses a concern for environmental impact. One is a good predictor of the other.

¹⁶ Committee on Climate Change (2019) UK Housing, Fit for the Future, <https://www.theccc.org.uk/wp-content/uploads/2019/02/UK-housing-Fit-for-the-future-CCC-2019.pdf>

When asked whether they knew the energy rating of their homes, however, 60% of residents confessed they did not. This suggests that despite (in most cases) having recently purchased their home, most residents are not overly concerned by such issues. It may point to a reason why environmental impact is less of a priority for the market than it should be given the widely acknowledged climate emergency.



RESIDENT SURVEY: ARE YOU AWARE OF THE ENERGY RATING OF YOUR HOME?

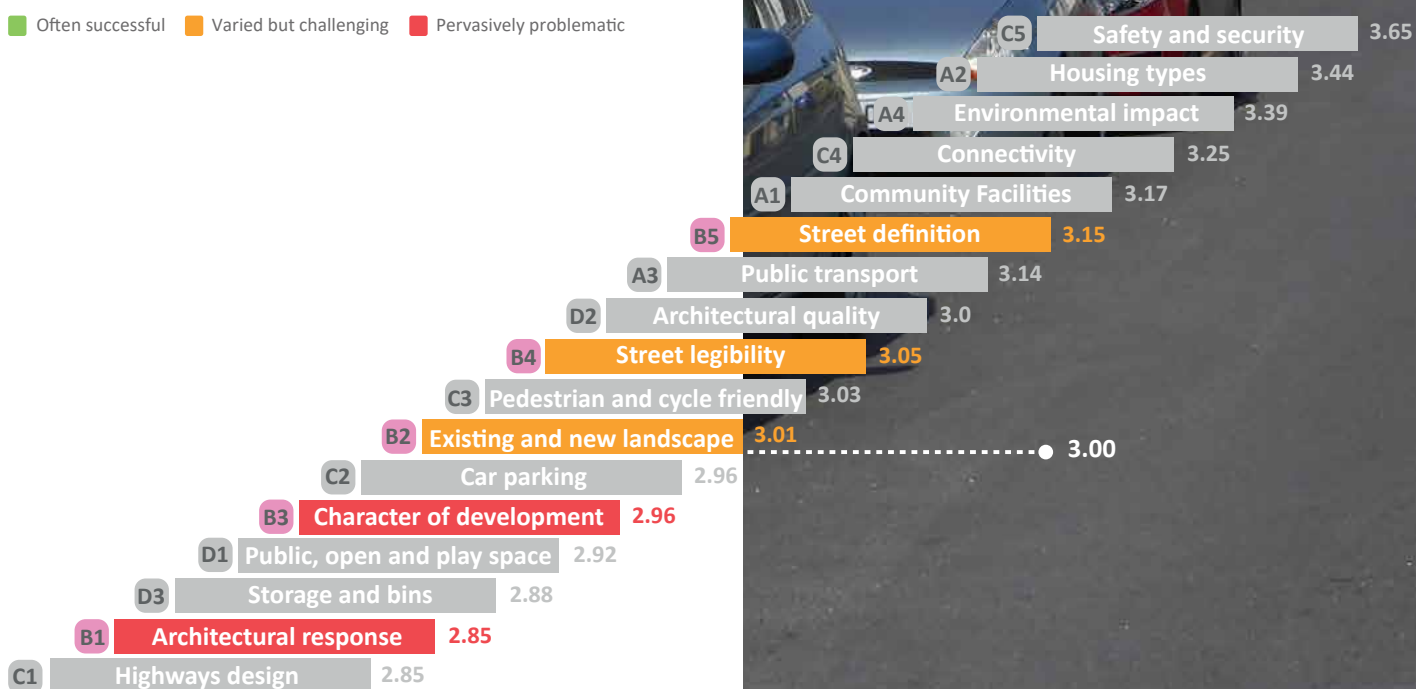




4.3 Place Character

The second group of design considerations focus broadly on establishing the distinctive qualities of place. These are fundamental to how places feel, look, and are used and encompass the design of streets, how the landscape is integrated and used, the response of the architecture to the surrounding context, and how all this gels together to give a coherent character. The green landscape elements in residential environments, perhaps more than any other element, are fundamental to the delivery of 'place value', whilst the presence of positive character, more than anything else, is identified by councillors and communities as too often absent from the sorts of housing estates that are being built (see 6.2). Collectively the scores for these factors were mixed, but tended towards the lower end of the scale, in relation to the seventeen design considerations. These are the sorts of factors about which planning authorities often have least confidence and are most disappointed with when schemes are delivered.

■ Often successful
 ■ Varied but challenging
 ■ Pervasively problematic



PLACE CHARACTER CONSIDERATIONS



B1

B2

B3

B4

B5

4.3.1 Architectural Response

Is the design specific to the scheme?

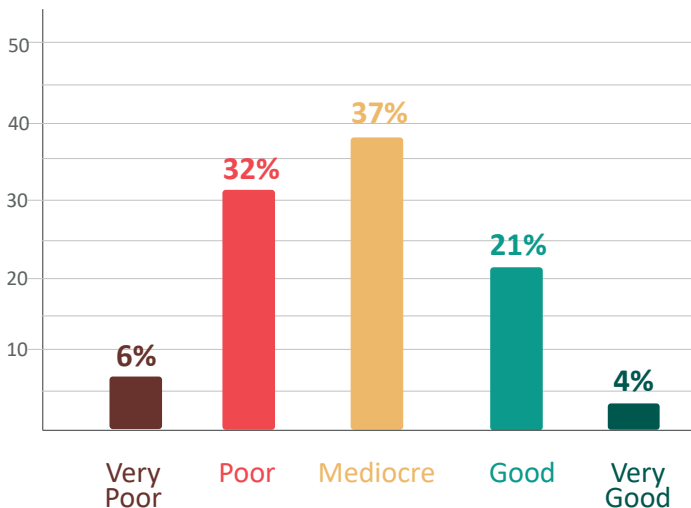
- *The design of individual homes are specific to the site*
- *The development draws from or is inspired by, an existing distinctive palette of architectural elements that are characteristic of the area*

When assessing the architectural response, auditors were asked to forget their own stylistic preferences and – regardless of style – focus on whether the response was one that had been sensitively tailored to the site. This meant homes that reflected something of the local context and which were not unmodified standard house types that could be found anywhere. Whilst inevitably subjective to some degree, these aesthetic factors are critical to the way in which housing development is perceived and a sense of place is created. Stylistically the audited schemes ranged from traditional to modern, with a more contemporary set of styles apparent in London and in higher density locations elsewhere. Both are capable of being successful or less successful in relation to context.

Overall this was one of the two least successful design considerations, with ‘mediocre’ and ‘low’ scoring schemes tending to feature standard house types, often with unconvincing attempts to relate them to local contexts through the crude application of ‘local’ materials. Schemes scoring ‘very good’ for their architectural response were only found in two of the nine regions – Greater London (3.40) and the South East – whilst the South West (2.33) followed by the East Midlands were the least successful in this regard.



ARCHITECTURAL RESPONSE (ALL ENGLAND)





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B5

4.3.2 Existing and New Landscape

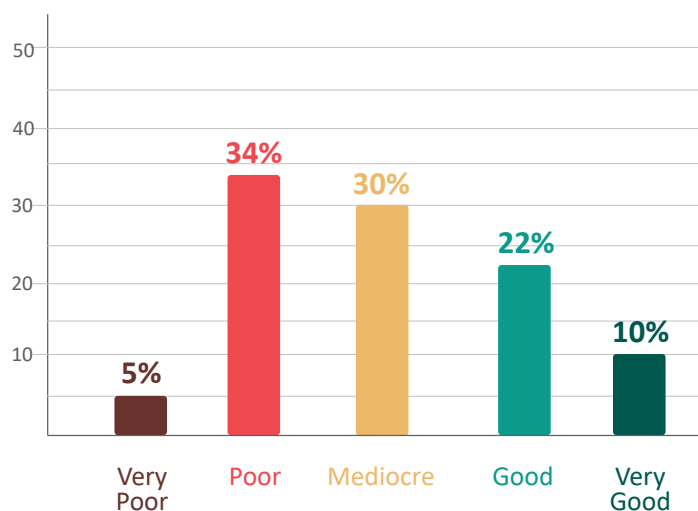
Does the scheme exploit existing landscape or topography and create a new bio-diverse landscape?

- *The development takes advantage of existing topography, landscape features (including watercourses), wildlife habitats, site orientation and microclimates*
- *SUDs are fully integrated within the development and the scheme is / will be ecologically rich*
- *Street trees are provided throughout the development*

The green landscape is often viewed as the forgotten dimension of urban design, applied after-the-fact in an attempt to obscure ugly architecture and parking or alternatively removed from masterplans prior to their development in an attempt to save on maintenance costs. Green infrastructure (the network of green spaces and other environmental features), both as a context into which development should fit, and as designed in new developments, is fundamental to creating a pleasant and healthy external environment in which residents will wish to spend time. It can play a vital role in encouraging bio-diversity and compensating for any habitat loss, as envisaged in the NPPF (2012 and 2019). Auditors considered the total landscape from the integration of existing landscape features to the planting of street trees and the creation of SUDs.

Whilst some regions exhibited some excellent practice, the headline is that too often green landscape and bio-diversity was sacrificed for a hard over-engineered environment. This was reflected in an average score of just over the 300 (100% mediocre) mark. Again, in this area, there was considerable variation across the regions with the North East (227) where there was no 'good' or 'very good' scores for landscape bringing up the rear, whilst the South East (351) was out in front. The key difference was between schemes that exploited the existing landscape as a bio-diverse resource – retaining existing mature trees, water features, hedgerows, and so forth – and those which did not, and which instead delivered seemingly leftover bits of green with no obvious function, either social or environmental.

EXISTING AND NEW LANDSCAPE (ALL ENGLAND)





B1

B2

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B4

B5

4.3.3 Character of the development

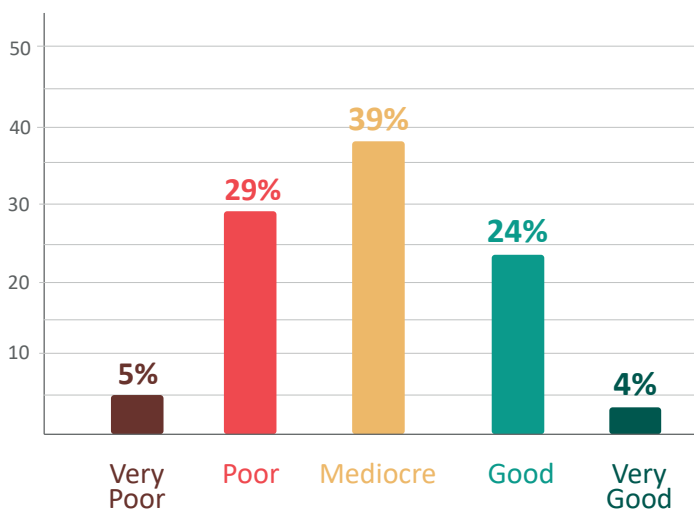
Does the scheme feel like a place with a distinctive character?

- *The development has an overall distinctive character and identity*
- *All the built and unbuilt elements create a coherent place*
- *Any existing heritage buildings are fully integrated into the development*

The notion of character is a broad concept and to some degree acts as a catch all for all other design aspects, but it is also a design consideration in its own right. One of the fathers of modern urban design – Christopher Alexander – talked about successful places being infused with “the quality without a name” – hard to describe but we know it when we see it. Character is the same and relates to how all the components of the place fit together to establish an identity that is clear, positive and distinctive. The alternative is indistinct, jarring or simply boring.

Overall the character of development was often poorly developed, with many schemes feeling generic. This was less a concern with the use of standard house types, which were used creatively in some schemes to establish places with individuality and character. Instead it reflected an absence of any attempt to use the components of development in a manner that created a coherent place as opposed to a collection of houses, roads and car parking. On this issue Greater London (3.50) and the South East (3.18) were the only regions to score over 3.00 (and to have schemes marked ‘very good’), with the worst performing regions – the South West and Yorkshire & Humber – scoring just 2.49 and 2.55 respectively.

CHARACTER OF DEVELOPMENT (ALL ENGLAND)





B1

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B4

B5

4.3.4 Street legibility

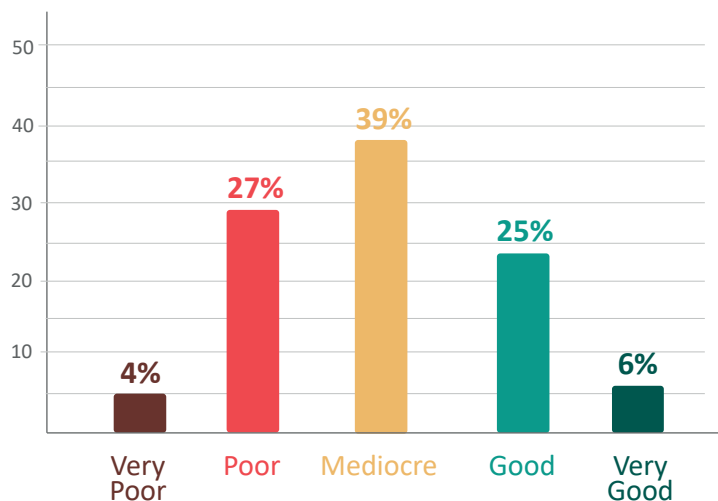
Do the buildings and layout make it easy to find your way around?

- Views into or from the site are carefully considered
- The development is easy to navigate and find your way around

Legibility refers to how understandable or 'graspable' an area is, which then determines how easily we can find our way around it. But legibility itself is determined by the organisation of space, elements within it, and views to and from it, in such a manner that places become memorable. This does not imply that everything has to be special, but that there are some landmark elements that stand out, be those architectural, landscape or urban space features. A legible environment can encourage the external environment to be used more for walking and play and can enhance the character giving qualities of the place.

Street legibility sat roughly in the middle of the sequence of design considerations with the national audit balanced around the mediocre category, although with a wide variation between the regions. London, with its higher density schemes featuring a mix of unit types and sizes, a mix of uses and public spaces, and simple grid street structures was far more successful in this area than other regions (3.80). The North East (2.54) followed closely by the South West, Yorkshire & Humber, and the East of England brought up the rear, let down by more convoluted car-based street structures and a lack of variety in the street scene.

STREET LEGIBILITY (ALL ENGLAND)





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B5

4.3.5 Street definition

Are streets defined by a well-structured building layout?

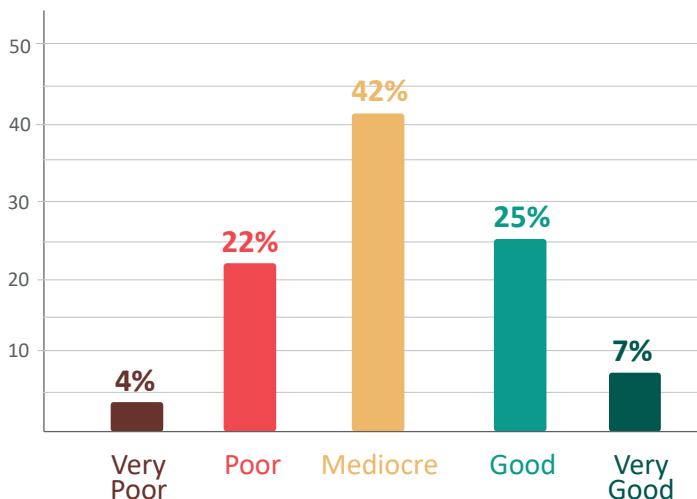
- *Buildings and landscape are used to create a coherent street edge and sense of enclosure*
- *Streets are principally defined by the position of buildings rather than the route of the carriageway*
- *Buildings turn corners well and contribute to a high quality townscape (the three dimensional composition of all the built elements)*

How streets are defined by their street walls is fundamental to how urban areas are experienced and used. A street that is well defined with active frontages (those with doors and windows onto the street) will feel safe, comfortable, social, walkable and more legible. Both buildings and landscape elements can help in defining the street wall although this can be easily undermined by overly dominant highways and by houses that turn their backs (or sides) onto streets. Street definition was the most successful element in this category, although practice varied significantly across the 142 schemes. Too many still allow the design of roads infrastructure to dominate the design of the three dimensional street space, rather than designing infrastructure appropriate to the spaces and places they wish to create.

Regionally this was the second most varied design consideration, with, by some way, Greater London coming out on top (4.08), whilst the North East struggled (2.54), followed by the East of England and the South West. The strong street based urbanism of London across inner and outer areas seems to have provided a firm template for new development that is following the historic urban pattern, whilst regions with a more car-based suburban pattern are failing to create coherent, well defined and walkable street-based patterns of development.



