

Compact Residential Development

Making more efficient use of land in Crawley and delivering
attractive, successful new places to live

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Abbreviations and Acronyms

ABCA	Area Based Character Appraisals
BBBCC	Building Better Building Beautiful Commission
BRT	Bus Rapid Transit
BISIP	Bus Service Improvement Plan
CBC	Crawley Borough Council
CDP	Compact Development Principles
CWIS	Cycling and Walking Investment Strategy
DfT	Department for Transport
dph	Dwellings Per Hectare
DLUHC	Department for Levelling Up, Housing and Communities
HCA	Homes and Communities Agency (now Homes England)
LCWIP	Local Cycling and Walking Infrastructure Plan
LTA	Local Transport Authority
MHCLG	Ministry for Housing, Communities and Local Government
NDG	National Design Guide
NPPF	National Planning Policy Framework
NMDC	National Model Design Code
PTAL	Public Transport Accessibility Level (of an area)
RIBA	Royal Institute of British Architects
SHLAA	Strategic Housing Land Availability Assessment
UDC	Urban Design Compendium
WSCC	West Sussex County Council

Executive Summary

The draft Submission Crawley Borough Local Plan 2024 – 2040 notes that over this 16 year period Crawley needs to provide over 12,000 more homes. By 2040, 5,030 new homes will have been built within the borough, a mix of new homes designed for residents in all stages of life. These will be built in locations which respect and can also enhance and expand the town's unique structure, character areas and features. The development will follow good design principles that preserve the most valued of the town's heritage, character and environmental features.

In the past, Crawley's growth has mainly been through the creation of entire new neighbourhoods and commercial development at Manor Royal. However, Forge Wood is the last full neighbourhood which can be built within the borough boundary, and across Crawley there are substantial constraints to development including flooding and aircraft noise. Effectively, there is no space left for more development of the form and type constructed since Crawley was first designated as a New Town in 1947.

Instead, in order to build more within its boundary, Crawley will have to become more compact in form and make more efficient use of its existing urban area. This Study confirms that it is both appropriate and realistic to accommodate a further 5,030 new homes within the borough's existing urban area over the next 16 years. New national and emerging Local Plan Policies require minimum density ranges for new development in appropriate locations. However, just how compact, in what form and in which parts of Crawley would such a change physically occur? Would it significantly change the character and quality of Crawley's existing neighbourhoods or is this a positive opportunity? The purpose of this document is to consider all these questions.

Chapters 1-3 set out of the case for compact form. Chapter 1 outlines how intensification of existing land and compact urban form is not a choice but a requirement in national planning policy.

"Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities and ensure that developments make optimal use of the potential of each site".

(National Planning Policy Framework paragraph 125, 2021, DLUHC & MHCLG)

Chapter 1 also outlines the significant positive opportunities to intensifying parts of the borough. It demonstrates how compact urban form significantly improves sustainability and helps mitigate the Climate Emergency, not just that it helps reduce the continual pressure to build in the countryside. It shows that compact places can be both attractive and desirable and that increased residential density can also unlock opportunities for reinvention and reinvigoration within existing urban settings.

Chapter 2 considers what the differing types of compact form can look like, across the various density ranges. It demonstrates that optimal density can be Low Rise and explains the tradition in Britain of gentle density, as opposed to high density.

Chapter 3 looks in more detail at how new compact form can be reconciled with existing communities and whether it is possible to have the best of both worlds. It considers how to recognise and achieve well-designed places in general, sets out what the government guidance states and provides best practice examples.

Chapters 4 and 5 set out the critical issues which the council, in considering development within the borough, needs to address in order to successfully pursue new compact development. 7 Key Principles for Successful Compact Development are outlined. This includes the key challenges, opportunities, risks and options available, where new compact

development can best be accommodated, outside of obvious high density locations such as in Crawley's Town Centre, and the physical form it could or should take. Chapter 4 takes a particular look at how it's not just the borough's protected heritage structures and areas, parks and protected landscapes that are important; there are so many more existing character components within the borough that should be properly identified, documented and protected from change brought about by new intensification of land use (or otherwise).

One of the principles also highlights how compact form is particularly dependent on new movement infrastructure being delivered, specifically, public transport and active travel in the first instance. This is to ensure intensification does not detract or diminish the quality of life for existing residents, workers and visitors. Chapter 5 introduces a new movement diagram of the borough indicating the locations where such infrastructure already exists in Crawley.

As a planned New Town, Crawley was organised and designed around a neighbourhood structure: an approach to strategic urban design still held up as best practice today. Crawley's residential areas are relatively compact in form (particularly when compared to the majority of new development built in Britain since 1947). However, optimal densities, as set out in Chapter 2, as well as in government guidance, suggest a modest increase in residential development densities to a range of between 60 and 120 dwellings per hectare.

At the higher end of the density range, more recently, in Crawley Town Centre, new homes have been delivered to a radically different height and typology than is found in most of the borough's neighbourhoods. These developments are tall new apartment buildings where residential densities average a minimum of 300-400 dwellings per hectare, a very compact, high-density form of design where buildings range in height from 7 to 10 storeys. This Study highlights the challenges with such forms of accommodation but also demonstrates how these large structures can help make town centres more attractive and desirable for people to experience and live in. Notwithstanding this, Chapter 5 concludes that new compact form, designed and built to between 60 and 120 dwellings per hectare, will likely be more appropriate for the majority of Crawley's existing urban neighbourhood areas.

The Study demonstrates how 5,030 new homes can be built in Crawley over the Plan period. Chapter 6 illustrates how the above theories and principles have been put into practice when considering the capacity within Crawley's administrative boundaries in meeting housing needs, using the known housing sites identified in the Strategic Housing Land Availability Assessment.

Part 1: Compact Development, Density and the Presumption in Favour of Sustainable Land Use

1. The Case for Compact Development

Compact Development in Context

- 1.1 Across the UK, when developing new housing, we need to make more efficient use of land and these places need to be more compact in form, built to a higher average density range than has typically been the case since the 1940's.

Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities and ensure that developments make optimal use of the potential of each site.
(National Planning Policy Framework paragraph 125, 2021, DLUHC & MHCLG)

- 1.2 Intensification of existing land and compact urban form is not a choice. It is a requirement in national planning policy in order to meet development needs, to address the acknowledged Climate Emergency, and to reach best practice urban design standards. If carried out properly, it will improve the general quality of life for residents and result, in both new settlements and in existing places, in the transformation of some of our urban environments so that they both appear and function more like our much-loved traditional towns. Many of England's best urban areas are widely seen as attractive places in which to live yet have a compact form and relatively high density (such as those considered below in paragraphs 1.36-1.38 and Chapter 2).
- 1.3 The purpose of this Study is to consider the implications and opportunities of planning for compact development within Crawley, in order to support the preparation of the Crawley Borough Local Plan 2024 – 2040 and to support its implementation through high quality, well-designed development schemes.
- 1.4 Chapters 1 and 2 of this document set out the general principles related to compact development, what it looks like, the positive opportunities it offers and the various forms it can take (whether it is sited within a traditional market town or a larger town centre. These chapters also outline criticisms regarding the overall quality of new homes and places delivered post war, right up to the present day. Interestingly the vast majority of critique applies to places that are not compact in form.
- 1.5 Chapter 3 outlines how latest government policy and guidance addresses how we can create beautiful and distinctive places with a consistent and high-quality standard of design, and shows how good design creates better places in which to live and work and helps make development acceptable to communities. Government policy also states that local planning authorities should prepare design guides or codes which are consistent with the principles set out in the National Design Guide (NDG) and National Model Design Code (NMDC) and which reflect local character and design preferences.

Successful places generally contain a mixed community and mix of uses creating variety and activity. The degree will vary within different area types, but opportunities need to be sought in all circumstances to make efficient use of land, promote a mix of uses that meet local needs and

- 1.6 Design vision, the identification of new opportunities (including locations for new compact development), and the rationale guiding how we have determined the best components of existing local character, is guided by the principles set out in the National Design Guide and National Model Design Code. The NDG's identifies ten Characteristics of successful places, which are in turn expanded on by the NMDC's design parameters and baseline standard of quality and practice and the NMDC guidance regarding the coding process. However, both the NDG and NMDC are concerned with all forms of new development, whether it be compact in form or not.
- 1.7 Chapter 4 therefore focuses on seven principles which need to guide compact form and good quality, compact residential development in particular. Parameters, opportunities and wider considerations which build upon the guidance of the NDG and NMDC, such as how compact form impacts on private car use and the particular design implications relevant to moderate density residential design are addressed. Whilst these may be considerations which are less of an issue in lower density places, if new compact places are to gain local support as well as be attractive to visitors and residents alike, these key foundational principles need to be understood and delivered as part any new compact development proposal.
- 1.8 Chapter 5 concentrates on development in Crawley, demonstrating how it, as a planned New Town, follows many of the principles of compact development with its strong neighbourhood principle. It is important that Crawley, as a tightly constrained borough, re-visits how its existing urban areas are used and organised, to enable existing land to be used more efficiently. This includes a particular focus on how the scale and layout of the existing built fabric could, or should, (a) facilitate new compact forms of development within the Built-Up Area Boundary, and (b) identify optimal locations suitable for new compact development on the edges of Crawley, including suitable, sustainable developable areas bordering and contiguous to the borough within adjoining districts.
- 1.9 The National Planning Policy Framework (NPPF)¹ is clear that in setting new policies, local plans must contain policies to optimise the use of land in their area and meet as much of the identified need for housing as possible and that this should include the use of minimum density ranges. The draft Submission Local Plan 2024 – 2040 introduces minimum density ranges across the borough. Policy CL2 states that all new development must identify, test, determine and (where appropriate) embrace opportunities for increased density. Policies CL3 and CL4 set out specific requirements in this regard.
- 1.10 Draft Local Plan Policy CL4 states that including how for major applications, within specific areas such as Crawley Town Centre and other locations which are well served by high frequency, reliable public transport, minimal high and moderate density ranges are expected, unless the existing character justifies a lower figure. Compact development form is defined by the NDG as follows:

“Development that is planned with a relatively high residential density and an urban layout. Community facilities are closer to one another and their users, preserves more open landscape, and makes efficient use of land

¹ National Planning Policy Framework, paragraph 119, 120 (c), (d), (e), & 123–125 (2021) MHCLG

and resources”.
(National Design Guide, 2019, MHCLG)

- 1.11 Compact residential schemes have recently been constructed in Crawley Town Centre to a high-density form and more have been granted planning permission and are shortly to be constructed. In the surrounding neighbourhoods, the Local Plan, in principle, supports schemes of moderate or ‘gentle density’ new developments which are significantly more compact in form than that of their surrounding area. Further compact schemes are also at the design stage, most of which are identified in the Local Plan’s Strategic Housing Land Availability Assessment (SHLAA) and outlined later in this document, in Chapter 6. These include affordable housing schemes the council is bringing forward itself.
- 1.12 Crawley Borough Council has already adopted a design guide for the Manor Royal areas and is in the process of preparing a vision defining, neighbourhood scale design code for the Town Centre. The design vision and expectations outlined in this code are generated from and directed by the parameters and opportunities identified by the Town Centre existing character assessment. Other area-based Character Assessment are being progressed for the Ifield and Ifield West neighbourhoods.

The Primary Advantages of Compact Development

- 1.13 The primary advantages of compact development include:
1. Sustainability and the Climate Emergency;
 2. Compact Urban Forms are Attractive and Desirable;
 3. Reducing Journey Times, especially the commute to work (improved quality of life);
 4. Opportunities for Reinvention and Reinvigoration of Existing Places;
 5. Wellbeing, Choice and Human Interaction;
 6. Protecting the Countryside (reduce pressure on Greenfield sites).

“Using land efficiently means getting the maximum possible benefit from a site or area, taking into account relevant constraints. This can help to achieve desirable social and environmental outcomes, facilitate the efficient use of resources and infrastructure and reduce pressure on greenfield sites”.

(National Model Design Code, p64, 2021, MHCLG)

Advantage 1. Sustainability and the Climate Emergency

- 1.14 Compact residential development is vital if we want our urban settlements to become more sustainable. As such, it is embedded in government policy. Compact development not only uses less land, but it also has the potential to create efficiencies in the use of other resources, including energy supply, services and transportation and allow better provision of open space.
- 1.15 Choices made in relation to the layout and scale of new development strongly influence everyday human activity, particularly in relation to movement which dictates how people move within, through and around a place. As a result, it has a major influence on climate change. Domestic buildings accounted for 22.7% of Crawley’s overall emissions in 2018, and industrial and commercial buildings for 35.7%, with transport accounting for the remaining 41.6%². Government policy makes it clear that

² UK local authority and regional carbon dioxide emissions national statistics: 2005 to 2018 (2020) Department for Business, Energy & Industrial Strategy (hereafter BEIS).

⁴ Build walkable neighbourhoods, 3.2.1 the neighbourhood unit, 2010, UDC.

higher residential densities, public transport and sustainability are all interconnected and that they rely upon one another in order to achieve an increase in the supply of residential units required in order to meet the needs of the population sustainably.

- 1.16 By living in closer proximity to each other, we can accommodate far more of the country's population, use less energy, concentrate goods and services and move from one place to another more efficiently. One obvious example relates to everyday movement. Compact settlement allows us to just walk five to eight minutes to get the things you need most often, the services and facilities you require on a regular basis. This means you don't need to use a private vehicle so often, requiring less land around these destinations to be covered in tarmac for car parking, traffic filter lanes, roundabouts and bypasses. Space which can, in turn, be used for play space, landscape and more housing.

“Making cities sustainable means making them more compact, better connected and less damaging to the environment. To do this, we need to recycle our land and our buildings, to increase the density of development and to stop our suburbs sprawling over the countryside. We need a plan of action that works from the centre outwards, layer by layer, developing existing communities and clusters of activity into a denser, closer texture”.
(Cities for a small country, 2000/2014, Richard Rogers and Anne Power)

- 1.17 At a time of climate and ecological emergency, a return to compact urban form is vital if we are to reduce greenhouse gas emissions, deliver ambitious carbon reductions and achieve net zero. Cities and towns are complicated and compact places even more so. However, they innately deliver a number of key carbon neutral components. These include:
- attractive, inclusive and economically viable active travel and public transport;
 - electrification of transport and logistics (deliveries);
 - an optimal level of local services being located within a 10 minute walk of the majority of homes;
 - the economic viability of shared/communal energy sources; and
 - general opportunities for collaborate consumption and greater potential for circular economy activity (the sharing of resources so as to keep them in use for as long as possible).
- 1.18 The original Crawley New Town masterplan phased the development of the town through the addition of complete neighbourhoods, each with good access to its own centre offering local shops, services and community facilities that meet day-to-day needs within walking distance. Although the average density ranges achieved were less than the net densities of 60 dwellings per hectare considered necessary³ to sustain a dependable, frequent and high-capacity public transport service, each neighbourhood was sized and laid out so as to achieve closer integration and provide greater accessibility to the neighbourhood centres.
- 1.19 In addition, considerable levels of dependable, frequent and high-capacity public transport service already exists in Crawley along sections of the Fastway bus network, complemented by a number of rail stations. As a result, significant portions of the borough's neighbourhoods are overlaid with and integrated via sustainable movement options. This geographical extent is outlined and illustrated in Chapter 5. This quality of public transport allows for many of the borough's services and destinations to both overlap and be located further from individual neighbourhoods

³ Urban Design Compendium (UDC), page 47 (HCA 2013 and English Partnerships 2007). A key NDG/NMDC evidence base source document.

than is viable for cycling and walking. Within these areas, where existing character allows, and within 400m radius of the neighbourhood centres (equating to about five minutes' walk, the widely used benchmark for mixed compact development neighbourhoods)⁴, these existing neighbourhoods readily lend themselves to new compact development.

- 1.20 On 15 December 2021, Crawley Borough Council unanimously passed a resolution: *'to pledge to reduce carbon emissions by at least 50%, and as close to net zero as possible by 2030, and to reach net zero by 2040 as the very latest'*.
Climate Emergency Declaration' (2019) CBC; 'Amending the targets within the Climate Emergency Action Plan' (2021) CBC.
- 1.21 The Draft Crawley Local Plan 2024 – 2040 notes key strategic objectives, aims and priorities with related policies in the Local Plan including:
- Low carbon, decentralised energy network for the town:
 - work in partnership with energy service companies, property owners and other partners with the aim of delivering combined heat and power schemes where possible. This is made more viable when places and development are compact in form.
 - Promote sustainable housing and transport within Crawley:
 - Investigate opportunities, in partnership with West Sussex County Council, to integrate improvements in sustainable transport with development. Ongoing work is currently concerned with sustainable movement options for new strategic housing sites within and at the edge of the town as well as defining optimal design parameters, (including routes, infrastructure segregation and signal prioritisation for new and improved Bus Rapid Transit (BRT) and Active Travel infrastructure.
 - Set an example with the council's own social housing stock. As mentioned in paragraph 1.11 previously, the council is seeking to identify and deliver optimal density ranges across all suitable council-owned sites (optimal density ranges are considered in Chapter 2 of this document). These include the Breezehurst Drive scheme in Bewbush neighbourhood, due to commence construction early summer 2023, where the overall scheme is compact in form, at a considerably higher density than the existing adjoining housing stock. In the Town Centre, the council has worked proactively with developers to deliver new high density residential accommodation, including affordable housing, and other schemes are in the planning phase.
 - Significantly increase the number of residents walking, cycling and using public transport for more every-day journeys.
 - As well as the joint authority work mentioned above, the Crawley Transport Strategy 'New Directions' identifies opportunities for Crawley developing more active travel and sets out a vision for decarbonising transport.
 - Local Plan Policy CL3 states that all new development should build upon, connect to, enhance and extend sustainable movement, so as to maximise opportunities for compact development and sustainable travel and increase levels of sustainable transport modal share, to put people before traffic and encourage walking and cycling through establishing a layout of pathways which understand and respond to the wider borough pattern of movement.
 - Policy CL3 also asks applicants to demonstrate how walking and cycling connections will enhance and integrate schemes with Crawley Town Centre, local centres, transportation hubs, schools and employment areas.
 - Policy CL3 also states that new development should build upon the established evidence base of the Crawley Local Cycling and Walking Infrastructure Plan (LCWIP), capturing and translating the direct desire lines

of this borough-scale, active travel route masterplan at an area-based scale and translate these into site specific layouts.

- In addition to the above, where existing character allows, larger schemes will be required to establish a development form based on sustainable compact layout and scale, as set out in Policy CL4, which take advantage of existing BRT and Rail infrastructure.

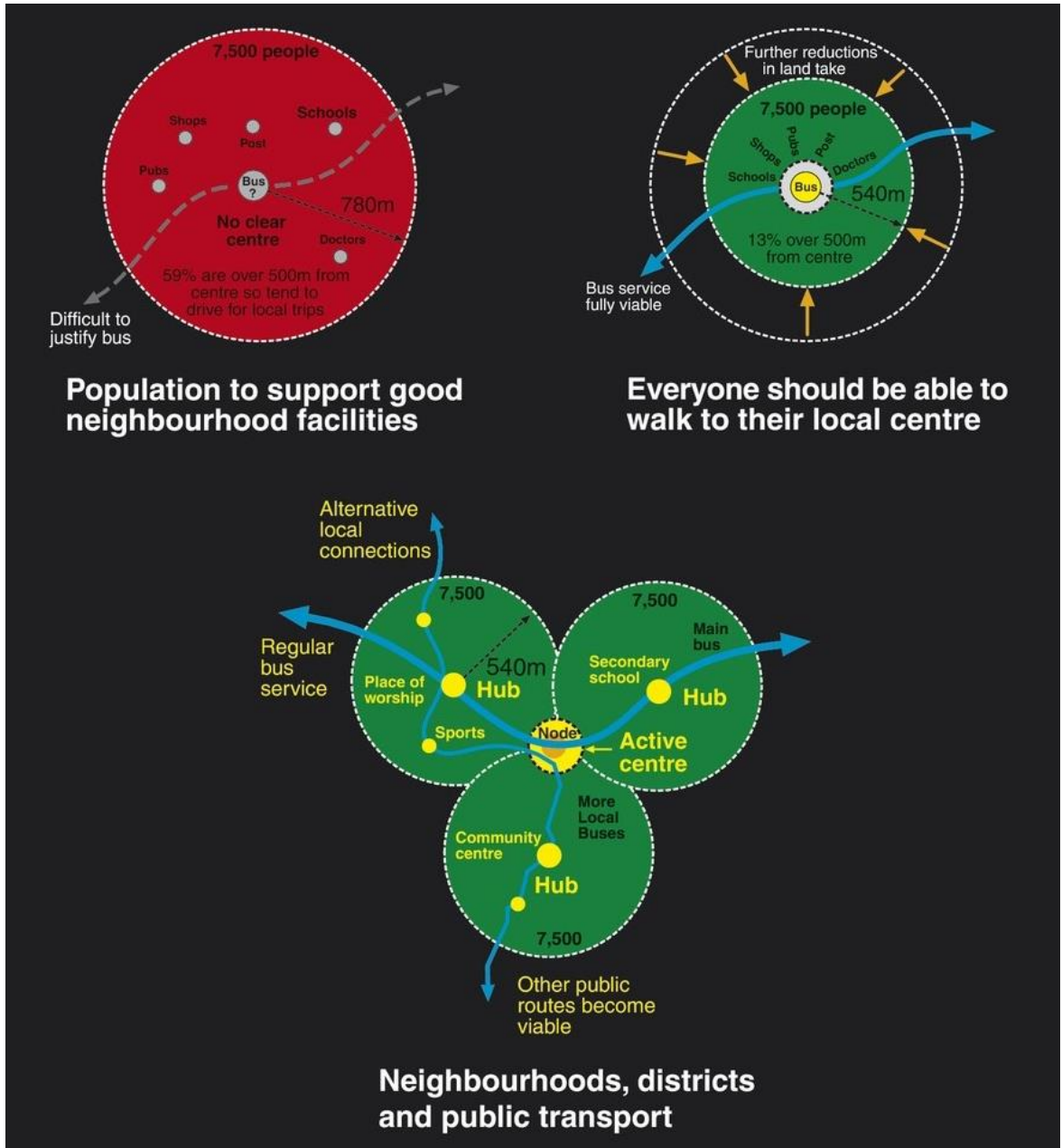


Illustration from *Cities for a small country*,
Richard Rogers and Anne Power, 2000/ 2014

“Compact forms of development bring people together to support local public transport, facilities and local services. They make destinations easily accessible by walking or cycling wherever this is practical. This helps to reduce dependency upon the private car”

(National Design Guide, p19, p63, ‘Compact form of development’, 2019, MHCLG)



A traditional, Italian example of compact urban form (the top end of the moderate density range. See Chapter 2 for further examples)

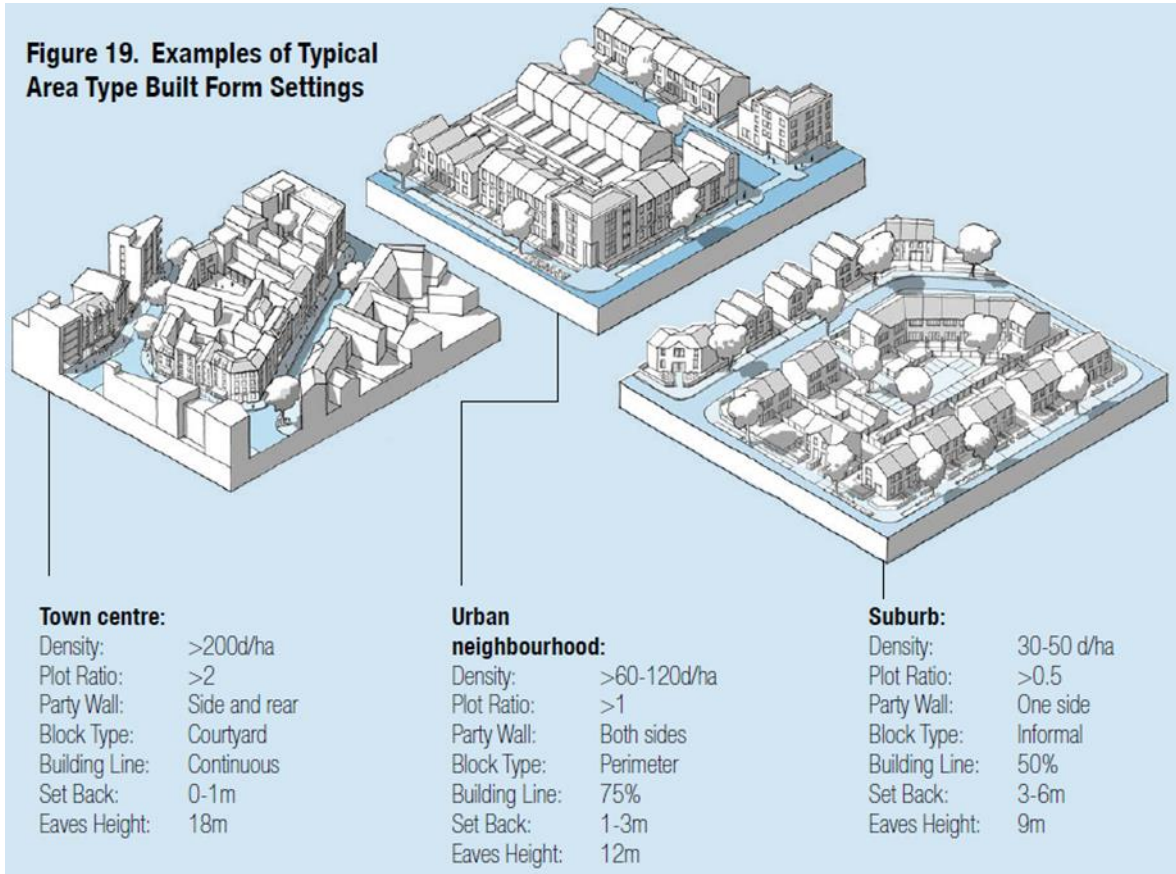
Advantage 2. Compact Urban Form: Attractive and Desirable.

- 1.22 Many of England's most desirable villages and market towns, built over the centuries, and widely seen as attractive places in which to live, have a compact form and relatively high density. They are not high or hyper dense in form and are not dominated by high rise tower blocks. A range of 60 -100 dwellings per hectare, minimum, was standard in Victorian and Edwardian towns: it all had to be compact due to lack of car ownership. Conversely, the post-World War 2 suburbs were predominantly designed to a low density of around 20-25 dwellings per hectare.
- 1.23 The majority of the most expensive residential addresses in our historic cities have also been laid out to various density scales of compact development. Higher density living can be extremely desirable, as the New Town in Edinburgh, and Kensington in London demonstrate. Both areas have at least 150 dwellings per hectare, and yet they are highly sought after. In our most attractive villages, market towns and cities, it is often the older houses clustered at higher densities in the centre that fetch the highest prices. This tradition of optimal, 'Gentle Density' was recently highlighted by the Living with Beauty report of the Building Better, Building Beautiful Commission (MHCLG, 2020) and is considered further in Chapter 2.

"A compact form of development is more likely to accommodate enough people to support shops, local facilities and viable public transport, maximise social interaction in a local area, and make it feel a safe, lively and an attractive place. In this way, it may help to promote active travel to

local facilities and services, so reducing dependence on the private car. What is meant by compact will vary according to area type and context”.
(National Model Design Code, Guidance Notes, 2021, MHCLG)

What does Compact Form Look Like?



Above: Illustration from p21 of the National Model Design Code, MHCLG 2021.

Advantage 3. Reducing Journey Times, especially the commute to work (improved quality of life)

- 1.24 Many people spend many hours every day sitting in their car or on a train. Assuming employment opportunities are nearby, compact development can significantly reduce this daily loss of time, allowing more for family, friends, leisure and overall quality of life. However, this requires the design, investment and delivery of a fast, reliable, frequent and high capacity public transport network and supporting active travel infrastructure to be in place as a key infrastructural foundation, such as the type Crawley already has in place (see paragraph 1.19 above).
- 1.25 Such public transport, along with a revolution in both the provision and design of cycling and walking infrastructure, will, over time, significantly offer viable and attractive movement options for many. This is explored in detail in Chapter 4 (principle 2). New compact development needs to be laid out around and alongside these movement corridors. This is something which has and continues to occur in the borough (see paragraphs 1.19, 1.20 and 1.21 above). The following provides an example of even greater potential achieved in Denmark:

“The development of a distinct bicycle culture is a significant result of many years of work to invite people to bicycle in Copenhagen... More than 50%

of Copenhageners bicycle every day.... By 2008 bicyclists account for 37% of commutes to and from work and education”
(Cities for people, p10, 2010, Jan Gehl, Island Press)

Advantage 4. Opportunities for Reinvention and Reinvigoration of Existing Places

- 1.26 The need to make efficient use of land, a better understanding today of how to design and plan for compact form, together with the reduction in space needing to be given over to fast, wide highways and endless car parking, allows for new development to once more take a form similar to that of our traditional villages and towns, and less like an out-of-town retail park, providing communities with visually attractive and interesting urban environments.

“Places affect us all – they are where we live, work and spend our leisure time. Well-designed places influence the quality of our experience as we spend time in them and move around them. We enjoy them, as occupants or users but also as passers-by and visitors. They can lift our spirits by making us feel at home, giving us a buzz of excitement or creating a sense of delight. They have been shown to affect our health and well-being, our feelings of safety, security, inclusion and belonging, and our sense of community cohesion”.

(National Design Guide, Introduction, p2, 1 October 2019, MHCLG)

“Since the Second World War, this country has seen very extensive urban development and renewal. While there are exceptions, a great deal of this development has been third-rate and is lacking in any ‘sense of place’. At worst, the results have been downright ugly and unpleasant. Fine urban fabrics have been spoilt through the process of re-development. The remarkable built heritage flowing from the English urban tradition has yielded to banal and monotonous development, humdrum in design and dominated by traffic. We have repeated standard housing types and layouts, retail boxes and road layouts so many times, with little or no regard for local context, until we find that now almost everywhere looks like everywhere else”.