STREET DEFINITION (ALL ENGLAND)

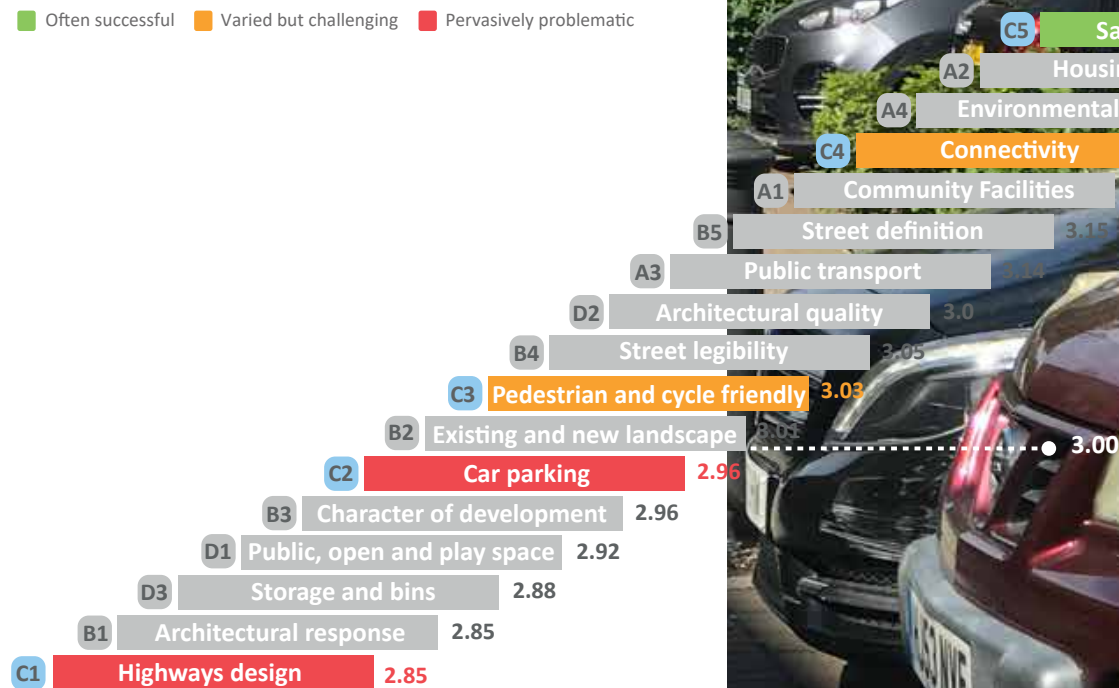




4.4 Streets, parking and pedestrian experience

The third group of design considerations focused on the design and integration of road, cycle and pedestrian infrastructure and with the experience of pedestrians using the public realm. Again these factors, notably the need for a walkable and cycle friendly environment, are fundamental to delivering 'place value' for communities, whilst car dependant, roads dominated development and poorly designed and integrated parking are amongst the factors most likely to undermine it, and should be avoided. Yet, of the four categories of design considerations, scores for these factors were the most widely spread. Ultimate responsibility for their implementation was also widely spread, with highways authorities, planning authorities and housebuilders all having a fundamental role in delivery.

■ Often successful ■ Varied but challenging ■ Pervasively problematic



STREETS, PARKING AND PEDESTRIAN EXPERIENCE CONSIDERATIONS



C1

C2

C3

C4

C5

4.4.1 Highways design

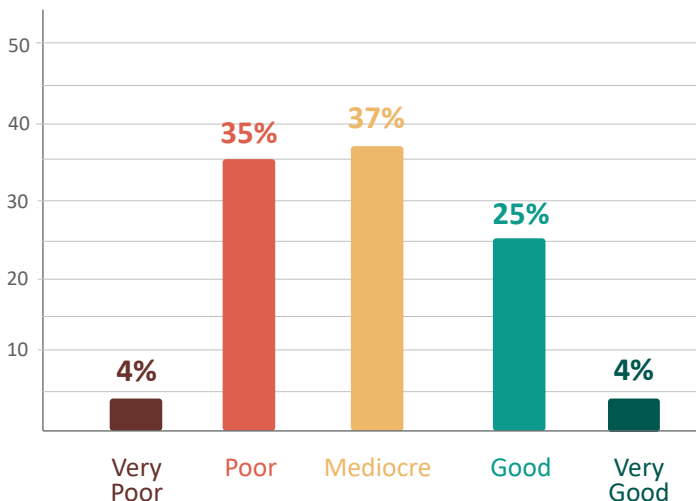
Does the building layout take priority over the road, so that highways do not dominate?

- *The building layout and / or landscape takes priority, not the highway*
- *Streets and spaces are attractively designed with robust and varied materials and are not over-dominated by tarmac or other hard landscape*
- *Streets, including the arrival to a new development, are designed at a human scale, for example avoiding large roundabouts*

How roads are designed and integrated into housing areas is fundamental. Since at least the 1950s and the work of Gordon Cullen (amongst others) the over-dominance of highways has been a source of profound concern. Cullen described what he witnessed in the post-war period as 'prairie planning' because of the wide open tarmac filled spaces that failed to define streets for walking and social life. In the 21st Century these critiques continue, with the Urban Design Group, for example, recently reporting that Highways authorities have retrenched away from the street-based prescriptions in Manual for Streets back to the old roads-based standards of DB32 (guidance with its origins in the 1970s)¹⁷.

Highway design was the joint lowest scoring design consideration (just 2.85 overall.) along with architectural response. Again, there was considerable variation between the best performing and worst performing regions, with the East Midlands scoring significantly below others (2.17), followed by the South West and then Yorkshire & Humber. At the top Greater London led the way (3.57) with only the South East also scoring above 3.00. Highways design encompasses not only the layout of roads inside developments, but also the arrival point into them and the quality of materials and detailing associated with street surfaces. Key aspects of highway design in schemes that scored poorly were a failure to address the highway as an integral part of the street space, poor transitions between developments and their surroundings, for example the use of large roundabouts, and the over-dominance and poor detailing of monotonous hard landscape materials (notably tarmac and/or brick pavements).

HIGHWAY DESIGN (ALL ENGLAND)



¹⁷ <http://www.udg.org.uk/content/street-design-uk-pilot-survey-2018>



C1

C2

C3

C4

C5

4.4.2 Car parking

Is the car parking well integrated and situated, so it supports the street scene?

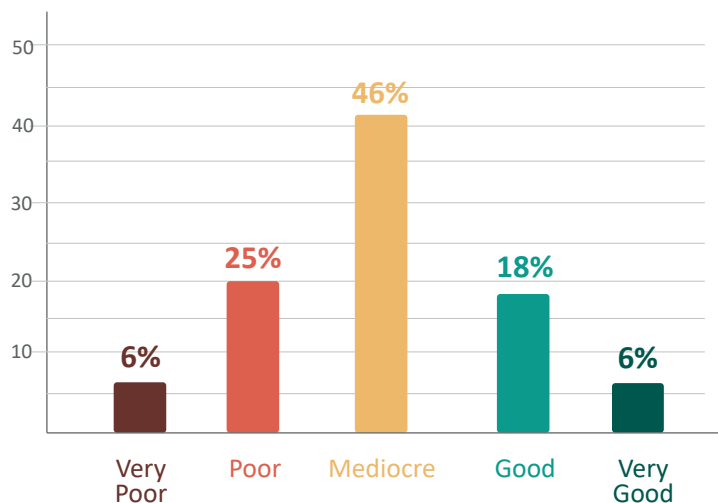
- *Parking positioned close to people's homes but not undermining the street scene or the potential for private green garden space (front or back)*
- *Parking areas are well overlooked, attractive and well integrated within the development*
- *Any garages are well designed and integrated within the scheme and do not dominate the street scene*

Accommodating the car at rest is a notoriously difficult challenge in residential areas, and that challenge becomes progressively more difficult as car parking standards (the number of car parking spaces per household) increases. Whilst trends in how to achieve satisfactory parking design outcomes change over time, what is apparent is that the parking of cars is fundamentally incompatible with other urbanistic design objectives. For example, providing rear parking courts ensures that many cars are kept off the street, allowing streets to be used for social activities such as children's play, but this is done at the expense of private garden space and leads to the opening up of the rear of properties to crime and predation. At the same time, because of the location of many developments (with poor public transport

connections), cars are often a necessity in many new residential areas and the availability of plentiful, convenient parking has become an overwhelming concern of residents (see 6.2). Perhaps because of these challenges this design consideration generally scored poorly.

How well a development scored, depended on how obtrusive areas of car parking were. Regionally the South East (3.40) followed closely by Greater London scored best, whilst the East Midlands (2.21), the North East, and the South West scored worst. In these and other regions, low land values and lower density housing solutions meant that space for car parking was a less valued commodity and large areas of hard surface was the result. In London and the South East – perhaps reflecting the higher land values – ways to accommodate car parking seem to have been addressed with greater care and creativity, and this showed in higher levels of successful integration of the car.

CAR PARKING (ALL ENGLAND)





C1

C2

C3

C4

C5

4.4.3 Pedestrian and cycle friendly

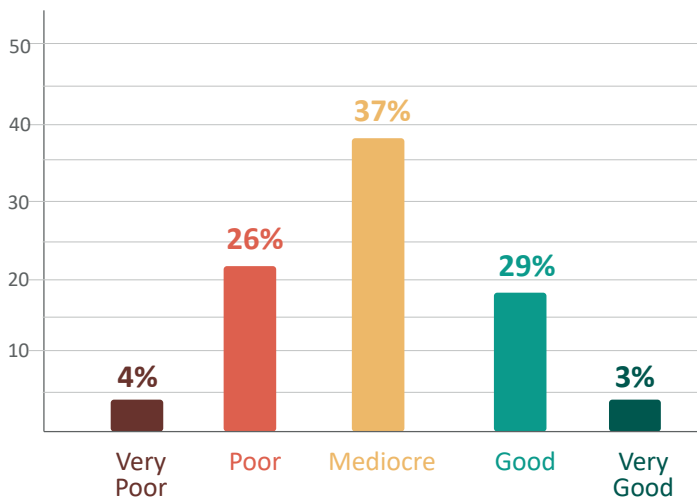
Are the streets pedestrian and cycle friendly?

- *The streets are pedestrian and cycle friendly and designed to encourage cars to drive slowly (max 20mph) and carefully*
- *Streets designed in a way that they can be used as social spaces, such as places for children to play safely or for neighbours to converse*

The potential for active travel, whether by foot or on a bicycle, has been shown to be a key determinant of healthy lifestyles in numerous studies. Turning streets from vehicle dominant to pedestrian and cycle friendly spaces involves slowing vehicle speeds (through design), designing parking to avoid conflicts, introducing cycle infrastructure and high quality pavements, and providing attractive street spaces with sufficient street furniture for rest and relaxation. Collectively the 142 schemes demonstrated scores just over the 300 (100% mediocre) mark, but with significant variation in practice between developments.

Regionally, scores largely followed those for highways design. However, the low vehicle volumes on many roads meant that, despite the dominance of roads, schemes typically functioned tolerably for other users. The best performing regions were the South East (3.52), West Midlands, and Greater London, whilst the East Midlands (2.55) followed by the North West, and the South West scored least well. The best performing schemes were able to integrate pedestrian only spaces and dedicated cycle infrastructure in order to facilitate fast and pleasant pedestrian and cycle links through residential areas and to their surroundings.

PEDESTRIAN AND CYCLE FRIENDLY STREETS (ALL ENGLAND)





C1

C2

C3

C4

C5

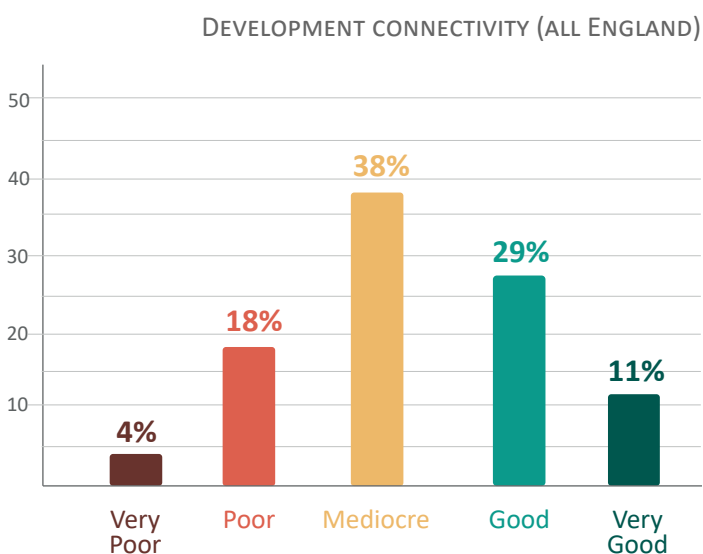
4.4.4 Connectivity within and to surrounding developments

Does the street layout connect up internally and integrate with existing streets, paths and surrounding development?

- *Vehicles, cyclists and pedestrians can move safely and conveniently into and through the development without conflict*
- *Direct and convenient linkages exist into all surrounding neighbourhoods*
- *The street layout provides convenient and direct linkages across the development to all parts of the scheme*

A fundamental objective of good urban design is to connect the built environment. Analytical approaches such as Space Syntax have long demonstrated that if residential environments are well connected both visually and physically (what is often referred to as permeable) then they will facilitate more active travel, social exchange and connections, economic opportunities (e.g. for shops and cafes) and a safer built environment with less crime. Connecting new developments to their surroundings allows them to become part of a larger urban area (city, town or village) rather than operating as isolated enclaves.

In this area the audit revealed better outcomes than



for most other design considerations, with the South East (3.53) and Greater London again scoring best, followed by the North East. At the other extreme, development in Yorkshire & Humber (2.65) and the North West were considerably less well connected than elsewhere. Such developments were too often served by a single vehicular access point with limited other alternative pedestrian connections; a characteristic that predominated in higher end developments where there seems to have been a tendency to 'control' access, creating a more segregated and less integrated built environment.





C1

C2

C3

C4

C5

4.4.5 Safety and security

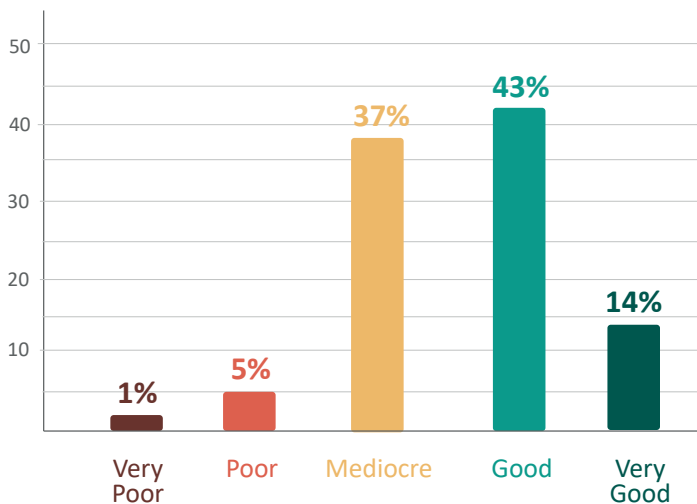
Are open spaces, play areas and streets overlooked and do they feel safe?

- *Streets and spaces are well overlooked by surrounding development so they feel safe and secure*
- *Streets and open spaces have adequate, well designed street lighting*
- *Private gardens are clearly defined and designed to be safe and secure*

The best performing design consideration in this category (and overall) was safety and security, with an average score of 3.65. Whilst street safety is largely determined by the speed of vehicles (see 4.4.3), safety from crime and the fear of crime both in the home and on the street is strongly influenced by design factors, notably how spaces are overlooked from surrounding houses, lit at night, and whether homes themselves have well protected boundaries that naturally deter opportunistic crime.

The safety and security scores nationally were boosted by the West Midlands which boasted the highest average score for any of the design considerations (4.50) with 60% in the 'very good' category. Whilst this was significantly better than the next nearest (Greater London), it echoed aggregate all England scores of almost 60% across the two 'good' categories. It was one of just two categories (the other being Environmental impact) in which regional scores were consistently over 3.00, the lowest being the East Midlands (3.20) and the South West (3.21). This was an area of urban design practice that seems well mainstreamed and marked a significant success when compared to previous audits.

SAFETY AND SECURITY (ALL ENGLAND)





4.5 Detailed Design and Management

The final category of design considerations encompassed a series of more detailed design concerns ranging from an important but prosaic concern – how bins and storage are integrated into schemes – to the more intangible issue of architectural quality, through to the vitally important consideration of how public, open and play spaces are provided and managed. Examined from a ‘place value’ perspective, research suggests that the presence of poorly managed buildings and spaces and an absence of high quality green space significantly undermines value, whilst the presence of attractive spaces and beautiful buildings has the opposite effect. Together, this was the least successful category, with two of the three considerations scoring poorly, but it is also one in which the original development leaders (the housebuilders and planning authorities) only have limited control. Once sold, responsibility for long-term management and maintenance typically moves away from the original developer, with a wide variety of arrangements put in place to address these concerns. Sometimes, it seems, these aftercare

■ Often successful
 ■ Varied but challenging
 ■ Pervasively problematic



STREETS, PARKING AND PEDESTRIAN EXPERIENCE CONSIDERATIONS





D1

D2

D3

arrangements are not fit for purpose.