(Urban Design Compendium, 2000, Homes and Communities Agency)

<https://www.gov.uk/government/publications/urban-design-compendium>

- 1.27 Intensification and new compact development form offers the opportunity for so many of the existing urban areas in the UK to be physically improved and enhanced, even for the reinvention of existing area wide built environments. The nation’s less attractive, isolated low-density places could lend themselves to such change and transformation can be economically attractive. Assuming the quality, functionality and character components of an existing area are retained, protected and enhanced, new development and change in such locations should also be able to gain extensive local support. The same is true for planned New Towns such as Crawley, particularly in parts of the neighbourhoods where average density ranges are low.
- 1.28 New compact form can be introduced to heal the breaks, gaps, unsupervised frontage and sections of poor quality public realm where appropriate. Crafting new forms of development can infill and mend the urban structure. It can enclose, improve the connectivity and legibility of a specific space or wider place better, or can amplify a landscape feature or green open space setting further than currently exists.

“The National Planning Policy Framework is also clear that local planning authorities should develop an overarching design vision and expectations that can inform design codes, guides and other tools that inform the design of the built and natural environment in their area, whether prepared by

them or other parties”.
(National Model Design Code, p5, 2021, MHCLG)

- 1.29 This paper argues that change to existing places, when it involves intensification of existing urban land to accommodate new compact form and higher residential densities can offer particularly viable and valuable opportunities for the improvement of so many of our existing urban locations. Intensification of an existing urban location provides a chance to make physical structural changes to existing places and the financial incentive and justification for doing so.
- 1.30 The intensification of such existing places can unlock significant design and spatial improvement. It provides new place-making opportunities, options for better streetscapes and public open space and a chance to make physical changes to existing street and path layout as well as the form and positioning of our built fabric and how it connects to or frames adjoining structural landscape. It can open up, link through and overall make better, more legible non-vehicular movement connections between places. It provides the chance to better directly link neighbourhoods and local destinations together and then also, beyond out into open landscape and countryside.

Wellbeing, Choice and Human Interaction

- 1.31 There are a number of advantages inherently built into places which are compact in form. These include:
- Improvements in Physical Health.
When compact development is designed and planned around sustainable public transport and high quality active travel infrastructure, significant improvements in the wellbeing of communities occurs. Physical activity becomes more a part of and built into everyday life, helping to reduce obesity. In addition, there is more safe space for children to play outside and better air quality, for example, active travel (cycling and walking) becomes the quicker, easier and natural choice for getting around on shorter journeys and private vehicle use reduces by default (see Section 4.4 for more detail).
 - Social interaction and mental health.
People are literally less isolated. There is more walking built into the layout of a compact place, naturally allowing for far higher levels of human interaction and life on the street, encouraging people to spend less time isolated within individual private vehicles.
 - Local choice and quality of life and attractive neighbourhoods.
When a neighbourhood, within 500m from a local centre, achieves an average minimum of 50 dwellings per hectare, residents will generally never be more than 5- 8 mins walking distance from a good range of local facilities, mainly because: (a) this level of density makes such facilitates commercially viable (footfall); and (b) commercial units do not require large space consuming surface car parks or expensive multi-story provision as enough customers live within a comfortable walking distance (see illustration 1 below).

“The location of substantial residential and business uses within easy walking distance of an urban or neighbourhood centre is the principal platform for sustainable development. This catchment (at least 5000 homes for a typical, sustainable neighbourhood) can support a bus route and a variety of shops and services and can attract other commercial investment. It requires an average neighbourhood density of around 65

dwellings per hectare with higher density towards the centre of the neighbourhood (or town centre, transport corridor etc.). This allows for lower densities towards the margins of the neighbourhood towards the rural edges”.

(The Essex Design Guide, 2018)

Protecting the Countryside (reducing pressure on Greenfield sites)

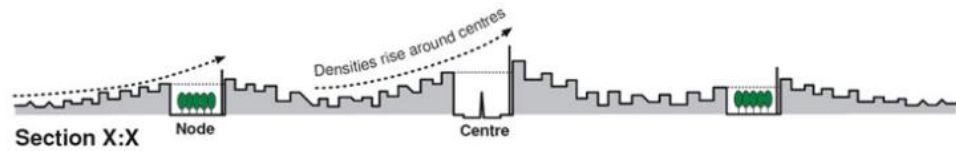
- 1.32 Fundamentally, compact development form allows for better protection of the countryside as well as landscape settings within urban areas. The ‘Living with Beauty’ report discusses how the planning process has, to date successfully managed to protect the countryside by confining the towns so that although England is a very densely populated country it is still only 11 per cent developed. Intensification can also help to create physically clear urban districts and distinct neighbourhoods with clear urban edges between countryside and town, ending the relentless march of the sprawling suburbs.
- 1.33 Published in June 1999, ‘Towards an Urban Renaissance’ was a report written by the Urban Task Force and chaired by the late Richard Rogers. It examined the question of how 4 million projected new homes over 25 years might be accommodated in the UK without further encroachment into the green belt or other areas of countryside. This work helped launch emerging national policy to reverse the onward sprawl of unsustainable low density car dependent development.
-

“In the creation of new towns, the question of density is paramount. Milton Keynes covers an area twice the size of Florence, but contains half as many residents.

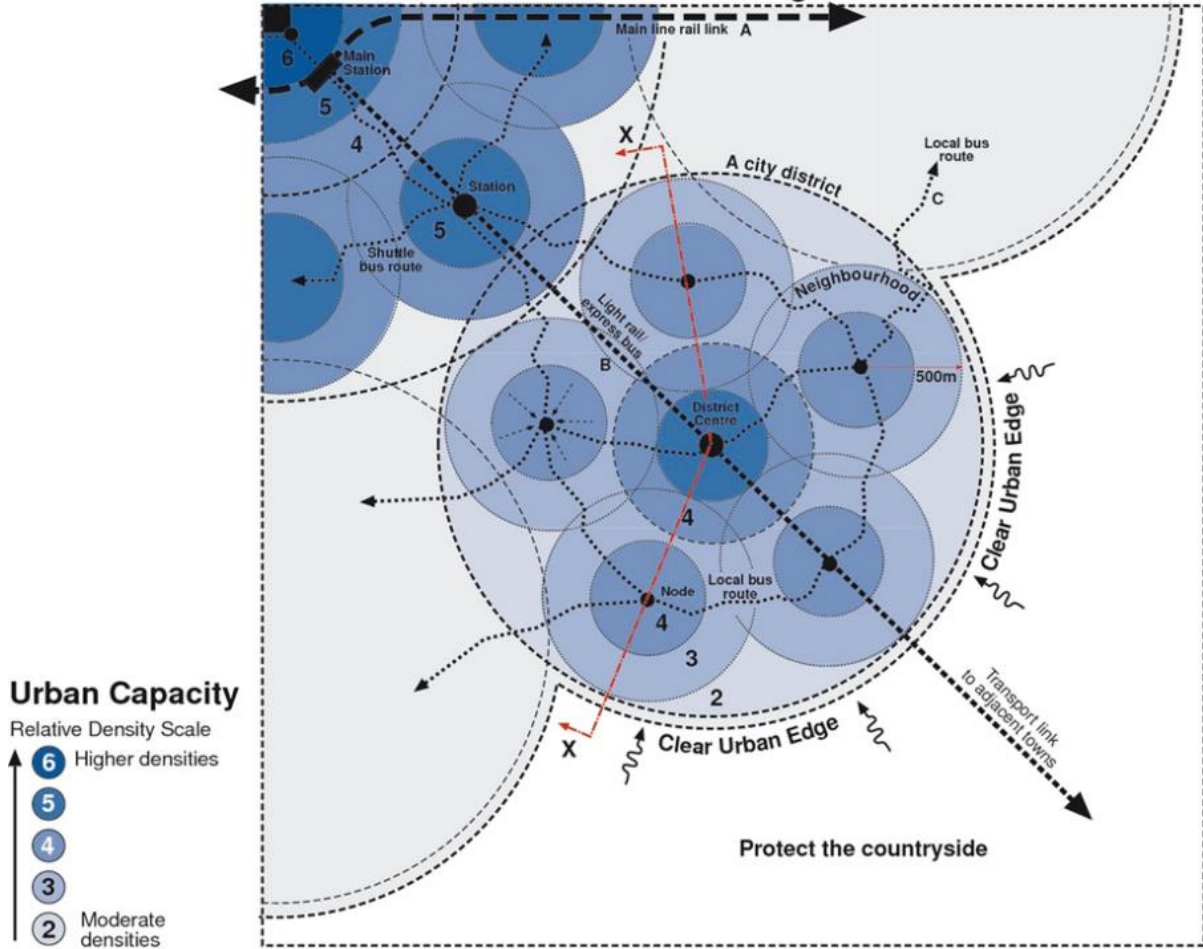
We don’t have spare land to play with in that car-dependent way, and some kind of ‘gentle density’ is what we must aim to achieve. By ‘gentle density’ we mean density that is achieved at street level and without presenting alien or impersonal structures that challenge the ordinary resident’s sense of belonging. Tower blocks in cleared spaces do not necessarily achieve greater density than the terraced streets that they replace. For example, none of the post-war estates achieved the density of Pimlico or Notting Hill Gate. And certainly, the highest density square kilometres in Europe are not high-rise estates, but historic parts of Paris and Barcelona”.*

(Living with Beauty: Report of the Building Better, Building Beautiful Commission, p45, 30 January 2020, MHCLG)

- 1.34 Optimal ‘Gentle density’ is considered in more detail in Chapter 2 below.
- 1.35 Diagram 1 (below) is an image taken from Roger’s ‘Cities for a Small Country’, first published in 2000. This was part of the work he chaired for the report in 1999 ‘Towards an Urban Renaissance’ which resulted in ‘Our Towns and Cities - the Future’ - The Urban White Paper published in 2000, and was influential in the revised ‘Planning Policy Guidance Note 3, Housing’ (published in 2000). Ultimately, this work informed the government guidance documents through the 2000s (e.g. the work of CABE, and the publication of the Urban Design Compendium) and the latest NPPF focus on ‘efficient use of land and minimal densities’ and the National Design Guide (MHCLG 2019).



Clear urban districts and distinct neighbourhoods



Malmesbury, Wiltshire

- 1.36 The town of Malmesbury, cited as a good example of a traditional compact town, has a higher proportion of Grade I and Grade II buildings than in many other English towns. The historic centre is compact in form with a density range of between 60 and 80 dwellings per hectare (dph). The scale and massing of structures varies; heights, for example, range from 2 to 2.5 and 3.5 storeys.
- 1.37 Due to topography, the overall townscape appears taller than it is in reality. From the perspective of a person standing in the field in the image below, the average height of buildings appears as 4 to 5 storeys, whereas in fact the majority of structures range from two to three storeys in height, along with a number of even taller structures interspersed to the rear.
- 1.38 There is a clear demarcation between urban and rural space (as is evident in the image below).



Illustration above: Malmesbury Wiltshire, taken from the 'Living with Beauty' Report of the Building Better, Building Beautiful Commission (MHCLG, 30 January 2020)

2. Compact Development: The Traditional, Sustainable Urban Form

The Move from Traditional Compact Form to Suburban Sprawl

“The traditional settlement was built for walking because it had to be: people had limited alternatives. The car has greatly enhanced the scope and comfort of human life, but it creates a collective action problem: if everyone drives everywhere by car, then huge highways are needed together with the massive provision of parking spaces, both around people’s homes and around their workplaces and shopping centres”
(Building Better, Building Beautiful Commission (Interim draft) Chapter 4, ‘Introduction’, 2019, MHCLG)

- 2.1 In the past it was easier for places to be designed in a compact form, as towns and neighbourhoods did not have to accommodate the space requirements of private motor vehicles, as mentioned in the previous quote. It is also worth noting the correlation between private vehicles and speed; the faster the traffic the more space that is required, for example, the different spatial requirements, e.g. the setback distances, barriers and the space needed for junctions, between a 40mph road and a 20mph road.
-

“Cities built with the aim of accommodating the car therefore have to look very different from the traditional city. If three parking spaces are required per household, as occurs in some local authorities, then terraces, streets, squares and mansion blocks become nearly impossible. The traditional shopping crescents and high streets tend to be abandoned and replaced with out-of-town retail centres, surrounded by fields of cars. Offices and government buildings are transferred to business parks, with their own parking lots. Walkability and mixed-use neighbourhoods are swiftly imperilled”
(Building Better, Building Beautiful Commission (Interim draft) Chapter 4, ‘Introduction’, 2019, MHCLG)

- 2.2 It is only in the recent past that this long standing, best practice approach to achieving compact settlement formation has been ignored. Unfortunately, instead, it has often been replaced by low density poor quality sprawl.
-

“Throughout the twentieth century, politicians and planners believed that moving people out of our city centres was a good thing, and many of the great architects of the twentieth century were anti-urban. In the late 60’s there was a shift in attitude in favour of inner-city renovation and moves were made to protect traditional communities, but for the most part, depopulation continued. Terraced housing was abandoned and planned garden cities fell out of favour. Instead, growth was delivered by the expansion of unplanned suburbs, large-scale clearance of the inner cities and the construction of new mass housing estates. This re-ordering of settlements separated work from home, breaking the close integration of commerce, manufacturing, leisure and home life which is found in popular inner-city neighbourhoods as well as smaller cities, market towns and historic villages. We are now reaching the limits of dispersal and this is forcing us back to the idea of compact, dense, mixed-use, integrated cities”
(Cities for a small country, 2000/2014, Richard Rogers and Anne Power)

“The Tudor Walters Report of 1918 argued for slum clearance, and the replacement of dense housing schemes with suburban developments at a density no greater than 30 units per hectare. The massive consumption of countryside that this entailed led to the foundation of the Council for the Preservation (subsequently Protection) of Rural England in 1926, and the pressure of opinion today is now in the opposite direction”.
(Living with beauty: report of the Building Better, Building Beautiful Commission, 2020, MHCLG)

- 2.3 Reducing the need for private car use is not only vital in achieving net zero carbon emission targets, it is essential if we are to once more create enjoyable and beautiful places to live and work.

Criticism of the Quality of the Homes and Places delivered since the 1950's

“Public disenchantment with so much of what has been built since the war cannot be adequately captured in facts and numbers; it is a powerful and present feeling of loss...”

‘Creating space for beauty’ interim report by Building Better Building Beautiful Commission, 2019
MHCLG)

- 2.4 In addition to the spatial revolution (and associated requirements) brought about by motorised vehicles, there are other primary reasons for this failure:
- a. *Little respect or care for existing character and context:*
Minimal regard is usually given to the existing positive character attributes of sites themselves, the area immediately surrounding them and the wider hinterland, apart from those which are most obvious (such as protected buildings, views, landscape assets).

Many definitions are used to define what people perceive as the character of an area, labels such as sylvan, rural, suburban, Victorian, high street, leafy, terraced. These definitions are not enough on their own to define the character of a place. Behind these labels there is a less obvious physical skeleton, or rural/urban structure, underpinning every area. This structure consists of tangible physical elements (such as paths, landmarks, roads, an edge of woodland, views and vistas), which together give a place its distinct form.
 - b. *Lack of time and skill, good architecture and urban design:*
Crafted and bespoke design is essential in order to unlock good compact development. Compact residential development, particularly its layout, appearance, residential amenity and provision of private open space, requires more thought, expertise and craft than is required (or even necessary) for low density housing, or demanded by market forces.
In general, a far greater quality of architectural design skill is needed, including attention to detailing, materials and consideration of the needs of future occupants.
- 2.5 In the short term, it's a lot cheaper and easier to simply keep building one and two storey dwellings across open countryside. However, in the long term the wider environment suffers substantially. There are also significant negatives to quality of life for residents, literally built into such places, such as loneliness and isolation, with the low incidence or opportunity for regular casual human interaction. Even the majority of movement is isolated as people primarily move around by private car, which minimises the opportunities for casual interaction.

- 2.6 Research carried out by the Place Alliance, UCL and CPRE in 2020⁴ found overwhelmingly that the designs of new housing environments in England were ‘mediocre’ or ‘poor’. It systematically evaluated the design of 142 new large-scale housing-led development projects against seventeen design considerations. This report, titled ‘A Housing Design Audit for England’, produced a 10 year audit of new housing scheme design in England, concerned with the design quality of the external residential environment (how new ‘places’ are shaped and with the quality of those places). The report found:
- One in five of the 142 schemes should have been refused planning permission as their poor design was contrary to advice given in the NPPF⁵
 - an additional 54% should not have been granted permission without significant improvements to their design having been made first; and
 - that, overall, 75% of new housing development design was ‘mediocre’ or ‘poor’.
- 2.7 The report includes 19 key findings and 18 recommendations, including the following:
- There are strong benefits in designing at higher densities than is the norm.
 - The government should be more prescriptive in seeking less sprawling densities, as more compact developments tend to be designed more sensitively.
- 2.8 Low density suburban sprawl has, in part, become so prolific, as it avoids the complexities required to produce good quality compact development. This includes extensive design and planning consideration and skill required at concept and feasibility stage and the need for new sustainable movement infrastructure being delivered in addition to standard highway capacity upgrades. On its own, the latter is usually all that is required to facilitate movement requirements for low density places.
- 2.9 Overall, it is easier and quicker to plan, design and construct non compact places and it usually follows that upfront costs are less. Even the cost of funding construction is cheaper and more straight forward – as the construction phasing and completion of individual plots is easier, meaning the cost of finance can be minimised and replaced by income from the sale of finished properties. Low density homes are, in the main, physically separated from one another with no internal common space and minimal public realm areas beyond the highways and public parks. This type of place is achieved with minimal effort. Simply put, this really only involves arranging standalone detached or semi-detached structures, physically distanced from one another by garden walls, public streets and driveways.
- 2.10 Conversely, complexities associated with Compact Development include:
- 1) *Damage to existing residential amenity:*
 - a. Closer proximity to a greater number of people and, by default, greater chance of disturbance from perceived antisocial activities (including noise, parking (see ‘*transport problems*’ below) and potential overlooking);
 - b. The spatial and environmental qualities, enjoyed by existing residents, can be compromised; for example, day light, views and privacy;
 - 2) *Transport problems:*
More residents usually means more cars which results in more traffic and more congestion. Existing streets can become dominated by car parking needs with a

⁴ A housing design audit for England’. Place Alliance, 2020. The report was produced with support from a 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. Along with voluntary input from Arup, JTP, Spawforths and URBED and a network of specially trained professional volunteers. (Electronic version available from www.placealliance.org.uk)

⁵ The NPPF, Chapter 12, paragraph 134 (2021) MHCLG, states that development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design (Contained in the National Design Guide and National Model Design Code), taking into account any local design guidance and supplementary planning documents such as design guides and codes.

clutter of cars parked up everywhere unless alternative transport modes are provided in tandem with intensification. This issue is evident in the older neighbourhoods of Crawley where, in some areas, houses were built with 1 parking space per 9 dwellings. Increasing car ownership in subsequent decades has resulted in serious parking problems, impeding access and damaging verges.

- 2.11 These are all matters which need to be carefully considered against the location, siting and overall form of any new proposals in relation to the context and character of the area in which a site is located.

“The Government...must raise standards immediately. This research is utterly damning of larger housebuilders and their failure to build the homes our communities deserve. They must significantly raise their game if we are to create the sorts of places that future generations will feel proud to call home. It’s no wonder so many of our communities feel apprehensive towards new development when the design is so poor. That’s why significantly improving the quality of design is central to addressing the housing shortage.”

(‘A housing design audit for England 2020’, Tom Fyans, campaigns and policy director at CPRE, Place Alliance)

- 2.12 All new development, and compact development in particular, if not carefully designed, planned and implemented, can have a negative impact on existing communities and the natural environment. This is, of course, obvious but it is particularly sobering when national studies⁵ have concluded that the majority of new housing environments in England, built over the last 10 years, at all types of density, were ‘mediocre’ or ‘poor’.
- 2.13 As noted in paragraph 1.5 above, government guidance regarding the key principles for successful, well designed places are outlined in Chapter 3. Added to these, additional principles, specifically related to achieving well-designed *compact* development and places, are outlined in Chapter 4 (along with corresponding detail regarding the associated risks).

Ensuring Densification is Successful

“Density is one indicator for how compact a development or place will be and how intensively it will be developed. However, in itself it is not a measure of how appropriate a particular development may be within an area type”.

(National Model Design Code, Guidance notes, 2021, MHCLG)

- 2.14 As mentioned above, it takes considerably more understanding, design skill, planning and craft to achieve good compact places, compared to that required for good low density development. Of course, the advantage is that good quality compact places should enable people to enjoy the best of both worlds (along with the many other benefits it offers, previously described, such as protecting and sustainability gains). As an example, compact places can and should be both tranquil and lively. The latter is something that is expensive or difficult to achieve in a low density setting.

“City vitality and tranquillity are both desirable and valuable urban qualities. Peace and quiet are highly valued qualities in the lively, active city.”

Arguments promoting the lively city should not aim specifically on creating as much life as possible in as many places as possible... It takes careful and concentrated effort to ensure a combination of lively and quiet places in the city....

It is important to remember that the answer is not to be found in simple, fixed principles about greater development density and getting more people in buildings, but in working carefully on many fronts..."

(Cities for people, p89, 2010, Jan Gehl, Island Press)

- 2.15 There is no simple one size fits all approach to compact form. In his acclaimed book *Cities for people*, Gehl considers the quality of the places we live from both an urban design, sociological architectural and psychological perspective. Arguing for the value of compact development his book outlines detailed study and data, illustrations and analogies to better help us understand the issues at stake. Considering, for example, how best to design and plan in order to bring life and interest into the overall urban environment.

"Planning for events and parties has familiarized us with the principles of concentrating activities on offer to kick start good processes. If we are expecting a limited number of guests, we need to concentrate them in a few rooms on the same floor. If things get a bit crowded, well that is usually not a problem – quite the contrary. If we try to spread this same event over many large rooms and perhaps even over several floors, it will almost inevitably fail to be memorable..."

The principles that underlie successful events can be used in modern urban planning in places where we cannot count on a large number of visitors. Here we need to concentrate the people and activities in just a few rooms of suitable size and on the same level"

(Cities for people, p65, 2010, Island Press)



Camden, London

What does Compact Form Look Like?

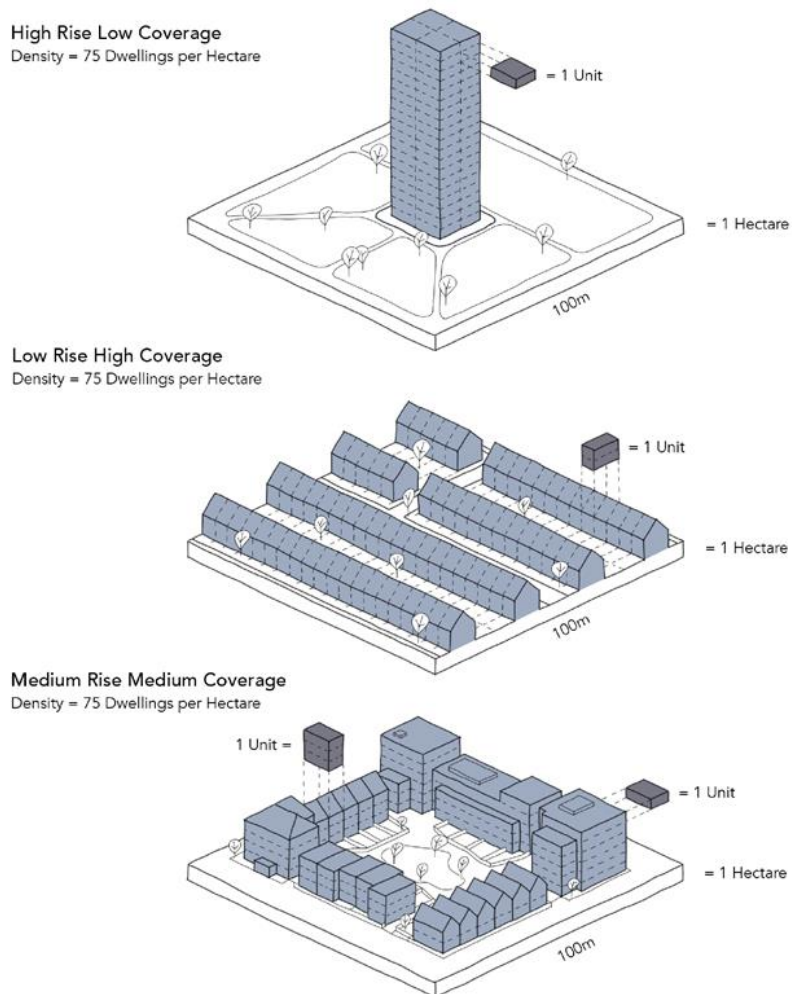
2.16 The image above, taken in Camden, London, illustrates two different types of compact residential development: the historic building on the right of the image above could be either large single dwelling or be divided up into 4-6 individual apartments. Further examples are presented in Part 2, Chapter 5: Density Ranges in a Crawley Context.

Optimal Density can be Low Rise

2.17 Building at sustainable densities not only makes more efficient use of land but should also deliver higher quality urban environments, yet there are many cases where higher density designs produce a poor quality environment and public opinion can be biased by negative perceptions. Some people imagine high density as only being possible when tall buildings, which fail to relate to the local context, are constructed, with many such schemes having been built in the UK over the last 50 years.

What does Optimal Density Look Like?

2.18 High structures, as well as long, impermeable repetitive perimeter apartment blocks, are only one way to increase density. Higher residential densities can be achieved in low rise developments with average heights of three- storeys which use innovative ways of providing outdoor amenity space.

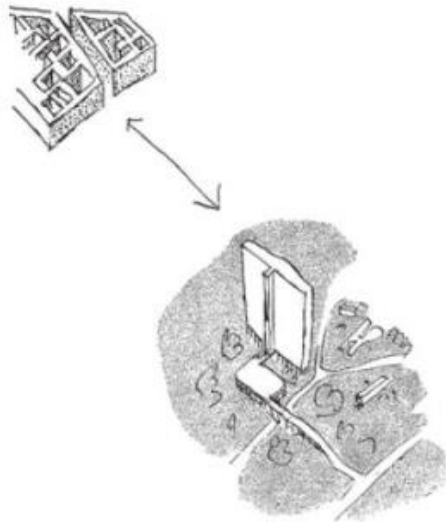


(Above): 'High density does not mean high-rise towers'. The Essex Design Guide, <https://www.essexdesignguide.co.uk/supplementary-guidance/higher-density-development/> and higher density development - as updated January 2021 / Urban Task force (1999)

The Human Dimension

- 2.19 In his book 'Cities for people', Jan Gehl considers people in relation to senses and scale, the built environment around us and the places where we live. His book provides helpful illustrations which prove these important considerations. One key example concerns how contact between building height and street can separate the occupant from the life below at ground level. This is one of a number of reasons which underline the limited attraction for the general public to have their main living spaces any more than 13.5 meters higher than street level.
- 2.20 Only a small number of us enjoy living high in the sky, something confirmed by both demand and prices paid for homes across the European residential market.

"the natural starting point for the work of designing cities for people is human mobility and the human senses because they provide the biological basis for activities, behaviour and communication in city space.... Contact between building and street quickly dissipates above the fifth floor, with the contact interface changing to views, clouds and airplanes".
(Cities for people, p40-41, 2010, Jan Gehl, Island Press)



“there is much evidence for the view that we will not normally achieve the kind of humane densification that we are looking for by ‘building upwards’ – evidence that has not always been taken into account in recent urban developments, especially in London and Bristol. We need to weave the ground-level fabric more closely, not to stretch it to the skies”.

Living with Beauty: Report of the Building Better, Building Beautiful Commission, MHCLG, 30/01/ 2020, p 45

Modernists rejected the city and city space, shifting their focus to individual buildings. This ideology became dominant by 1960, and its principles continue to affect the planning of many new urban areas. If a team of planners was asked to radically reduce life between buildings, they could not find a more effective method than using modernistic planning principles (diagram from Propos d’urbanisme by Le Corbusier

Opposite: ‘Cities for people’ Jan Gehl, page 4, 2010 Island Press.

2.21 Gehl talks about a dense city being a lively city as “a truth with qualifications”.

“Downtown Sydney is dominated by high rise buildings. Many people live and work along dark, noisy streets with strong gusty winds.... New York City’s Manhattan also has many examples of skyscraper clusters with dark, unattractive streets at their base. In contrast Greenwich Village and Soho in New York City are less dense than Manhattan but still relatively high in density. The buildings are lower so the sun reaches into the tree lined streets- and there is life”.

(Cities for people, 2010, Jan Gehl, Island Press)

2.22 Many of the much criticised high rise blocks built in the 1960’s and ‘70’s, did not, in fact, create compact settlement. Although individual buildings were often well in excess of 14 metres, these tower blocks were usually placed in wide open landscape settings resulting in places where human activity, street life, at ground floor level, was minimal and fragmented, usually, to the point of being anti-social and insecure.



St Mark's Square, Venice

- 2.23 St. Mark's Square, Venice, is celebrated and globally admired whilst being modest in both height and density. Note the higher floor to ceiling height of the colonnade at ground floor – the floor to ceiling heights in such buildings are considerably higher than that of most modern developments. For example, the height of the building on the left, Procuratie Vecchie, is equivalent to a standard 6/7 storey UK apartment block.