4.5.1 Public, open and play spaces

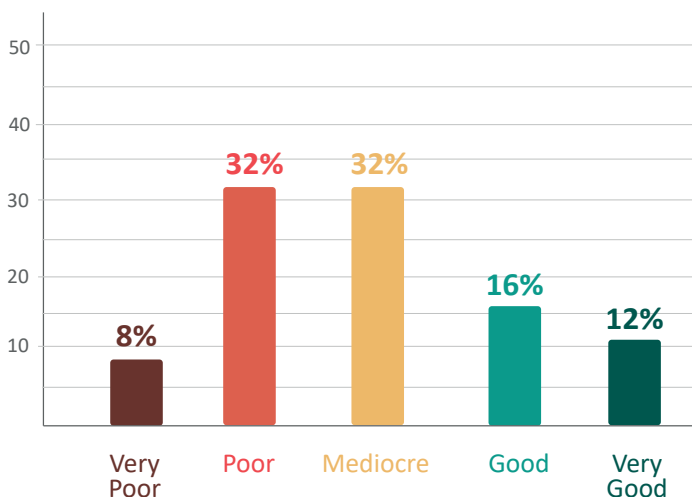
Is public, open and play space well designed and does it have suitable management arrangements in place?

- *Public and/or open spaces are well designed to maximise their recreational and social value*
- *Public and/or open and play spaces are designed with maintenance in mind and are well looked after*
- *Play spaces are designed in a manner that maximises play potential and sociability*

The range of 'non street' spaces in new residential developments play a vital role in providing spaces for exercise, socialising, play and relaxation. If well designed, they help to support ecology, assist in connecting up streets, aid navigation, help to establish place identity, encourage walking, help reduce heat build-up, and a host of other functions. It is unfortunate then that this aspect of many development schemes seems poorly considered with spaces poorly designed, featuring minimal, often standardised and uninteresting play equipment and designed to minimize maintenance costs rather than

enhance social, ecological and recreational value. Collectively the 142 schemes scored 2.92 with less variation regionally than for other design considerations. The West Midlands was most successful in this area (3.40) followed by Greater London and the East of England, whilst the North West (2.36), North East and South West were least successful. Importantly, whilst design factors often left much to be desired, maintenance considerations were also critical, with some spaces already feeling dilapidated or used for spill-over parking just a short time after the development's completion. In too many schemes maintenance arrangements are either not being considered at the design stage or are not being funded following completion.

PUBLIC, OPEN AND PLAY SPACES (ALL ENGLAND)





D1

D2

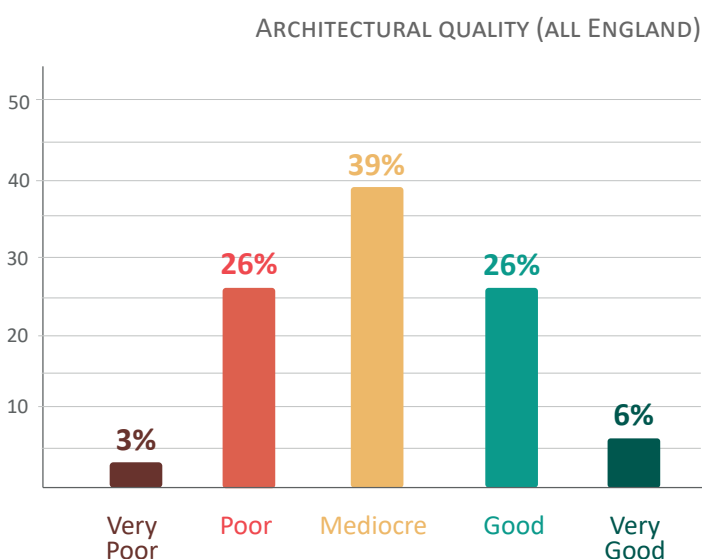
D3

4.5.2 Architectural quality

Do the buildings exhibit architectural quality?

- *Creative use of building materials, used with integrity*
- *Designed to allow adequate privacy between homes and between homes and the public realm*
- *Visually interesting and articulated facades, with an appropriate variety in architectural treatments across the development*

The external design of homes, either individually, or collectively, has a huge impact on how places are perceived and on their sense of place. Beyond their response to local contextual factors (see 4.3.1) good architecture engages onlookers and enriches the built environment. In the first century BC, Roman architect and author Vitruvius wrote that buildings should be judged by their firmness, commodity and delight. In the audit these were interpreted as: being built with high quality materials used with integrity; successfully designing the edge between inside and out to achieve a sense of privacy; and providing a level of visual interest that engages the eye. For England as a whole, the score for architectural quality just exceeded the 3.00 mark with schemes predominantly in and around the 'mediocre' category.



Regionally, Greater London (3.65) followed by the West Midlands and the South East received the highest audit scores for architectural quality, with the higher densities and higher land values seemingly supporting a more considered design process. The South West (2.43) followed by the North West and East Midlands scored lowest, with many schemes featuring standard house types with only crude adaptations and 'gob-ons' (as superficial applied details and features are pejoratively referred to in the industry) to distinguish homes.





D1

D2

D3

4.5.3 Storage and bins

Are storage spaces well designed and do they integrate well within the development?

- *Storage for bins and recycling are fully integrated, so that these items are less likely to be left on the street*
- *Storage for bikes are located in convenient and secure locations*

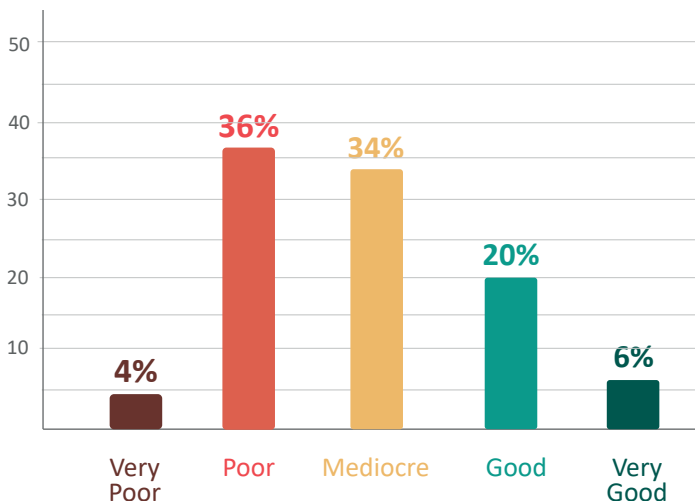
The final design consideration related to the storage of bikes and bins (including for recycling). Whilst this may seem like a very detailed concern, the absence of appropriate storage for modern bins that allow for the separation of rubbish and easy handling by collectors, can have a significant detrimental impact on the character and quality of the street scene. Likewise a lack of storage for bicycles can make this highly sustainable and healthy mode of travel all but impossible for residents.

Unfortunately, this was one of the least successfully handled design considerations, coming close to the bottom of the seventeen audited design considerations with an all England average score of just 2.88. Regionally, a very low score from Yorkshire

& Humber (1.55) set a new low bar, followed by the South West and North East. At the other end of the scale, the West Midlands scored 4.10 followed by the North West and Greater London. These simple functional concerns are critical to how places are perceived and used, but along with many other design issues, practice varies from carefully considered and resolved to seemingly unconsidered and unresolved. In this area, like almost all the design considerations, the final verdict has to be 'could do better'



STORAGE AND BINS (ALL ENGLAND)



CASE STUDY 8

REGION: SOUTH WEST - HOMES: 375

HOUSING AUDIT SCORE



63

ACORN CLASS



4 M 42

URBANITY



SUBURBAN

SITE HISTORY



BROWNFIELD

THE DEVELOPMENT

The site is situated in an area characterised by a mix of housing and commercial uses. The development offers a total of 375 dwellings across two parcels, 85% of which are houses and 16% apartments.

SELECTED AUDIT OBSERVATIONS

- Good mix of housing and tenure types including 1-2 bed apartments, and 2-, 3- and 4-bedroom terraced, semi-detached and detached houses.
- Good attempt to create a distinctive place character with the design of individual homes being designed specifically for the site.
- Poor provision and maintenance of public open spaces with little recreational value or play potential
- Very good highway design with building layout taking priority over the highway, and attractive streets and spaces.
- Poor access to community facilities and limited open space or play areas.

PLANNING PROCESS

The residential scheme was proposed as part of a hybrid planning application for housing and a package of enhancement proposals to local commercial interests of strategic value. The importance of the development was recognised in local policy, and this, alongside national policy on design, informed the proposals. The proposals were subject to a series of pre-application discussions with the Council and public exhibitions were held to inform and receive feedback from local residents. All of this informed the design process which attempted to create something that was distinctive and well integrated into its context. Inevitably the location required some compromises to be made (given the position of the housing in relation to a local airport), but the quality overall and the strategic goals of cross-funding a local enhancement scheme, meant that some degree of compromise was a necessity.



ENVIRONMENT & COMMUNITY
Score: 3.75



PLACE CHARACTER
Score: 5.00



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 4.75



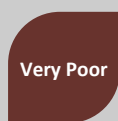
DETAILED DESIGN AND MANAGEMENT
Score: 2.25



CASE STUDY 9

REGION: SOUTH EAST - HOMES: 117

HOUSING AUDIT SCORE



27

ACORN CLASS



3 J 33

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

Located at the periphery of an existing town, this early phase of a sustainable urban extension project comprises 117 dwellings, 24 of which are affordable. 10% of the affordable units satisfy the Lifetime Homes criteria.

SELECTED AUDIT OBSERVATIONS

- The scheme provides a good mix of housing types – detached, semi-detached, terrace and flats; and sizes – 2- to 4- bedrooms
- All dwellings meet Sustainable Homes Code Level 3 standard, and a target of 10% carbon reduction through energy efficient 'fabric first approach'
- Lack of community facilities and public transport infrastructure in the current phase of the development, although a local community centre is planned for a later phase
- Frontages overlook key routes and spaces, but roads and tarmac dominate to an unacceptable degree.
- The dwellings are traditional in form and massing but lack character and townscape interest.

PLANNING PROCESS

The case study site comprises an early phase of a wider masterplan for a large urban extension. Public consultation on the masterplan proposals took place over a period of three years. The overall illustrative masterplan comprises eight 'character areas' including a Local Centre, Community Hub, Central Wetland area and multiple residential areas. The aspirations for the site were set out in the Local Centre Character Area Development Framework; the design approach adopted a clear road structure and grid-form for the development. Secured by Design principles have generally been incorporated into the layout of the scheme which seek to ensure that public routes and parking areas are well-overlooked. The size of the overall development site is very large; consequently, phasing and coordination of different parcels of land have been very complex, and have been subject to multiple subsequent planning applications to determine reserved matters. Whilst the development has been influenced by guidance across different scales, this has failed to result in the creation of a high-quality and characterful residential environment. In this phase the housebuilder has clearly not lived up to the aspirations set for the development at large.



ENVIRONMENT & COMMUNITY
Score: 1.50



PLACE CHARACTER
Score: 1.50



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 2.50



DETAILED DESIGN AND MANAGEMENT
Score: 1.25



CASE STUDY 10

REGION: GREATER LONDON - HOMES: 149

HOUSING AUDIT SCORE



37

ACORN CLASS



4 K 36

URBANITY



URBAN

SITE HISTORY



BROWNFIELD

THE DEVELOPMENT

Located within a predominantly residential area, this estate regeneration project comprises 149 dwellings, 98 of which are 'affordable' and 15 are wheelchair adaptable.

SELECTED AUDIT OBSERVATIONS

- Successfully provides a good mix of housing types – semi-detached, terraces and flats – and sizes – 1- to 5-bedrooms
- Good energy efficiency and environmental performance ratings
- Poorly designed and insufficient car parking which tends to dominate key spaces
- Lack of community facilities or a pedestrian friendly environment.
- The design of streets does not encourage cars to drive slowly, and thus are not entirely pedestrian or cycle friendly, leading to safety concerns among residents.
- Some attempt to create a distinctive character and sense of place through the architecture, but undermined by the poor-quality public realm.
- The design and management of open spaces is poor, undermining the recreational value and sociability of such spaces.

PLANNING PROCESS

A strong desire was expressed in policy to deliver better quality housing than that which the scheme replaced, whilst maintaining a high level of affordable housing. The proposals were informed by public consultation, two public exhibitions, and comments from the Residents Urban Design Forum. The preferred delivery partner worked with the local planning authority (which has no design officers) through several rounds of project refinement. The design approach aimed to create a new residential neighbourhood that combined pedestrian friendly streets and spaces with new house types designed to the highest functional and environmental standards, all of which meet standards in the London Housing Design Guide and the GLA and HLA London Funding Standards Framework. While informed by the best design intentions, the poor outcomes point to a failure to deal adequately with parking and the long-term management of the public realm.



ENVIRONMENT & COMMUNITY
Score: 2.50



PLACE CHARACTER
Score: 2.00



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 2.75



DETAILED DESIGN AND MANAGEMENT
Score: 1.50



CASE STUDY 11

REGION: EAST MIDLANDS - HOMES: 290

HOUSING AUDIT SCORE



68

ACORN CLASS



3 J 33

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

The site is bordered by a business park and a plantation which is a Site of Importance for Nature Conservation (SINC). The development consists of 290 dwellings between 2 to 2.5 storeys, ranging from 2-5-bedroom units, 20% of which are classed as affordable.

SELECTED AUDIT OBSERVATIONS

- There is generally a distinctive character to the development, with all built and unbuilt elements creating a coherent sense of place.
- The development provides a good mix of housing and secures the integration of different tenures in a manner that obscures their tenure identity.
- Good access to community facilities with opportunities to work locally were provided, as well as very good access to public transport
- The scheme was very successful in providing well-designed and maintained spaces with high recreational value, play potential and sociability.
- The integration with the neighbouring SINC has been carefully thought through and greatly benefits the scheme

PLANNING PROCESS

In 2013, outline planning permission for up to 300 dwellings, with vehicular access, open space and service infrastructure was granted. The layout of the scheme evolved from the principles of the masterplan with character areas that would be distinguished by a range of architectural styles. Consultations was also conducted with key stakeholders and with owners of neighbouring properties. The proposal was considered compliant with national policy and policies in the Nottingham Local Plan, particularly as regards affordable housing, sustainable design, building design, access to open space and design context in the public realm. The scheme was appraised against Building for Life 12 criteria, performing strongly with a score of 11/12 with praise reserved for the creation of place through designing character and well-defined streets and places.



ENVIRONMENT & COMMUNITY
Score: 4.25



PLACE CHARACTER
Score: 4.75



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 4.75



DETAILED DESIGN AND MANAGEMENT
Score: 3.25



5.0

WHY IS THERE SUCH VARIATION IN PRACTICE?

If previous sections have focussed on 'what' has been produced with regard to the design of housing developments in recent years, then this section asks 'why' are we seeing variations in practice. It does this by attempting to unpack some of the key factors that influence design practices from site to site. The work utilises data gathered separately (as part of a Laidlaw Scholarship funded project) and correlated with the results of the audit in order to see what can be deduced.

When new private housing developments are proposed, there are three sets of factors that influence how they will be ultimately designed and delivered. First, the market factors inherent in how housebuilders see the market opportunity, what the local market will support, and how they – as businesses – operate. Second, there are a range of contextual factors inherent in the nature of the site and its surroundings. These influence both how housebuilders view the opportunity and how the public sector sees what is or is not appropriate in any given location. Finally, there are a range of design governance factors that relate to how the public sector both shapes and reacts to development proposals through the policy, guidance and other advisory arrangements put in place to influence design outcomes.



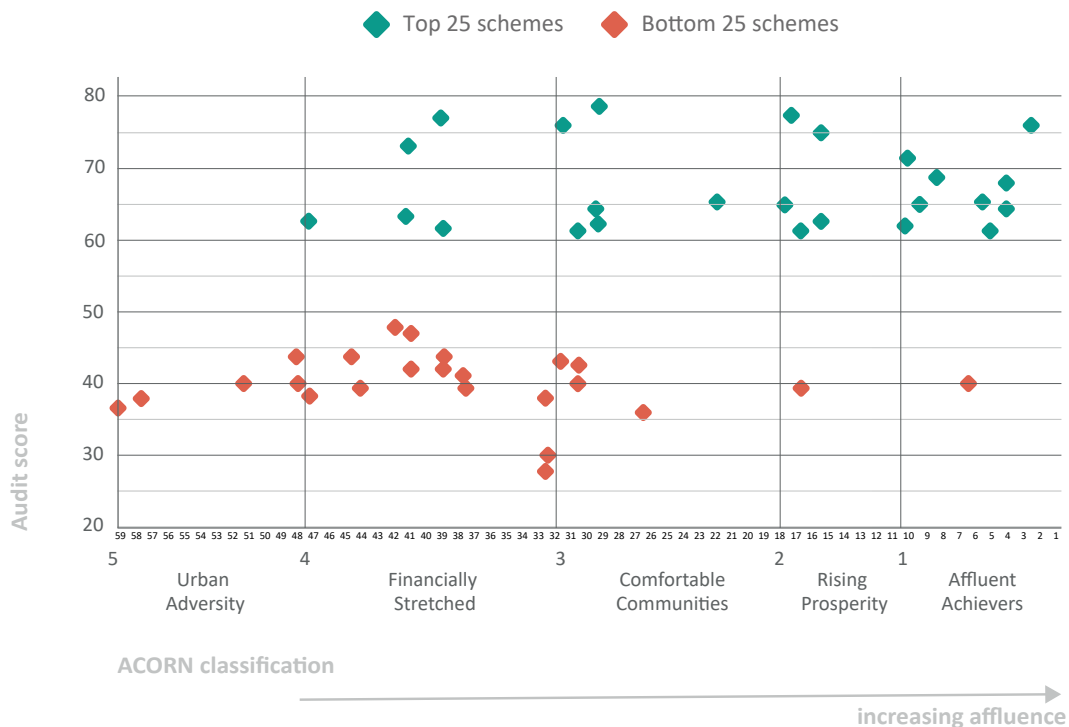
5.1 Market factors

A number of market factors have the potential to decisively influence the design of new housing development. Here data on relative affluence, sales values, and developer practices are all considered and correlated against the results of the audit.