The Desire for High Rise Living

- 2.24 The vast majority of the world's great towns and cities are low in height, human in scale and fundamentally integrated to life at street level – where average building heights are usually no higher than that shown above. However, a lot of the new compact schemes built in recent years across England, particularly in the big cities, are far taller. However, even well located and well-designed high rise homes struggle to become 'the typology of choice' for the majority of the house buying public. Living above 13.5 meters is unlikely to ever be attractive to the majority as high rise living, by its very nature, cannot offer all of the qualities afforded by schemes designed to a modest, gentle density. This is not to say that high rise living doesn't have a place, and it does offer significant desirability and appeal. Many people enjoy living in a high level apartment or penthouse, particularly when they offer panoramic views and great sunlight, and the best of these homes enjoy extensive outdoor private garden space.
- 2.25 High density, higher rise living can be particularly attractive to particular demographics such as those down-sizing from larger properties. Many residents don't want the hassle of having to deal with maintaining a house, fixing tiles, painting external walls, blocked drains and looking after a garden (although the same issues are looked after by a management company also in a development of more modest density and height). Younger generations and young professionals in particular value and enjoy living in locations at the heart of a vibrant city or town centre. Urban life, choice and excitement that can only really be sustained and made commercially

viable by average densities in excess of 200dph. A further attraction is that such locations are often built within walking distance of a railway station or other high quality public transport routes which allows such residents to readily connect to other large towns and cities. This includes locations such as Crawley Town Centre, where buildings up to 10 storeys in height are currently being developed.



Above: Proposed 10 - 11 storey residential scheme at Station Way, Crawley Town Centre



Opposite:
Street life late in the evening at a new High density location. Even when the area is only partially completed and still under construction.

(Elephant and Castle, Southwark).



High Rise Living

High Density living can also have their calmer, private spaces, away from the public realm.

Left:

St. Andrews Block B, Bromley-by-Bow, London. Maccreeanor Lavington Architects. Buildings on the left; 7 - 12 floors. Buildings on the right, 6- 7 storeys (image taken from National Design Guide).

Tradition of Optimal, 'Gentle Density'

2.26 As already mentioned, many of England's most desirable locations are compact in form and have a relatively high density. Government guidance, and many celebrated urban designers, theorists and architects agree that the optimum residential density lies within a range of between 60 and 150 dwellings per hectare (dph) in a neighbourhood centre or small/market town setting. These buildings would usually range between two to four storeys in height. Optimum densities fall between 100dph and 200dph minimum for a large town centre, with the NMDG recommending 200dph for town centres.

2.27 The 'Living with Beauty' report of the Building Better, Building Beautiful Commission (MHCLG 2020) supports this long-established, traditional, optimal density range: "we need to develop more homes within "mixed-use real places at gentle density".



Living with Beauty: report of the Building Better, Building Beautiful Commission, p99, 2020, MHCLG

- 2.28 Notwithstanding this, of course there is a place for low and high density development. As discussed above, there is a continual attraction and demand for higher rise apartment living in city centres and large town centres such as Crawley. Conversely, the existing character of some places will mean that some locations are simply not appropriate to building heights which exceed one or two storeys.
- 2.29 Gentle density has not been the prominent compact development form these last 20+years since the 'Towards an Urban Renaissance' report was published in 1999. The public's perception of higher density living is generally that compact living equates with high density, high rise buildings only. This perception is compounded by the fact that, over the last 60 years, the house building industry has focused on constructing homes at the two extremes of the density range: until the late 1990's, homebuilders concentrated on constructing the sprawling low density settlement found today in most of our suburbs and post war settlements; and, more recently, the development of high, or hyper density apartment schemes in our large towns and cities.
- 2.30 National policy is now emphasising the need for the places we live now need to return to the gentle, moderate traditional form of urban density.

Examples of Gentle or Moderate Density



PTE Architects, New Ground Cohousing. Cambridge Density: 78dph

- 2.31 Historic areas of Paris and Barcelona are noted in the MHCLG 'Living with Beauty' report as having some of the highest density per square kilometre in Europe, yet these are places which would meet the criteria of gentle density. In these historic locations, the buildings, usually no more than five floors of accommodation, are all within a height of 13.5 meters. Any additional 6th or 7th floor would not usually contain a main living space but an upper level of bedroom accommodation.



Camden, London

- 2.32 Although designed originally as large individual semi-detached townhouses, many of these historic buildings are today subdivided into separate dwellings, sometimes with their own door access from the street as well as via the original hallway as a shared communal entrance. This overall built form readily lends itself to a quality, compact residential layout containing a number of homes of differing sizes at a density range of between 60 and 90dph.
- 2.33 Brunswick Square (below) is a more local historic example of moderate density.



Hove, Sussex (Image credit: Urban Design Compendium)



Via Senofonte, Milan

- 2.34 Traditional and contemporary examples in Milan (above) of what the upper end of 'Gentle Density' range (as defined by the Living with Beauty report) looks like. Apartments on the right are by the British firm Zaha Hadid Architects.



Procter and Matthews Architects, Cambridge

- 2.35 A more vernacular form and appearance in Cambridge (above). The homes here are at the lower end of 'Gentle Density'.



Barton Park, Oxford

- 2.36 A contemporary scheme in Oxford (above) of moderate density ranging in height from two to four storeys.

3. New Compact Development and Existing Communities

Reconciling the need for change

- 3.1 An unprecedented number of densification, intensification and infill development projects as well as new planned urban extensions are occurring across cities and towns throughout the UK, and Crawley is no exception. New urban characters are being introduced near, alongside and within established neighbourhoods, at a fast pace.
- 3.2 Successful, compact, sustainable places share a number of characteristics based upon key urban design principles, as outlined later in this document. However, crucially, and particularly in the case of Crawley, locations for compact development are located both within and adjacent to existing neighbourhoods. As a result, new proposals need to be based on a thorough study and understanding of context and the existing character of such areas. Any new proposal for compact development needs to be carefully stitched and moulded into these established urban locations, through identifying the character, features and settings of an area that are currently enjoyed and carefully crafting new compact development within the spaces in between. The layout and scale of compact forms must be arrived at through a careful, considered process, in particular ensuring that new schemes respect and respond to the grain, structure and pattern of the existing built environment and its valued landscapes. It should also carefully introduce new/ improved movement routes between these new compact places and their existing urban and rural surrounding neighbourhoods.
- 3.3 In addition to Crawley's designated Conservation Areas, Listed Buildings, locally listed heritage assets, key views and structural landscaping there is a significant quantity of other valuable but less obvious, un-recorded and un-protected spaces, places and features. Both natural and human made, these elements are often harder to identify, map and recognise, for example, a bend in a pathway or the overall arrangement of a group of houses where the proportions, scale and grain of the buildings and landscape create something special and where their juxtaposition and interaction with the wider context creates a powerful sense of place.
- 3.4 The government, through the NPPF, recognises the importance of existing local character⁶ and calls for area based (existing) character assessment (ABCA) to be carried out as part of the planning process for new development. In addition, MHCLG's National Design Guide (2019) and the National Design Code (2021) outlines detailed guidance on how this can be achieved.

An Opportunity for Improvement or a Potential for Loss?

- 3.5 There is an overwhelmingly positive case for compact development. If implemented correctly, it has the potential to bring improvements and to reinvigorate an existing community. However, any new development means change, no matter what form it takes, and compact development in particular, if not carefully designed, planned and implemented, can have a negative impact on existing communities.

*"We like historic cities and vibrant capitals. We enjoy landmarks new and old, the blend of history and modernity that settled-in feel and the thrill of change, new activities alongside and within old buildings. We like compact small towns, we like village centres.
Our more attractive cities are humming with vitality,*

⁶ National Planning Policy Framework, Chapter 11, paragraph 124 (d), 125 and Chapter 12, para. 127 and 130 (c), Chapter 15, 174 (a & b)' (2021) MHCLG.

a mix of work, home and leisure, a dense pattern of land use adapted over time that would be hard to create from scratch.

This does not mean we cannot plan, but we need to do it more carefully. It is vital to identify simple core goals that everyone supports so that we can escape the circus of developers blaming planners who blame developers.

Both blame politicians and argue that they are 'demand driven'.

(Cities for a small country, 2000/2014, Sir Richard Rogers and Anne Power)

- 3.6 How can we define and identify suitable locations for compact development and what are the primary safeguards which need to influence decision making in regard to its overall design, form, siting and residential amenity, both for the existing and new communities? As noted earlier in paragraph 1.5, Chapter 4 below outlines 7 key principles which need to guide compact form and good quality, compact residential development in particular, but first it is worth considering the recent guidance published by the government in response to concerns about the quality of new housing set out in Chapter 2 above.

Recent Government Policy and Guidance

“Places matter more than ever as beacons of pride, identity and belonging. Places that stand the test of time in every sense – that are as good for the planet as they are for the soul. That’s why beautiful, high-quality homes must become the norm, not the exception. The cost exacted by poor homes and places on quality of life is well-known. Less explored is how the decline in quality – and, yes, beauty – that we’ve seen over the post-war period– has corresponded with increasing opposition to new housing.

(Robert Jenrick, former Secretary of State for Housing, Communities and Local Government, July 2021)

<https://www.gov.uk/government/speeches/office-for-place-launch>

- 3.7 The NPPF confirms that achieving high quality places and buildings is fundamental to the planning and development process and that it also leads to improvements in the quality of existing environments. The NPPF was revised on 20 July 2021 in an effort to make beauty central to the planning system. In particular, Chapter 12, “Achieving well-designed places” deals with this issue:

“The creation of high quality, beautiful and sustainable 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. Being clear about design expectations, and how these will be tested, is essential for achieving this. So too is effective engagement between applicants, communities, local planning authorities and other interests throughout the process”.

(NPPF, Chapter 12, paragraph 126, 2021, MHCLG)

- 3.8 The government has also established a new ‘Office for Place’ to:

“help councils and communities banish ugly developments and deliver beautiful, green homes and places using Britain’s world-class design expertise” (MHCLG, July 2021)

- 3.9 In October 2019, the government published the new National Design Guide (NDG) entitled “Planning practice guidance for beautiful, enduring and successful places”. The NDG addresses the question of how we recognise well-designed places in the form of ten characteristics, covering themes of character, community and climate.
- 3.10 Shortly after in January 2020, the Ministry of Housing, Communities & Local Government (MHCLG) published “Living with Beauty”, the final report of the Building Better Building Beautiful Commission (BBBBC), setting out its recommendations to the government and raising concerns about the quality of post-war development.

“Development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design , taking into account any local design guidance and supplementary planning documents which use visual tools such as design guides and codes”.

(NPPF, Chapter 12, paragraph 134, 2021, MHCLG)

- 3.11 In 2021, the government published the National Model Design Code (NMDC) which: *“sets out clear design parameters to help local authorities and communities decide what good quality design looks like in their area... ..and expands on the ten characteristics of good design set out in the National Design Guide, which reflects the government’s priorities and provides a common overarching framework for design” (NMDC, MHCLG, 20 July 2021).*
- 3.12 A summary of the key statements noted in chapter 12 of the 2021 NPPF in order to achieve well-designed places is set out below.
- a) “Good design helps make development acceptable to communities” (Paragraph 126)
 - b) “Plans should, at the most appropriate level, set out a clear design vision and expectations, about what is likely to be acceptable” (Paragraph 127)
 - c) “Design policies should be developed with local communities so they reflect local aspirations, and are:
 - d) grounded in an understanding and evaluation of each area’s defining characteristics” (Paragraph 127)
 - e) recognises that Neighbourhood planning groups “can play an important role in Identifying the special qualities of each area and explaining how this should be reflected in development, both through their own plans and by engaging in the production of design policy, guidance and codes by local planning authorities and developers” (Paragraph 127)
 - f) “local planning authorities should prepare design guides or codes consistent with the principles set out in the National Design Guide and National Model Design Code and
 - g) which reflect local character and design preferences” (Paragraph 128)
 - h) “Design guides and codes provide a local framework for creating beautiful and distinctive places with a consistent and high quality standard of design” (Para.128)

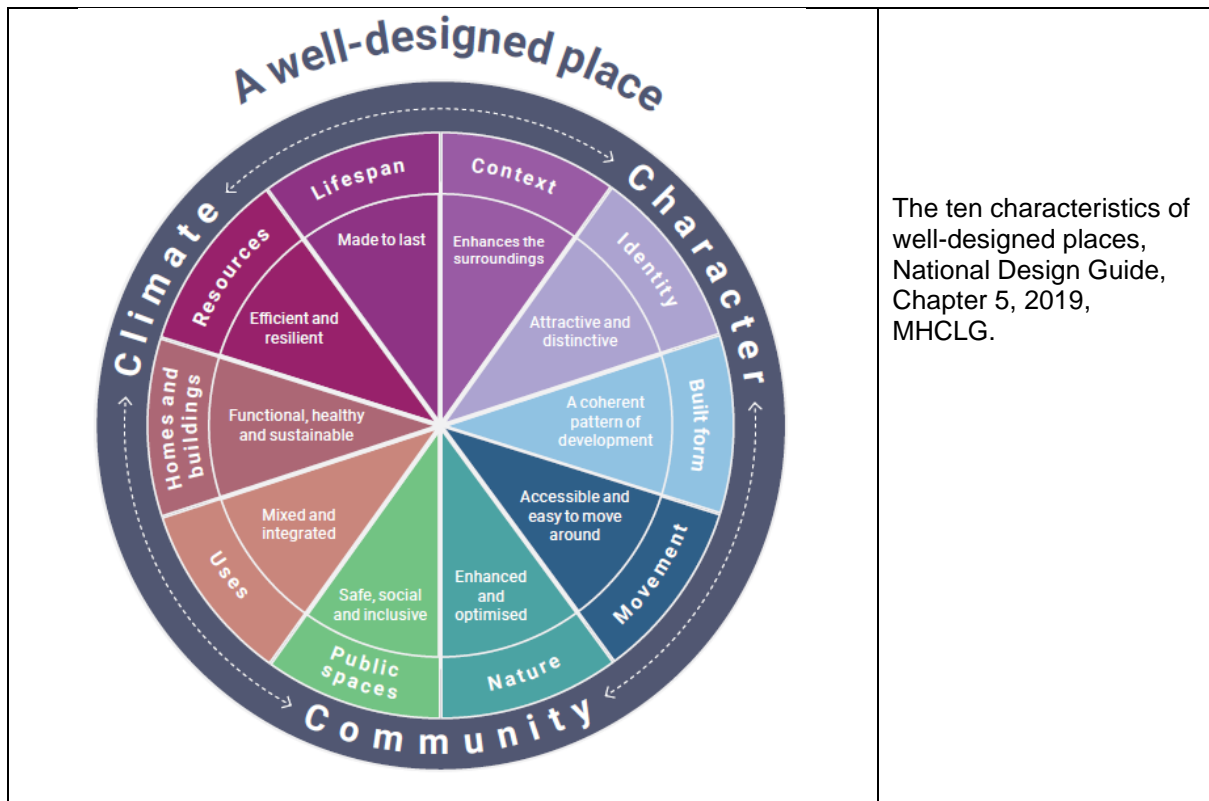
- i) “Their geographic coverage, level of detail and degree of prescription should be tailored to the circumstances and scale of change in each place and should allow a suitable degree of variety” (Paragraph 128)
 - j) “Design guides and codes can be prepared at an area-wide, neighbourhood or site specific scale, and;
 - k) to carry weight in decision-making should be produced either as part of a plan or as supplementary planning documents” (Paragraph 129)
 - l) “Landowners and developers may contribute to these exercises, but may also choose to prepare design codes in support of a planning application for sites they wish to develop” (Paragraph 129)
 - m) “Whoever prepares them, all guides and codes should be based on effective community engagement and;
 - n) reflect local aspirations for the development of their area, taking into account the guidance contained in the National Design Guide and the National Model Design Code” (Paragraph 129)
 - o) “These national documents should be used to guide decisions on applications in the absence of locally produced design guides or design codes” (Paragraph 129).
- 3.13 Additional more detailed guidance underpins, complements, expands upon and is referenced by the latest government guidance. For example, the Urban Design Compendium or the Department of Transport’s guidance in relation to the designing for active travel infrastructure (see ‘Gear change’). Overall, a lot of valuable work has been prepared by various governments in the years since the Urban Task Force was set up by government back in 1998 including work by CABE⁷, the Design Council and the Building Better Building Beautiful Commission and Historic England.

How do we recognise and achieve well-designed places?

The ten characteristics of well-designed places

- 3.14 Good design is vital for all places, whether compact in form or not. The NPPF is clear that the NDG and NMDC should be used to guide decisions on applications in the absence of locally produced design guides or codes.
“national policy sets out that the NDG and NMDC provide guidance on what constitutes well-designed and beautiful places as well as providing a default checklist of issues that schemes will be expected to address” (NMDC part 1, paragraph 15).
- 3.15 The NMDC provides detailed guidance on the production of design codes, guides and policies to promote successful design. It expands on the ten characteristics of good design set out in the NDG, which reflects the government’s priorities and provides a common overarching framework for design.
- 3.16 The design detail and scope of consideration outlined in the NMDC, or as part of any locally produced design guides and codes, is detailed and comprehensive enough so that it can be used both as a vision defining tool and/or a vision delivering tool to achieve well designed places. Regarding delivery for larger schemes, such as phased developments, design codes can help to maintain consistency in the delivery of development over a longer period of time.

⁷ The Commission for Architecture and the Built Environment (CABE) was an executive non-departmental public body of the UK government, established in 1999.



A design guide: A document providing guidance on how development can be carried out in accordance with good design practice.

A design code: A set of illustrated design requirements that provide specific, detailed parameters for the physical development of a site or area. The graphic and written components of the code should build upon a design vision, such as a masterplan or other design and development framework for a site or area.

Design concept: The basic design ideas on which a proposal will be based, often expressed in a combination of words and visual material.

(Definitions from page 4 and 5 of the NMDG).

So much more than the design of buildings

3.17 The NMDG reminds us that although all development proposals, whether they be highways or buildings, are in themselves important component of places in their own right, their good design involves careful attention to other important components of places, including those beyond the development site boundary. In effect, it is vital to understanding the wider context.

“A place is more complex and multi-faceted than a building:

- *it is a setting for a diverse range of uses and activities, and is experienced by many people in many different ways;*
- *it is made up of buildings, and also landscape and infrastructure, which are likely to endure longer than the buildings themselves;*
- *most places evolve over a long period of time once they have been established, with many incremental changes that can affect their quality;*
- *the quality of ‘delight’ includes a richness of experience gained from all of our senses, not only the visual; and*
- *beauty in a place may range from a long view down to the detail of a building or landscape.*

Good design involves careful attention to other important components of places. These include: the context for places and buildings; hard and soft landscape; technical infrastructure – transport, utilities, services such as drainage; and social infrastructure – social, commercial, leisure uses and activities.” (NDG, paragraph 5 and 20 (MHCLG 2019)

- 3.18 The NPPF highlights⁷ that area based Character Appraisals (ABCA) should be carried out to identify the existing qualities and value of a place, its context and identity, as a tool and evidence base of positive spatial planning. The identification and understanding of local character is the essential first step to altering and reversing the disillusioning outcomes associated with new development.
- 3.19 Principle 1 in Chapter 4 considers the importance of existing character in detail. Design codes can also be used to “*set out a necessary level of detail in sensitive locations, for example, with heritage considerations, and they can set out specific ways to maintain local character*” (NMDC, part 1, Chapter 13).
- 3.20 Complementary to the ten characteristics of well-designed places, the National Design Guide outlines key principles which need to be focused on in order to achieve well designed places.

Key principles to be focused on in order to achieve well designed places

“A well-designed place is unlikely to be achieved by focusing only on the appearance, materials and detailing of buildings; instead, it comes about through making the right choices at all levels”, including:

- *the layout (or masterplan);*
- *the form and scale of buildings;*
- *their appearance;*
- *landscape;*
- *materials; and*
- *their detailing”.*

<p>Layout</p> <p>23 A layout shows how routes and blocks of development are arranged and relate to one another to create streets, open spaces and buildings. It defines:</p> <ul style="list-style-type: none"> ■ the structure or settlement pattern; ■ the grain, or the pattern of development blocks and plots; and ■ the broad distribution of different uses, and their densities or building heights. <p>Form</p> <p>24 Form is the three-dimensional shape and modelling of buildings and the spaces they define. Buildings and spaces can take many forms, depending upon their:</p> <ul style="list-style-type: none"> ■ size and shape in plan; ■ height; ■ bulk - their volume; and ■ massing - how the bulk is shaped into a form. <p>In the case of spaces, their form is influenced by the buildings around them.</p> <p>25 The form of a building or a space has a relationship with the uses and activities it accommodates, and also with the form of the wider place where it is sited.</p>	<p>Scale</p> <p>26 Scale is the height, width and length of each building proposed within a development in relation to its surroundings. This relates both to the overall size and massing of individual buildings and spaces in relation to their surroundings, and to the scale of their parts. It affects how a space can be used and how it is experienced. The relationships between the different dimensions of a building or component are known as its proportions.</p> <p>Appearance</p> <p>27 Appearance is the aspects of a building or space within the development which determine the visual impression the building or space makes, including the external built form of the development, its architecture, materials, decoration, lighting, colour and texture. In the case of a space, its landscape also influences its appearance.</p>
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<p>Landscape</p> <p>28 Landscape is the treatment of land (other than buildings) for the purpose of enhancing or protecting the amenities of the site, the area in which it is situated and the natural environment. Landscape includes landform and drainage, hard landscape such as surfacing, boundary treatments, street furniture and play equipment. It also includes soft landscape – trees, shrubs and other planting.</p> <p>Materials</p> <p>29 The materials used for a building or landscape affect how well it functions and lasts over time. They also influence how it relates to what is around it and how it is experienced. The scale, form and appearance of a building influence what materials may be appropriate for its construction. Materials should be practical, durable, affordable and attractive. Choosing the right materials can greatly help new development to fit harmoniously with its surroundings.</p>	<p>30 Innovative materials and construction techniques are being developed all the time. Modern methods of construction are becoming more common, whether in the form of mass production for modular construction, or off-site bespoke construction for self- or custom-build.</p> <p>Detailing</p> <p>31 The details of a building are the individual components and how they are put together. Some are a deliberate part of the appearance of a building, including doors, windows and their surrounds, porches, decorative features and ironmongery. Others are functional, although they can also contribute to the appearance of a building. These include lighting, flues and ventilation, gutters, pipes and other rainwater details.</p> <p>32 Detailing affects the appearance of a building or space and how it is experienced. It also affects how well it weathers and lasts over time.</p>
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3.21 These seven components build upon earlier design guidance prepared by CABE in 2003 (now part of the Design Council), specifically focused on how to achieve good urban design. In this document there were four components: Layout; Scale; Appearance; and Public Realm. Each of these made up of eight interchangeable elements (this work was later expanded in the 2013 Urban Design Compendium which set out the key aspects of urban design in detail). These key components and the various elements are common across both the NDG and CABE documents.

	<p><i>“The form of development is the physical expression of urban design. It consists of the relationships, shape and size of buildings, structures and spaces. It will influence the users activity and movement in a place and so is fundamental to the success of a place”.</i></p> <p>* ‘The Councillor’s guide to urban design’, Commission for Architecture and the Built Environment (CABE) 2003. Illustrations left and below: ‘<i>The most important elements of overall development form</i>’ (from page 5).</p>
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<p>1</p> <p>Urban structure The essential diagram of a place showing:</p> <ul style="list-style-type: none"> • The relationship between new development and nature, land form and existing buildings • The framework of routes and spaces that connect locally and more widely, and the way developments, routes, open spaces and precincts relate to one another 	<p>3</p> <p>Density and mix The amount of development and the range of uses this influences, to include:</p> <ul style="list-style-type: none"> • The intensity of activity relative to a place's accessibility • The place's vitality relative to the proximity and range of uses • The development's viability 	<p>5</p> <p>Building type</p> <ul style="list-style-type: none"> • The size of the building floorplate its storey heights and means and location of access • The relationship of the building to adjacent buildings and how it relates to external space at ground floor level • The nature and extent of the building's setback at upper floors and roof treatment 	<p>7</p> <p>Details and materials The appearance of the building in relation to:</p> <ul style="list-style-type: none"> • The art, craftsmanship, building techniques and detail of the various building components true to local context • The texture, colour, pattern, durability and treatment of its materials • Materials sourced from local and/or sustainable sources, including recycled materials where possible • The lighting, signage and treatment of shopfronts, entrances and building security
<p>2</p> <p>Urban grain The nature and extent of the subdivision of the area into smaller development parcels showing:</p> <ul style="list-style-type: none"> • The pattern and scale of streets, blocks and plots • The rhythm of building frontages along the street as a reflection of the plot subdivision 	<p>4</p> <p>Height and massing The scale of a building in relation to:</p> <ul style="list-style-type: none"> • The arrangement, volume and shape of a building or group of buildings in relation to other buildings and spaces • The size of parts of a building and its details, particularly in relation to the size of a person • The impact on views, vistas and skylines 	<p>6</p> <p>Facade and interface The relationship of the building to the street:</p> <ul style="list-style-type: none"> • The rhythm, pattern and harmony of its openings relative to its enclosure • The nature of the setback, boundary treatment and its frontage condition at street level • The architectural expression of its entrances, corners, roofscape and projections 	<p>8</p> <p>Streetscape and landscape The design of route and spaces, their microclimate, ecology and biodiversity to include:</p> <ul style="list-style-type: none"> • Paving, planting and street furniture • The integration of public art, lighting, signing and waymarkers • The treatment of parks, play areas, natural features and recreation areas • Consideration of long term management and maintenance issues

Comparing the emphasis of different guidance

Three documents; the NDG Ten Characteristics, 'the fundamental qualities of successful places' (CABE) and the NMDG baseline standard of quality and practice


3.22 The ten characteristics of the NDG provides a common national overarching framework and advises that more specific guidance and codes can be locally formulated to meet the priorities of local communities which would set out a baseline understanding of the local context and an analysis of local character and identity.

"This may include (but not be limited to) the contribution made by the following:

- *the relationship between the natural environment and built development;*
- *the typical patterns of built form that contribute positively to local character;*
- *the street pattern, their proportions and landscape features;*
- *the proportions of buildings framing spaces and streets;*
- *the local vernacular, other architecture and architectural features that contribute to local character".*

3.23 Of course, if we are to achieve successful places and communities, there is so much more needed than just the ten characteristics of well-designed places and an understanding, and good implementation of best practice in relation to the key principles of well-designed places. Such priorities include:

- good local schools and employment opportunities;
- clean air. Promotion of cycling and walking to support active healthier lifestyles;
- designing nature into streets and public spaces and connecting nature and green space to where we live and work;
- revitalising our highstreets and keeping them viable;
- achieving 5 - 15 minute walkable communities which capture key services and amenities;
- provision of digital infrastructure and connectivity; and
- physical accessibility to the public realm for all, combatting loneliness and social exclusion by providing opportunities for social interaction for all members of a community (from providing civic space to just a bench to sit and pause and contemplate or chat and people watch).

Comparing the NDG 10 characteristics with the CABE 7 qualities.			
NDG list of 10 characteristics	Comparable CABE quality		
<ul style="list-style-type: none"> ■ Context – enhances the surroundings. ■ Identity – attractive and distinctive. ■ Built form – a coherent pattern of development. ■ Movement – accessible and easy to move around. ■ Nature – enhanced and optimised. ■ Public spaces – safe, social and inclusive. ■ Uses – mixed and integrated. ■ Homes and buildings – functional, healthy and sustainable. ■ Resources – efficient and resilient. ■ Lifespan – made to last. 	<p>1</p> <p>1</p> <p><u>2 / 5</u></p> <p><u>4 / 5</u></p> <p>1</p> <p>3 / 2</p> <p>6 / 7</p> <p>NDG only</p> <p>6</p> <p>NDG only</p>	<p>The 10 characteristics of well-designed places, NDG, 2019 (left)</p> <p>‘the fundamental qualities of successful places’, (CABE /Design Council), 2003 (below).</p>	
<p>1</p> <p>Character Sense of place and history A place that responds to and reinforces locally distinctive patterns of development and landscape</p> <ul style="list-style-type: none"> Distinctive landscapes Natural features Locally distinctive buildings Streets and street patterns Special spaces Skylines and roofscapes Building materials Local culture and traditions Avoiding standard solutions 	<p>3</p> <p>Quality of the public realm Sense of wellbeing and amenity A place with public spaces and routes that are lively and pleasant to use</p> <ul style="list-style-type: none"> A feeling of safety and security Uncluttered and easily maintained Carefully detailed with integrated public art Suited to the needs of everyone, including disabled and elderly people Well-designed lighting and street furniture Attractive and robust planting 	<p>5</p> <p>Legibility Ease of understanding A place that has a clear image and is easy to understand</p> <ul style="list-style-type: none"> Landmarks and focal points Views Clear and easily navigable routes Gateways to particular areas Lighting Works of art and craft Signage and waymarkers 	<p>7</p> <p>Diversity Ease of choice A place with variety and mixed uses</p> <ul style="list-style-type: none"> A mix of compatible uses and tenures Variety of layout and building form Diverse communities and cultures Variety of architectural styles Biodiversity
<p>2</p> <p>Continuity and enclosure Clarity of form A place where public and private space are clearly distinguished</p> <ul style="list-style-type: none"> Streets, footpaths and open spaces overlooked by buildings Clear distinction between public and private space Avoiding gaps in the line of buildings Enclosing streets and other spaces by buildings and trees of a scale that feels comfortable and appropriate to the character of the space No leftover spaces unused and uncared for 	<p>4</p> <p>Ease of movement Connectivity and permeability A place that is easy to get to and move through</p> <ul style="list-style-type: none"> Density highest where access to public transport is best Roads, footpaths and public spaces connected into well-used routes Easy accessibility Direct routes that lead to where people want to go A choice of safe, high quality routes 	<p>6</p> <p>Adaptability Ease of change A place that can change easily</p> <ul style="list-style-type: none"> Flexible uses Possibilities for gradual change Buildings and areas adaptable to a variety of present and future uses Reuse of important historic buildings 	 <p>The qualities of successful place outlined above build upon the objectives of urban design set out in <i>By Design</i>, the companion guide to Planning Policy Guidance Note 1 <i>General Policy and Principles (PPG1)</i>.</p>

3.24 Whilst each of the above are independent policy drivers in their own right, all of these ambitions are enabled and made physically possible by the construction of places via best practice implementation of the key principles and the NMDC framework for how to best design places.