5.1.1 The influence of affluence

For any site, housebuilders will make an assessment about what the market can afford and how they should pitch the development in that local market. To test how this impacts on the quality of design, results from the audit were correlated with relative affluence using the Acorn consumer classification (CACI) categories and dataset¹⁸. Acorn is a segmentation tool which categorises the UK's population into demographic types based on relative affluence (see Appendix 3). Acorn provides a general understanding of the attributes of a neighbourhood by classifying postcodes into a category: affluent achievers, rising prosperity, comfortable communities, financially stretched, and urban adversity (with each category further sub-divided with point scores between 1 and 59).

To test the impact, the top and bottom 25 performing schemes from the audit were selected and the raw audit scores between 17 (all 'very poor') and 85 (all 'very good') were classified against the Acorn data. The analysis confirmed that many of the best designed schemes were located in more affluent areas, while those schemes scoring poorly were strongly associated with the least affluent areas. 14 of the 25 schemes achieving the highest audit scores are located in the two Acorn categories associated with the highest level of affluence whilst only two of the bottom 25 performing schemes feature in those categories. Conversely, 19 of the 25 schemes that performed most poorly in the audit are located in the two least affluent categories as compared to five of the top-performing schemes (none at all in the least affluent category). Put another way, poorly designed schemes are almost ten times more likely to be built in the least affluent areas than in affluent areas. Conversely, well designed schemes are four times more likely to be built in affluent areas than in the least affluent ones.



SCHEMES BY TOTAL AUDIT SCORE AND ACORN CLASSIFICATION

¹⁸ <https://acorn.caci.co.uk/what-is-acorn>

Whilst the analysis clearly shows that it is possible to deliver 'poor' and 'very poor' schemes in affluent areas (e.g. case study 12) and 'good' and 'very good' schemes in less affluent areas (see for example case studies 8 and 18), the latter tend to be part of local authority-led urban expansions or public / private partnerships (e.g. large regeneration projects). A conclusion may be that greater local authority leadership is required in such areas.

Elsewhere there is a continued trend to deliver sub-standard outcomes for less affluent communities and higher standards for affluent ones. In particular, there is a reversion to standardised schemes in less affluent areas where design expectations seem generally to be lower. With the exception of community facilities and public transport (often funded publicly), other design considerations consistently scored lower in less affluent areas.

5.1.2 The influence of house prices, land prices and return on investment

Whereas it may seem obvious that more affluent areas tend to have higher house prices and therefore will inevitably benefit from higher standards of design, to understand how price impacts on design, it is important to consider the standard assumptions used in the housebuilding industry for testing the viability of schemes. Most housebuilders work to a formula that does not vary considerably from site to site (see appendix 1). This means that the factors impacting on the quality of design (alongside non-quality related factors) are typically treated as a set percentage of the gross development value (GDV).

In very simple terms, if the development value goes up, the funding available both to design (professional fees) and to deliver enhanced design outcomes (the external costs) rises also. This can amount to a very significant difference in high cost areas, notably in London, large parts of the home counties, and other more affluent areas. In such places gross development values can reach and exceed £6,500 per square metre.



Elsewhere, the differential is far less, with much of the country building within the £1,500 to £3,000 per square metre range¹⁹. If used wisely, this extra resource can be used to good effect to influence design outcomes (e.g. better quality materials), as is very apparent when house prices are compared to the audited quality outcomes.

When the average design audit score for each of the 142 schemes is calculated and correlated against market value using data from Zoopla's Zed-Index²⁰ which records average sales prices by postcode, a descending correlation is very obvious between house price and urban design quality. This shows that, nationally, the average house price for a home in a 'very good' scoring development, is significantly higher (£357,113) than those in 'good' scoring schemes (£309,000), which are higher than 'mediocre' schemes (£280,717) and 'poor' schemes (£208,250). In this analysis 'very poor' schemes (£262,408), but because of the very low numbers of projects in this category (just four), this result should be discounted.

Examined regionally, the data demonstrated the same consistent picture, with better scoring schemes also achieving higher sales values (and vice versa) in every region.

Whilst the resource available for design quality is clearly one powerful factor underpinning these results, other factors may also be relevant. First, an investment in better design in new housing areas will itself lead to a premium in sales values. Second, housebuilders know that to sell into premium markets they need to deliver better design whilst in other markets where purchasers have less choice, design quality (as a differentiator in the market) may matter less and so it is not so important for them to prioritise design outcomes.

Given the size of the uplift in sales values being achieved (on average almost a 75% uplift between 'poor' and 'very good' schemes) and the consistency of the trend between categories of design quality, it is likely that both factors contribute to varying degrees to the trend. Housebuilders reflect this in their own business models whereby some outwardly invest in a more 'designed' product than others and also in their own internal design capacity²¹.



AVERAGE SALE PRICE AGAINST DESIGN AUDIT CATEGORIES FOR ALL 142 SCHEMES

¹⁹ <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/articles/sepriceshowmuchdoesonesquaremetrecostinyourarea/2017-10-11>

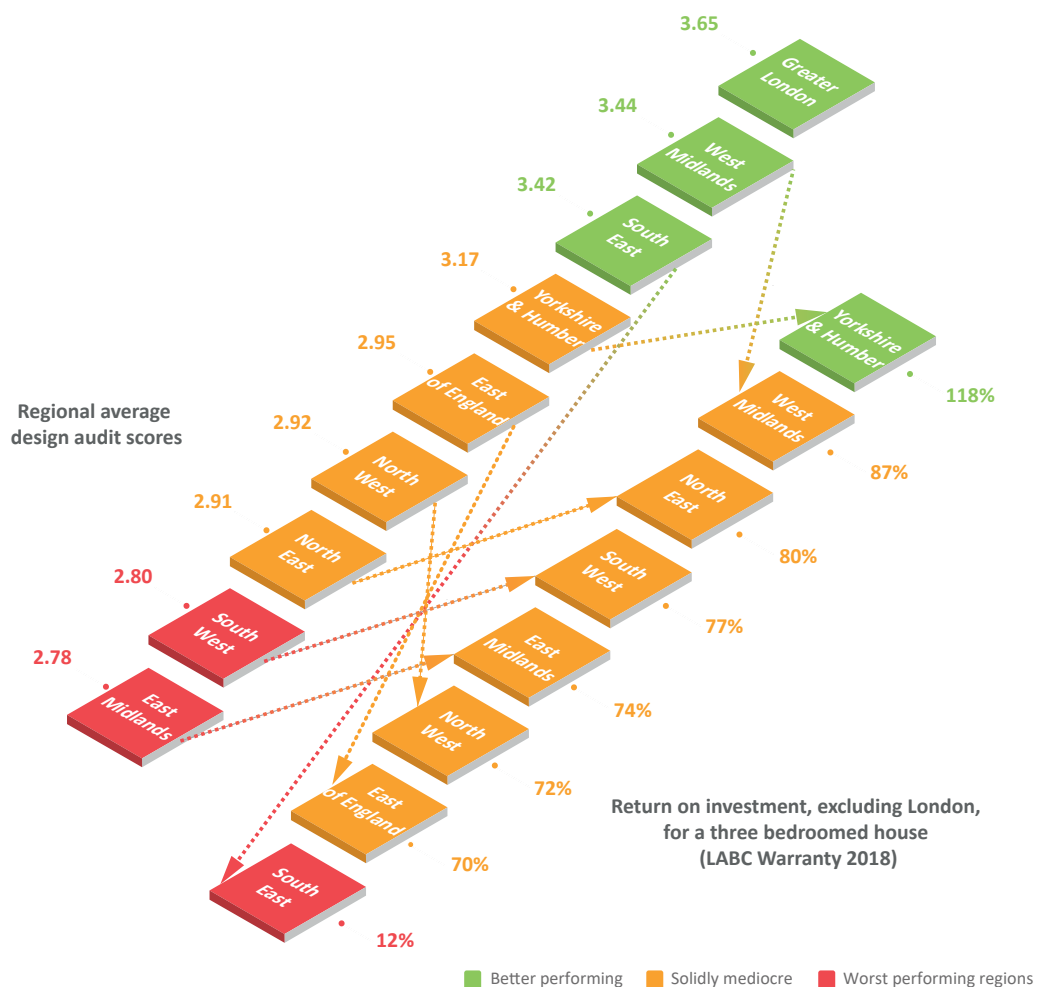
²⁰ <https://www.zoopla.co.uk/property/estimate/about/>

²¹ Marris C (2015) "Third of biggest housebuilders don't employ own architects" Architects' Journal, 26th January, <https://www.architectsjournal.co.uk/home/third-of-biggest-housebuilders-dont-employ-own-architects/8677524.article>

However, if outlying schemes shown on the 'Average sale price against design audit categories for all 142 schemes' chart are considered, then the results also indicate that schemes with low market value can achieve 'good' and 'very good' design outcomes and that high value schemes sometimes deliver only 'mediocre' and 'poor' quality design.

This raises questions about the factors underlying the higher values and what implications they have on design. Clearly a large proportion of the differential between house prices in London and the South East and other parts of the country is down to the price of land. Indeed there is a perfect correlation between regional land prices and unit sales prices²².

It is frequently argued that in parts of the country where values are low, there is simply insufficient resources available to invest in good design. Research from LABC Warranty²³ notes, however, that the Return on Investment (ROI) for a housebuilder (the difference between the Residual Land Value and the Gross Development Value) is often largest away from those parts of the country with the highest land values (which eat into the ROI). In their 2018 study (which excludes London) the highest land values are found in the South East – four times that in the lowest region, Yorkshire – but the greatest ROIs were found in Yorkshire (a sizable 118%) – with the South East recording the lowest return (just 12%). Other regions clustered between 70 and 87%.



REGIONAL AVERAGE DESIGN AUDIT SCORES AGAINST LAND PLOT PRICES AND RETURN ON INVESTMENT

22 LABC Warranty (2018) Where do land developers get the best return on investment in England?, <https://www.labcwarranty.co.uk/media/2694/land-development-report.pdf>

23 LABC Warranty (2018) Where do land developers get the best return on investment in England?, <https://www.labcwarranty.co.uk/media/2694/land-development-report.pdf>

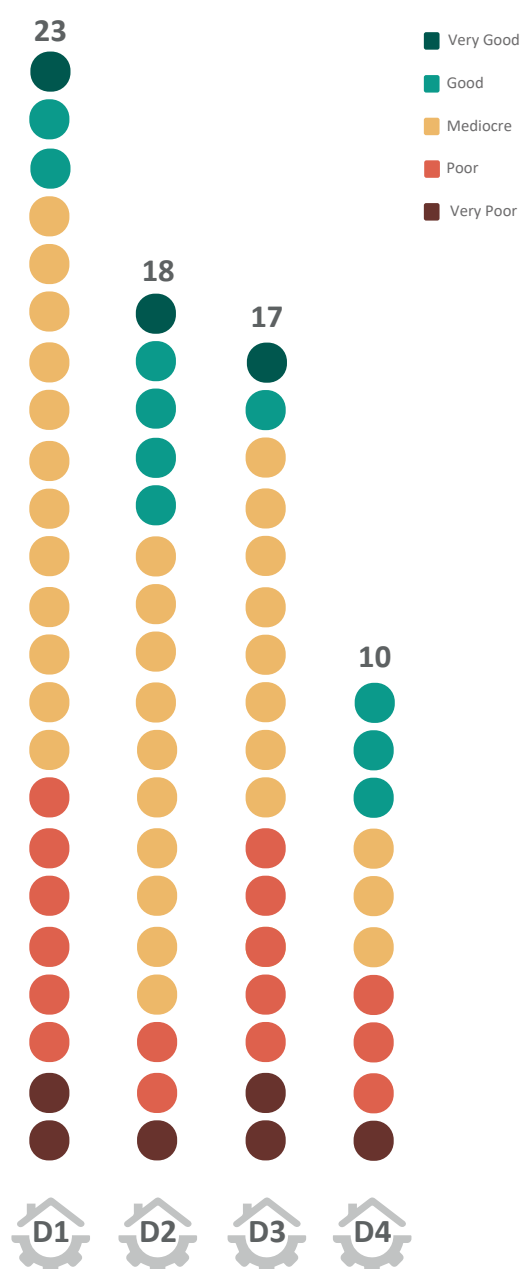
Comparing ROIs to the average design audit scores for each region shows little obvious correlation. The South East, with the second highest design quality scores (outside of London) is the region with the highest land values and is where housebuilder profits are most squeezed. The South West, by contrast, has the third highest land values, but the second worst design outcomes which translates into a middling ROI. Given this, profitability does not seem to be a major factor in determining the delivery of design quality in new residential areas. The implication is that just because land values are low, this does not mean that good design cannot be ‘afforded’. Such locations may be the most profitable to develop.

At this point it is also important to reiterate that design – as examined in the audit – did not encompass issues such as the internal specification of homes, internal space standards / home sizes, or the quality of materials (beyond whether materials were used with integrity), all factors liable to have a significant impact on the price per square metre of new homes. If these development costs are removed, as well as below ground costs and non-quality related costs (e.g. marketing, legal, warranties, CIL, and other abnormals), then the actual costs of the elements that create the place value (the seventeen design considerations) are encompassed in a much smaller pot that constitutes the ‘external costs’ (with some in the ‘housebuild costs’). In Appendix 1 based on industry norms, this proportion is envisaged as 15% of gross development value.

Given that – whatever the quality – the large majority of this expenditure relates to elements that will inevitably always need to be provided – roads, footpaths, play areas, gardens, street lighting, parking, external walls and windows, etc. – arguably the cost differential between ensuring a scheme is well or poorly designed will be much less, and typically a relatively small percentage of the gross development value.

5.1.3 The influence of developer practices

In the volume housing market, decisions about where and when to invest, and how, are ultimately made by developers. The audit focussed on the largest housebuilders in each region, but, as this varied between regions, and as housebuilders often partner with social housing providers and others, the final list extended to 37 developers. Sample sizes for each housebuilder ranged from 23 schemes to just one.



TOP FOUR DEVELOPERS BY NUMBERS OF PROJECTS INCLUDED IN THE AUDIT

Not enough schemes were audited in the sample to allow any meaningful conclusions to be made about most developers' broader approach to design quality, but for the ten developers that had three or more schemes included, it was notable that scores varied, often right across the audit scale.

Calculating the average design audit scores for these, they range from 2.6 ('poor') to 4.25 ('good'), with four of these averages falling below 3.00 and only one above 4.00. The top four (by the numbers of schemes included in the sample, not necessarily by volume nationally) show typically varied profiles.

Many of the largest volume housebuilders organise themselves regionally, with varied levels of autonomy given to their regional operations. Whilst targets, policies, and key spending decisions are made centrally, how these are operationalised locally – including approaches to design – are often

subject to a good deal of local discretion. Some large housebuilders have a range of tools that they use within and across their organisations to encourage better design e.g. internal design guides, checklists / indicators, awards schemes, design advisory services, design review, and so forth. Others have nothing and employ no designers as part of their core team (see 5.1.2).

It is noticeable that those with a known greater corporate emphasis on design also recorded higher design audit scores, but also that those which are organised regionally exhibited significant variation in their approaches to design. This is illustrated by the audit profiles of the two developers with the largest number of schemes included in the audit. The practices, priorities and inconsistencies within and between housebuilders clearly are very significant in relation to the quality of housing developments that are being realized nationally.