- 3.25 New development in Crawley will need to adhere to two sets of baseline design principles, depending on the density range of development proposed.
1. All development must adhere to the baseline principles outlined in the NDG and the National Model Design Code (regarding the NMDC, this applies where bespoke area based design codes are not in place and/or in the process of being produced. The draft Submission Crawley Borough Local Plan 2024 – 2040 also attributes specific minimum density range requirements for particular areas (see Policies CL3 and CL4). These requirements inherently direct design as the different density ranges manifest as different development form, as outlined in Chapter 2.
 2. In order to safeguard the quality of new compact development and places, Chapter 4 of this document identifies a second baseline set of principles.

- 3.26 A third set of additional bespoke principles could also be added for tall building design/hyper density forms of development. However, such building height is not viable in Crawley, due to Gatwick airport height restrictions. Therefore, this is not considered as part of this report.

Baseline 1: applicable to all development (whether compact in form or not)

“The NMDC sets a baseline standard of quality and practice which local planning authorities are expected to take into account when developing local design codes and guides and when determining planning applications,

The guidance notes include many of the potential issues that might be covered by a design code. These are organised under the ten headings of the National Design Guide and include sub-headings. Codes are not expected to cover all of these issues, and the context and scale of development will determine the appropriate issues that need to be included. Some design parameters are an essential component of design codes for their effective use such as movement pattern, built form, height, land use, character of buildings and public spaces, open space and density while others are discretionary. The latter include, for example, housing standards that are crucial but may be dealt with elsewhere in local plans”.

(NMDC, Objectives, p2, and Chapter 1, p7, July 2021, MHCLG)

Baseline 2: additional requirements for compact development (as outlined in Policies CL3 and CL4 of the draft Submission Crawley Borough Local Plan 2024 – 2040)

In addition to the ten characteristics of well-designed places and the NMDG baseline standard of quality and practice, CBC maintains that there are seven key principles which need to be understood and applied for development at higher density ranges to achieve beautiful, enduring and successful homes and places.

- 3.27 The seven principles are interrelated and should be considered in addition to the baseline established by the NMDC and NDG. They build upon and expand on many of the themes outlined already within this document. The NMDC objectives state that *‘the context and scale of development will determine the appropriate issues that need to be included’* (NMDC part 1 paragraph 25, MHCLG 2021).
- 3.28 Baseline 2, the 7 principles, by definition, removes consideration of ‘context and scale’ as being a variable issue of influence. It should be assumed that for compact development to be pursued, then the 7 principles of Baseline 2 apply. Example 1: compact form, as set out in draft Submission Crawley Borough Local Plan Policy CL4, will always result in an increased scale of built form. Gentle density ranges will result in new building heights ranging between 3 and 5 storeys. Example 2: Where major compact development is proposed, careful consideration of existing character will always need to produce baseline parameters from the outset.
- 3.29 As discussed earlier, good quality compact form is complex and can only be achieved if it is understood that its success depends on greater upfront and ongoing investment than that needed for low density places. This requires greater investment in design expertise and the time such work requires increased design and planning resources and skill, especially during early concept, design development and planning consent stage.
- 3.30 Key strategic considerations need to be resolved long before the process of individual scheme design begins. This work predominantly concerns the wider area, outside of and across individual site ownerships.

4. The Key Principles for Successful Compact Development

- 4.1 The key principles set out in this Chapter form the critical issues which the council, in considering development within the borough, needs to address to successfully pursue new compact development. They have been used to inform, structure and guide new Local Plan policy and:
- a. Are considered a first step in the process of developing Crawley area wide design codes⁸. Aligned with national policy and guidance, they outline the overarching considerations relevant to compact form so that new compact places meet the 10 Characteristics of well-designed and beautiful places. Based also on new Local Plan policy, they are intended to inform the scope and content of the borough's new area wide, vision defining codes (when such codes are concerned with new compact development), particularly focused on movement infrastructure, improved urban design and placemaking opportunities and not least the identification of the best borough-wide locations for compact form.
 - b. The principles are also being used to inform and guide individual site development and design briefs, area/site specific design codes and masterplans (such as those mentioned in Chapter 1).
- 4.2 The substantial value of these principles, as well as other tools available to the planning authority, community and developers, should together help the council to define and agree a consensus of how best to realise great compact places, and subsequently deliver good design quality and great new homes and places.
- 4.3 All 7 principles align with the NDG and NMDC and can be identified alongside the 10 Characteristics of Well Designed Places (see below). However, the 7 principles have a particular emphasis relevant for new development at density ranges above 60 dwellings per hectare, given the opportunities, requirements and risks related to this form of design and planning. Consequently, the principles also draw upon the wider evidence base referenced by the NDG and NMDC.

Comparing the NDG 10 characteristics of Well Defined Places with the 7 Principles.	
NDG list of 10 Characteristics	How the 7 Principles align.
Context	Principle 1
Movement	Principle 2
Nature	Principle 3
Built Form	Principle 6.
Identity	Principle 1 and 4.
Public Space	Principle 4 and 6.
Uses	Applicable to all development.
Homes and Buildings	Principle 6
Resources	Applicable to all development.
Lifespan	Principle 7

⁸ As identified by government policy/NMDC guidance - see previous chapter.

The Seven Principles in Summary

1. The existing character of an area

Assessing and defining the character of both a new development site and its surrounding area and producing clear guidance on how its qualities should be protected, visually identifying the location and extent of the various elements.

2. A viable, dependable and attractive alternative to private car use

Large new compact development needs to:

- Be within 640m – 800m or 5-10 minute safe walking distance of high capacity, high frequency, segregated public transport.
- Connect to and capture Local Cycling and Walking Infrastructure Plan (LCWIP)-based active travel routes cycle infrastructure.
- Be within five minutes' walk of basic local neighbourhood facilities and ten minutes to a primary school or health centre.
- Be within 15 minutes' walk of wider area facilities, e.g. library or swimming pool, with distances reduced by optimal active travel infrastructure and adherence to desire lines).

3. 10 minute walking distance to areas of substantial natural and semi-natural landscape and/or panoramic open space

No more than a ten minute walk from home, experiencing such landscape, without the need for a car, can be automatically built into everyday life, without having to drive to such places in order to encounter them. Instead, movement through or along the edge of such landscape can be stitched into everyday active movement patterns.

4. Taking advantage of opportunities to improve existing urban environments

To accommodate compact development, existing neighbourhoods will automatically require physical change. However, new construction provides both the means (funding) and opportunity to reimagine, re-design and deliver wider area spatial and structural improvements. This could include better streetscapes; open space; the capturing of vistas; the framing of views; new pedestrian routes which follow desire lines; better area permeability and legibility; more and improved structural landscape; and biodiversity net gain (e.g. opportunities for rewilding/access to open space).

5. Beautiful places, good quality design and the essential role of the Architect, Urban Designer, Engineer and Landscape Architect

Key professionals are required to both identify and deliver on these principles. These professions can offer expertise in the craft and vision needed and the skill to see both the macro and the micro scale. Through producing design codes and Masterplans, futureproofed, flexible and adaptable design can be secured.

6. Good quality residential design and 'gentle' density (60 – 90 dwellings per hectare (dph))

Gentle Density is likely to be identified as the most appropriate range for compact development locations across Crawley. Within this range, compact homes should be able to enjoy an equivalent level of amenity provision and specification to that currently enjoyed by low-density housing. Attractive and desirable to families, such development should at least match the levels of amenity offered by a standard Semi-detached house.

7. Good management, maintenance and design of communal areas

When density ranges surpass 45dph residential schemes will require more communal areas, including semi-private space (e.g. lobbies and shared

landscape areas) and infrastructure (communal gates, intercoms, lifts). These assets are often controlled by a management company, which is in turn owned by the individual residential leaseholders, and require ongoing management/maintenance and funding.

- 4.4 All seven principles are examined in more detail later in this document including:
- (a) The risks to the existing community should these principles not be followed, or should they be poorly adhered to in the pursuit of compact development;
 - (b) An outline of the baseline research and evidence required to inform each principle; and
 - (c) Related recommendations of essential safeguards, guidance and proactive design tools needed to ensure good design and development and mitigate risk.

Chapter 6 outlines the correlation and overlapping of these seven key compact development principles (CDPs) and how they apply and relate to examples of allocated sites in Crawley.

- 4.5 It should be noted that one size does not suit all. Any new policy, guidance, project briefs or coding, influenced by or springing from these principles, can and need to be adapted to suit individual neighbourhoods. There will be distinct areas within neighbourhoods which will also need a customised, bespoke focus. As an example, both the Historic High Street and College Road are both located within the Town Centre, but the key principles would apply very differently to each area.

The Primary and Central Importance of Principles 1 and 2

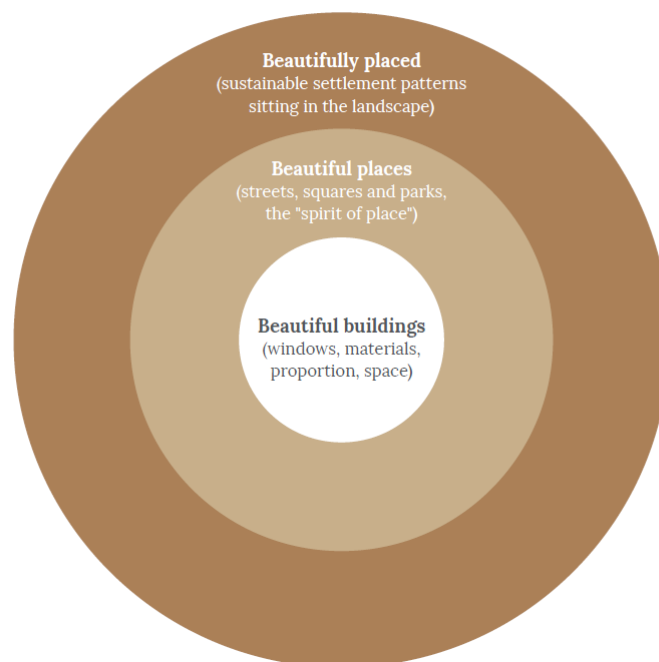
- 4.6 The new draft Submission Crawley Borough Local Plan 2024 – 2040 design policies are based upon National Policy and, as noted in paragraph 4.3 above, latest national Design Guidance. Policies CL2 – CL4, in the Local Plan Character, Landscape and Development Form chapter particularly deal with compact development and establish minimum density ranges across the borough. The potential for and determination of density range is primarily guided by the first two principles; existing character of an area and the proximity to sustainable transport infrastructure.
- 4.7 Principles 1 and 2 are the vital first step in guiding and determining the scope, limits and potential of the other five. These are critical in order to gain support from existing 'host'/neighbouring communities. Any initiative to promote new compact form should first and foremost be dictated to by these foundational principles, the parameters, constraints and opportunities they identify particularly dictate subsequent decisions concerning physical form (e.g., determination of density range or the fact that moderate and high-density housing should only be promoted where it is /can be served by sustainable transport infrastructure). In the draft Local Plan, Principles 1 and 2 are reflected in Policy CL2. Principle 2 is also covered in Policies CL3 and CL4.
- 4.8 Principles 1 and 2 should function as the leading safeguarding determinants which help protect the best of an area's existing character, setting and general quality of public realm amenity enjoyed by an existing community. Adherence to principle 2 is also essential in order for new compact development to harmoniously exist alongside existing neighbourhoods without, for example, it resulting in parking blight and traffic congestion. Together these two principles should function as a 'baseline safety lock', to protect an existing community. Gentle Density (see principle 6) could be

considered as a third de- facto ‘foundational principle’ for Crawley because in practice, it is likely to be identified as the most appropriate density range suited to compact development locations in the borough. Gentle density including what it looks like, was introduced earlier in Chapter 2. Additional examples are shown in Chapter 5.

How and Where New Compact Development could be Located

- 4.9 Principles 1 and 2 are foundational in any attempt to identify suitable locations for compact development. This relates not just to general areas, areas suitable in a macro sense, but to the identification of specific locations/individual sites that could be developed, as well as the layout and scale of compact form which would be suitable. Principle 1: existing character assessment, for example, not only helps identify actual sites but also informs and dictates the appropriate height and density range (or ranges) suitable for such a location. This in turn can then be captured, structured and controlled by an area wide masterplan at the macro scale, down to the micro scale via the detail in a design code.
- 4.10 The NMDC notes that intensification and efficient use of land could involve:
- *Co-locating higher density housing with shops, services and public transport nodes;*
 - *Coding for the intensification of lower density areas that use land inefficiently;*
 - *Providing substantial, accessible, useable green/public spaces rather than multiple small strips and verges;*
 - *Consolidating surface parking infrastructure into multi-storey car parks or car barns;*
 - *Building over surface car parks”.*
- 4.11 Principles 1 and 2 correlate with the first of the ‘three scales’ of beauty: ‘beautifully placed’, proposed by the living with beauty report.

BEAUTY AT THREE SCALES



“Beauty is not just a matter of how buildings look (though it does include this)

but involves the wider ‘spirit of the place’, our overall settlement patterns and their interaction with nature”.

Key Recommendation 01:

Identifying and approving overall locations and subsequently individual sites for major compact development.

For all areas outside of the Town Centre and Three Bridges railway station, major applications of high and moderate density should not be considered policy compliant until work related to Principles 1 and 2 is completed and approved for the wider area within which it is being proposed. (As outlined in the Crawley Borough Local Plan 2024 – 2040 Policies CL2-CL5.)

The town centre and the area around Three Bridges railway station are locations already well served by high capacity, frequent, dependable and attractive public transport.

- 4.12 Building upon these two overarching principles, the remaining five are just as vital as the first two principles (albeit not foundational) in order to realise high quality, sought-after Compact Development. These support the creation of new homes and places which are appreciated not just by future communities and residents, but at the same time acceptable, welcomed and considered genuinely a benefit to the existing community.

Principle 1: The Existing Character of an Area

- 4.13 Meeting this Principle involves assessing and defining the character of both a new development site and its surrounding areas and providing a clear articulation of how its qualities should be protected.
- 4.14 One of the primary causes for deep feelings of loss felt by the public as a result of new development is the lack of understanding, identification, protection and capturing of quality character elements across all parts of an area. Currently, careful appraisal and controls are afforded to heritage assets but limited understanding and protections exist for remaining areas.

“Public disenchantment with so much of what has been built since the war cannot be adequately captured in facts and numbers; it is a powerful and present feeling of loss....

“People fear that the places they love will be spoiled, and the fear is very often justified”.

(Interim Report from the Building Better, Building Beautiful Commission, Chapter 4, page 10 & 11, 2019, MHCLG)

Area-Based (Existing) Character Assessments

- 4.15 The value gained from Area-Based (existing) Character Assessments (ABCA)⁷ is that they should give wider protection to an area’s positive features and setting, so that what is retained is not just a focus solely on a few obvious individual buildings and trees. Just as in the case of Conservation Areas, each feature contributing to the unique character of the area should be identified and considered for protection. However, unlike Conservation Areas, it is unlikely that a majority of features within any given area are likely to be recognised as having important character value.

- 4.16 The government, local authorities and built environment professions have spent decades working on the protection of heritage assets such as ancient woodland, structures, landscapes and settlements. However, the vast majority of new development occurs in the spaces in between these assets: the urban or rural setting where most of us live. These are places which are generally lacking in significant study, analysis or practical evidence based output related to the quality of its features and setting.
- 4.17 Simplistically speaking, after cultural, heritage and wider character qualities and their settings are identified and mapped, it is within the remaining space that:
- Locations will be found where new compact form can be introduced.
 - Existing urban fabric or landscape can be removed or altered.
 - Where new built form, massing approaches, increased density and public realm, may appear more attractive than that already in place.
- 4.18 In some locations, this will only result in small one-off sites being identified, or a sequence of small adjoining or nearby sites being dotted around a particular location. In other locations there may be larger zones where substantial change can be appropriate.
- 4.19 The NPPF requires that new development should be:

“grounded in an understanding and evaluation of each area’s defining characteristics.... sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities)”

(NPPF, Chapter 12, para.125, 2019, MHCLG)

- 4.20 The impact of compact development on the existing character of an area is complex and it is less understood than the impact low density, car dependent forms have on existing places (mainly because the latter has dominated post urban growth patterns since the 1940’s). Compact form needs to be considered through greater and more varied lenses. This wide ranging appraisal produces a key evidence base to guide local design policy, and guidance (including supplementary planning documents) including visual tools such as design codes and guides. ABCA output is not only relevant to the protection of an existing area’s wider qualities. It should give a very clear indication of how much and in what manner spatial change could and then should best be fitted into an existing area, fundamentally guiding and dictating the form of major new compact development. From the identification of potential site locations, in the first instance, to the siting and three dimensional form of new structures and landscape on these sites, ABCA output should prompt and dictate a much-required, area specific, bespoke design approach to each site. As a result; this baseline work is particularly important in order to help win the hearts and minds of the existing community of any area.

Key Recommendation 02:

ABCA’s need to be produced for any area, particularly for existing built up areas, which are being considered for significant levels of compact development.

This is defined further in Strategic Policy CL2 and Policy CL5 of the Crawley Local Plan.

ABCA as a detailed evidence base is essential to guiding and directing the form, position, and siting of new development. From inception, new compact proposals must identify, respond to and be based upon a thorough understanding of the significance and distinctiveness of both the site and the positive aspects of the wider area's existing character.

4.21 The NMDC deals with Character in its Context chapter. In addition to character analysis, it also suggests 'visioning' exercises and site studies. A These can and should naturally lead to the identification of new opportunities for existing area improvement. In addition – and almost by default, this work should also identify specific sites suitable for compact development (see Key Recommendation 05).

Risk 1:	Damage to the existing Character of an Area.
Compact development in particular, if not carefully designed, planned and executed, can have a negative impact on the existing spatial character of a place.	
Safeguard output 1.1	Area Based (existing) Character Assessment
Research, identification and assessment of an area's existing character, to best understand the essence of a place. This work is generally comprised of a composite of a number of separate baseline outputs	
Safeguard output: 1.2	Accurate ABCA conclusions should enable the formation of a superior new development constraints baseline, upon and from which future forms of development can emerge.
Bespoke, local area design code and guidance related to the siting, layout and scale of new proposals A set of simple, concise, illustrated design requirements that are visual and numerical wherever possible to provide specific, detailed parameters, to direct and guide the form of new development within a site or wider area.	

Positive Components which should be Captured as part of an ABCA

4.22 The draft Crawley Local Plan confirms that within Conservation Areas “every building matters as well as the streets, public spaces and gardens between them – with each feature contributing to the unique character of the area. By understanding what gives each Conservation Area its special architectural or historic interest, it can be ensured that the special character and appearance of the area is preserved and enhanced. This is done with the use of additional controls over what can be done to buildings, trees and the overall appearance of the area”⁹

C.1 Character Studies

6. Character includes all of the elements that go to make a place, how it looks and feels, its geography and landscape, its noises and smells, activity, people and businesses. This character should be understood as a starting point for all development. Character can be understood at three levels; The area type in which the site sits, its surroundings and the features of the site.

Above: Guidance notes for design codes, MHCLG, 2021, p4.

⁹ Draft Submission Crawley Borough Local Plan 2024- 2040, p74 (May 2023) CBC

Understanding Place

Historic Area Assessments



“Nothing is experienced by itself but always in relation to its surroundings, the sequences of events leading up to it, the memory of past experiences”.

(Kevin Lynch, *image of the city*, MIT University Press 1960).

Perceptual aspects.

The public’s subconscious and conscious, mental image of a place.

There can be confusion over what constitutes existing character or, indeed, what baseline evidence is needed to produce one. An ABCA is not just a focus on one key element of place, it is not just a Heritage Assessment or a Landscape Character Assessment but a composite of eight areas baseline outputs. Prominent qualities usually emerge where a number of these overlap, intersect and/or merge together.

Seven Baseline Ingredients which together make up an Area’s Character

1. The fixed/flexible Constraints of an area

(e.g., ancient woodland, flood plains, utility wayleaves, Conservation Areas);

2. Heritage Assessment

the setting of heritage assets;

3. Landscape and Townscape Character Assessment

(including topography, landscape classification, relief, and aspect, existing form and patterns of built environment and nature);

4. The essential diagram of an area its existing Structure

(see below);

5. How a place is experienced

e.g., views and vistas within an area, the experience along movement routes, building upon the output of the Crawley Baseline Character Assessment (2009);

6. Movement Attractors, Push/Pull factors

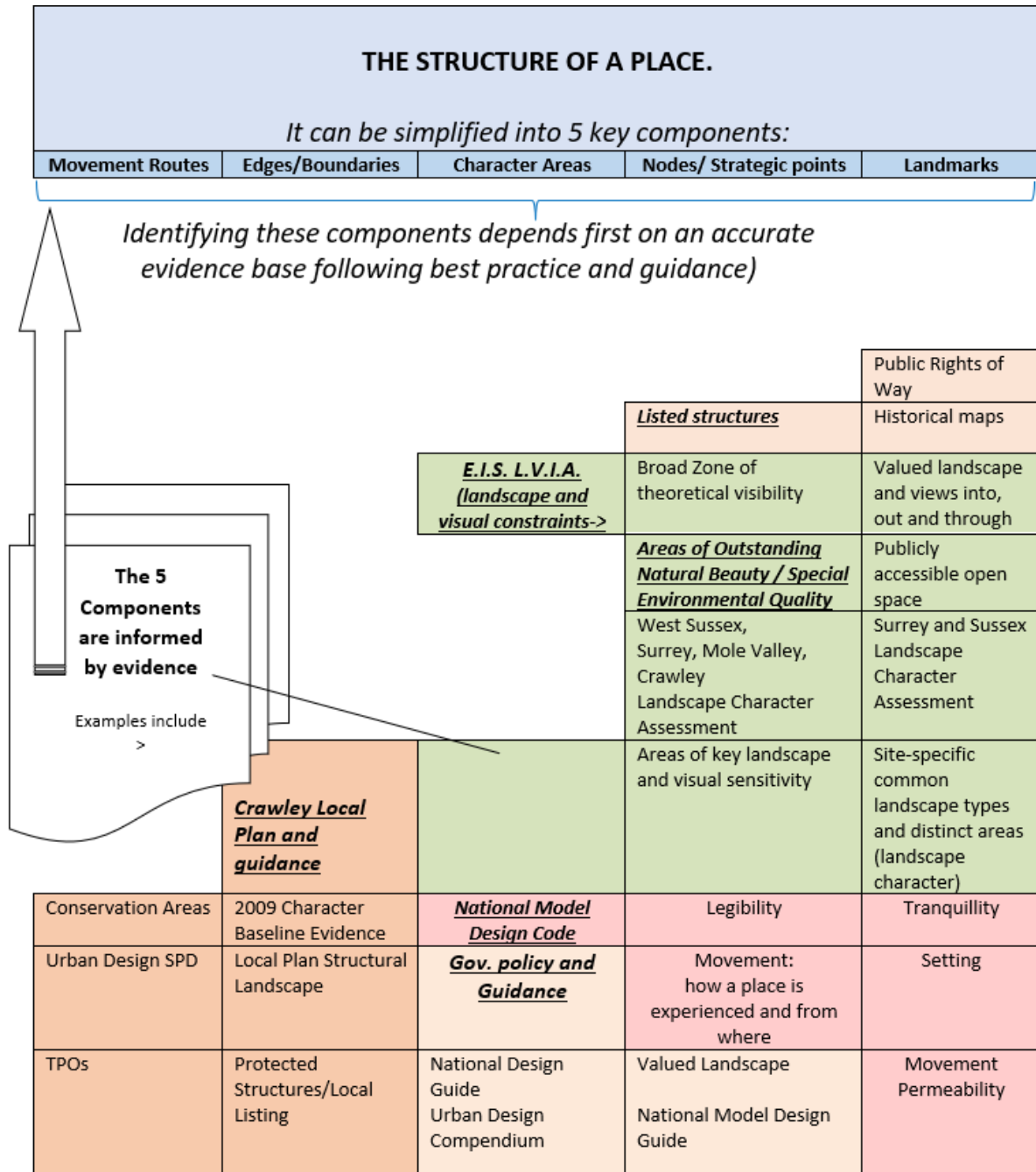
(both within and outside an area);

7. The Value placed on Character Elements of Quality appreciated by the Public

valued landscape and scarcity in context (as opposed to quantity/quality);

Baseline 4. The essential diagram of an area: Its Existing Structure

A diagram, (or set of) illustrating an areas structure identifies the definitive and distinct diagram of any place, (rural or urban): its existing structural character.



- 4.23 Although not appraising nor controlling to the same extent and level of detail as is required in a Conservation Area, an ABCA should use a similar approach and methodology, in order to determine what constitutes the positive components of existing character. Two key NDG and NMDC references particularly help with this defining process:
1. Historic England’s detailed guidance on setting and understanding place.
 2. The Urban Design Compendium, Chapter 1.4, Character and Identity: *“retaining or creating the character of a place should be based on the characteristics of the movement pattern: its connections, its hierarchies, its geometry and its relation to topography. Retaining existing features on a site, either in substance, position or alignment, is often far more effective in creating a tangible sense of character than a pastiche design (drawing on parts of other works, or elements of various local styles) would be”.*
- 4.24 Paragraph 174 and 175 of the NPPF calls for planning policies and decisions to (a) protect and (b) enhance valued landscapes and (c) recognise the intrinsic character and beauty of the countryside, and (d) allocate land with the least environmental or amenity value. The council aims to identify demonstrable physical attributes which take a particular ‘valued landscape’ beyond mere countryside. The same is true for landscape within the built-up area boundary.
- 4.25 The NPPF states that plans should; *“take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries”* (Chapter 15, paragraph 175, 2021, MHCLG)
- 4.26 Valued landscape is not defined in national policy but has been considered by planning inspectors and high court judgements and key observations included:
- that a "valued landscape" need not be designated.
 - that it may be required to demonstrable physical attributes which would take a particular ‘valued landscape’ beyond mere countryside”.
 - That it’s not about the red line of a particular development site. That a small section of landscape or site itself may not exhibit any of the demonstrable physical features of value but as long as it forms an integral part of a wider ‘valued landscape’ it should be considered to deserve protection.

Precedent: [A High Court Case between CEG Limited and Aylesbury Vale Council](#)

(a) The Inspector’s original finding:

“In coming to a view as to whether or not a site falls to be classified as a valued landscape within the terms of the Framework, it seems to me that one first has to consider the extent of the land which makes up the landscape under consideration before examining whether or not there are features which make it valued. Developments and appeal sites vary in size. For example, it is possible to conceive of a small site sitting within a much larger field/combination of fields which comprise a landscape and which have demonstrable physical characteristics taking that landscape out of the ordinary. The small site itself may not exhibit any of the demonstrable physical features but as long as it forms an integral part of a wider ‘valued landscape’ I consider that it would deserve protection”

(b) Mr Justice Ouseley agreed saying:

“It would be bizarre if the way in which the red line was drawn, defining the site on whatever basis was appropriate, and which need have nothing to do with landscape issues, crucially affected landscape evaluation. It would be equally bizarre to adopt a wholly artificial approach to landscape evaluation where, in most cases, a development site is but part of a wider landscape.”

- 4.27 The illustration in paragraph 4.60 below, highlights an example of one particular type of valued landscape, panoramic open space (note: only such assets which exist outside the western half of Crawley's Built-Up Area Boundary (BUAB), and as such occur in natural /semi- natural rural context. Other panoramic space also exists within the urban Crawley setting, not indicated in this illustration).
- 4.28 The valued landscape identified in paragraph 4.60 not only jumps across 'red line' site or ownership boundaries, but also administrative boundaries. Its demonstrable physical feature is the fact that it is a spacious open panoramic rural landscape, rare in the context of the countryside adjoining Crawley (which mostly consists of enclosed fields and structural woodland/hedgerows). It is also especially rare in its placement so close to the built up area boundary of Crawley and, therefore, accessible within 10 minutes walking distance of a substantial part of the community living in the west of the borough.
- 4.29 ABCA output will need to be communicated at different scales and differing levels of detail. Bespoke to their area, the extent of content and analysis required will vary and overlap across differing places within any given area. The same will be true of their conclusions and recommendations. Generally, an ABCA should:
- Bring together as many aspects of a place as possible, in order to appreciate and understand it better: the reality of character is formed by an overlap or layering of many individual elements;
 - Objectively identify all that is of value or significance;
 - Provide an evidence base both in diagrammatic /graphic, and written form to enable the clear identification of the various standalone and overlapping elements;
 - More accurately define and distil the true 'spirit' of a place: how buildings and structures, landscapes or habitats, movement patterns, vistas and nodes relate to each other and to other aspects of the historic and natural environment, and identify the value placed on these elements by the general population;
 - Integrate and connect: identify the position of existing movement paths and possible connections from proposed new developments, and define what they are connecting to/connecting onward to subsequent routes, alignments and destinations, and identification of the mode of movement they facilitate (e.g. a 40mph road has a very different quality to a wide pedestrian only laneway);
 - Function as the lead foundational parameters for a site, to be captured within the design briefs for individual developments. This is also foundational to the assessment of viability and business case more generally as well as a schemes overall scope of work;
 - Routinely/automatically help identify such parcels in the first place.
- 4.30 As noted in Key Recommendation 02 above, accurate ABCA output can, and is being used to identify opportunities for area improvement (see principle 4 and Key Recommendation 05). When produced in tandem with either local bespoke design codes, or by default, the NMDC, acceptable forms of new compact development should be clearer and easier to determine for those promoting development. At the same time, these should allow local communities and the council to lead on defining and promote any conclusions identified from the ABCA evidence base. In particular, this should have regard to the adoption of opportunities for area improvement and the identification of new development sites.

Principle 2: A viable, dependable and desirable alternative to private car use

- 4.31 Reducing car use is not just about achieving sustainability and net zero targets. It is also essential so that the additional vehicular movement generated by new development does not negatively impact existing communities, in particular new traffic congestion and the potential damage resulting from additional car parking

needs. Where new compact development occurs, it does not have to follow that there will be a significant denigration or loss of the established movement patterns and choices already enjoyed by an adjoining or host community.

- 4.32 Car ownership by new residents, in itself, is not an issue, but instead how frequently these additional private vehicles are used and where they are parked needs to be addressed. To protect existing communities, some changes are essential in order to control and guide the activity of new residents (such as the introduction of controlled parking). Most importantly, new development needs to be located within a 5 to 10 minute safe walking distance of high capacity, high frequency, segregated public transport, and local neighbourhood facilities, with comprehensive quality cycle infrastructure in place (see paragraph 4.35 below). This infrastructure will provide new communities with a natural, appealing and practical alternative to private car use. The place they live will be designed and planned in a manner that enables people to instinctively and routinely move around the town without first jumping in a car. Local planning policy in this regard is contained in the draft Crawley Borough Local Plan 2024 – 2040 (draft Policies CL4 and CL3).
- 4.33 In order to ensure that new private car use and congestion is minimised, highway routes can be modelled and reorganised so as to divert motor traffic away from existing residential streets, to introduce filtered permeability for through vehicular traffic. This should be to the benefit of existing communities in the first instance but can also apply to any new residential streets. This can include the use of barriers such as bollards, boom barriers and planters or be implemented through the use of automatic number-plate recognition cameras and road signs. In addition to protecting existing low traffic neighbourhoods (or at least the status quo), filtered vehicular permeability has the added benefit of improving the quality of existing roads and public open space – creating more pleasant environments and improved safety.

“New urban planning approaches use smart traffic management which separates vehicles going past an area from those that need to access it. ‘Through’ traffic is channelled onto key main routes. Streets within residential and business areas are filtered to enable easy, direct walking and cycling – and sometimes bus access – throughout, while motor vehicles can reach their destinations but not cut through. In these calmer streets, walking or cycling can be the safe, quick and most attractive option.”

New Directions for Crawley. Transport and Access for the 21st century (March 2020)

- 4.34 In addition, existing residents will have access to and gain from the improved public transport and active travel infrastructure itself. This can be a substantial new benefit and advantage for existing communities and one which can increase property prices. All of this should be considered a reasonable trade-off to the associated controls and changes required, even where new development results in a minor increase in traffic congestion on the local network.

[How to Reduce Both the Need and Desire for Private Car Use](#)

- 4.35 There are three basic requirements set out in guidance which are needed in order to reduce the need and desire for private car use. These include the general principle that people live in a neighbourhood where the average walking distance to basic facilities will be 5 or 10 minutes and that a community can easily access two essential types of movement infrastructure: cycle network and a quality, reliable and

frequent bus or tram service. All three requirements are required in order for there to be a genuinely attractive and dependable alternative to private car use.

1. **5-minute walk to basic facilities:** compact, mixed use development can best be promoted when it is designed and planned in the first instance using the distance most people will walk to daily facilities, the corner shop, a small supermarket and the school.
2. **A comprehensive quality cycle network:** designed and constructed to the standards outlined by the Department for Transport's (DfT) in their guidance document 'Gear Change' (2021, DfT). In places like Copenhagen, cycling now constitutes at least 37% of commutes to and from work and education. Although this shift to cycling cannot occur over night, 37% is a fantastic figure to achieve, especially as this is for a mode of transport which most benefits both the environment and public health. Policy CL3 of the draft Submission Crawley Borough Local Plan 2024 – 2040 seeks to put people before traffic and encourage walking and cycling through establishing a layout of pathways which understand and respond to the wider borough pattern of movement, demonstrating how walking and cycling connections will enhance and integrate schemes with Crawley town centre, local centres, transportation hubs, schools and employment areas. This should build upon the established evidence base of the Crawley Local Cycling and Walking Infrastructure Plan (LCWIP) and capturing and translating the direct desire lines of borough-scale route masterplan in detailed local scale layouts.

If significant levels of new development come forward, such as urban extensions, it is possible to quickly convince many people of the benefits of cycling through the roll out of a docked public bicycle sharing scheme (where rental is free for the first 30 minutes of use). Such schemes have been proven to significantly change people's behaviour and encourage them to use a bicycle. In practice such a system is virtually free at the point of use for long term subscribers as over 95% of journeys would be less than 30 minutes. This allows for bike use without the worry about repairs and punctures or locking your bike and theft (thanks to the docking locations).

3. **Bus Rapid Transit (BRT) at a minimum:** BRT is a transport mode which sits somewhere between conventional bus and light rail, aiming to bring the benefits and user experience of light rail to bus corridors at significantly lower cost. Crawley already has some of this infrastructure in place on sections of the Fastway network (see draft Crawley Borough Local Plan 2024 – 2040, Policy CL3). This valuable existing infrastructure is also recognised in the National Bus Strategy, '*Bus back better*' (2021, DfT).

1. Cultural and community facilities: village halls, community hubs and other cultural facilities.

2. Local shops: The design code needs to provide guidance for the design of and access to local shopping facilities.

3. Pubs/café: Local shops can include cafés and other food and beverage uses where people can meet and, increasingly, work.

4. Medical facilities: All areas need medical facilities, including doctor's surgeries, district nurses, dentists and chemists. GP's mostly work in group practices in health centres, so only the largest schemes will be required to include them. Health facilities need to be in accessible locations at the heart of a community and planned in co-operation with relevant health and care organisations.

5. Places of worship: New buildings for religious worship are an important community function as places of congregation and community and need to be integrated into new development.

6. Homeworking hubs: Homeworking employees can support local facilities and there may also be scope to provide facilities to support home workers. Hubs include meeting spaces, shared resources such as printers, and even a delivery address.

74. Local facilities that should be accessible in all neighbourhoods:



Illustration and text from the National model design code (MHCLG 2021)

“The neighbourhood unit can provide a useful organising device - but only when it is overlaid on an integrated movement framework and conceived as a piece of town or city whose activities and forms overlap. This is to move away from large-scale projects envisaged or described as neighbourhoods but designed as disconnected enclaves. It is also to move away from estates and layouts - terms which in themselves serve to emphasise single use and segregation. A widely used benchmark is for mixed development neighbourhoods to cover a 400m radius, equating to about five minutes’ walk. This translates into 50 hectares.

Build walkable neighbourhoods, 3.2.1 the neighbourhood unit, 2010, UDC

“Buses are vital to ensuring the economy meets Net Zero carbon emissions... in congested areas, substantial modal shift away from the car will soon be needed if clean air targets and the Government’s broader climate goals are to be met. The only mode capable of sufficient expansion in the time available is the bus.

“BRT could be a game-changer for bus networks. It can deliver a large proportion of the benefits of rail-based schemes at much lower cost..... Construction costs for Bus Rapid Transit systems, such as Glider (Belfast), are typically at least 50% lower than traditional light rail/tram schemes”.

(Bus back better, p18 and p66, Department for Transport, March 2021)

- 4.36 In addition to the two essential movement modes listed in paragraph 4.32 above (cycle and BRT), there are other types of movement infrastructure which can further support the ambition to reduce car use. These include car sharing (shared rental subscription clubs) and the facilitation and growth of micro-mobility: electric bikes, for example, make every day cycling over wider distances and across hilly routes far easier and more attractive to a wider number of users.

Local experience related to density, access to public transport and private car use.

- 4.37 For many years now London Plan policies have linked opportunities for new higher density to what is called the Public Transport Accessibility Level of an area (PTAL). In planning terms this rating has considerable weight when considering the density of new development in London and has promoted compact, and in many places high, density levels of urban living within close walking distance of stations and bus stops.

“PTALS are a detailed and accurate measure of the accessibility of a point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at any location within Greater London. Each area is graded between 0 and 6b, where a score of 0 is very poor access to public transport, and 6b is excellent access to public transport.”

(Transport for London)

<https://data.london.gov.uk/dataset/public-transport-accessibility-levels>

- 4.38 However, London is a very large and complex place compared to Crawley and it is a location which already benefited from a myriad of existing public transport services before PTAL was developed. The rating measure was needed in order to identify the various zones suitable for higher density. Live PTAL mapping is regularly updated to provide a visual illustration of public transport accessibility in London. It is much easier to identify public transport accessibility for Crawley due to the size of the town and the limited provision of existing infrastructure. These areas are identified in Chapter 6 in draft mappings illustrating these locations within Crawley, based on the methodology outlined in the following paragraphs.
- 4.39 PTAL thresholds which allow for developments at higher density ranges “*assume that people will walk up to 640 meters (approximately eight minutes) to a bus stop*” (see PTAL, 2010, Transport for London). This is comparable to the council’s expectations set out in draft Local Plan Policies CL3 and CL4. These thresholds apply only to distances to BRT, not a conventional bus service. “*The distances that people are prepared to walk from their dwelling to reach public transport are determined by the nature and quality of the public transport service, how attractive and safe the walk feels, and the total length of their journey. Generally, people are prepared to walk further to a railway station or tram stop (10 minutes) than to a bus stop (5 minutes)*” (NMDC part 2 page 8 – M.1:ii).
- 4.40 Crawley’s Fastway, BRT infrastructure cannot yet be compared to the quality offered by a tram service. As BRT segregation and therefore reliable, consistent, and shorter service speed improves in Crawley, the distance from the service can increase to 800 meters (or 10 minutes’ walk). Currently this improvement work is only beginning and taking place on an incremental basis, as outlined in 4.43 below. Until completed, an 8 minutes’ walk or 640m is a generous catchment area. 500m is considered the benchmark by a number of key studies including PTAL, the NMDG, the UDC and EU regional policy (see ‘how many people can you reach by public transport, bicycle or on foot in European cities’ 2020. 800m distance is applicable to Crawley and Three Bridges station due to the quality of rail connections at these locations.

- 4.41 One major difference between PTAL and the Crawley Local Plan Policy CL3 is that all qualities of bus service are included in PTAL matrix. This includes issues such as ease of interchange, comfort of vehicle, speed and dependability of travel time, in short, a tram equivalent level and quality of service. This is essential if the bus is to realistically attract users from their cars and is very important in genuinely promoting compact form within existing neighbourhoods while at the same time reducing car use. Otherwise, there could be number of significant downsides, as explored in paragraph 4.53 below.
- 4.42 For this reason, principle 2 and draft Submission Crawley Borough Local Plan Policies CL2-CL4 recommend that large compact developments should only be permitted where they are accessible to at least a BRT standard of public transport. In a large urban area like London, heavy congestion and high parking charges alone instigate and achieve significant shifts in mode choice. This automatic influence on behaviour is unlikely to occur in a settlement the size of Crawley. Without an attractive alternative to private vehicle use, it will be far harder to persuade communities to easily reduce car use.

Funding and the viability of sustainable infrastructure

- 4.43 The commercial viability of BRT infrastructure depends on an average minimum density within 8 minute radius safe walk of transport nodes/stops in order to ensure there is a substantial and reliable customer base for the service. The Urban Design Compendium (page 47, HCA, 2013 and English Partnerships, 2007) suggests net densities of 60dph are necessary, within this catchment area, to sustain a dependable, frequent and high capacity public transport service such as BRT. The government's new draft model design code suggests the figure to be higher at 75dph.

The Government's Cycling and Walking Investment Strategy

- 4.44 The physical geography and weather of Copenhagen (Denmark) or Haarlem (Netherlands) is not significantly different to that of Crawley. Yet their communities have embraced active travel. The government has responded to this situation with the Cycling and Walking Investment Strategy (CWIS), a strategy setting out the ambition to make walking and cycling the natural choices for shorter journeys or as part of a longer journey. The ambitions by 2025 are:
- *“to aim to double cycling, where cycling activity is measured as the estimated total number of cycle stages made each year, from 0.8 billion stages in 2013 to 1.6 billion stages in 2025, and to work towards developing the evidence base over the next year;*
 - *to aim to increase walking activity, where walking activity is measured as the total number of walking stages per person per year, to 300 stages per person per year in 2025, and to work towards developing the evidence base over the next year;*
 - *to increase the percentage of children aged 5 to 10 that usually walk to school from 49% in 2014 to 55% in 2025.”*
- 4.45 The government's strategy suggests greater levels of ambition to be delivered by 2040 (this timeline concerns urban England in general). Progress has already begun in this regard as both CBC and West Sussex County Council (WSSCC) have developed and adopted a Local Cycling and Walking Infrastructure Plan (LCWIP) with DFT funding and software support. This plan has identified, at a macro level, the extent and rough alignment of active travel routes required by the borough. This important document provides Crawley with one of the key foundational building blocks, a high-level masterplan, to guide the development of a genuinely attractive active travel network, as noted in draft Submission Crawley Borough Local Plan Policy CL3.

- 4.46 The cost of delivering both cycle and BRT could be delivered on an incremental basis by constructing the sections of the network along/within individual compact development sites which come forward. Although this would initially result in a patchwork of cycle and bus lanes ultimately needing to be joined up, it may allow for a cheaper overall cost and for the construction of the infrastructure to be ultimately delivered faster. However, BRT and standard bus provision would benefit from the development of a sustainable bus masterplan. A viable network can be designed, planned and approved in detail when based upon detailed scenario planning. With regard to BRT, scenario planning should first focus on the parts of the borough where there is a critical mass of activity and population to sustain and make viable such infrastructure, or readily link to such places, not simply the areas where existing urban character can accommodate new intensive development. Crawley already has three such areas, Manor Royal, Crawley Town Centre and Gatwick Airport. Three Bridges is another destination due to its main line train station.
- 4.47 With this in mind, and in order to secure Department of Transport BISIP funding, West Sussex County Council (WSCC) and Crawley Borough Council (CBC) have progressed route upgrade designs, scenario planning and traffic modelling focused on the main Fastway 10 bus route spine within the Town Centre, as far north as Gatwick. This corridor is identified in paragraph 4.40 and Policy CL3 of the draft Submission Crawley Borough Local Plan. This BRT corridor runs through the majority of the new higher density development site locations identified in Policy CL4 of the draft Submission Crawley Borough Local Plan. Currently, CBC and WSCC are delivering a number of individual BRT improvement projects along this corridor and work is both at design and construction stage. These schemes are funded by the Crawley Growth Program and the government's Bus Service Improvement plan (BISIP) program.
- 4.48 Strategic design and planning work is also ongoing regarding new strategic BRT routes linked to neighbourhood scale development on the administrative boundaries of Crawley. These would be new high frequency, high-capacity, segregated BRT corridors to link new development to Crawley Town Centre, Three Bridges Railway station, Manor Royal and Gatwick. Such routes would also allow the council to potentially identify additional suitable sites for further compact development within Crawley.
- 4.49 As previously noted, car ownership in itself should not be the issue, what matters is how frequently private vehicles are used and how and where they are parked. Careful planning and design of car parking provision and the highway itself (its overall network structure, minimising through routes, traffic calming and lower speed limits) can work to naturally tilt our default preference to jump in the car. This work is just as important as the delivery of new BRT and active travel infrastructure. A large toolkit of complementary design and control options are available, including interventions which have been costed and proven to work in pilot locations across the country and Europe in general, such as:
- a. the introduction of 20mph speed limits;
 - b. reductions in the physical width of carriageway needed for vehicular flow, such as tighter junction symmetry;
 - c. installation of new modal filters/bus gates and filtered vehicular permeability;
 - d. maximum car parking provision for new occupants; and
 - e. controlled parking zones.

The application of these measures needs to be tailored and designed specifically to suit both its host area and the strategic highway network. There is no one size fits all.

“Getting the movement framework right affects uses and activities, density, security and the impact of the development on neighbouring places. The movement framework concerns the structural aspects of movement, focusing on the street and footpath networks. A successful movement framework:

- *provides the maximum choice for how people will make their journeys.*
- *takes full account of the kinds of movement a development will generate.*
 - *makes clear connections to existing routes and facilities.*

Because every site is different there can be no standard formula. The movement framework should, wherever possible and practicable, make it as easy and attractive to walk, cycle or take the bus, as it is to travel by car. This means providing the right kinds of route to fit the journeys that people want to make. The reason why one route is better than another depends on countless factors, many of them quite intangible, hence route assessment can never be an exact science. Predicting vehicle movements is only one part of the exercise: how people experience their journey (especially people on foot) is just as important”.

The movement framework (creating the urban structure) 3.1 p34 UDG

Opportunity for existing places to become more enjoyable, attractive and healthy

4.50 Quieter and more peaceful neighbourhoods are particularly enabled by the measures just mentioned because, in simple terms, there will be less vehicles and those that exist will move more slowly. Where only 20mph is allowed, wide carriageways for speed are no longer needed and a street can then be redesigned to capture the advantage of leftover space. This will, by default, both encourage and allow people to stop and pause when outside, for neighbours and even strangers to stop and chat, allow space for coffee shops and bars to spill out onto the street, leave space for many new small areas of landscaping and casual play places for children. This can create new shared, attractive safe space along streets for human beings right beside where people live.

Streets and their sidewalks-the main public places of a city-are its most vital organs. Think of a city and what comes to mind? Its streets. If a city's streets look interesting, the city looks interesting; if they look dull, the city looks dull....

The more successfully a city mingles everyday diversity of uses and users in its everyday streets, the more successfully, casually (and economically) its people thereby enliven and support...give back grace and delight to their neighbourhoods instead of vacuity.

“The Death and Life of Great American Cities”, p29 & p111, 1961, Jane Jacobs, Random House

4.51 This has all long been understood and it is no accident that the majority of our great towns and villages were built before the era of private transportation. In 1961, over sixty years ago, the journalist and author Jane Jacobs published her seminal book *The Death and Life of Great American Cities*:

“.....Automobiles. Traffic arteries, along with parking lots, gas stations and drive ins, are powerful and insistent instruments of city destruction. To accommodate them, city streets are broken down into loose sprawls, incoherent and vacuous for anyone afoot. Downtowns and other

neighborhoods that are marvels of close-grained intricacy and compact mutual support are casually disemboweled. Landmarks are crumbled or are so sundered from their contexts in city life as to become irrelevant trivialities. City character is blurred until every place becomes more like every other place, all adding up to Noplace”.

4.52 Jacobs has been described by Jan Gehl as “The first strong voice to call for a decisive shift in the way we build our urban places...at the same time burgeoning car traffic was effectively squeezing urban life out of urban space.”

“If (urban) life is reinforced, it creates the preconditions for strengthening all forms of social activity in city space... experiencing life in the city is also diverting and stimulating entertainment. The scene changes by the minute. There is much to see: behaviour, faces, colours and feelings. And these experiences are related to one of the most important themes in human life: people.”

Cities for people, p 65, 2010, Jan Gehl, Island Press

Key Recommendation 03:

The crucial relationship between movement options and good compact development.

Major new compact development should only be permitted when it is located within 5-10 minute safe walking distance of high capacity, high frequency, segregated public transport and local neighbourhood facilities, to enable new residents to have a choice between car and car competitive public transport (supplemented by active travel infrastructure).

The specifics of how this translates in a Crawley context are outlined in the draft Submission Crawley Borough Local Plan Policies CL2, CL3 and CL4.

Risks and Safeguards: Compact Development and the new movement it generates

4.53 The table below sets out four identified risks (following Risk 1: Damage to the existing Character of an Area set out above in paragraph 4.19) from movement generation associated with compact development along with the safeguards needed to address and prevent these:

1. Risk 2: More homes results in more traffic and more parked cars on the roads of existing communities.
2. Risk 3: Parked cars dominating the street and the loss of trees, verges and vegetation.
3. Risk 4: If only poor quality active and public transport infrastructure is delivered, it is unlikely that the public will be attracted away from private vehicle use.
4. Risk 5: Even more hard surfaces: the risk of losing soft landscaping and trees to cycle and bus lanes.

Risk 2: More homes results in more traffic and more parked cars on the roads of existing communities.

Any significant increase in new homes is likely to result in increased traffic, congestion and need for additional car parking space.

Safeguard / Output 2.1:

Major applications for schemes above 45 dwellings per hectare should not be permitted in car-dependent areas.

Intensification should not be allowed unless car usage can be minimised by providing viable and desirable non-private car movement options. This is reflected in draft Submission Crawley Borough Local Plan Policy CL4. The 5-8 minute walking distance rule for neighbourhood centres and BRT stops and the 10 minutes walking distance to Crawley and Three Bridges stations should apply to any significant application for compact development or where a number of smaller schemes are built within a 500 meter walking distance of each other and, when combined, deliver in excess of 30 new residential units, and related car ownership.

Other example of local policy dealing with infrastructure requirements and density:
The London Plan 2021, Policy D2:

“Where there is currently insufficient capacity of existing infrastructure to support proposed densities (including the impact of cumulative development), boroughs should work with applicants and infrastructure providers to ensure that sufficient capacity will exist at the appropriate time. This may mean that if the development is contingent on the provision of new infrastructure, including public transport services, it will be appropriate that the development is phased accordingly”

Safeguard / Output 2.2:	Detailed scenario planning to target viable public transport mode share, with an ambition of approximately 40%.
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Subject to the outcome of this analysis, the construction of such infrastructure can be completed, and operation of BRT services can begin when certain thresholds of new residential units are occupied.

Safeguard / Output 2.3:	New car parking strategies such as the expansion of controlled parking (Permit Parking) zones.
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Scenario planning to also determine options regarding neighbourhood specific protections which (a) secure car parking provision which is enjoyed by existing residents while (b) determine the extent and scope of new controlled parking zones for areas where new compact residential development is possible, and (c) identify locations for car parking for new compact residential schemes, which are flexible and allow for such car parking to be later removed as sustainable mode share increases.

Risk 3:	Parked cars dominating the street and the loss of trees and vegetation.
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The building of new homes within an existing urban district can often result in cheap and damaging approaches to obtaining the extra car park spaces required. Public space can become cluttered with parked cars and front curtilage landscape and grass verges are dug up over time to be replaced with hardstanding.



(Above) Hard surface and car parking dominates the streetscape and public realm. Opportunities for landscape mitigation are limited but could be created. Although this comes with a financial/maintenance burden and so barely exist in this setting (Hillingdon west London). This is in an area of relatively low residential density but one which is heavily car dependent. The nearest London underground station is a 22 minute walk away.



Above: every space is accounted for

Any new development constructed nearby will only exasperate the shortage. Only the introduction of controlled parking /resident permits can protect the needs of existing residents. This obliges new residents to purchase a car space when they move into the area or accept that they will use alternative sustainable modes for day to day movement instead.

Safeguard / Output 3.1:	Compact development needs to pay for both the design and construction of carefully considered private parking.
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Compact development can be developed adjacent to and within existing urban communities without resulting in increased numbers of parked cars taking over existing residential districts, without the loss of the extensive lawns, verges, trees and planting much admired as one of the town's great character assets. However, careful planning control needs to ensure that incremental loss of landscape to parking does not transform the Crawley streetscape. In schemes where average densities exceed 45dph, alternative parking options will need to be offered.

Underground car parking can be very costly, but only undercroft or underground car parking can meet standard car parking requirements in schemes where average densities exceed 80dph. WSCC will not approve a scheme with no parking if this could have an impact on the public highway and as such have only permitted town centre schemes at higher densities with minimal, and in some cases, no car parking provision, where there is no possibility anywhere nearby of parking on street. As such, the use of controlled parking zones is an essential tool for enabling and promoting reduced car ownership development, and schemes at higher density ranges (see Safeguard 2.3).

Such developments also need to have alternatives in place, such as BRT and rail as previously discussed to provide attractive sustainable transport options which will enable many new homes to be sold without dedicated parking provided, or within the finite number of car parking permits being made available on the public street. Policies CL3 and CL4 outline the locations and the existing geographical extent of such places in the borough.

Overall, the option to own a car and car parking space should be available, but for an additional price, which in turn will make other modes more attractive. Each underground car space adds an additional £20,000 at least to the unit cost of each dwelling compared to the cost of providing a driveway or street parking. The cost of underground parking, and the management of the space it occupies, needs to be factored in when residual development values are calculated during land purchase.

Under deck/undercroft parking options are far cheaper than underground car parks. Parking can also be provided within purpose built parking facilities, a little removed from the front door of new homes. They can be temporary structures which can later be rebuilt for other purposes, even a new building, should/when the demand for individual car ownership reduces. It is also vital that all areas have some short-stay, unallocated on street spaces for visitors and customers of local businesses.

Risk 4:	If only poor quality active and public transport infrastructure is delivered, it is unlikely that the public will be attracted away from private vehicle use.
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Compared to most places in West Sussex, almost anywhere in Crawley can be considered accessible and close to good public transport options. However, 'good' is not enough if we want

people to change behaviour, and fast, reliable, frequent and high capacity public transport such as rail or Bus Rapid transit), is essential in order to attract people away from private car use.

Safeguard / Output 4.1:	The design, planning and adoption of new and /or improved cycle routes, to at least the standards outlined in DfT's gear change guidance.
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This work is already in progress as part of the LCWIP and Crawley Growth program work being progressed by the council and WSCC.

Safeguard / Output 4.2:	Secure further Bus Service Improvement Plan (BISIP) funding from the DfT and design for and deliver bus improvement recommendations in all locations, not just along the corridors where new compact development enables the funding of new BRT infrastructure.
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The Bus Service Improvement Plan will need to be updated annually and reflected in the WSCC Local Transport Plan and in other relevant local plans such as Local Cycling and Walking Infrastructure Plans (LCWIPs).

It can include plans for bus lanes on any roads where there is a frequent bus service, congestion, and physical space to install one. Bus lanes should be full-time and as continuous as possible. They should be part of a whole-corridor approach, including other physical measures such as: • Traffic signal priority; • Bus gates, which allow buses to enter a road that prohibits access to other traffic; and • Clear and consistent signage”.

Risk 5:	Even more hard surfaces: the risk of losing soft landscaping and trees to cycle and bus lanes.
Safeguard / Output 5.1:	The design, planning and delivery of any work in the public realm should always be led by Urban design, Architect and Landscape design professionals in partnership with relevant engineering specialists.

When roads, cycle and bus lanes are designed, only with engineering in mind, the overall quality of a place, its streetscape and character can be forgotten. More tarmac for buses and bikes can result in similar results as that of a new dual carriageway if not properly designed.

“In real life, which is quite different from the life of dream cities, attrition of automobiles by cities is probably the only means by which absolute numbers of vehicles can be cut down. It is probably the only realistic means by which better public transportation can be stimulated, and greater intensity and vitality of city use be simultaneously fostered and accommodated. However, a strategy of attrition of automobiles by cities cannot be arbitrary or negative. Nor is such a policy capable of giving dramatic results suddenly. Although its cumulative effects should be revolutionary, like any strategy aimed at keeping things working it has to be engaged in as a form of evolution”.

Jane Jacobs (1961). “The Death and Life of Great American Cities”, p 363. Random house.

Principle 3: Walking distance to areas of substantial natural and semi-natural landscapes and/or panoramic, open space

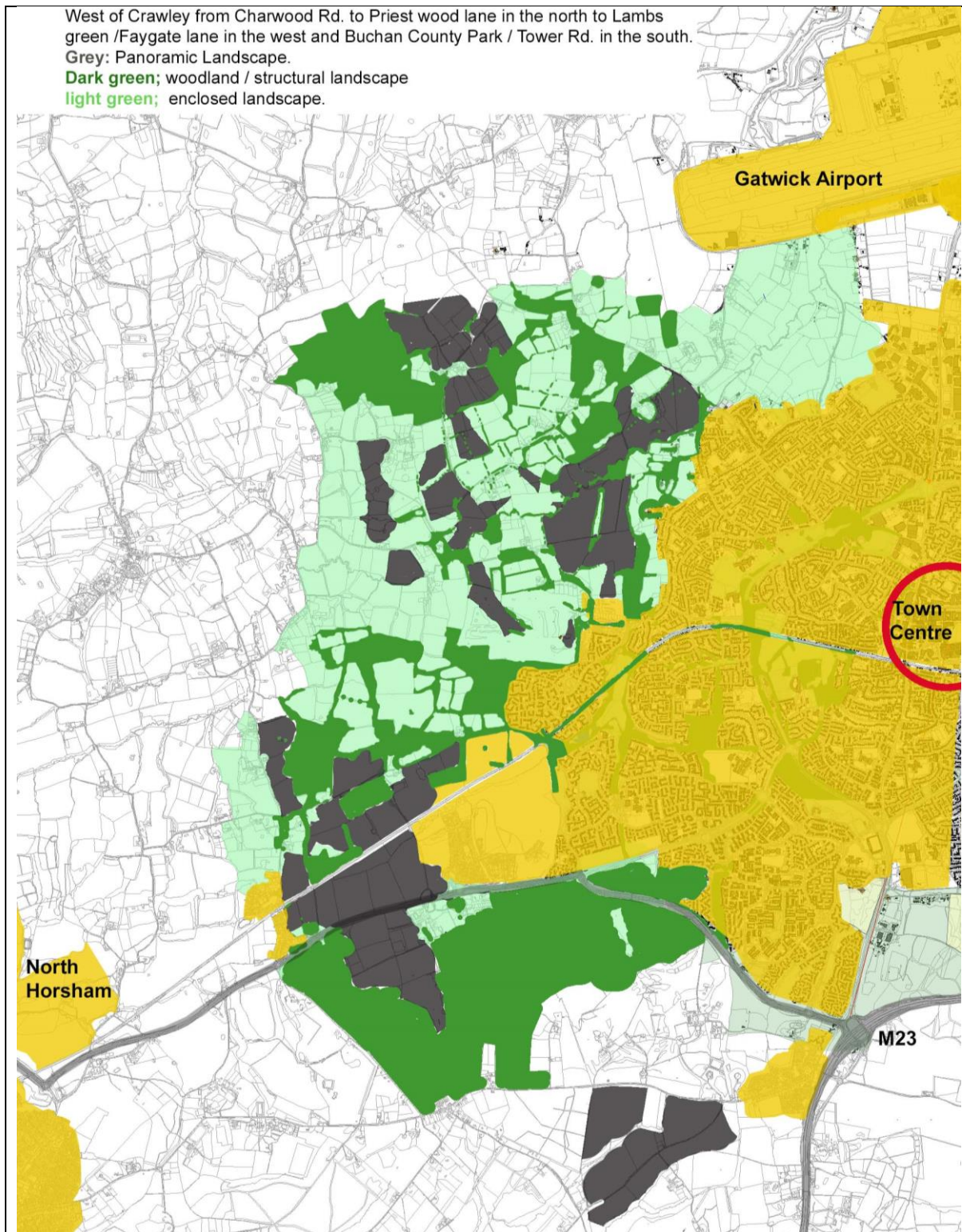
4.54 The ambition for such open space outlined in principle 3 is in addition to other open space and landscape policy requirements and the need for pocket parks and increased casual communal play spaces for children adjoining compact development schemes. Substantial areas of panoramic, natural landscape is particularly of value to our quality of life when it is located within or immediately adjoining urban neighbourhoods (see illustration in paragraph 4.60 below). Specifically, when it is located within a ten minute walk of where people live and move around every day so that these natural resources can be automatically built into our everyday life and experience. It is far more preferable to experience these places on the way to school

or to buy a loaf of bread rather than just as a result of deliberate effort, such as having to drive to get to such places.