DEVELOPER DESIGN AUDIT PROFILES, SHOWN REGIONALLY

5.2 Contextual factors

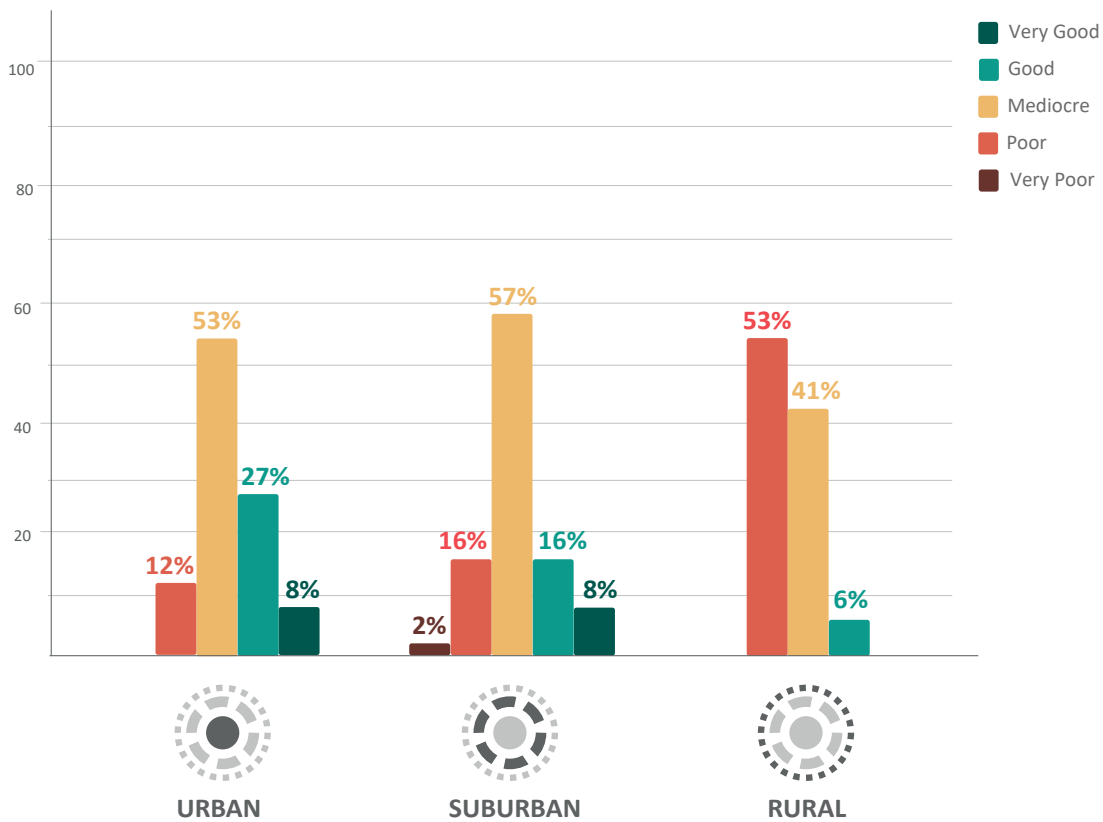
One of the most significant influences on design outcomes is the setting within which developments occur. Typically, the planning process requires that new housing developments relate to and reflect key characteristics of the wider context. This section traces how three contextual factors – relative urbanity, density and site history – are reflected in design outcomes.

5.2.1 Urbanity

The first distinguishing factor is whether developments are built in predominantly urban, suburban or rural settings. These were defined in the research using the 2011 census rural / urban classification²⁴. Of the 142 projects audited, 18% were built in urban locations (although very central town centre locations were omitted from the study),

70% in suburban, and 12% in rural areas (where housing schemes are often smaller and typically did not meet the requisite size threshold to be included in the audit). Comparing these categories against the audited design outcomes revealed progressively worse design scores as projects moved away from the urban core, with average design audit scores for urban, suburban and rural developments of 3.31, 3.09 and 2.47, respectively.

Whilst just three schemes in an urban setting were scored as ‘poor’, the majority of rural schemes fell into this category. Suburban schemes dominated the audit sample, and the average design audit score for these projects perfectly reflected the equivalent score for housing nationally, in the lower portion of the ‘mediocre’ range. Compared to the results of previous audits, a reduction was noticeable in the quality of design in rural areas, whilst urban and suburban schemes generally performed better.



DEVELOPMENT SETTING AND DESIGN OUTCOMES

²⁴ <https://www.gov.uk/government/collections/rural-urban-classification>

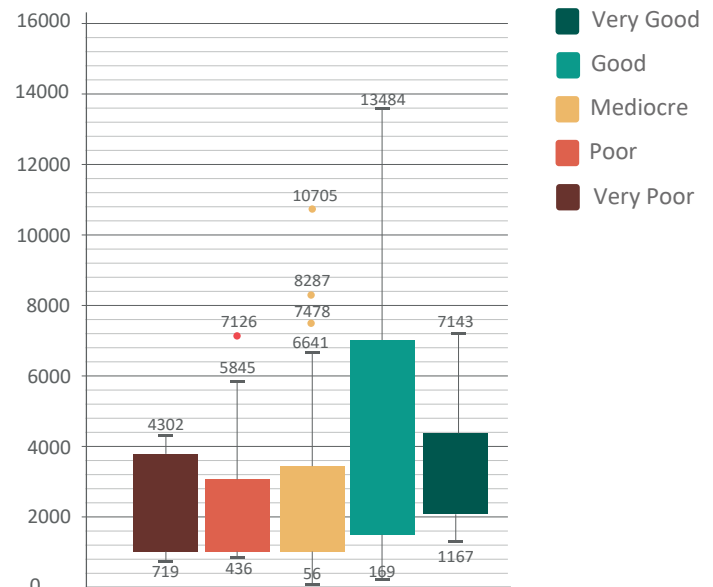
5.2.2 Density

A key distinguishing characteristic of location is density. Density can be measured in various ways, and in this research two measures were used, both revealing much the same story. First, design quality outcomes were assessed against the prevailing population density²⁵ in the locations surrounding each of the 142 audited developments. This analysis revealed a clear positive correlation between better scoring schemes and higher population density. In other words, in areas where population density is higher, better quality schemes are being designed and developed. Using a Box and Whisker graph to reflect this shows that there are 'good' and 'very good' schemes in lower population density areas and 'poor' and 'very poor' schemes in higher population density locations, but predominantly the boxes (representing the concentration of density profiles in each audit category) demonstrated an upward trajectory for design against population density.

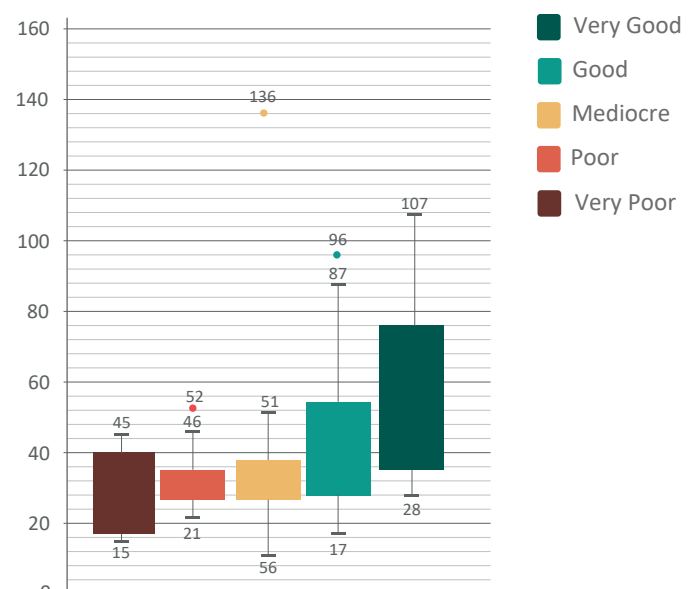
This was shown even more starkly using the second measure of density – dwellings/hectare – again comparing the design audit results²⁶. The analysis showed that increasing densities – this time physical development densities in the sites being developed – led to better design outcomes, with the box for each design quality category giving the following average development densities:

- **Very good** – 56 dwellings / hectare
- **Good** – 44 dwellings / hectare
- **Mediocre** – 37 dwellings / hectare
- **Poor** – 32 dwellings / hectare
- **Very poor** – 25 dwellings / hectare.

The concerns expressed by local councillors (see 6.2) that higher density developments are leading to lower quality outcomes seems not to be supported by the research. Indeed, the opposite seems to be the case.



PEOPLE/KM2 AGAINST DESIGN AUDIT CATEGORIES FOR ALL 142 SCHEMES



DWELLINGS/HECTARE AGAINST DESIGN AUDIT CATEGORIES FOR ALL 142 SCHEMES

²⁵ Using Office for National Statistics (ONS) Annual Lower Super Output Area (LSOA) Population Estimates for England and Wales: (Mid-2016)

²⁶ The site area included everything within the 'red line' boundary of the site as represented in planning applications. What this

encompassed varied from application to application and was measured using the Google maps area measurement tool. Dwelling figures were obtained from respective planning applications. The average density for projects included in the audit were 37 dwellings / hectare.

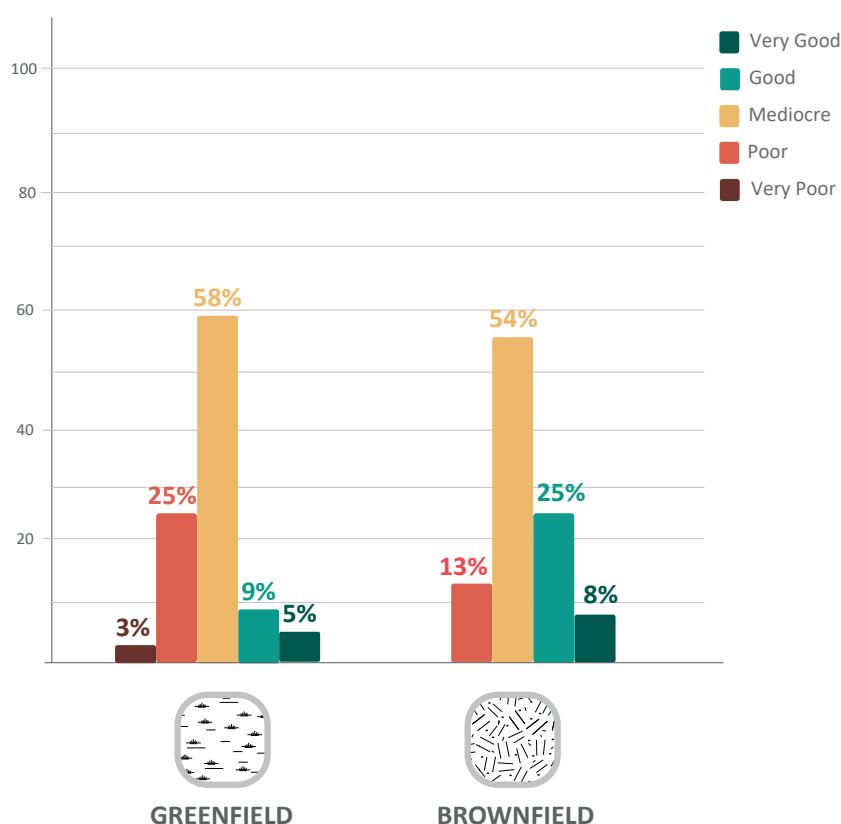
5.2.3 Site history

A final contextual factor relating to the history of sites was also investigated. Two types were analysed: greenfield sites that had not previously been developed, and brownfield sites, that had. These amounted to, respectively, 54 and 46% of the chosen sites. In this categorisation, brownfield sites included both cleared and reclaimed locations in an urban setting and large-scale reuse and intensification projects focussed on previous hospital / institutional sites, retail parks, airbases and the like.

Nearly a third of the schemes developed on greenfield sites were rated as 'poor' or 'very poor' and just 14% 'good' or 'very good'. This was compared to a profile for brownfield schemes that was almost exactly the opposite demonstrating that better design and placemaking was often (although not always) associated with building on reused sites, typically in already built up areas.

5.2.4 A comment on contextual factors

Urban schemes – which also tended to be higher density themselves and located in higher population density locations²⁷ – performed better across all the design considerations, and significantly better in relation to the provision of community facilities and public transport. Correspondingly, brownfield schemes tended to noticeably out-perform their greenfield counterparts on issues relating to local character, architectural response and quality, the existing and new landscape, and notably on issues concerning connectivity, highways design and parking. It seems that the additional constraints imposed by a stronger pre-existing urban context – often with established infrastructure, heritage and natural assets, and a street network to plug into – encouraged a more sensitive, and ultimately a better design response than is often apparent in less constrained greenfield locations.



SITE TYPE AND DESIGN OUTCOMES

²⁷ Density averages in the audited schemes were as follows: urban schemes 55 dwellings / hectare, suburban schemes 32 dwellings / hectare, rural schemes 31 dwellings / hectare

Based on these results, it could be argued that there is an in-built bias within the seventeen audited design considerations towards schemes in urban and brownfield locations and with higher densities. This is not the whole story, however, as suburban and rural schemes also have their own potential advantages with regard to design quality. These include: the potential to better exploit existing and new green landscape; more space for public, open and play spaces; and, the possibility to respond positively to the local vernacular which is often more evident in less urban locations. The fact that suburban and rural schemes are not exploiting these advantages which have proven to be so attractive to potential buyers at least since the days of the original Garden suburbs (and still today see 6.2), demonstrates that opportunities are being squandered along with the design potential of many sites.

In summary, it is clear that contextual factors had a significant impact on design outcomes, with more urban, higher (although not necessarily high) density and brownfield schemes all seemingly better able to simultaneously address the seventeen design considerations. The greater complexity of these sites and the consequential need to employ architects and urban designers to realize them, may go some way to explaining the variation in outcomes.



5.3 Design governance factors

Beyond market and contextual factors, the public sector has a range of tools of design governance at its disposal that can be used to influence design outcomes. Some of these are generic tools produced at the 'national' level to guide local decision-making processes:

1. National planning guidance
2. National highways design guidance
3. Building for Life 12

Others are generic tools produced by local planning authorities or neighbourhood forums to guide the design of developments within their boundaries:

4. Local plan policy
5. Supplementary planning guidance / documents
6. Design policies in neighbourhood plans

A final category encompasses site-specific tools used to influence particular sites and projects:

7. Site specific design codes
8. Design review
9. Community consultation / participation processes
10. Pre-application discussions

Examining the tools used by the 134 schemes for which data was available, the use of local plan policy was ubiquitous (referred to in all schemes) and consequently data was not gathered on their use. For those tools that were used more selectively, the research confirmed that the use of pre-application discussions were the most popular, followed by reference to generic (largely withdrawn) national planning guidance, with Secured by *Design guidance*, the *Code for Sustainable Homes* (see 4.2.4), *By Design: Urban Design in the Planning System*, and *The Lifetime Homes Standards* (in that order) being referenced most often²⁸.

These were followed by generic (not site-specific) local design guidance (SPDs and SPGs), and the use of community consultation / participation.

All these approaches were used in connection with the large majority of schemes (respectively 93, 85, 83 and 82% of the 134 projects).



DESIGN GOVERNANCE TOOLS, FREQUENCY OF USE

²⁸ Other generic guidance referenced included: Better Places to Live; Urban Design Compendium 1 & 2; Towards Sustainable Housing: Principles and Practice; Creating Successful Masterplans; Best Practice in Urban Extensions and New Settlements; Planning and

Access for Disabled People: A Good Practice Guide; Planning for sustainable development: Towards Better Practice; Protecting Design Quality in Planning; The Value of Good Design; Safer Places: The Planning System and Crime Prevention; Biodiversity By Design

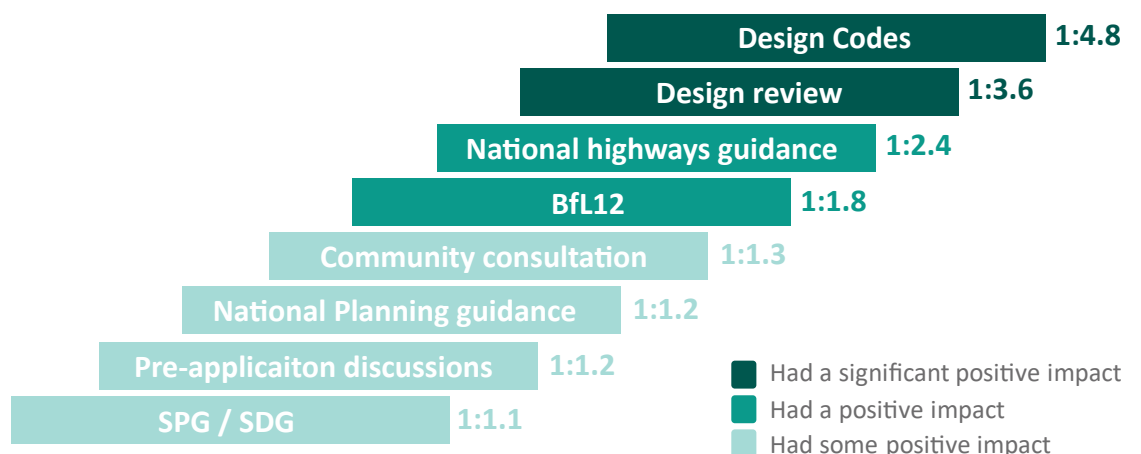
Less frequently referenced were national highways design guidance (57% of schemes), Building for Life12 (45%), design codes (24%) and design review (16%). Policies in neighbourhood plans were not referenced at all in relation to any of the schemes, although this may simply reflect the small numbers of 'made' neighbourhood plans across the country for the period covered by the audit.

5.3.1 The effectiveness of tools

More interesting than the frequency of use was the association between the tools and the design audit scores. Measuring this was done by separately identifying which tools were used in conjunction with those schemes scoring 'good' or 'very good' and comparing those against schemes scoring 'poor' or 'very poor'. Comparing each of the eight categories for which data was available, a very clear pattern emerges. First, all design governance tools help to deliver better design outcomes, it is better to use them than not; but second, impact varies considerably between tools.

Most effective – by some margin – were the use of design codes and design review. Schemes that benefitted from the use of design codes were almost five times more likely to appear in the 'good' or 'very good' categories than in the 'poor' or 'very poor' ones, whilst schemes that benefitted from the advice of a design review panel were approaching four times more likely.

Design codes are proactive site-specific design tools which aim to establish and tie down the critical design parameters for sites and projects (typically used in association with an agreed urban design framework or masterplan). Design review processes offer a mechanism for independent peer review of the design of schemes during the design process. Research elsewhere²⁹ suggests that whilst neither approach offers a panacea for good design – poor as well as good design codes and design review practices exist – when best practice principles are followed, they deliver enhanced design outcomes. The audit confirmed these findings.