- 4.55 Where significant new areas of new compact development are developed, one clear advantage to both new and existing communities is that new compact development form should make viable and enable such open space to be realised. This can be by improving, expanding and enhancing existing open space, carving out new space or more directly linking to such existing space.
- 4.56 These natural assets not only need to be geographically located within walking distance of where most people live, but optimally, prominent movement desire lines for active travel should run alongside and through them. *“Design codes need to ensure that nature and the historic landscape is woven into the design of places. This may include the amount and type of open space”* (National Model Design Code. Part 2, paragraph 58. MHCLG 2021).
- 4.57 Principle 3 should be considered as one of the most attractive benefits, both for existing and new communities, should we choose to build our neighbourhoods in a compact form. For so many living in large urban areas, such landscape is usually only available when a conscious decision is made to travel to such places by car or public transport: this requires a plan to go, to experience and enjoy such a place.
- 4.58 This opportunity is best identified through the delivery of a comprehensive ABCA (see principle 1) and its opportunity value reflected in an area wide masterplan and detailed in design coding as discussed in principle 4. The current extent of structural landscaping and public parkland across the borough already delivers extensive levels of such green open space to Crawley residents. Compact form helps justify the case for the protection, enhancement and even the creation of new/expanded areas of such landscape within and adjoining existing urban areas, whilst still delivering substantial numbers of new homes.
- 4.59 This principle is not concerned with simply improving the quality of access or the number of routes to such areas. It is concerned with the following:
- a) Ensuring the retention and protection of existing panoramic areas located within or immediately adjoining the existing built up area boundary of Crawley, including such areas outside of the borough’s administrative boundary;
 - b) Ensuring that experiencing such places is stitched into everyday life for as many as possible, to be enjoyed and encountered, without the need for a car journey. This allows people to casually, frequently and automatically find themselves in such landscape, within 10 minutes walking distances from where people live;
 - c) Ensuring, where proposals for large development are envisaged, that opportunities are found within the existing built up area boundary to carve out a new space and/or join up a number of existing open space areas to physically enable whole new areas of such open space to exist deep within our existing neighbourhoods.

To Identify and then Structure how such Opportunities can be Captured

- 4.60 Building upon ABCA output, district wide Urban Frameworks and strategic masterplans are the key tools needed to identify and then structure how such opportunities can be captured. Proposals for change must be built upon the parameters established by the ABCA. New proposals should not just identify open landscape space but also carefully design for access by cycling and walking in order to capture the everyday experience and use of such places, via new or improved direct, legible, traffic calmed landscaped corridors. These should be carefully stitched into and threaded through existing urban neighbourhoods or new development areas. This should produce an overarching urban and landscape structural design: a framework upon which new schemes can be incrementally developed.



Land at Crawley that surrounds the western half of Crawley’s Built-Up Area Boundary (BUAB)

The mapping above illustrates the extent (quantity), location and relationship between three dominant natural / semi natural landscape character types (1) Enclosed Landscape, (2) Panoramic open space and (3) Woodland or Structural Landscape / Green edges. Note: this diagram is incomplete and not all areas outside the BUAB are covered. Landscape areas within the BUAB of Crawley or north Horsham are not shown.

Key Recommendation 04:

- a) To retain scarce panoramic open space both within and surrounding the BUAB of Crawley as this type of open spaces is limited both within the borough's administrative area as well as the countryside immediately adjoining the Crawley Built-Up Area Boundary.

Paragraph 2.30 -2.33 of the Draft Local Plan considers development adjacent to Crawley and the potential development pressure on the surrounding countryside and notes that the plan; *"should not be considered as an indicator of the extent of acceptable development adjacent to Crawley. Many physical, environmental and policy designations apply to these areas, including Green Belt, Area of Outstanding Natural Beauty, Ancient Woodland and Sites of Special Scientific Interest. The planning policies of the neighbouring authorities will apply in cases of development outside of Crawley's administrative boundaries.*

- b) Position new development form in such a way that it physically frames, overlooks and/or better connects, though, to and around such landscape.
- c) To investigate, identify and agree urban design frameworks and masterplans which enable the siting and layout of new compact development to capture opportunities which improve and expand existing substantial natural and semi-natural, landscapes and /or panoramic open space. This is important even deep within the built up area where brownfield and intensification opportunities exist within existing urban settings, enabling more urban locations to be within walking distance of substantial areas of natural open space.

Significant* new compact development will usually offer opportunity to spatially improve/reorder the existing urban layout of any given host area. This is a major advantage offered by intensification, but usually overlooked. This can be achieved in a number of ways, including:

- a) The careful carving out of new open space in its own right; and/or
- b) the joining up of one park or landscape structure to another via new landscape corridors; or
- c) carefully positioning and grouping of new open space and landscape structure alongside existing open space, which together form a much larger, and coherent natural asset;
- d) prioritise new open space at points and locations which just happens to also enable the capture of great new long distance or framed views or panoramic settings.

All of this can greatly expand and /or unveil the natural assets of an existing area and even open up possibilities for natural landscape to reach from the rural edge deep into the built up area, through a sequence of open spaces or structural landscape and clear and direct active travel corridors.

Area Based Character Assessment enables the identification of such opportunities which are then captured by comprehensive Masterplanning and design codes.

* 'Significant development' is defined in the draft Submission Crawley Borough Local Plan in paragraph 4.57.

Risk 6:	(a) The loss of panoramic open space to new development, particularly where new urban extensions occur past the current built up boundary. (b) Pushing proximity to rural countryside further away from the everyday life and movement of existing communities
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Urban expansion (particularly post war) has tended to extend its footprint to form new continual concentric bands. This has encircled existing neighbourhoods, pushing them further and further away from their rural hinterland, leaving only fragments of the former rural landscape in place such as nothing more than a line of trees. This has happened to an extent in Crawley with the newer neighbourhoods of Bewbush, Broadfield, Maidenbower, Forge Wood and now Kilnwood Vale in Horsham District separating original New Town neighbourhoods from the countryside beyond. Elements of ecological connectivity and semi-natural accessible routes have been threaded through neighbourhoods, however, such as the Worth Way, and Bewbush Water Gardens and Ifield Mill Pond. The central landscape feature of Kilnwood Vale retains a substantial area of natural green open space to the eastern end of the neighbourhood, linking with open playing fields on the western edge of Bewbush, a natural asset further enhanced by the fact it is framed on many edges by retained woodland. There is an alternative approach to urban growth. It requires a more nuanced, area specific selection of developable land and a layout which breaks and weaves in order not to disturb the spatial extent and setting of substantial enclaves of rural landscape.

Safeguard / Output 6.1:	New development plots on greenfield /rural locations, as well as significant new applications, should only be identified after a district wide character assessment is completed and approved.
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Wider scale district assessment is needed (as opposed to a smaller area based character assessment) in order to identify and understand the significance/value, quality and quantity overall, of the substantial and /or panoramic open space and other areas of natural, semi-natural, green open space available, in the same way as the scope of Design Codes are viewed in NPPF (2021). Paragraph 128 refers to various scales of *“geographic coverage, level of detail and degree of prescription”* which should apply to coding itself and paragraph 129; describes how they *“can be prepared at an area-wide, neighbourhood or site -specific scale”*.

The value of such space is not to be confused with ecological value or standard landscape character in and of itself. This value is in addition to other very important open space, landscape and related ecological local plan requirements.

Safeguard / output 6.2:	The careful crafting of new development around such panoramic open space and landscape so that it is sensitive to the scale, definition and setting of such assets.
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Sometimes new development form should be hidden or screened from views within these spaces. Other times it should be celebrated. There is no one best way to define such a transition as it will be site specific and overall masterplan vision dependent.

Urban Edge

- 4.61 Although intensification should be primarily focused on brownfield land within existing built up urban areas, urban extensions to the town are being promoted immediately beyond Crawley’s boundary in neighbouring districts to the west and the east. It does not have to follow that such urban expansion will be sited so as to start forming yet another continual outer layer to the town.
- 4.62 More easily than is possible within an existing urban area, new greenfield development lends itself readily to Principle 3 and there is an opportunity to reverse the continuing concentric tendency and break the continual wrapping of the urban edge. New layouts should turn, taper and pivot to allow for substantial portions of the best rural landscape to remain.

The Alternative

- 4.63 Far more than just a narrow band of structural landscaping, these areas should be substantial in spatial scale; wide and panoramic. People cannot experience such qualities in every type of landscape. An area of woodland, for example, can be big in size but it will always be experienced as an enclosed landscape even where it may

contain long distance views and vistas. Groups of small meadows may stretch far together in quantity, but if they are enclosed, there is no panoramic value.

- 4.64 The value to neighbourhoods relates to the rarity of such space in a local context. We are not comparing such landscape to the best panoramic areas of outstanding natural beauty across Sussex such as the Devils Dyke in the South Downs. It is a matter of scale in its local context, i.e. panoramic in comparison to the majority of the surrounding local area.
- 4.65 Many of panoramic open spaces within and around Crawley are ultimately enclosed landscapes. They do not enjoy additional onward visual connections with wider or vistas across further away, open areas. Yet they are highly valuable and rare in their local context. Such open space may not be exceptional in regional terms and there may be much of it found across Sussex – particularly in areas of outstanding natural beauty. But these locations are not within walking or bicycle distance from where most people live. How much more exceptional and highly valued is such landscape when it is surrounded by an expanding urban community.

Long Distance Views and Panoramic Open Space in Crawley

- 4.66 Within and adjoining Crawley, there are a limited number of locations which enjoy vast panoramic vistas. Examples include those identified as protected views in the Local Plan, such as the view north from Target Hill or the view up into Worth Park, from Somerville Drive in the Pound Hill neighbourhood. Others ‘at Crawley’ include views up north from the A264 towards Kilwood Lane and the ridge,

What about those living further away within the town – far from the rural edge?

- 4.67 Areas of natural and semi-natural landscape can and should stretch deep into the heart of our towns and cities. They can break the continual circular layers of growth. The ideal would be that such panoramic landscape can even stretch deep into the core of a town. Some of the most popular British towns and cities enjoy such an advantage, in some cases by design sometimes by default: Brighton for example has the sea; Edinburgh has Calton Hill and Hollyrood Park (among others).

More like a spoke – less like an onion

- 4.68 It is a significant undertaking to carve out, join up and stitch such space back into a large existing city, although it is still very possible. On the other hand, it is far easier to achieve such advantages for small cities and growing towns:
- (a) Because places like Crawley still have a relatively small urban footprint and retain the advantage that most existing neighbourhoods are reasonably close to rural countryside; some of which will have panoramic landscape qualities or areas of extensive woodland, such as those adjoining parts of Maidenbower in the south east, or the three neighbourhoods bordering Tilgate Park (Tilgate, Furnace Green and Broadfield), and;
 - (b) On Greenfield or brownfield sites, significant new compact development be constructed only along a route for high capacity public transport. Alignment of such routes will usually radiate out from a town core (and in the case of Crawley, also Gatwick/ Manor Royal) and create a natural pattern of linear corridors which swell in width around every transit stop/transport interchanges. This naturally results in an overall urban footprint which is more spoke than continually layered onion.
- 4.69 The intensification of existing urban neighbourhoods and small brownfield sites is more difficult to do well than developing on green fields, not least in regard to the parameters outlined in principles 1 and 2 concerning private cars and existing character. Significant intensification of existing neighbourhoods should enable new opportunities which achieve an improved, careful re-ordering of an area’s existing urban structure. Where considered desirable, even whole sections of existing

neighbourhoods can be improved and enhanced in order to improve beauty, functionality, movement paths and enjoyment. Such transformational change and improvement is already taking place in parts of Crawley Town Centre, especially focused on the development opportunities noted in the Town Centre SPD. However, in the Town Centre, the form of development is very compact in form and of a very large scale and height at density ranges often in excess of 300dph. This is a form of transformation not appropriate to the majority of most other Crawley neighbourhoods.

- 4.70 New development provides not only the opportunity to make our neighbourhoods more beautiful, but with carefully crafted design can also enable more of our existing communities to access substantial areas of natural and semi-natural landscapes simply by walking. This will also enhance community health and biodiversity net gain.

The size of open space and other natural green space

- 4.71 Natural England recommend that at least two hectares of accessible green open space should be located within five minutes' walk of people's homes. When such a landscape is also panoramic in nature, and or laid out in a configuration which aligns with or captures long distance views, then its value to the community becomes even greater than the space it physical occupies.

<i>Natural England's Accessible Natural Green Space Standards¹⁰ recommend that all people should have accessible natural green space:</i>	• <i>Of at least two hectares in size, no more than 300m (five minutes' walk) from home.</i>
	• <i>At least one accessible 20-hectare site within 2km of home.</i>
	• <i>One accessible 100-hectare site within 5km of home.</i>
	• <i>One accessible 500-hectare site within 10km of home.</i>
	• <i>A minimum of one hectare of statutory local nature reserves per 1,000 people.</i>
	• <i>That no person should live more than 500m from at least one area of accessible woodland of no less than 2ha in size.</i>
<i>The Woodland Trust's Woodland Access Standard¹¹ aspires that:</i>	• <i>That there should also be at least one area of accessible woodland of no less than 20ha within 4km (8km round trip) of people's homes.</i>
	• <i>No person should live more than 500m from at least one area of accessible woodland of no less than 2ha in size; and</i>
<i>Crawley Open Space, Sport and Recreation Local Standards for Natural Greenspace</i>	• <i>There should also be at least one area of accessible woodland of no less than 20ha within 4km (8km round trip) of people's homes.</i>
	• <i>Quantity Standard: 1.8ha per 1,000 population.</i>
	• <i>Accessibility/Walkability Standard: 720m (15 minutes' walk).</i>
	• <i>Quality Standard: Green Flag Quality Score of 70% to achieve a Good Quality Score or above.</i>
	• <i>Value Standard: Value Score of 60% and above to achieve a High Value Score.</i>

Precedents

Compact urban neighbourhoods and walking access to substantial natural and semi-natural landscapes and /or panoramic open space

- 4.72 Already mentioned, any re-configuration of existing urban areas is difficult to achieve in large urban places such as London or Manchester where the urban footprint covers such large distances. However, even in London, substantial areas of nature have been retained (places which can almost be considered as having a rural character). For example, areas along the banks of the Thames west of Kew Bridge.

¹⁰ Accessible Natural Green Space Standards in Town and Cities (2011) Natural England

¹¹ Space for People, Targeting Action for Woodland Access (2017) Woodland Trust

Almost by default, river corridors have acted to provide this for many of Europe's great towns and cities.

- 4.73 Without the obvious structural highlight of a river, a beach or a landscaped ridge the challenge for urban areas with less dramatic natural features is to identify, for retention, the best elements of less dramatic natural features and open space structure. This is to be brought forward as Area-Based Character Assessments (ABCA) are rolled out across the borough as this evidence base will highlight such opportunities. Such natural space is being identified and captured within and adjoining Crawley town centre as part of the vision defining the Town Centre area design code and ABCA work.

A Sussex case study

- 4.74 There are many great and desirable examples of traditional medium density compact development in Sussex.
- 4.75 One example is Vernon Terrace in Brighton (see below); from here, it only takes 12-15 minutes to walk to the seafront, and so this is a neighbourhood very close to a vast area of panoramic open space. However, if it wasn't for its proximity to the coast, it is likely that it would take a lot longer to reach significant areas of wild or rural landscape by foot. Since it was constructed, Vernon Terrace has been pushed further and further away from rural landscapes as it became encircled by subsequent rings of lower and lower density suburbs to the north east and west. It is a 40-44 minute walk to get to rural landscape at Hollingdean Park in the north, Manor Hill in the east or the beginning of Devils Dyke Road in the north west. Nearby, St Ann's Well Gardens (5 mins walk) or the larger Preston Park (16 minutes' walk) are two closer natural spaces. However, both are clearly urban landscapes in terms of setting, character and spatial scale.



Vernon Terrace in Brighton

An example from central Europe

- 4.76 The image below is a typical example of a typical 4/5 storey compact residential street in Wroclaw (formally Breslau), Poland. The density here is circa. 150-230dph. This area was laid out within easy walking distance of its rural surroundings. Today it is still only a 5 minute walk away from an area of substantial natural landscape (see image under paragraph 4.77). Subsequent post war suburban expansion has since also developed here, like in the UK, across the opposite bank of the river but it is at a distance and sited in such a way so as not to damage the scale and setting of the expansive wild landscape.
- 4.77 This is not to say that all parts of the city of Wroclaw have fared so well over time. Many neighbourhoods have been encircled by substantial areas of continuing suburban sprawl. Despite this, as the majority of new development has been built in

a medium density form, the distances are almost never more than 15 to 25 minutes' walk. Wroclaw is a city with more than double the population of Brighton.



Wroclaw

Existing areas of panoramic open space within and adjoining Crawley



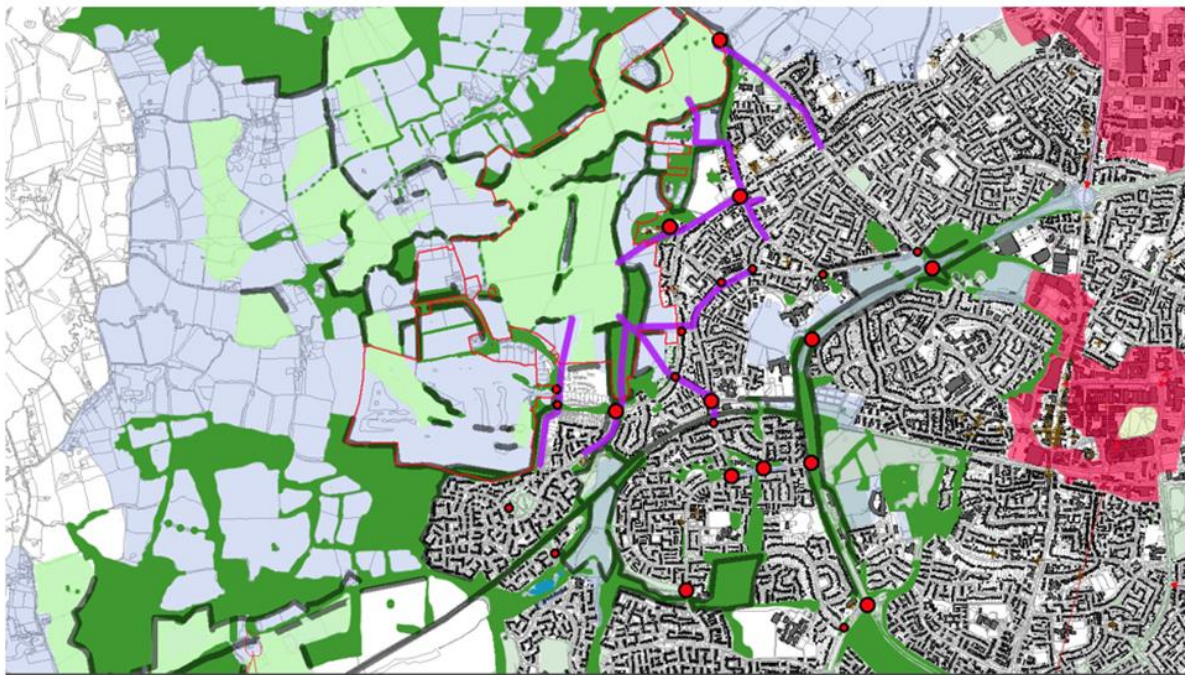
Worth Park, from Somerville Drive (above)

- 4.78 In Crawley, the example shown above of Worth Park highlights how both the vehicular and pedestrian routes naturally and routinely bring everyday movement through and across this panoramic open space asset.



Panoramic wide open landscape west of Ifield Brook (above)

4.79 The example shown above of the open landscape to the west of Ifield Brook is northwest Crawley's first experience of rural Sussex countryside. This is one of only three such expansive, prominent, coherent and vivid locations in the west of the borough.



No more than a 10 minute walk for much of the west Crawley community to be in panoramic rural landscape (---). Strong Edges(---) Nodes(○)

- 4.80 In the illustration above, long distance views and Panoramic open landscape is identified in light green, the wooded areas are highlighted as dark green, and the other enclosed landscape is shown in light blue.
- 4.81 The illustration of part of north western Crawley and its rural hinterland above, shows a number of suggested 10 min walking distance routes. Some of these exist and others could potentially be brought forward if opportunities are taken to improve rights of way.

Principle 4: Taking advantage of opportunities to improve existing urban environments

- 4.82 Principle 4 relates to taking wider spatial/structural opportunities to achieve area improvement:

“The National Planning Policy Framework is clear that local planning authorities should develop an overarching design vision and expectations... that inform the design of the built and natural environment in their area”

NMDG, part 1, page 35 (MHCLG 2021)

- 4.83 Principles 2 and 3 identify two of most attractive and beneficial opportunities offered when existing urban places embrace compact form, (particularly when developed in the context of overarching wider area vision and Masterplanning).
- 4.84 There is no need to seek out some radical design vision or expectation, nor rush to define parameters in relation to massing and appearance. The prize of achieving principles 2 and 3, in any significant measure, is highly desirable for any new or existing community. Not to mention that both principles, when designed based on principle 1 outcomes, should be foundational and prioritised in the first instance. They establish a viable overarching structure upon which other design intent, potential and expectation depends.
- 4.85 There are many opportunities made possible by compact development, but probably one of the most important and valuable opportunities is simply the chance to reinvent, improve or heal existing urban environments, structurally and spatially. Change can be used to achieve improved placemaking, functionality, beauty and better design in general. The aims of principle 3 are a good example of this.

The Opportunity to Reinvent, Improve or Heal Existing Urban Environments

- 4.86 Most people assume new development on ‘Greenfield’ or large ‘Brownfield’ sites offers the best possibility for great new place making and design. However, it would be preferable if this time, knowledge and investment is stitched into and through existing urban areas, not just the obvious brownfield urban sites. These can be places where new vision, regeneration and physical improvement can be more transformative to more people, and more cost effective and environmentally beneficial than greenfield, or even brownfield locations.

“development can be the cause of ugliness - but development can also be the cure”

Living with Beauty Report of the Building Better, Building Beautiful Commission, 2020, MHCLG

- 4.87 In addition to the obvious opportunities outlined by principles 2 and 3, intensification enables a myriad of differing, less dramatic, more localised, yet beneficial and

desirable advantages to existing urban environments. These are just as important, beneficial and attractive as the macro-opportunities, for example, when more people are living in an area this will make new retail more viable – attracting a greater choice of shops, or keeping existing shops open, and perhaps helping secure the re-opening of a local pub or café. A new pedestrian path may be opened up which cuts through formally closed off back lands providing a new attractive short cut along genuine desire lines. Even the simple replacement of an ugly group of structures or left-over open space which attracts anti-social activity or fly tipping can be a benefit. Intensification brings with it enterprise and funding to realise physical improvement providing the opportunity for our existing places to become more beautiful, functional and liveable.

- 4.88 Extensive green or brownfield sites are generally viewed as easier locations within which to promote change as they generally come with fewer constraints regarding the needs of existing residents, although brownfield sites can have significant cost constraints from issues such as contaminated land and the need for utility diversion. Large sites generally have fewer existing inhabitants tight on all of the site boundaries than is the case for smaller sites, which are usually stitched into and through existing urban areas. Although this is usually true, that doesn't mean that these are the optimal places to focus on for new development: just easier.
- 4.89 Large green or brownfield sites empty of existing residents are not necessarily cheaper in terms of land acquisition and overall cost of delivery to completion, and all places whether greenfield or urban infill /regeneration have some existing character of value and requirements related to movement apply to all places. However, they are generally more straightforward, less complicated and likely quicker to realise than working within smaller or more fragmented developable land in existing built environments. Design and planning decisions require less negotiation and support from the local communities.
- 4.90 It is far easier for the promoters of new development to just ignore intensification within the more complicated, fragmented developable locations available within existing urban areas and to simply bypass them and build on larger brownfield sites or add yet another outer ring of urban development. This leaves the existing urban community to just hope any negative attributes in their neighbourhoods slowly improve over time through gentrification or targeted regeneration schemes or targeted government investment. However, if the true and full extent of district or neighbourhood benefit was accurately assessed and used to guide decisions it is likely very different places would be focused on, - i.e. many of our existing low density urban districts. Rather than being guided and directed, in the first instance, by the location and availability of potential green and brownfield sites, a genuine assessment of best opportunity should direct where change should occur. This begins with principles 1-3.
- 4.91 Policy H2 of the draft Submission Crawley Borough Local Plan: 'Key Housing Sites', identifies key housing sites, as allocated on the Local Plan Map. These are almost all located within the existing Built-Up Area Boundary and considered to be critical to the delivery of future housing in Crawley. Paragraph 12.44 highlights how "*New housing is considered integral to the creation of sustainable neighbourhoods in Crawley. The council will ensure that new housing opportunities are identified according to both land availability and the characteristics of individual neighbourhoods*".
- 4.92 The council has endeavoured to ensure that every opportunity for residential development within the borough has been fully considered through the Local Plan process. In addition, as noted in paragraph 12.38; "*density levels of allocated sites have been reassessed in light of Policy CL4 and the council's commitment to making effective use of land*".

Wider Scale Considerations and the Scope of a Masterplan

- 4.93 One of the great advantages of the analysis and output gained from principles 1 and 2 is that it can enable us to better understand, identify and uncover all of the valuable attributes of the existing urban/rural form and structure of Crawley and surrounding countryside, whether a piece of landscape, building or setting, whether hidden or a less tangible (such as a potential vista or onward direct connecting route for pedestrians – components which are usually more difficult to physically identify and map), as well as obvious assets such as Conservation Areas or Tilgate Park.
- 4.94 The first three key principles uncover a new detailed evidence base and overarching framework for the identification of a new area wide vision for where compact development is best suited, also providing the basis of inherent commercial viability for improved public transport and local facilities such as retail. Such evidence includes, for example, ABCA and vision defining design codes. The thresholds at which it needs to be in place is clarified in draft Submission Crawley Borough Local Plan Policies CL2 and CL5. As noted in Chapter 1, some of this work is already being progressed by the council and developers are also invited to help resource the council in bringing such baseline work forward faster than would otherwise be possible. Coupled with the funding and energy required to develop new compact places, this is all likely to mean that delivery of new opportunities will be more deliverable, cost effective and generally financially justifiable.
- 4.95 In simple terms, an existing eyesore (say a boarded up site or building) can be improved if replaced by a new well designed development. When the replacement development is compact in form, this improvement opportunity is likely to also be economically attractive and so be delivered at minimal cost to the taxpayer. The pursuit of large new compact development, particularly where it is to be stitched into and through an existing urban location, enables more substantial and aspirational place making ambitions, visions and masterplans, to actually get built.
- 4.96 For large new proposals, it is essential that a specific development site is first and foremost considered as part of the wider context. All constraints need to be considered (not just principles 2 and 3), so as to generate a local based, realistic identification of opportunities and all the other usual S.W.O.T. analysis considerations.

Creating a masterplan to deliver a vision Moat Lane regeneration project, Towcester

Towcester plans to expand significantly as part of the Milton Keynes and South Midlands Growth Area. The authorities promoting and managing this process recognised that, for the future community to be successful, investment in the town centre was required before this growth would take place. The preparation of a masterplan proved invaluable on the road to delivery of this vision.

South Northamptonshire Council had long recognised the potential of Moat Lane to enhance and extend the town centre. However, as a series of backland sites in multiple ownerships set behind the town's main street, a crucial challenge was to promote the opportunity to key players in the public and private sector, and to the local community.

The Council prepared a planning brief setting out the potential of the area. It recognised the need for a masterplan to coordinate the vision and ensure its delivery. Public engagement led to formal adoption of the brief with strong local backing. Supported

by West Northamptonshire Development Corporation and Northamptonshire County Council, the brief was developed into a masterplan, setting out a detailed proposal for commercial, community, civic and residential development in new and refurbished buildings.