DESIGN GOVERNANCE TOOLS: PROPORTION USED IN 'POOR' AND 'VERY POOR' SCHEMES AGAINST THOSE USED IN 'GOOD' AND 'VERY GOOD' SCHEMES

²⁹ For recent research on both tools, see: Design Codes Diffusion of Practice in England <http://www.udg.org.uk/sites/default/files/publications/Design-Coding-Diffusion-of-Practice-in-England.pdf> and Reviewing Design Review in London <http://placealliance.org.uk/research/design-review/>

Critically, both these tools focus on specific sites and specific projects (rather than offering generic guidance), typically requiring a skilled design team to create or respond to them. Because of this, both carry a cost in their production / use, but the small scale of this investment can be appreciated by comparing the average costs of a single design review for a whole scheme to the average gross development value of the schemes in the audit³⁰. This reveals that a single design review would cost between 0.003% and 0.005% of the gross development value of, respectively, a ‘very good’ or ‘poor’ scheme.

Less effective but still noticeably more present in processes associated with ‘good’ and ‘very good’ schemes than ‘poor’ and ‘very poor’ ones were, first, projects designed within the parameters of the national highways design guidance Manual for Streets. This was almost two and a half times more likely to be used in connection with the best than the worst schemes. Second, schemes evaluated against the Building for Life 12 principles. These were almost twice as likely to score well. The generic nature of these tools means that they are very cost-effective to use, but as generic guides they are more suited to helping avoid the worst forms of design outcomes, rather than inspiring the best.

Because of the ubiquitous nature of the four remaining tools – national planning guidance, local supplementary planning guidance, pre-application discussions, and community consultation / participation – it is difficult to determine their effectiveness as design governance tools. A key problem seems to be that whilst these resources / processes are often referred to in planning applications, reference to them does not mean that they have been used in a positive manner that truly informs better design outcomes. Consequently, their use is associated with a wide range in design outcomes: ‘good’, ‘mediocre’ and ‘poor’. Design policies in local plans are similar, they are used in association with all developments, but how they are used is open to a good deal of interpretation.

Regionally, it was not possible to detect any definitive patterns because the numbers using the more proactive tools – design codes and design review – at a regional level were often too small. It is interesting to note, however, that the top scoring region – Greater London – was the heaviest user of design review and a heavy user of design codes, and amongst the lowest of Building for Life 12 and Manual for Streets (the latter perhaps because of the range of London-specific highways guidance). The East Midlands, by contrast, which scored least well nationally in the audit, was the highest user of Building for Life 12 and a very low user of either design review or design codes.

5.3.2 Tools and process

The lesson seems to be that to achieve ‘good’ or ‘very good’ outcomes requires more than a passive check against a generic checklist of design principles, it requires a proactive and site-specific process of guidance and accompanying peer review. It requires a design governance process that is consistently applied, not only at the start when the masterplan is approved, but through all reserved matters applications and in relation to how developments are phased on site. It also requires that design quality is prioritised by the Planning Inspectorate during any appeals processes.

Failures in both these regards were very apparent in the case studies. In case study 4 design quality was effectively set aside in the interests of boosting housing delivery in the area. In case studies 6, 12 and 14, promising initial masterplans were watered down through successive phases of the development. Elsewhere, including case studies 9 and 17, poorly conceived phasing strategies often meant that over the many years that large schemes took to deliver, projects were nowhere near meeting the aspirations that had initially been set out. The delivery of design quality clearly requires that both the whole and the parts are properly scrutinised and that a consistent application of quality principles is applied.

³⁰ The average cost of a design review is £3,670 as quoted in Reviewing Design Review in London. Gross development value was calculated as the average house price within a design quality category multiplied by the average development size within the audit.

CASE STUDY 12

REGION: NORTH EAST - HOMES: 460

HOUSING AUDIT SCORE



39

ACORN CLASS



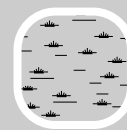
1 B 9

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

This greenfield development project comprises 460 dwellings - of which 115 are affordable units - and associated habitat, landscape and recreational improvements.

SELECTED AUDIT OBSERVATIONS

- The scheme provides a range of housing types - including semi-detached, detached and terraced houses.
- No local community facilities within the development.
- It is possible to identify the tenures from the appearance, with the affordable units clustered within the most remote part of the development next to the main road.
- The structure and form of the development includes a high number of cul de sacs accessed from key roads within the development.
- The pedestrian environment is very poor; pedestrian links across and beyond the scheme are very circuitous.
- The townscape and landscape qualities of the scheme are poor.

PLANNING PROCESS

Two years after the original planning permission was granted for the site in 2013, a consortium was established and a new planning application was submitted in 2015 which largely retained the original access and general layout arrangements, but sought to increase the number of dwellings on the site from 450 to 460, whilst removing the proposed community facilities (and negotiating a financial sum in lieu as part of the Section 106 agreement). The approach taken by the consortium was to establish a set of design principles that would guide the development of the different parcels of land by the different house builders; however, this approach has failed to deliver upon the aspirations for the site, and outcomes for the overall pedestrian environment are poor.



ENVIRONMENT & COMMUNITY
Score: 2.50



PLACE CHARACTER
Score: 2.25



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 3.25



DETAILED DESIGN AND MANAGEMENT
Score: 2.00



CASE STUDY 13

REGION: NORTH WEST - HOMES: 206

HOUSING AUDIT SCORE



62

ACORN CLASS



2 E 19

URBANITY



URBAN

SITE HISTORY



BROWNFIELD

THE DEVELOPMENT

The first phase of this brownfield redevelopment project comprises 202 apartments; the overall development consists of over 600 apartments.

SELECTED AUDIT OBSERVATIONS

- Development provides a limited range of housing types and sizes, comprising 1- to 3-bedroom apartments; no affordable housing was provided.
- Well-located in terms of access to city centre; good access to local community facilities on foot.
- Good transport links in and around the area.
- The development consists of a single built form divided into three separate access cores allowing the creation of various public and semi-public spaces facing out onto the adjacent river and green spaces beyond, in addition to a riverside walkway.
- More could have been done in terms of the landscaping; the additional provision of trees and planting within the scheme would have been beneficial.
- The development is architecturally distinct, reflecting the industrial heritage of the area, and generally contributes positively to the local townscape. However, the design of the scheme doesn't make the most out of the river edge in terms of frontage, especially at ground floor level.
- Streets and spaces are attractively designed with robust and varied materials, and with parking being fully integrated into the development within the basement of the block.

PLANNING PROCESS

The case study site was located strategically within an identified key transformation area and formed the first phase of a major integrated urban initiative aimed at the economic, physical and social renewal of the historic core of the city in which it was located. Planning consent for residential development of up to 27 storeys had previously been granted for the wider site but was never implemented due to unfavourable economic conditions. Following early pre-application engagement, a process of consultation with stakeholders and the local community, and an external design review, the scale of the development was significantly reduced to a maximum of 8 storeys. The good outcomes of the development reflect a high level of conformity with the objectives of the adopted local plan and guidance documents, which sought to guide the type, scale, massing and design of the development and influence a strong focus on the provision of a high quality public realm and improved access to - and along - the adjacent riverside.



ENVIRONMENT & COMMUNITY
Score: 2.75



PLACE CHARACTER
Score: 4.25



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 5.25



DETAILED DESIGN AND MANAGEMENT
Score: 3.00



CASE STUDY 14

REGION: EAST OF ENGLAND - HOMES: 270

HOUSING AUDIT SCORE



39

ACORN CLASS



3 G 24

URBANITY



RURAL

SITE HISTORY



BROWNFIELD

THE DEVELOPMENT

The case study site is located towards the southern edge of an existing small village and comprises 276 dwellings and a new village centre.

SELECTED AUDIT OBSERVATIONS

- The development comprises a mix of 2- and 3-storey dwellings as well as 2-storey flats over garages, and 4- and 5-storey blocks of flats.
- The development is a 10-minute walk from public transport and there are two bus routes serving the local town centre, which run until 7pm in the evening.
- The architectural design of the housing lacks creativity, visual interest or distinctiveness and is not site-specific.
- Poor pedestrian environment is a feature; vehicular traffic is typically prioritised, and the approach to traffic calming is extremely minimal.
- The provision of car parking is poor.
- Poor provision of landscaping across the scheme with minimal provision of street trees.

PLANNING PROCESS

The original outline application for 276 dwellings and a new village centre was approved in 2008 with a series of reserved matters being approved after. An application to re-plan a section of the site in an attempt to reduce the density of the development and make it more attractive and commercially viable was approved in 2015. This re-planning reduced the number of flats and 3-storey houses by providing predominantly 2-storey dwellings, thereby reducing the range of property types provided. The development was generally compliant with a raft of national and local planning policy and guidance, which relate to the design and layout of new developments, the provision of a range of housing types, and the requirement for developments to reflect the local characteristics of the surrounding area. Additional guidance that informed the development proposal included *Safer Places – The Planning System and Crime Prevention* and *Secured by Design* principles to ensure community safety. In addition, a series of community and stakeholder consultations were held at different stages of the development process, and the feedback received from these sessions was incorporated into the final proposal. Whilst the development process was informed by a range of key policy aspirations and stakeholder feedback, the lack of distinctiveness, character, townscape quality and a poor pedestrian environment within the streets and spaces of the area have resulted in a poor outcome for the scheme.



ENVIRONMENT & COMMUNITY
Score: 2.50



PLACE CHARACTER
Score: 2.50



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 3.00



DETAILED DESIGN AND MANAGEMENT
Score: 1.75



6.0

WHAT DO RESIDENTS AND COMMUNITIES THINK?

Whilst the design audit methodology is tried and tested and in 2019 was conducted with as much rigour as possible, professional judgements will never tell the whole story. It is also important to gather the perspective of those who have chosen to live in audited environments and those who are impacted by them – the neighbouring community. To obtain the perspective of new residents, auditors conducted a short survey in each of the schemes with a small number of residents. Unfortunately resources did not allow for a survey of the wider community surrounding new developments, but the Place Alliance's national survey of the views of local councillors on the design of new housing development – Councillors' attitudes to residential design – can act as a good surrogate for these views. These results from a survey of 1213 councillors across England are therefore contrasted with those of the resident survey.

Auditors were asked to interview up to five adult residents encountered whilst walking around each location, and specifically not to attempt to knock on doors and canvas formally. Between them the auditors interviewed 278 residents across the sample of 142 schemes – almost two per scheme – a figure that reflects, in part, the exceptionally quiet nature of many of the developments when audited (typically on weekdays during work hours). Auditors obtained answers to five questions, one of which has already been discussed (see 4.2.4). Answers to the remaining four are covered here. It was made clear to residents responding to the survey that questions related only to the external residential environment, and that – as far as possible – they should avoid reflecting on the internal standards or quality of their homes.

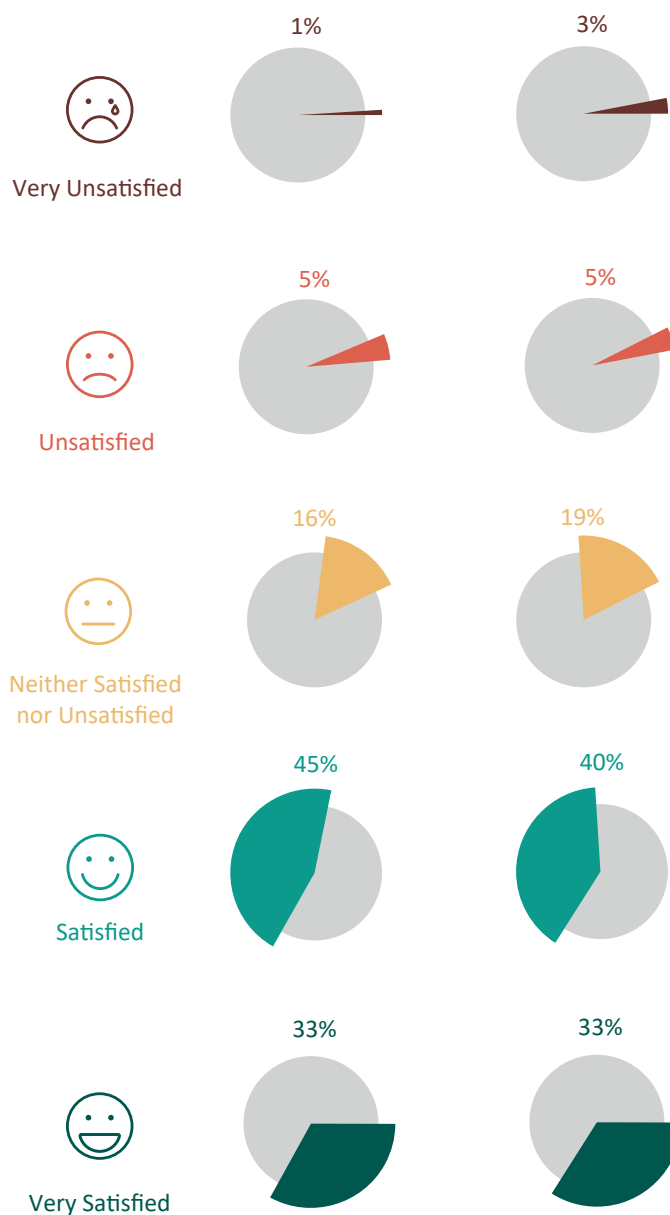


6.1 Overall satisfaction

The first two questions concerned residents' overall satisfaction with the developments in which they now lived and in which, for most, they had purchased a home. First, they were asked: in comparison with other residential areas that you know, how satisfied are you with the character and quality of the environment that has been created?

In contrast to the audit itself, a noticeably high proportion of residents (78%) expressed that they were 'satisfied' or 'very satisfied' with their developments, with only 6% noting levels of dissatisfaction. Next residents were asked, are the streets and spaces of the development pleasant places to walk in, play in and spend time? A less strong but nevertheless solidly affirmative response was received. Comparing this with the equivalent (albeit more comprehensive) survey conducted by CABE in 2007, a slight drop (by 4%) in overall satisfaction is apparent³¹.

Such questions to residents who have recently made, for many, the biggest investment of their life in a new home are unlikely to garner a completely objective and dispassionate response. A number of studies suggest that unless something has gone dramatically wrong to change their opinion, residents are unlikely to criticise their new home environment and implicitly their own judgment in making the purchase³². For this reason, taken in isolation, resident satisfaction is not regarded as a reliable measure of the quality of the built environment. It is interesting, however, that all the residents expressing that they were unsatisfied with the development were living in 'poor' and 'very poor' scoring schemes.



RESIDENT SURVEY: SATISFACTION WITH THE CHARACTER AND QUALITY (LEFT) AND SATISFACTION WITH THE STREETS AND SPACES (RIGHT)

31 CABE (2007) A Sense of Place, What residents think of their new homes, <https://webarchive.nationalarchives.gov.uk/20110118112139/http://www.cabe.org.uk/publications/a-sense-of-place>

32 Donnelly, D (1980) Are we satisfied with 'housing satisfaction'? Built environment, Vol 6, No 1, 29-34; Young R (2002) 'Consumer choice in house buying', in Joseph Rowntree Foundation, Improving the image of new houses; Mumford, K. & Power, A. (2003) East Enders: family and community in East London, Policy Press.

When contrasted with the views of councillors (representing wider community views), a significant disparity in opinions is obvious. Whilst a small majority of councillors (52%) felt (echoing the results of the audit at large) that there had been a moderate improvement in the quality of housing design in recent years, they were also mindful of the very low base on which that improvement was built. There was also a significant minority (31%) who felt the quality of new residential environments had continued to decline in their areas. Whilst councillors felt that better quality design could help to make developments more acceptable to their communities, they also believed that more often than not housing developments were failing that test because planning authorities, highways authorities and developers were not taking the pursuit of design quality in new residential development nearly seriously enough.



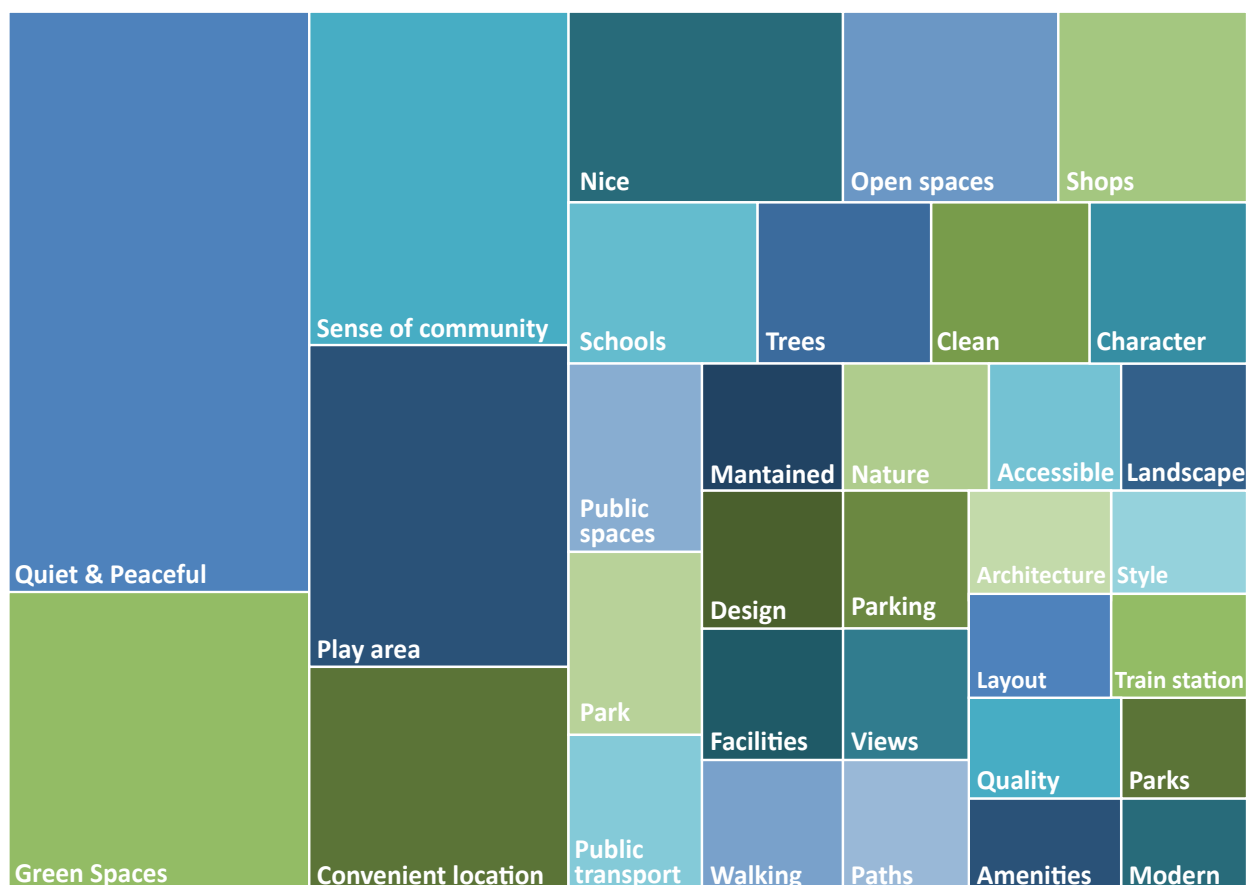
6.2 Likes and dislikes

In order to get a more critical assessment of the development in which they lived, residents were also asked: What three things do you most like about this development? and What three things would you change if you could?

When asked about the things they liked, residents picked-out quietness, green spaces, sense of community, and play facilities as the top factors: all factors strongly in line with the sorts of suburban environments that dominated the audits and consequently the output of the volume housebuilders. Further down the list were other factors that also support the general focus on greenness, conviviality and convenience, whilst more intangible factors: quality, character, views, architecture, layout, design, style, also creep into the list. Noticeably, when the views relating to the schemes that scored higher in the audit are isolated:

character, the close proximity to public transport, and the availability of shops and other facilities and services rise considerably up the list.

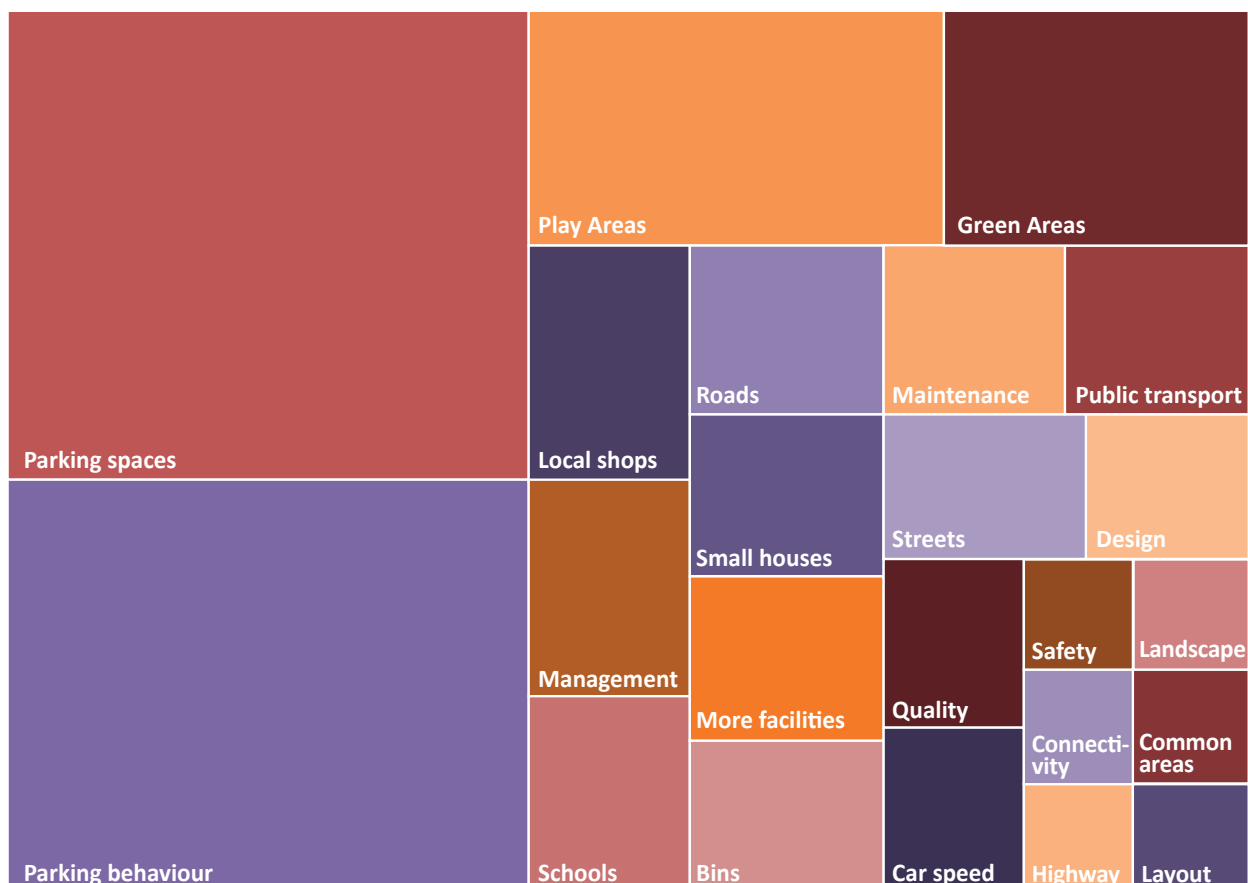
When asked about what they would change if they could, responses were dominated by dissatisfaction over parking spaces and parking behaviour, with how parking is designed and integrated into schemes being a major cause of concern. Whilst expressed in different ways, a concern for the design of highways / roads / streets / layout / road traffic was very prevalent, with the design of play and green areas also criticised by many, alongside the lack of access to local facilities and amenities, notably local shops, schools and public transport. When examined in the round, there was little criticism of the more intangible design considerations, and instead concerns focussed on the downsides of living in environments where life without a car would be difficult and consequently the impact of cars and



roads dominated the built environment. Here there was some alignment with the view of local councillors who, when asked to identify the aspects of design that remained the greatest ongoing cause of concern for themselves and their communities, identified problems with parking, poor access to facilities and amenities, and concerns with traffic safety as the third, fourth and fifth most significant concerns. They differed from new residents in placing the impact of perceived overdevelopment of sites and the loss of local character as their two primary concerns, and took a noticeably broad view of 'local character' to mean everything from the choice of materials, to relative greenness, and the mix of uses.

It was noticeable that the factors identified by residents – positive and especially negative – correlated strongly with those identified in the survey of residents' views conducted by CABE in

2007. This suggests that what residents like and dislike remains broadly consistent over time. The issues identified by residents were also picked up strongly in the audit at large and demonstrate the need to somehow address the things that communities (including recent buyers of new homes) dislike, whilst not losing sight of those things that they like. That, of course, is not an easy balance to strike, although some of the higher scoring schemes audited in this report demonstrate that not only is it possible, it is possible everywhere – rich, poor; urban, suburban, rural; north, south, east and west.



CASE STUDY 15

REGION: YORKSHIRE & HUMBER - HOMES: 170

HOUSING AUDIT SCORE



69

ACORN CLASS



3 J 33

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

This development project comprises two parcels of land that accommodate 170 new dwellings out of the wider masterplan total of 741 proposed dwellings.

SELECTED AUDIT OBSERVATIONS

- Provides a range of housing types and sizes, from 2- to 4-bedroom dwellings. All dwellings are 2 storeys, and are detached, semi-detached or terraced in form.
- The development segregates the different tenures; affordable units are located within their own parcel of land, situated closest to the local centre.
- Good access to community facilities; the local centre is well established and integrated into the development. Pedestrian access to the local centre is via a designated footpath and greenway at the edge of the scheme.
- The development includes a hierarchy of streets which are attractively designed, and comprise main vehicular routes, pedestrian priority routes and shared surfaces.
- Public transport has been successfully integrated into the wider development. The local centre is located within a 6-minute walk and accommodates a bus station with busses running approximately every 10 minutes.
- The design of individual homes is relatively standardised, so whilst these have a good level of architectural detail and quality, they do not contribute to local character or distinctiveness.

PLANNING PROCESS

The two parcels of land that comprise the case study site forms part of a large urban extension (at the northern edge of a city) that was initiated in the 1990s. The aim of the overall development was to provide suburban housing, employment, shopping, leisure and community facilities. As only half of the original urban extension had been built or committed in the twenty years since permission was first granted, the decision was made to produce an Area Action Plan that would seek to ensure that any future development would respond to shifts in local and national planning policy, alongside the changing needs and aspirations of the wider local community. The masterplan for the development was approved as part of the outline planning permission and the principles of the overall masterplan helped to shape and guide the design of the case study site. As part of the planning process, pre-application engagement with council officers was undertaken, in addition to public consultation and meetings with councillors and ward members. The approach taken (within both the policy documents and the design process) to exploit and enhance the potential visual and townscape qualities of the development has resulted in a high-quality residential environment.



ENVIRONMENT & COMMUNITY
Score: 4.50



PLACE CHARACTER
Score: 5.00



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 5.25



DETAILED DESIGN AND MANAGEMENT
Score: 2.75



CASE STUDY 16

REGION: WEST MIDLANDS - HOMES: 300

HOUSING AUDIT SCORE



66

ACORN CLASS



3 G 26

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

The case study site is situated on the urban fringe of a city and is surrounded by residential and industrial areas. The development comprises a total of 300 dwellings.

SELECTED AUDIT OBSERVATIONS

- Good access to community facilities that are also well-integrated into the urban fabric, with some opportunities to work locally.
- The development comprises a range of property sizes, from 2- to 4-bedroom houses and flats.
- A reasonable level of integration of different tenures in a manner that obscures their tenure identity.
- The overall character of the scheme is not distinctive, but the architectural quality is good with some variety and the creative use of building materials.
- The building layout takes priority over the road, with streets designed at a human scale and attempts to design attractive streets and spaces.
- Streets are pedestrian friendly and can be used as social spaces during the daytime.
- Very good design and maintenance of public open spaces, maximising their recreational and social value.

PLANNING PROCESS

After outline planning permission was granted, a reserved matters application with details of the development was submitted and approved. A series of pre-application discussions and consultations with council officers, local residents and other stakeholders took place as part of the design development process. Various elements of the development's design were informed by national and local policy guidance, including supplementary planning guidance on issues such as sustainability, open space requirements, and walking and cycling. Important aspirations included the creation of a development that was well connected and integrated into the surrounding area and established public transport networks, in addition to providing a high-quality and safe public realm. Whilst the form and architectural design of the individual dwellings are traditional and modest, the completed phase strongly benefits from the investment made in the design and management of the streets, spaces and the landscape.



ENVIRONMENT & COMMUNITY
Score: 4.25



PLACE CHARACTER
Score: 4.00



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 4.75



DETAILED DESIGN AND MANAGEMENT
Score: 3.50



CASE STUDY 17

REGION: SOUTH WEST - HOMES: 148

HOUSING AUDIT SCORE



32

ACORN CLASS



3 J 32

URBANITY



SUBURBAN

SITE HISTORY



GREENFIELD

THE DEVELOPMENT

This greenfield development is the first phase of a larger scheme (of up to 750 dwellings) and comprises 148 dwellings.

SELECTED AUDIT OBSERVATIONS

- The case study site provides a mix of housing types including apartments, detached and semi-detached housing.
- The integration of different tenures in a manner that obscures their tenure identity is not always successful
- Poor access to community facilities; very few opportunities to work locally.
- Poor access to public transport.
- Lack of character and local distinctiveness; poor architectural quality in addition to inadequate landscape provision and design.
- The design (and management) of streets and spaces is poor; streets are not pedestrian-friendly or social spaces.
- Good levels of connectivity within (and around) the development.

PLANNING PROCESS

Key policy objectives within national and local planning and design policies (including supplementary planning documents) informed the proposals. In addition, the development of the masterplan included extensive engagement with council officers and local residents through various meetings and a public exhibition. However, despite the development having identified aspirations of sustainable design principles, integrated landscape proposals, and the creation of character areas, the actual outcomes in the first phase of development are markedly poor and few of the original design aspirations seem to have been carried through.



ENVIRONMENT & COMMUNITY
Score: 2.25



PLACE CHARACTER
Score: 2.00



STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 2.75



DETAILED DESIGN AND MANAGEMENT
Score: 1.00



CASE STUDY 18

REGION: SOUTH EAST - HOMES: 373

HOUSING AUDIT SCORE



78

ACORN CLASS



3 H 29

URBANITY



SUBURBAN

SITE HISTORY



BROWNFIELD

THE DEVELOPMENT

Located on the outskirts of an existing housing area, this residential expansion project comprises 373 dwellings, 66 of which are affordable, consisting mainly of 2 and 2.5 storey housing

SELECTED AUDIT OBSERVATIONS

- Successfully provides a good mix of housing types – detached, semi-detached, terraced houses and flats.
- Units of different tenures are integrated in a manner that obscures their tenure identity.
- Good provision and access to community facilities such as an integrated community centre, a school and pub.
- Open spaces within the development are well designed and maintained, achieving maximum recreational and social value.
- Very good street legibility and definition, creating a coherent sense of place.
- Pedestrian friendly streets enable use for socialising and children's play.
- Well-designed housing with high architectural quality, interesting facades and use of creative building materials that reflect the local vernacular, creating a sense of local distinctiveness.

PLANNING PROCESS

A key policy objective for the site was the delivery of a residential expansion scheme of high-quality design and layout. The proposals were informed by a public exhibition, and pre-application discussions with council officers representing a range of disciplines (planning, urban regeneration and housing). The site was divided into a number of character areas including ones focussed on the village green, boulevard and squares, and the community centre. The design approach has successfully created a well-overlooked and safe residential environment, whilst also reducing dependency upon car travel through inclusion of bus and cycle routes. Affordable housing units have been designed to Sustainable Homes Code Level 3. Strategic landscape proposals have helped to ensure that open spaces and play areas have been well-designed and carefully integrated.



ENVIRONMENT & COMMUNITY
Score: 3.50



PLACE CHARACTER
Score: 6.25



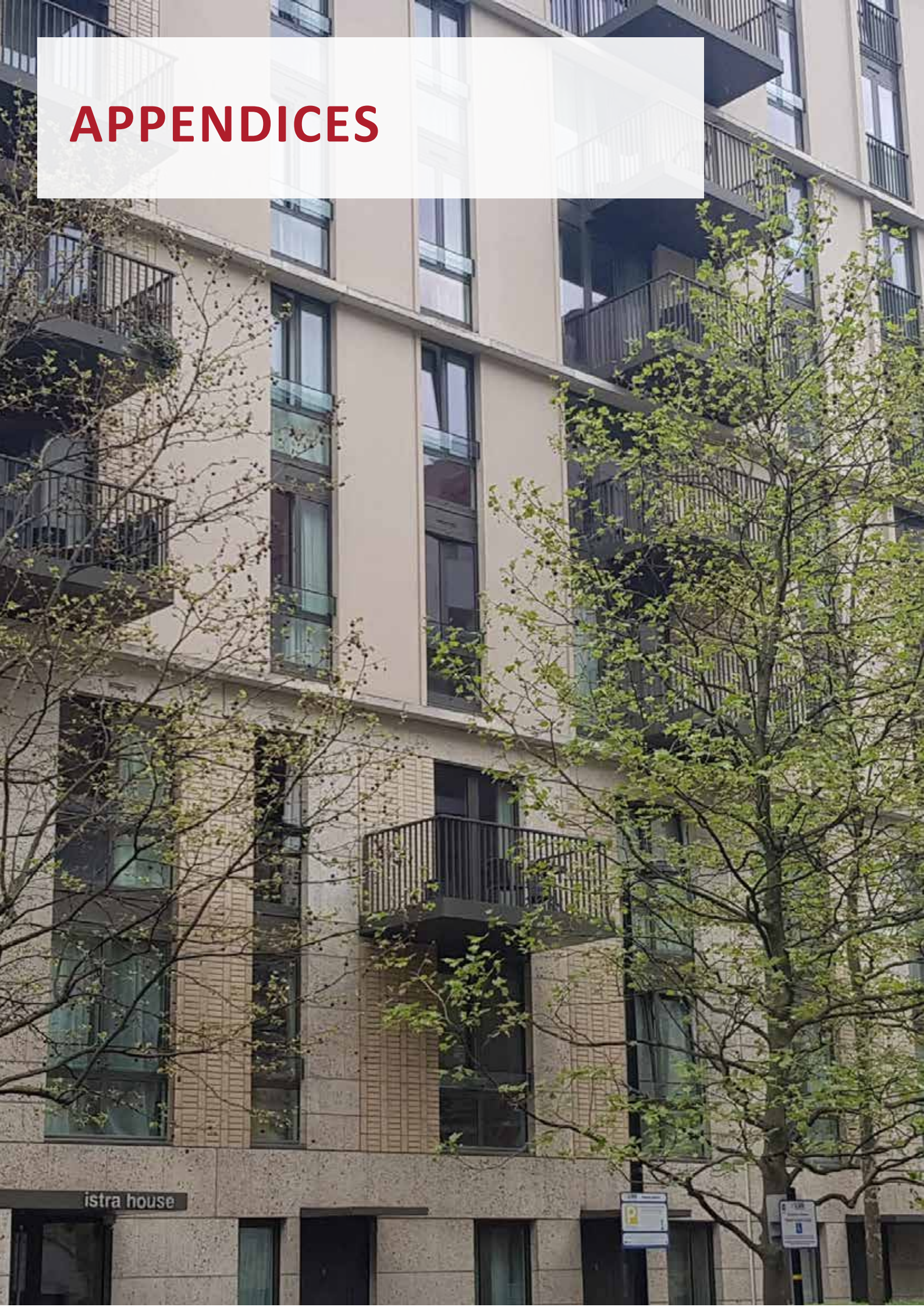
STREETS, PARKING & PEDESTRIAN EXPERIENCE
Score: 6.00



DETAILED DESIGN AND MANAGEMENT
Score: 3.75



APPENDICES



Appendix 1: Costing housing development, industry norms

A number of factors impact on the resources available for development. The following – by way of example – is based on industry norms although will vary regionally and from case to case.