The masterplan formed the basis for consultation with the statutory authorities and served to gain an outline planning consent for the comprehensive regeneration project. It set the context for the first project, the restoration of the scheduled ancient monument Bury Mount, which is now complete. The masterplan also provided a framework for the council to assemble the development site, consult with individual landowners over the detail of design and, where necessary, use its Compulsory Purchase Order powers. Finally the masterplan has proved an important tool in the procurement of a developer partner to deliver the vision.



Above excerpt and Illustration taken from the Urban Design Compendium

- 4.97 Any vision document or Masterplan needs to consider and propose new development layout irrespective of land ownership. This includes all plots both within and surrounding the land promoted for development. The focus of new development activity is almost always targeted just on sites and land clearly identified as developable or within specific development promoter ownership. Work being progressed for Crawley Town Centre as well as through the development management process (i.e. direction given to applicants at both pre-application and planning application stage for large and significant new development schemes), as well as in the assessment of new sites coming forward as identified in the SHLAA to support the Local Plan Review, has translated into a number of site-specific Masterplans and design codes/guides, and produced conclusions and directions for development which: *“Transcend land ownership and embrace components with different timescales”* (Urban Design Compendium, p25, HCA 2013 and English Partnerships 2007).
- 4.98 Valuable opportunities, which transcend land ownership and best design principles should never be dropped or ignored but planned for and designed in a way that allows them to be delivered on a phased basis over time. For example, alignments and routes, which intersect with separate ownerships, can be fully realised over time on a phased basis.

- 4.99 When delivered in a phased manner, for both active travel and public transport, this can make the ultimate cost and negotiation involved in their delivery far more palatable, realistic and cost effective. A masterplan and overarching phasing strategy can incrementally deliver wider pieces of an overall jigsaw of opportunity. As noted above, this is being pursued as far as possible by the council during the planning process, for new development sites in Forge Wood and Crawley town centre for example.
- 4.100 Expectations have to be tempered by realistic timelines regarding natural development change as may apply to the variously owned sites, but it is essential that a Masterplan both identifies and captures the essential elements needed for delivery of identified opportunities in the first instance. Design concepts can be firmed up into site specific, structural design principles and included within an adopted masterplan. This can in turn be further clarified in detail using design codes.

Key Recommendation 05:

Large proposals for new compact form should only be considered likely to achieve planning approval when the following design development steps are taken, as per the thresholds set in draft Submission Crawley Borough Local Plan Policies CL2 - CL5:

1. The identification of opportunities available and a clear design vision developed in collaboration with local communities. Genuine, thorough, Area-Based Character Assessment should be used to identify this potential and enable the location, physical coverage and impact to be accurately mapped and allow for the existing character attributes which inform it to be mapped, providing clear evidence of how the existing qualities of an area are reflected in new proposals.
2. Clearly identify up front the overarching design vision and key opportunities new proposal aims to achieve. Conceptual ideas should be explored before settling on an agreed way forward and producing a site layout.
3. Demonstrate how places are experienced (both currently and proposed), including valuable visual connections into, out, through and beyond the site;
4. Proposals must always look beyond the red line that marks the extent of an applicant's site. Design Principles and Structural Parameters, reflecting the above should be set out at a broad level for the wider area as part of a masterplans. (Including key elements such as the landscape and movement strategy and connections to the wider street network, the position of different area types, key areas of active frontage and the design of the public realm).

It is particularly important, that the baseline output and conclusions from the first four principles are brought together into a single spatial layout or masterplan. This helps deliver best results in relation to site specific connectivity and place making. It also enables the council to capture wider district wide opportunities available and begin to establish overarching visions and practical plans for how to make existing places even better.

3.B Code Wide Guidance

57. In addition to the guidance in step 3a the following guidance relates to all development within the area covered by the design code or guide regardless of area type. All of this must be referenced back to a policy within the local plan.

Context

58. An understanding of the context and character of an area must influence the siting and design of new development as set out in [Guidance Notes Code Content: Context](#). This should be informed by:

- i **Character studies:** All schemes should consider their context and schemes over a specified size should be accompanied by a context study [See C.1 Character Studies](#)
- ii **Historic assets:** Schemes should respect the historic assets of the site and its surroundings, making use of existing structures where possible [See C.2 Cultural Heritage](#)

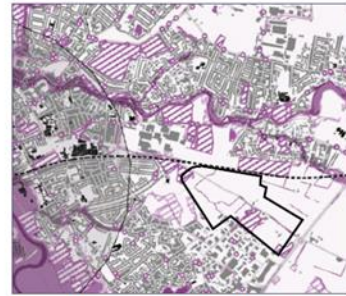


Figure 34. Context Study Extract [See C.1.ii](#) for example of context study content

Above, excerpt from the National Model Design Code, MHCLG 2021 (see Chapter 3)

4.101 The principal opportunity which all seven principles are aiming to support is the identification of new locations for compact development.

Key Output:	Area based appraisal of the flexibility and adaptability of existing buildings and landscape, to accommodate change.
	Building upon conclusions from all seven principles and the detailed outputs noted above in 1.1, 2.1 and 2.2, in particular.
Key Output	Mapping of the plots /sites /structures which could accommodate new compact development and related density range, including indicative suggestions for new development scale and layout.

Based on all safeguard output across the six principles, this output, some of which the council has already developed, as noted above, identifies site specific future development potential, directly highlighting the mix, form and quantity of new compact development which is already delivered and being delivered and will continue to come forward over time.

Is there [Inherent Conflict between New Opportunities and Protection of Existing Character?](#)

4.102 Inherent conflicts between new opportunities and the protection of existing character should not occur as long as opportunities are identified and dictated by a thorough, genuine Area based Character Assessment. Whether it be a new public space, pedestrian route or bus lane a small new area of public seating or the careful stitching of an entire new four-storey scheme into an existing, predominantly two-storey neighbourhood, it is key that all visions, concepts and subsequent detailed designs are dictated to by ABCA output. All new opportunities should be inspired and informed by the existing valued characteristics of an area. This is not to limit the consideration or ultimate delivery of new or alternative ideas and concepts which radically differ from what already exists.

4.103 Good design and its delivery can deliver surprisingly ambitious levels of change while still retaining and enhancing the existing quality characteristics of any type of area. Key to this are good quality masterplans, design codes and the skillset outlined in principle 5 below. However, outcomes from ABCA will also identify locations where there are only limited opportunities for significant change or intensification.

- 4.104 Not all areas are suitable for intensification. A good example of this is the Crawley High Street conservation area where upper moderate density (above 150dph) and significant physical change in general would be detrimental to its historic built fabric structure, setting and character. In the case of a setting such as the Ifield Village Conservation Area, even a minimum density of 45dph would likely be inappropriate.
- 4.105 In general though, most areas can stand to benefit from new opportunities provided by intensification in nearby, adjoining or surrounding areas, such as improved movement options, extended zones of landscape or new facilities, shops and cafes for example, opening up now that more people live nearby to make them commercially viable. The historic Crawley Town Centre High Street will likely become more vibrant and attractive with increased footfall as new high density residential development is realised further to the east and south on sites identified in the Town Centre SPD.

Many Small Improvements – Not just the Big-Ticket Opportunities

- 4.106 As previously discussed, many of the opportunities generated and made viable by intensification and the development of compact form, can be modest in nature but provide substantial improvement to the functionality, liveability and beauty of a local area. For example, sustainable movement (see principle 2), is vital to compact form. At its most basic, this requirement will result in greater space being needed to accommodate improved active travel infrastructure - wider pedestrian paths and new cycle infrastructure. Sometimes this will result in changes or reductions in the vehicular road space or through routes, leaving space in the public realm for slower activities, such as places to sit for quiet contemplation or for children to play.

There are many variants to physical subtraction of roadbed space for the benefit of other, already evident uses. Spots of intense congregation outside schools, some theaters, certain store groupings, could be given outdoor lobbies intruding partially into the vehicular roadbed, thus making their attrition value permanent instead of ephemeral. Small parks could be carried across a street, thereby creating dead ends. These would still permit, from either direction, vehicular service access to a street. But they would prevent vehicular through traffic except in emergency".
"The Death and Life of Great American Cities", p364, 1961, Jane Jacobs, Random House

- 4.107 Other opportunities offered by compact proposals include:

- | | |
|---|--|
| 1 | New non-vehicular movement routes which are determined by where people want to go within and beyond a specific new development site. |
| Delivery of pedestrian and cycle paths to take advantage of direct desire lines as much as possible. (This may include those already proposed within the Crawley Local Cycling and Walking Infrastructure Plan as well as others identified during the ABCA process.) | |
| 2 | Enabling everyday experiences to become more special. A more enjoyable experience (improving quality of life). |
| For example, opening up a new vista or access into a significant structural landscape, previously cut off from busy locations such as a school entrance or neighbourhood centre. Or redirecting part of an existing active travel route, used by many on a daily basis so that it takes advantage of and captures views, panoramic open space and other identified physical assets and can be enjoyed as part of everyday life. | |
| 3 | Opportunities for better enclosure and /or animation of existing public spaces and natural features. |
| Bespoke, area and site based, good quality design can produce new built forms which improve both the character, life and beauty of an existing urban setting. | |

- 4 Opportunities to enhance, amplify and expand existing character features, unlocking and unveiling hidden attractions.

Compact form can literally mean less land will need to be developed when compared to low density form. This can allow for the expansion of or better connections to quality landscape features or the opening up of new views and vistas into, through and out of development sites. These benefits can increase the desirability, attractiveness and value of existing urban settings.

- 5 Opportunities for nature regeneration rewilding and ecology more generally.

2 and 3 above show practical ways in which this can be achieved. The opportunity proposed in principle 3 would particularly advance this ambition.

Zooming In and Zooming Out: Identifying and Determining the Context and Scope of any New Opportunity

4.108 The identification of opportunities as well as any individual character area appraisal should not be considered in isolation and should always be reviewed under a variety of geographical extents, with scale and detail changing depending on the extent of area under consideration. There should be deliberate cross-referencing, overlap and duplication of edge structural elements where one ABCA boundary meets another.

4.109 At the same time, as new opportunities are being considered in the early work stages of a project, the design team needs to continually work across different scales in order to identify how a macro ambition can still be realised at restrictive points. For example, when considering the layout for a new cycle route they will need to zoom in to one particular section to understand how at least the minimal standard of cycle infrastructure can be adapted to move through a wooded area by possibly splitting alignment away from an associated vehicular traffic lane or pavement in order to protect and retain a tree or a landscape feature such as an attractive hedgerow. However, the general direct nature of the alignment will continue; it is just the application of the layout which will be adapted as the context dictates.

4.110 The following image illustrates the process of determining the scope of a new vision, and defining and delivering design codes:



Example above taken from Prior and Partners

“The idea is that a good code, based on a thorough understanding of the character, constraints and opportunities of the area it covers will bake in quality requirements without full design proposals needing to be drawn up first. If used in a formal way, codes can be seen as visual or numeric

planning policies, setting out what needs to be done to get consent. Instead of using general statements of intent as most planning policies do, codes are based on diagrams and drawings; they set minimum or maximum limits, or value ranges for issues such as heights, window to wall proportions, street widths..... At their best they can allow for contextual analysis to inform the testing of different output options and provide a golden thread of quality through the lifespan of a scheme. if used on a site-by-site basis, they can be combined with masterplans and parameter plans to link strategic decisions to detailed design ones... But design codes do not come cheap. They take a lot of time, skill, leadership, commitment and work.”

Esther Kurland, The Urban Design Group Journal, Summer 2022 issue 163

Suggested Geographical Extents – the Various Scales to be Considered

- 4.111 The outputs listed below consider the identification and relevant extent of area which needs to be considered in order to properly shape and determine opportunities, masterplans, codes and the production of ABCA. The town centre is used as an example to illustrate the value and scope the various ‘jumps in scale’ and detail require. The first output ‘scale 1’ is applicable only to a number of areas of the borough such as the town centre or where a district wide Character assessment is required (e.g. where all the western neighbourhoods being appraised together as a distinct region within the borough – Ifield, Gossops Green, Ifield West, Kilnwood Vale and Bewbush). One example of the benefit of this wider geographical consideration of context is that it will help to pick up long distance push/pull factors/attractors which would help in better guiding improved non-vehicular movement routes within the borough and to and from the town centre particularly.
- 4.112 The town centre, for example, is an area which both attracts and provides, and generates services and movement to all other areas. It is important to understand how it spatially relates to its wider context in order to identify both its immediate urban structure and any new potential opportunities in relation to this much wider geographical context. The same is true of a location like Manor Royal as it generates so much movement across the borough.

Scale 1 Output:	Wider, overall, borough district scale (including consideration of adjacent urban/rural setting and context).
<p>In the case of the Town Centre, this scale identifies:</p> <ol style="list-style-type: none"> 1. The overarching Town Centre, urban structure elements. 2. Significant areas of Structural landscape immediately outside of the town centre boundary (e.g. Northgate Avenue, Goffs Park and Southgate Park) and all others which partially or appear to physically connect the centre to the built-up area boundary. 3. Movement structure outside of the town centre boundary which physically connects to the town centre or is relevant to it. Routes for all modes which radiate to and from and around the town centre, such as the dominant axis of Brighton Road/Crawley Avenue. This includes the most direct routes to: <ul style="list-style-type: none"> - valuable areas of panoramic, rural and /or natural and semi-natural landscape both within and outside of the borough. - all neighbourhood centres. - Primary attractor areas such as Manor Royal, Tilgate Park and Gatwick Airport. 4. Consideration of connections to and from development outside the built up area boundary. Again, focusing on movement and structural landscaping in the first instance, this wider area would likely cover an area starting west of Faygate and continuing north to Charlwood and then east to Horley town centre. South east to include all of Copthorne and Crabbet Park before returning west via the south of Pease Pottage and Colgate and then north to Faygate. 	
Scale 2 Output:	District scale, e.g. The Town Centre Area as a whole (including consideration of immediately adjacent context).

Suggested geographical extent: West as far as Ewhurst Road, South to Goffs Park Road/Hawth Avenue and north to Barnfield Road/Crawley Avenue.
 A similar focus on elements outlined above but including the following jump in defining characteristics of the area especially the following structural components:

1. movement routes (paths);
2. linear boundaries (edges);
3. character areas (including conservation areas);
4. strategic points (inc. movement nodes);
5. landmarks.

Scale 3 Output: Detailed individual 'Character areas' within the overall Town Centre Area.

Suggested geographical extent: Distinct areas or places such as the High Street Conservation Area or individual public open space assets and their settings such as Memorial Gardens and its immediate context.

<p>1. Local Authority Some elements of the code may apply to the entire local authority area.</p> <p>2. Area type Some elements of design codes can apply to types of area, for example, all villages, or all inner suburbs.</p> <p>3. Development Sites Parts of the code can relate specifically to development sites such as urban extensions, new settlements and other large sites where the code may be guided by masterplans.</p> <p>4. Plot Parts of the code can be used to guide individual building plots, for example relating to a single house or block of flats, whether they be in existing urban areas or new development.</p>	<p><i>“A coding plan will be needed to show the area covered by the code or guide. There is an option to use area types so that the guidance can be adjusted to reflect local character. The commentary in Part 2 provides a checklist of content for design guidance or policies that local authorities may consider including in their local plans if a design code is not appropriate.</i></p> <p><i>Geographical extents, as discussed in the NMDC (MHCLG), 2021.</i></p>
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Principle 5: Beautiful places, good quality design and the essential role of the Architect, Urban Designer and Landscape Architect

“Research has consistently shown that high quality design makes new residential developments more acceptable to local communities and delivers huge social, economic and environmental value to all, yet we are still failing in this regard across England.”

(Professor Matthew Carmona, The Bartlett School of Planning, UCL) chair of the Place Alliance. Place Alliance report 2020 - An electronic version of the publication is available from www.placealliance.org.uk)

4.113 Expertise, skill and experience is essential, generally from Architecture, Planning, Urban design, Highway engineering, Economic Development, Property, Ecology, Landscape and Heritage professionals. Design team leaders must be individuals who understand the macro as much as the micro and can jump across scales at ease. They will need to be both imaginative and pragmatic, strategic thinkers who also

have 'an eye for detail' and who can identify and collaborate with stakeholders at the right time. In addition, strong and inclusive leadership is essential.

- 4.114 As discussed in earlier chapters good compact design is more complex to do well compared to low density form. Therefore, even greater guidance, design skills and controls are needed in order to produce good compact places as illustrated in Chapter 2 and Chapter 5. Local authorities need to have enough good quality expertise/resources to enable them to guide, promote and manage (at planning stage), the quality of such schemes to control design quality from concept through to discharge of planning conditions (this includes detailed understanding of design and related construction costs, land value determination and overall development management). Otherwise, intensification will be slow. In the case of Crawley, the focus has thus far only been possible in Crawley Town Centre, and in response to individual new development proposals which have come forward through the planning process.
- 4.115 Quality control is very important: a poorly designed, compact form, even at optimal, gentle density ranges, will usually result in homes and places considerably worse than a similarly poorly designed low-density comparator. It will take more resources to improve a poor quality place which is already compact in form and it may be considered more cost-effective to remove, improve and retrofit existing low-density areas.
- 4.116 It is relatively straightforward to assess and control compact form so that it does not result in existing neighbours being subjected to issues such as overlooking, overshadowing and unreasonable loss of light, and aspect, or car parking blight. However, skill, time, care and bespoke site-specific design solutions are needed to produce beautiful, compact places, and avoid the pitfalls identified in the Place Alliance study, see below:

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 pavements), 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. Recognized as too low by Government in their proposals for a far more ambitious Future Homes Standard to cut carbon emissions.

A housing design audit for England' Place Alliance 2020 (p8) www.placealliance.org.uk

Key Recommendation 06:

Building upon the output of Key Recommendation 05, it is essential that detailed design requirements are set out for new compact developments and places. In particular, the design codes as set out in the NDG and NMDC should be used (while still allowing for innovation and flexibility).

With limited specialist design resources, councils need to focus on key opportunity areas to promote new compact form, and need to allow adequate time for design testing, local consultation, workshops and research to tease out design concepts, options and parameters which will translate into relevant SPD's, framework plans, masterplans and Design Codes (as appropriate). Decision making should be supported by the specialist oversight of Design Review Panels or similar.

Such work ideally needs to be led by local authority 'in house' specialist designers and planners (both officers and private consultants), working independently of private developer/site promoters, albeit allowing collaboration and partnership where appropriate.

- 4.117 The form of compact development and the new places it creates has to be carefully considered and delivered well in order to attract and retain private ownership, their property value and any future uplift in value in line with adjoining low density housing typologies, i.e. poorly designed compact places will not increase in value in line (comparatively) with adjacent low density residential stock. This in turn will entrench negative attitudes to compact development. The same care is just as important in relation to the design of compact residential development for the social rented sector, for those in the community with less choice, agency or resource to determine where they live and what should be built.

“To take beauty seriously may mean costly procedures, it will mean involving architects and urbanists, and not merely to stick a plaster on the wounds; it will involve some changes to the house-builders’ business model. Some of these processes will not come for free, but equally they may add more value over time. The extra cost, as long as it is anticipated, will also be assumed into the land price”

*Living with beauty: report of the Building Better, Building Beautiful Commission, MHCLG;
30 January 2020*

- 4.118 The Royal Institute of British Architects (RIBA), responded in 2021 to the Government's Building Beautiful Places plan, which included an updated National Planning Policy Framework and new National Model Design Code. RIBA President, Alan Jones said:

“Successful design is critical to the delivery of homes and communities fit for future generations. I therefore welcome measures that place greater emphasis on design quality, sustainability and placemaking. This includes the community-focussed approach of the National Model Design Code, which will see planning and development experts work directly alongside local authorities. I am also pleased to see the Government recognise the need to use the UK’s world-class design expertise to deliver beautiful, green homes and places. However, I remain seriously concerned that wider planning system reforms – including the extension of Permitted Development Rights – undermine the stated commitment to quality design.

Good design is about much so more than the surface appearance. These planning reforms need to level up the quality of new housing developments across England; this means requiring developers and local authorities to think about the long-term sustainability of new homes and communities, as opposed to cramming of the greatest possible number of homes onto a site.

The absence of critical guidance that effectively demonstrates the importance of enlisting knowledgeable professionals such as architects at the earliest, most critical stage of a project also remains a huge omission.
<https://www.architecture.com/knowledge-and-resources/knowledge-landing-page/riba-responds-to-governments-building-beautiful-places-plan>

Principle 6: Good Quality Residential Design and ‘Gentle’ Density

- 4.119 Once strategic infrastructure, existing character and new opportunities are identified in regard to the wider urban structure (in line with the above five principles), attention needs to focus on more detailed issues and in particular the standards and specification of new homes and the private realm in compact places. Good quality and often bespoke design is essential in a compact context and particularly essential in relation to residential design.
- 4.120 The design and layout of housing, has for centuries been well understood, appreciated and applied across Britain. Conversely, apartment and maisonette living lacks the same understanding or application. Apart from the positive perceptions associated with penthouse and loft apartments, the preference of most UK urban dwellers would be to live in a house. People generally believe that apartment living offers less conveniences and flexibility and unfortunately this has usually proven to be true. Compact residential amenity, and design standards more generally, need to improve significantly.

“The key to successful high-density buildings as places to live is in the quality of the internal design and the external space in which they sit. What also matters is the way they are managed day to day. As density and height increases, these factors become more important and greater scrutiny is needed to maintain the quality of high density and high rise living.”

*Lessons from Higher Density Development, GLA (2016)
London Plan density research*

Traditional Low Density v Compact Housing Typologies

- 4.121 In the late 1980’s, housebuilders began to construct significant quantities of new apartments within central urban locations in the UK. Town and city centres had, in the preceding decades, lost so many of their residential inhabitants to new sprawling low density suburbs that there were many vacant buildings and sites available as well as brownfield land. By the late 1980’s, local authorities across the nation embraced almost any new development proposal which reversed this trend which had by this stage left most town and city centres hollowed out and, in particular, lacking in residents.
- 4.122 For the next 10 years, the industry new development or typology preference was for very small townhouses or apartments. It was a start, but these homes seldom matched the amenity or space standard of a typical 3-bed starter house. The difference was and is particularly stark in relation to general space standards, the provision of outdoor private space and storage.

- 4.123 There is nothing wrong with the provision of smaller apartments. The design, specification and amenity value they provide is exactly what some people need. The problem is that this was really the only new form of an affordable moderate density home on offer to buyers - a binary choice between a standard low density two storey house or a small, higher density apartment with poorer amenity. By and large, the same continues to be true today as a comparison of the qualities offered by a new standard 3-bedroom semi-detached house or 3-bedroom apartments offered by the volume house builders, confirms (this is considered in more detail below, see paragraphs 4.136 – 4.140).
- 4.124 Because of this, the average income homeowner or renter is only given three options: either choose to live in one type of apartment; pay more to live in a low-density house; or move away to a less accessible location (to afford a similar house for a cheaper price). Where are all the new moderate density houses and flats designed so as to offer qualities comparable to a low density ‘starter’ house?
- 4.125 Different home type options are necessary, especially when the differences are fairly reflected in the differing purchase price or rental cost, not everyone has need of all the options offered by a standard house design; some for example have no real interest in a garden and certainly not the associated upkeep and maintenance. This is not the case for the majority and there are good reasons why the standard semi-detached house continues to be so popular. A family moving into a 3-bed apartment for example should be able to expect to find the same qualities as they would get with a low density, 3-bed semi (e.g., an equivalent area of open space to a back garden, storage space in the attic, somewhere for the bikes, or options to extend to the rear). However, this is very seldom on offer. In order to genuinely develop more compact, sustainable places and homes, then there needs to be compact residential typologies which can genuinely compete.
- 4.126 Of course, families choose a home and location for many reasons, not just the quality of the built environment, residential amenity and choice of layout, the existing character of an area (principle 1) or access to sustainable transport (principle 2). Living within the catchment area of a good quality school is one such key consideration but not part of the scope of this study. However, access to services, facilities and employment in general are key determinants in compact places, which, once established, become popular and successful.

Only Offering Buyers and Renters a Binary Choice of either a Flat or a House

- 4.127 Despite the fact that some of the most sought after and expensive neighbourhoods in England are built at densities in excess of 120dph (see Chapter 2), there has been little focus on developing new compact/higher density homes. Many developers claim this is due market preferences, but this is not borne out by the prices paid for moderate density homes in urban centres across the UK. It is likely that simply producing a binary ‘product’ of either a low-density house typology (under 45dph) or a single apartment typology to a higher density range, is easier for the industry to deliver.
- 4.128 For these limited options, firms really just need to be geared up to deal with two realities, construct and sell houses or basic blocks of flats. The in-between ‘gentle density’ as identified in the Living with Beauty report, require more bespoke layout typologies and site-specific design alterations. These typologies are by their nature more nuanced and varied and require greater expertise, time and fees to be spent on design and planning professionals. It also makes commercial decisions more complex than schemes when the basic ‘product’ is standardised and generic, as they are easier to control, quantify and estimate in terms of potential outcomes and deliverables.

- 4.129 There are two other key justifications and outcomes which further compound the industry focus on this binary offer. Firstly, issues in regard to semi-private space or common areas – specifically in relation to compact residential development, and secondly, when homebuilders pay so much for a development opportunity that they can then only offer a basic design typology, or the binary choice mentioned already, and the minimal specification possible in order to achieve a planning permission and make sufficient profit.
- 4.130 The standard layout of a house, or a standard flat, results in easy-to-understand requirements in relation to common areas in terms of cost, maintenance, security and ownership, whether such areas are internal or external. For residential density in excess of 60dph, this becomes a more complicated and significant issue. This must be better understood, organised and designed in order for compact living to be made more attractive. As such, good management, maintenance and design of communal areas is listed as the seventh principle.
- 4.131 The binary offer has also come to dominate because it is frequently ‘fixed’ in advance or ‘baked in’ to commercial terms or a development business case by promoters even before they take ownership of the land being developed. The price developers pay may be dependent on a precise formula of construction cost, completion target and sales value being achieved, all based on strict adherence to the binary typology offer. This results in space for minimal flexibility and divergence from the norm.
- 4.132 A firm may have purchased a site yielding far more units per hectare than its surrounding neighbourhood context, but that ‘additional’ uplift in land value will often have already been captured by the previous landowner. This leaves little financial margin for the construction of a better and more generous scheme, despite the significant increase in real land value delivered by new compact form. On this basis, ‘viability’ arguments by applicants are in reality distorted and skewed – uplift from compact form is lost before some of it can be correctly diverted to pay for the basic requirements of compact form. This is a particular issue where schemes are purchased only after obtaining outline planning permission and when there are no detailed design guides or design codes yet in place to ensure a local authority can promote gentle density ranges or simply better design standards in general to help with any planning refusal appeal.
- 4.133 Without the time, investment and control being developed and achieved by local authorities, the binary housing typology options will continue to dominate permitted schemes. This is mainly because of:
- a) The imperative to meet housing need.
 - b) The severe restrictions on local planning authorities being able to reject applications based on poor unit quality or by simply relying on a general policy declaration that alternative, gentle density typologies need to come forward. Such refusals will invariably fail and be reversed at appeal stage given the imperative to meet housing need.
 - c) In high demand areas of England, primarily the large cities, where the shortage of new housing is acute, buyers have no choice but to accept the binary option, particularly when this means the avoidance of a long car commute. A majority see this choice as a temporary solution, no more than a start on the ‘property ladder’ particularly when then have a growing family. This results in such apartment schemes primarily being occupied by transient, temporary communities. Due to lack of alternatives this basic apartment typology continues to sell giving no incentive to the housebuilding industry to offer anything better.
 - d) The previous point (c) is less significant in a smaller population settlement such as Crawley as it is a shorter physical distance to commute out of the employment areas to get to buy houses in the outer neighbourhoods and surrounding small towns and villages – literally because of the distances involved (something far

harder to do from a city like Bristol or London). This is confirmed by the more limited commercial attraction for the development industry in building high density schemes (i.e. apartment schemes in excess of five levels or greater than 200dph), in towns such as Crawley, Haywards Heath or Redhill compared to say central London or Brighton. When these standard typology apartments are not selling well, then the call goes out to rezone more countryside and greenfield land instead to allow more houses to be developed because “people don’t want to live in flats”, and the market knows best.

“The densest and tallest buildings are only viable in the highest value locations (see Chapter 9). This in itself places a restriction on the extent to which very dense or tower development will take place across London. Two of the case studies showed that towers just outside the central prime areas had significantly slower sales rates and were dependent on a large proportion of shared ownership sales or marketing to the private rented sector (Strata Tower, Southwark and High Road, Stratford).”
Lessons from Higher Density Development, GLA (2016), London Plan density research

- 4.134 It should also be noted that the implications of the remote/home working revolution, fast tracked by Covid, is not yet properly understood. Of course, this has resulted in an obvious need for more home working space in residential layout design, something the industry can easily cater for, as well as the benefit that there are now more daytime customers for neighbourhood shops and cafes. It has also highlighted the importance of private amenity space, and the accessibility of natural greenspace in the local area.
- 4.135 However, now that many only need to be in the office once or twice a week, a long-distance commute is less of an issue. A whole new set of options are now opened up and it is still too early to determine the new geographical trends of where people will wish to live. This potentially has significant implications for efficient use of land, consolidation and intensification of existing sustainable urban areas and the need to deliver viable sustainable transport across a wider area.

Residential Design at Higher Densities: Key Matters concerning Layout and Amenity

- 4.136 Housing requirements and average occupancy have significantly changed over the years, and today there is a need for a greater mix of residential options. The size of the average family unit has very much reduced in size compared to even the 1990’s. Notwithstanding this, the binary choice between house and flat is stark and this is particularly a problem for families with children, or people who want to live in a compact setting but also love their garden. Obviously access to communal open space or a nearby allotment could be some compensation but still why should the majority of compact residential developments only offer little more outdoor private space than a small patio or balcony?
- 4.137 There are key standout issues which particularly matter to compact residential design which require far greater care than in typical low density typologies. Improving the quality of compact design, in relation to all these factors, is key to changing both perceptions as well as the basic quality of life for those living in flats or apartments and maisonettes.