Profit

Profit in the volume house building industry is regarded as a cost to be deducted off the gross development value at the outset (and calculated as a % of Gross Development Value (GDV) i.e. it is not a percentage added to the total cost of the development at the end). Developers will aim to maximise this but a figure around 20% is usually regarded as a standard return for most projects in most circumstances. Where risk or sales rates are higher or lower than the norm there may be some variation in the GDV percentage rate.

Land and Section 106. costs

Land and Section 106 obligations are essentially taken from the same pot of money. The landowner and developer will have an idea of what an appropriate land value is and this is often highly conditional on the scale of any planning obligations such as affordable housing and education contributions. Land values are often benchmarked between agents and landowners and will once again roughly approximate to a percentage of the development value. When the costs of Section 106 obligations are factored in this percentage may be around 22%.

Development costs

Development costs fall into two broad categories:

- Non-quality related costs – Costs such as marketing, legal, warranties, CIL, below ground costs and other abnormals which, although they indirectly have an impact on viability and therefore quality, can be regarded as being fairly constant. Industry standard assumptions on marketing, legal, finance, warranties, CIL, and abnormal costs can be grouped to come to a reasonable average figure of 8% of GDV which can be applied across the board to costs which are not directly related to quality
- Quality related costs (QRC) – Construction and design team costs that clearly impact on the quality of the finished development. The main costs that impact on the quality of the final product are those relating to the design team (professional fees) and the build costs. The latter can be further broken down but together they amount to around 50% of the development costs.

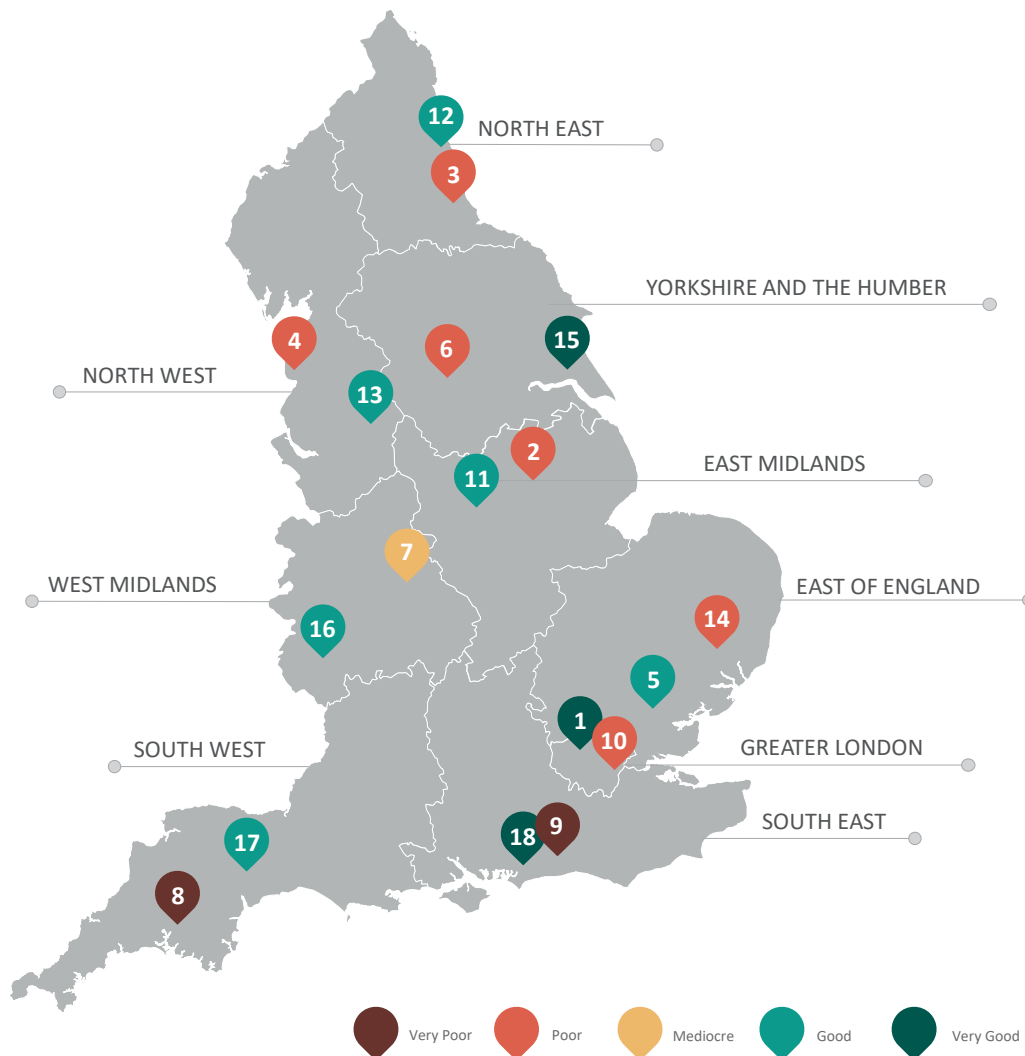
Design team

To determine the costs of the design team, industry standard assumptions for professional fees can be used. Professional fees vary from as little as 4% of GDV up to 12% but usually settle at between 5-8%. Such figures are common in viability assessments but include the range of professional fees, and not just that associated with design.

Build Costs

Build costs are typically split into three headings i) Housebuild (anything above damp proof course) ii) Plot (Foundations and other elements below damp proof course) and iii) Externals (anything outside the plot boundary). A split of 45/20/35 of the QRC is again based upon assumptions typically made by volume housebuilders during viability assessments. This leaves around 19, 9 and 15% of GDV for the these components.

Appendix 2: Case study information



URBAN



SUBURBAN



RURAL

The Rural Urban Classification is an Official Statistic used to distinguish rural and urban areas. The Classification defines areas as rural if they are outside settlements with more than 10,000 resident population.

For more info see:

<https://www.gov.uk/government/collections/rural-urban-classification>

Appendix 3: The Acorn structure

1 Affluent Achievers	Types
A Lavish Lifestyles	1 Exclusive enclaves 2 Metropolitan money 3 Large house luxury
B Executive Wealth	4 Asset rich families 5 Wealthy countryside commuters 6 Financially comfortable families 7 Affluent professionals 8 Prosperous suburban families 9 Well-off edge of towners
C Mature Money	10 Better-off villagers 11 Settled suburbia, older people 12 Retired and empty nesters 13 Upmarket downsizers
2 Rising Prosperity	Types
D City Sophisticates	14 Townhouse cosmopolitans 15 Younger professionals in smaller flats 16 Metropolitan professionals 17 Socialising young renters
E Career Climbers	18 Career driven young families 19 First time buyers in small, modern homes 20 Mixed metropolitan areas
3 Comfortable Communities	Types
F Countryside Communities	21 Farms and cottages 22 Larger families in rural areas 23 Owner occupiers in small towns and villages
G Successful Suburbs	24 Comfortably-off families in modern housing 25 Larger family homes, multi-ethnic areas 26 Semi-professional families, owner occupied neighbourhoods
H Steady Neighbourhoods	27 Suburban semis, conventional attitudes 28 Owner occupied terraces, average income 29 Established suburbs, older families
I Comfortable Seniors	30 Older people, neat and tidy neighbourhoods 31 Elderly singles in purpose-built accommodation
J Starting Out	32 Educated families in terraces, young children 33 Smaller houses and starter homes
4 Financially Stretched	Types
K Student Life	34 Student flats and halls of residence 35 Term-time terraces 36 Educated young people in flats and tenements
L Modest Means	37 Low cost flats in suburban areas 38 Semi-skilled workers in traditional neighbourhoods 39 Fading owner occupied terraces 40 High occupancy terraces, many Asian families
M Striving Families	41 Labouring semi-rural estates 42 Struggling young families in post-war terraces 43 Families in right-to-buy estates 44 Post-war estates, limited means
N Poorer Pensioners	45 Pensioners in social housing, semis and terraces 46 Elderly people in social rented flats 47 Low income older people in smaller semis 48 Pensioners and singles in social rented flats
5 Urban Adversity	Types
O Young Hardship	49 Young families in low cost private flats 50 Struggling younger people in mixed tenure 51 Young people in small, low cost terraces
P Struggling Estates	52 Poorer families, many children, terraced housing 53 Low income terraces 54 Multi-ethnic, purpose-built estates 55 Deprived and ethnically diverse in flats 56 Low income large families in social rented semis
Q Difficult Circumstances	57 Social rented flats, families and single parents 58 Singles and young families, some receiving benefits 59 Deprived areas and high-rise flats
6 Not Private Households	Types
R Not Private Households	60 Active communal population 61 Inactive communal population 62 Business addresses without resident population
Detailed Characteristics for all Acorn Types	

Appendix 4: Schemes audited

CASE STUDY*	LOCATION	REGION
Kingsway Hospital Site	Derby	East Midlands
Prince Charles Avenue	Derby	East Midlands
Radbourne Lane	Derby	East Midlands
Castle Park	Sleaford	East Midlands
Holdingham Grange	Sleaford	East Midlands
Racuceby Hospital	Sleaford	East Midlands
Lake Side	Lincoln	East Midlands
Witham St Hughes	Lincoln	East Midlands
Manor Farm Phase 3	Lincoln	East Midlands
Nettleham Fields	Lincoln	East Midlands
Poplar Farm	Grantham	East Midlands
Beacon Gardens	Grantham	East Midlands
Allotments Hassocks	Nottinghamshire	East Midlands
Lime Tree Gardens	Nottinghamshire	East Midlands
Papplewick Lane	Nottinghamshire	East Midlands
Gamston Lings Bar	Nottinghamshire	East Midlands
The Avenue	Gainsborough	East Midlands
The Swale	Gainsborough	East Midlands
Princess Boulevard	Nottingham	East Midlands
Berryfields Major Development Area	Aylesbury	East of England
Kingsbrook Village	Aylesbury	East of England
Former Four O Five Sports and Social Club	Ipswich	East of England
Ditchingham Grove	Ipswich	East of England
Bannold Road	Cambridge	East of England
Long Road Cambridge	Cambridge	East of England
Trumpington Meadows	Cambridge	East of England
Upper Cambourne	Cambridge	East of England
Blakenham Fields	Ipswich	East of England
Windsor Park Gardens	Norwich	East of England
Costessey	Norwich	East of England
Lodge Farm	Norwich	East of England
Regent's Place	Leighton Buzzard	East of England
Frenchs Avenue	Dunstable	East of England
Guardian Industrial Estate	Luton	East of England
Zone A Beaulieu Park	Chelmsford	East of England
Marconi Works	Chelmsford	East of England
Lightermans Place	Maldon	East of England
Heybridge Hall	Maldon	East of England

Hayworth House*	Borehamwood	Greater London
Castle Hill Eastern Quarry*	Swanscombe	Greater London
Site Wellington Drive Dagenham Essex	Dagenham	Greater London
Lymington Fields	Dagenham	Greater London
Mackintosh Street	Bromley	Greater London
Goresbrook Village	Dagenham	Greater London
Kidbrooke Village	Kidbrooke	Greater London
Cane Hill Park	Coulsdon	Greater London
Nescot*	Epsom	Greater London
Chandos Avenue	Whetstone	Greater London
Dollis Valley	Barnet	Greater London
Chobham Manor	Stratford	Greater London
Raf West Drayton	West Drayton	Greater London
Reynard Mills	Brentford	Greater London
RAF Uxbridge	Uxbridge	Greater London
Former Colindale Hospital Site	Edgware	Greater London
Trinity Square	Edgware	Greater London
Millbrook Park	Mill Hill	Greater London
Millbrook Park Phase 4	Mill Hill	Greater London
Stonegrove & Spur Road Estates	Edgware	Greater London
The Rise	Newcastle Upon Tyne	North East
Great Park	Newcastle Upon Tyne	North East
Lisburn Terrace	Sunderland	North East
Lisburn Terrace	Sunderland	North East
Kidderminster Road	Sunderland	North East
Newton Hall	Durham	North East
Middlewood Moor	Durham	North East
Murton Lane	Houghton-le-Spring	North East
Holystone	Newcastle Upon Tyne	North East
The Maples	Hebburn	North East
Regent Drive	Hebburn	North East
Clarence Street	Manchester	North West
Adelphi Wharf	Manchester	North West
Oakwood	Manchester	North West
Stamford Brook	Altrincham	North West
The Window Farm	Wigan	North West
Bridgefield Forum	Liverpool	North West
Blundell's Wood	Wigan	North West
Cotton Meadows	Bolton	North West

*Schemes right on the edge of the continuous Greater London metropolis but outside of it administratively were included in Greater London for the purposes of analysis

Scholars Field	Liverpool	North West
Speke Hall Avenue	Liverpool	North West
Summerhill Park	Liverpool	North West
Magnolia	Blackpool	North West
Rigby Road	Blackpool	North West
Ryscar Way	Blackpool	North West
Aylesham Village	Aylesham	South East
Timperley Place	Sholden	South East
Former Rowcroft And Templer Barracks Site	Ashford	South East
Chantry Green	Maidstone	South East
Cheesemans Green	Ashford	South East
Oakgrove Millennium Community	Milton Keynes	South East
Brooklands	Milton Keynes	South East
Aldershot Urban Extension	Aldershot	South East
Queen Elizabeth II Barracks	Fleet	South East
Vespasian	Milton Keynes	South East
Newton Leys	Milton Keynes	South East
Jennett's Park	Bracknell	South East
Woodhurst Park	Bracknell	South East
Bersted Park	Bognor Regis	South East
Kingley Gate Development	Littlehampton	South East
Toddington Lane Phase 2	Littlehampton	South East
Toddington Lane Phase 1	Littlehampton	South East
West Durrington Development	Worthing	South East
Highwood Village	Horsham	South East
Jamine Square	Reading	South East
Dee Park Estate	Reading	South East
Hill Barton Vale	Exeter	South West
Trafaigar Road	Exeter	South West
Former Ibstock Brickworks Site	Exeter	South West
Colling Lane	Tidworth	South West
Crediton Road	Okehampton	South West
Saltram Meadow	Plymouth	South West
North Prospect	Plymouth	South West
Manor Rise	Tidworth	South West
Oldbury Court	Bristol	South West
Lyde Green	Bristol	South West
Bilbie Green	Bristol	South West
Parkhouse Lane	Bristol	South West
Haywood Village	Weston-Super-Mare	South West
Seaton Neighbourhood	Plymouth	South West
Former Runway, Plymouth City Airport	Plymouth	South West

Tiverton Eastern Urban Extension	Tiverton	South West
Seacole Wey	Shrewsbury	West Midlands
Sutton Grange	Shrewsbury	West Midlands
Booths Lane	Birmingham	West Midlands
Dovedale Road	Birmingham	West Midlands
Wilmot Drive	Birmingham	West Midlands
Alma Way	Birmingham	West Midlands
Cherry Orchard	Worcester	West Midlands
Kilbury Drive	Worcester	West Midlands
Bullingham Lane	Hereford	West Midlands
Homler	Hereford	West Midlands
Former Lambsons Site	Castleford	Yorkshire & Humber
Water Lane	York	Yorkshire & Humber
Brecks Lane	York	Yorkshire & Humber
Derwenthorpe Scheme	York	Yorkshire & Humber
Park Drive	Wakefield	Yorkshire & Humber
South Parkway	Leeds	Yorkshire & Humber
Bodington Manor	Leeds	Yorkshire & Humber
Sycamore Park	Leeds	Yorkshire & Humber
Ruskin Avenue	Wakefield	Yorkshire & Humber
Kingswood	Hull	Yorkshire & Humber
Lowfield	Hull	Yorkshire & Humber
West Hill	Hull	Yorkshire & Humber



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