“Apart from the question of privacy, the critical issues connected with living in flats can be listed under three main headings:
1. quality of internal planning and layout;

2. *sharing circulation spaces (that is entrances, lifts, stairs and corridors), common facilities such as refuse disposal, parking, and cycle storage, services such as aerial systems and deliveries, and most importantly, maintenance;*

3. *outdoor space, aspect and orientation”.*

The Housing Design Handbook (2010) David Levitt, Levitt Bernstein Architects

4.138 The issues in more detail include:

Privacy and overlooking

For compact form, people are literally living closer to one another so the simple 22-metre separation rule between rear opposing windows is no longer applicable. A wide variety of alternative design solutions are required, including screening and staggered and angled views from living spaces.

Outside the front door

The public / private interface at the threshold and the connection to the street. Although many terraced houses in historic towns and village have their windows and doors right up to the pavement, new development should always be able to offer a layout which provides some level of privacy and transition between the public realm and a ground floor bedroom or living room window.

Storage

The provision of private storage, both internal and external, needs to make up for the lack of a garden shed or the traditional attic storage space. Secure private storage space for items such as bicycles, muddy boots or an electric scooter is necessary. This can be accessed from external semi-private communal areas, in addition to that provided within the apartment, and made available at least to three person/family units, in place of the standard garden shed or attic space offered by low density housing typologies.

Sunlight, daylight and ventilation

The layout of a typical semi-detached or terraced house offers simple solutions in this regard. The standard consideration when buying a house is determining whether it comes with a south or west facing rear garden. This is the type of concern new apartment residents could only dream about as a majority of flats are only single aspect. New developments, even today, frequently construct units which only offer a north or east facing single aspect orientation. All homes should be either dual aspect or, where single aspect, south facing. In limited numbers, in a high-density scheme, dual aspect can also be achieved by adding projecting ‘bay’ extensions to the main living spaces, positioned proud of the principal elevation, these ‘bay’ elements offer potential for glazing in two directions. Case studies investigated as part of the ‘Lessons from Higher Density development’ report for the Greater London authority (2016) identified particular issues with poor daylight in rooms and living spaces that were too hot or too cold. Single aspect flats are also more associated with overheating.

The overall quality of internal space (planning and layout)

A minimum of 2.7metres of floor-to-ceiling height should be standard as compensation for the loss of other attributes offered by the standard starter house. It is also essential in order to allow for light penetration into deeper room plans. It is also worth noting that the attractive apartments that appear in popular culture, TV and glossy magazines, almost always have high floor to ceilings and rooms which open out onto balconies with views across fascinating streetscapes and spires. Internal layouts need careful consideration in higher-density developments, particularly for family accommodation, where the size and quality of private outdoor space is also important, particularly access to such spaces so that they are accessed

directly from main living areas and kitchens. The privacy, daylight and general quality of external private amenity space as compensation for a standard rear garden is also important.

External space

The lack of or unsuitable private and public amenity space is too often a major issue in higher density design. The noise from the use of outside amenity space is also a significant and often overlooked issue. Communal amenity space provided as residents' lounges/ meeting rooms can be a potential alternative to external private amenity space, particularly for taller buildings where private balconies are small or physically constrained.

The flexibility of a house to allow for some change

For an average 3-bed house, there is usually scope for some flexibility in layout. A small extension to the rear, maybe an attic conversion or just a change to the ground floor layout. This helps a house to become a home and to an extent adapt as needs arise, without having to move out. Apartments can be designed to offer similar flexibility, albeit not in the same manner, but such units are rare in new developments. Gentle density typologies lend itself far better to this, but as highlighted repeatedly already, there is a severe lack of compact development at moderate density built or being built.

Costs, Maintenance, security and ownership of the common areas

See principle 7.

- 4.139 Overall, well-designed places include a clear attention to detail. This considers how buildings operate in practice and how people access and use them on a day-to-day basis, both now and in future. The lack of choice for residents is a significant negative in regard to basic quality of life for those on an average wage but there is no reason it cannot be changed. We can't all afford to live in a house but we can have compact homes which at least match the level of amenity traditionally offered by a small house. Other European countries have achieved this.
- 4.140 Consider the other famous major purchase people make in life: new car - there is an abundance of choice and options available, people generally avoid purchasing a model which attracts poor reviews or doesn't offer at least as good a standard as its competitors. In the housing market, this is only possible when purchasing a premium home. In addition, there is the choice on offer for customisation, optional extras that can be added to a car, and for all brands, not just for expensive Bentleys or Porsches but also for the standard cheaper model ranges.

“New garden community developments can be easily designed to achieve this density – but applying it universally across a development would not produce the ideal variety of housing stock or an attractively diverse environment. In such situations, where there is the scope to construct a new layout model based upon sustainable urban design principles, density should become a by-product of the process rather than its driving force. Many emerging development sites require a minimum development density target which is applicable to the different development models suited to the context of the site. The most compact development is required in the most sustainable locations, with a progressively reducing minimum density beyond these locations. There is no upper density limit within these specific areas. By undertaking an appropriate context analysis, designers and Local Authorities will be able to determine the appropriate target density. These decisions need to be informed, in part, by the accessibility of the site, volume of development and the proposed

provision and mix of amenities (such as shops, green spaces and schools) that are so vital for higher densities to function. Some of these amenities can be established or improved over time either via the process of new development or through the management of market forces. Nevertheless, within larger developments (of 50 hectares or more) it is essential that these amenities are in place at the beginning of the development of the new community)."

Essex Design Guide, Higher Density Development (2018)

- 4.141 Development costs and density in relation to construction cost and commercial viability are not considered as part of this study. There are many detailed studies and reports already available in relation to this, not least Crawley's own viability assessment recently prepared as part of the draft Submission Crawley Borough Local Plan 2024 – 2040.

Principle 7: Good Management, Maintenance and Design of Communal areas

- 4.142 Effective management in all schemes with common areas is vital, regardless of height and density. Management input is needed during the design of a building (so that it will work for residents once occupied) and thereafter, to ensure that the quality of the services residents receive are maintained.

"The range of services provided depends on the scale and type of scheme although there is a typical core of services including, for instance, cleaning, security, lift maintenance. In mixed tenure schemes, the management is set up to deliver an appropriate level of service to different tenures which is reflected in the service charges to residents of those tenures".

Lessons from Higher Density Development, GLA (2016) London Plan density research

- 4.143 Issues concerning common areas are much more straightforward to deal with when designing, constructing and living in a standard house, as mentioned above in principle 6. Having to pay a small management fee for a semi private green space or a party wall dispute is usually as complicated as it gets when you live in a house. Compact form, even at moderate densities above 70dph, automatically introduces considerably more points of contact between one home and another. The most obvious examples are the need for a common lobby or car park and cost of associated running and maintenance and upkeep costs.
- 4.144 All of this needs to be carefully designed and planned for from the outset, alongside long-term management structures. All need to be realistic and follow proven or established best practice so as to be viable, cost effective and straightforward to maintain.
- 4.145 There are many important factors related to the common areas which are less obvious in pure aesthetic or unit specification concerns. Noise and nuisance is an issue even with standard detached housing but in a compact typology the points of contact and proximity to more neighbours is clearly increased. Also, dealing with waste requires a considered design response and can cause significant problems when it works poorly.
- 4.146 A majority of apartment schemes come with standard, default leaseholder agreements which can place restrictive conditions on residents. This can be the case even when such schemes are owned and controlled by owners – for example, no pets and no personalisation of external private space. Children are discouraged from playing within the common areas of many schemes. More than simply having a 'no ball games' sign, often schemes have been built with no consideration of facilitating

exploration, climbing a tree or space to just simply running around between and behind set piece landscaping.

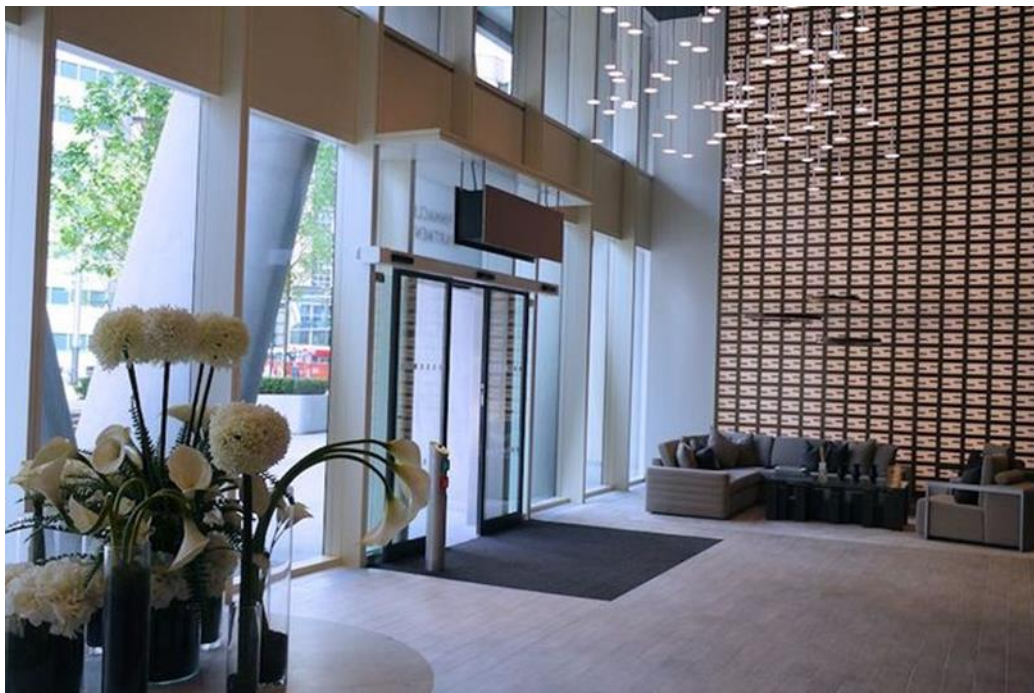
- 4.147 Owner-controlled management is usually dependent on voluntary director governance by owners. Where management agents are employed, as is usually the case, their fee and brief is usually limited, and defined, managed and controlled by their client, the Company directors/freeholders.
- 4.148 Opportunities for flexibility and personalisation outside the property's four walls – such as a well-designed minor extension or changes to an opening or threshold, is limited. Rather than applying for permission to a local authority, the scheme management company is expected and required to also make determinations on design and the protection of adjacent residential amenity. Strict controls and limits are, therefore, understandable. Flexibility and the potential for change can only be achieved if it is actively designed in to schemes on day one and a viable, design code or 'user guide' is passed over to new owners and the management company by the developer as units are sold and ownership of the common areas are transferred from developer to a management company.

Basic Design and Layout Parameters concerning Common Areas

- 4.149 For a semi-detached house, key parameters include a minimum back to back distance between opposing windows, a clearly designed space for refuse and a car parking location. With moderate and high range density there are many more concerns. Key areas include:
- i. The need for attractive communal circulation spaces which avoid long, narrow, badly-lit and ventilated internal corridors. Flats grouped around a core is usually the ideal arrangement. This allows for the shortest distance from front doors to lift and stairs
 - ii. The use of external gallery access or central atria to improve natural ventilation and dual aspect options.
 - iii. The promotion of integrated tenures with buildings so that a residential development can be 'tenure blind'. At best this means an entrance lobby and cores being shared between owner-occupiers and shared ownership occupiers. However, there are many varied ways to achieve a genuinely 'tenure blind' neighbourhood.
 - iv. In apartment schemes, limiting the number of dwellings accessed per floor at two or three improves passive management of the common areas. However, the costs of lift provision and ongoing service and maintenance are an issue. For schemes at densities below 150dph, this means there will usually only be four floors and no more than nine homes that benefit from, and therefore should pay for this cost. In a higher density 10 storey development there is a better economy of scale.
 - v. External gallery access has the added benefit of facilitating cross ventilation and allows for alternative floors to be dual aspect when designed in conjunction with a two-storey maisonette typology.
 - vi. In higher density schemes, an inviting lobby area and main entrance can go a long way to making up for the some of the benefits lost from not living in a house. It can look and feel like a four-star hotel standard, even when not supervised by a concierge. Such spaces can be great places for casual social encounters and help foster closer neighbourhood ties, promote passive interaction between residents and help reduce social exclusion and loneliness.



(Above) Vita apartments lobby, Ruskin Square Croydon



(Above) An inviting, spacious entrance foyer to a high density scheme, (Croydon).

The Seven Principles – In Conclusion

4.150 One of the baseline guidance documents referenced both in the National Design Guide and Living with Beauty report, is the Urban Design Compendium (first referred to in Chapter 3). The UDC's purpose is to:

“help equip all those involved in the delivery of places with guidance on achieving and assessing the quality of urban design in developing and restoring urban areas”.

Urban Design Compendium 1, page 14 www.udc.homesandcommunities.co.uk/ / <https://www.gov.uk/government/publications/urban-design-compendium>

4.151 Although concerned with summarising key aspects of urban design and the related project development process required for all types of good quality places (whether compact or not), its structure follows a chronology and focus similar to the seven principles proposed in this document.



Opposite:
Urban Design Compendium 1, page p29.

The Greater London Authority report, ‘Lessons from higher Density development’ report (2016) considers further detailed matters in relation to compact form and issues identified with higher density residential design and outlines fifteen potential solutions.

However, this document is particularly concerned with high density development design. Schemes in excess of 200dph and less so the ‘gentle’ or moderate density housing typologies.

The seven principles compare well with London Plan policy also:

“Taking into account local context and character, the design principles in Chapter 7 and public transport capacity, development should optimise housing output for different types of location within the relevant density range shown in Table 3.2. Development proposals which compromise this policy should be resisted.”

(London Plan Policy 3.4)

4.152 Compared to standard two-storey house design, successful compact development is dependent upon the detailed consideration of a far greater number of vital considerations which not only have to be designed well but also managed and maintained on an ongoing basis. In design terms, there are so many more factors which need to be carefully thought through, particularly in locations where new

proposals require bespoke design approaches and where new compact forms need to be moulded and crafted to suit and complement their surrounding context.

- 4.153 In comparison to more typical traditional, low density housing typologies and considering the essential features of what makes a house a home, there is a long way to go regarding the design of compact homes. It really is far more difficult to get right and requires far more time and expertise from a professional, proven and experienced architect-led design team. Also, a far greater amount of time needs to be spent on understanding and responding to site constraints and context, especially the surrounding area's character. The cost of constructing such schemes is also higher, but this and fee increases are marginal in terms of overall project values. This is particularly the case when the benefit of increased unit numbers achieved on a site is factored in, let alone the overarching sustainability gain to the wider community. However, housebuilders frequently complain that this is all just too expensive:

“... the objection is founded on a false estimate of costs, which ignores the costs that are externalised by the one who builds to lower standards. The real costs of shoddy building include the social costs of poor housing and non-existent facilities, the costs in terms of irritation, unhappiness and extended travel times. These costs are not borne by the developer, but inevitably the local community must pick them up in terms of raised taxation, social provisions, healthcare and so on... The evidence concerning the environmental, physical, social and psychological costs of our way of building is now immense and has been summarised in the Place Alliance's Ladder of Quality and the 2018 NHS report Putting Health into Place. A broader assessment shows that beauty reduces the overall cost of a development to the community. This is true even before taking into account the point noted above, that the ugliness of new developments prompts local opposition to them, thereby delaying or impeding planning permission and exacerbating the national housing crisis”.

*Living with beauty: report of the Building Better, Building Beautiful Commission, MHCLG;
30 January 2020*

- Future Place report, Place shaping: Learning from 2020 (RIBA) (explores several strategies for approaching the design of places and spaces after COVID-19).
- Lessons from Higher Density Development, GLA (2016). London Plan density research.
- The Housing Design Handbook (2010) David Levitt, Levitt Bernstein Architects).
- Essex Design Guide, Higher Density Development (2020). <https://www.essexdesignguide.co.uk/supplementary-guidance/higher-density-development/>
- Home Improvements: Housing Research in Practice, RIBA 2019.
- Quality Apartments and Urban housing, housing agency, Gov.ie (2018)
- Residents' experience of high-density housing in London LSE London/LSE Cities report for the GLA. https://www.london.gov.uk/sites/default/files/residents_experience_of_high-density_housing_in_london_lse_-_final_report_july_2018.pdf
- Owners' Management Companies, Sustainable Apartment Living for Ireland, housing agency, Gov.ie (2019)

Part 2: Crawley within this Context

5. Compact Development in Crawley

- 5.1 Compact development is particularly important to Crawley given the limited extent of the borough and the constraints on development which affect many areas of the town. The population of Crawley has been rising significantly over the past three decades, increasing by about 22% from 88,750 in 1991 to 106,600 in 2011, it now stands at approximately 118,500 residents, increasing a further 11.2% (2021 Census). Crawley's population was expected to grow by over 16% over the period 2019-2039¹² to reach 135,262 residents.
- 5.2 The borough is already well served in many places by a good public transport network and, through the Local Cycling and Walking Infrastructure Plan (LCWIP), is seeking to create an improved network of safe, coherent cycle routes. In addition, employment opportunities are also significant within the borough, limiting the need for out-commuting. These characteristics and opportunities make the borough, in principle, an extremely sustainable place to live.
- 5.3 Crawley has very constrained land supply, alongside high projected housing need associated with the increasing population. In particular, opportunities for further strategic development are limited within the borough due to:
- The planned areas of open space (both formal and informal) within the neighbourhoods which are highly valued by local residents for their amenity and recreational benefits. In addition, these are critically important for their role in response to the Climate Emergency – including as opportunities for securing biodiversity net gain, carbon sequestration and flood management.
 - The tight relationship between the Built-Up Area Boundary and the borough's administrative boundary limits the potential for urban expansion on strategic greenfield sites within the Local Plan's scope.
 - There is a continued need to safeguard land for a potential future southern runway at Gatwick Airport. This, together with the noise contours associated with both the existing and potential southern runway scenarios, further limits the potential for additional housing in the northern parts of the borough.
 - Much of the borough is subject to aerodrome safeguarding, limiting opportunities for upward expansion and new high rise buildings. Restrictions to the height, design and types of developments may be necessary to avoid impacts on the aviation safety. Such impacts include those relating to navigational aids, creating building-induced turbulence or including lighting which could pose a hazard to the safe operation of the airport.
 - Crawley's residential neighbourhoods are characterised predominately by two-storey, family-sized homes; all built meeting established internal and external space standards. In seeking higher densities for the borough, compromising the town's character, reducing quality of life for residents and creating town cramming will still not be accepted.
- 5.4 There are no major greenfield sites suitable for strategic scale residential development remaining within the borough's administrative boundaries after Forge Wood is completed. Therefore, any future development in the borough will have to be compact in order to make effective use of the land supply available.

¹² 2014-Based Population Projections, Northern West Sussex Strategic Housing Market Assessment (2019) Icen Projects

Past Compact House Building

- 5.5 Good examples of traditional compact forms of development within Crawley include St Peter's Road, Brighton Road and Ifield Village Conservation Area. More recent developments, such as the Commonwealth Drive scheme at Three Bridges, are seeking to achieve similar success. However, there are lessons than can be learned from how this scheme and other new compact developments in Crawley were designed and specified to inform how to improve in the future in order to contribute to new design codes on development standards for compact form.
- 5.6 Over recent years, residential windfall developments within the borough have been higher in number than anticipated. These have been particularly in the form of developments benefiting from permitted development rights for the conversion of offices to dwellings. Of the 3,590 dwellings gross completions over 2015-23, 28% were from developments which had secured these permitted development rights. In many of these cases, densities have been achieved that would not otherwise have been approved through a formal planning application, because of the unacceptably small size of the new apartments. These have resulted in serious concerns regarding their impacts on location, design and quality of life.

Future Compact House Building

- 5.7 National planning policy emphasises the need to plan for the effective use of land in order to deliver a sufficient supply of homes. It states that strategic policies should make "as much use as possible of previously-developed or 'brownfield land' ... and "promote and support the development of under-utilised land and buildings". Furthermore, the NPPF identifies that "small and medium sized sites can make an important contribution to meeting the housing requirement of an area, and are often built-out relatively quickly".
- 5.8 To determine a realistic assumption for the quantum of housing land supply within the borough, a Strategic Housing Land Availability Assessment (SHLAA) is undertaken to support the Local Plan. Inclusion of a site within the SHLAA does not mean that planning permission is certain. It merely carries out an assessment of whether a site is suitable, available or achievable for housing development. For each assessment the anticipated gross and net dwelling number is indicated, based on the high level known site characteristics (i.e. site area and critical constraints such as flood zones). These figures are indicative only, and the quantum of development achievable on the site could go up or down, depending on detailed infrastructure assessments and site layout and design.
- 5.9 In addition, it is also anticipated that further housing development is likely to come forward through unidentified/windfall sites over the Plan period. As part of this process, it is necessary to be mindful of the principles behind the realistic densities achievable and appropriate on sites within the borough.

Further Potential for Intensification

- 5.10 Crawley's development as a series of comprehensive neighbourhoods, many of which have also accommodated a significant amount of infill housing in the last decade, means that the capacity of the built up area to accommodate further housing is limited without careful consideration. Notwithstanding this, scope for further new residential infill development remains and a number of new sites have been identified as part of the Local Plan Review.
- 5.11 Opportunities for intensification will particularly apply to areas within the Town Centre and other locations which are already well served by high frequency, reliable public transport. Crawley already has some of this necessary transport infrastructure in place. In such locations, major new development should seek a significant uplift in

the average residential densities, unless it can be shown that there are strong reasons why this would be inappropriate.

- 5.12 Key routes, access points or interchanges within the borough overall include:
1. Crawley Town Centre rail and bus station hub;
 2. Two high frequency, quality bus corridors, running north/south along Fastway bus route 10, and including routes 20 and 100 as follows
 - a. Where route 20 aligns with 10, all stops between Gatwick Airport and the Gatwick Road North stop; and all stops between the Southgate Avenue stop and Broadfield Barton stop;
 - b. Where Fastway Routes 10 and 100 intersect; the Manor Royal Centre stop, and in the Town Centre, Crawley Bus Station and the Broadway.
 3. Two of the best rail stations south of London in terms of connectivity; frequency of services; journey times/express services; number, variety and desirability of destinations served, being Gatwick Airport and Three Bridges;
 4. Gatwick Airport is directly linked by coach to more than 100 UK towns and cities, and is accessible by rail from Crawley Town Centre, Ifield and Three Bridges, and many bus routes from Crawley's neighbourhoods.
- 5.13 Chapter 6 includes an illustration of the extent of the borough where high capacity, high frequency and segregated public transport infrastructure (and accessibility to same) is already in place.
- 5.14 Areas on the periphery of Crawley, both within and outside the borough boundary, will continue to be assessed, in partnership with the adjoining authorities where appropriate.



Above: Junction of Gales drive and Northgate Avenue, looking south towards recently completed Bridgewater House, and the College Tower (the latter being the tallest structure in Crawley Town Centre)

Density Ranges in a Crawley Context

- 5.15 Policy CL4 of the draft Submission Crawley Borough Local Plan 2024 – 2040 is concerned with the layout and scale of compact development. This recommends the following density ranges:

- High density: A minimum of 200 dwellings per hectare (see image above).
 - Moderate or medium density: a range of between 60-200dph.
- 5.16 For specific locations in the borough, Policy CL4 outlines how major applications must achieve minimum densities in line with the above categories, unless the existing character justifies a lower figure. This seeks to ensure the borough can grow, whilst making the best use of land and encouraging modal shift to take advantage of sustainable transport options.
- 5.17 For areas outside those expressly identified, the Policy confirms that, in general, a density of at least 45dph will apply to all residential developments within the Built-Up Area Boundary unless the existing character justifies a lower figure. Outside of locations such as Crawley Town Centre or areas adjoining Three Bridges Station, areas where both the market, existing movement infrastructure and existing character support high density, a density range at the lower 'gentle density' range (between 60 and 90 dwellings per hectare) will likely be appropriate for the majority of Crawley's existing urban areas.

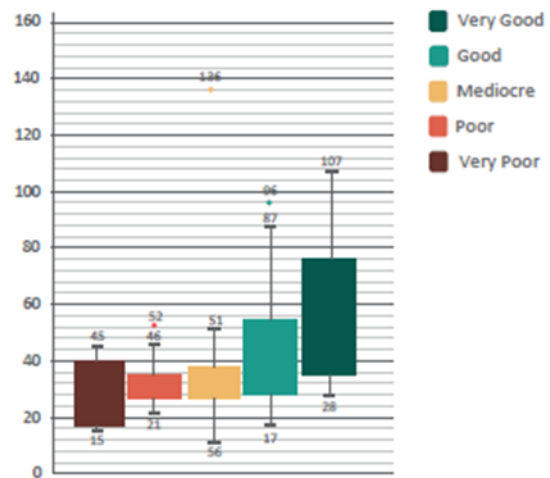
Compact Retrofitting in Crawley?

5.18 The Place Alliance report (discussed earlier in Chapter 2), carried out research regarding density as part of its design quality audit of new residential development in the UK. The excerpt below, from page 79 of the report, considers overall design outcomes comparing low density ranges up to the start of moderate/gentle density levels.

This was shown even more starkly using the second measure of density – dwellings/hectare – again comparing the design audit results²⁵. 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.



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.

5.19 Care and caution is needed. Even retrofitting 'gentle density' range development (60-90dph) within the typical lower density existing residential settings is not easy and can result in uncomfortable juxtapositions between old and new development, or loss and damage to the subtle green and spacious structure of the spaces between buildings across the town. This could introduce a risk of casual and sporadic loss of Crawley's attractive, generous and prolific green verges, for example; not necessarily

taken over by new buildings, but instead, and almost under the radar, being lost to surface car parking, the encroachment of enclosed private outdoor space and new pavements and cycle tracks.

- 5.20 The extent to which this can be mitigated will vary according to each site and the adjacent uses and the detailed design and layout of the development itself. It is crucial that places where such intensification occurs is first and foremost identified based on principles 1 and 2, and not simply a claim that great quality architecture and bespoke typologies alone determine acceptability. Existing character assessment and sustainable transport infrastructure must always underpin compact development ambitions.
- 5.21 The baseline evidence for a borough-wide ABCA (see principle 1) is already in place. The 2009 broad baseline, *Crawley Character Assessment*, prepared by EDAW/AECOM, listed a number of area specific recommendations & next steps which should be reviewed as part of any ambition to deliver new development. This report identified broad character areas and positive features that should be protected and enhanced and a number of priorities for enhancement or regeneration across the borough. It highlighted that these areas of opportunity could be subject to further detailed study and assessment to more fully understand the potential for them to deliver positive change, or their need for protection in the context of Crawley borough and the UK as a whole.
- 5.22 These priorities for regeneration and enhancement set out in the EDAW/AECOM included:
- Bewbush and Broadfield – opportunities for residential and neighbourhood centre regeneration and potentially selective redevelopment.
 - Town Centre – focusing on improvements to the quality of arrival points and the town centre edge, in addition to the now obsolete Town Centre North redevelopment proposals.
 - Three Bridges Station areas – focusing on improvement to the public realm and station surrounds.

“Across the borough as a whole, opportunities for enhancement to the existing character of Crawley focus on the New Town phase 1-2 neighbourhoods. Potential areas for future study across the neighbourhoods include:

- *Neighbourhood centre public realm improvements and infill development*
 - *Residential street security, parking and public realm improvements*
 - *Assessment of the quality, function and value of amenity grassland across the borough to identify areas where function or value could be improved, and areas where other uses may be more appropriate.*
 - *Identification of views over green spaces / rural hinterland which are of particular value or would benefit from development frontage”*
- Crawley Character Assessment, EDAW/AECOM 2009.*
-

- 5.23 When considering opportunities for improvement in Crawley (see principle 4), the 2009 report already provides a high-level assessment of the borough which:
- a) identifies primary character features and spatial settings across the town which are hidden or not really taken advantage of;
 - b) influence design decisions and,
 - c) identifies locations and neighbourhoods which would structurally benefit from improvement.

- 5.24 As discussed in earlier in Chapter 4, intensification in the form of new compact development, could help fund improvements or at least enable a commercially viable business case for same.

“The rapid growth of the town following the New Town designation and the dominant two storey housing typology presents a relatively monotonous character in many of the New Town neighbourhoods. Later neighbourhoods including Maidenbower are based on a maze of cul-de-sacs and small detached properties with poor pedestrian connectivity to the centre of Crawley. Priorities for regeneration in the New Town neighbourhoods include Bewbush and Broadfield, which suffer from poorly thought through residential and commercial layouts....

Crawley’s green setting; its Country Parks, remnant moats, mill ponds, estate gardens, woodland corridors and waterways provide a distinctive and characterful quality. Many of the New Town neighbourhoods have failed to make best use of these spaces by developing housing which backs onto green areas creating poorly overlooked public spaces. Future expansion of the town that is planned to the South West should learn from the missed opportunities of earlier development and focus on the importance of the landscape as a key to delivering attractive and distinctive neighbourhoods”.

Crawley Character Assessment, EDAW/AECOM 2009

No Need to Start from Scratch or Reinvent the Wheel

- 5.25 Lessons should be learned from the previous experiences of compact schemes delivered in Crawley. Crawley should also take advantage of the lessons learned in other places as well as the wealth of work produced, built, being built and continually assessed by professionals across the UK.



Image above taken from Future Place report Placeshaping: Learning from 2020 (RIBA)

Examples of Moderate Density (Range: 60 to 90 dwellings per hectare)

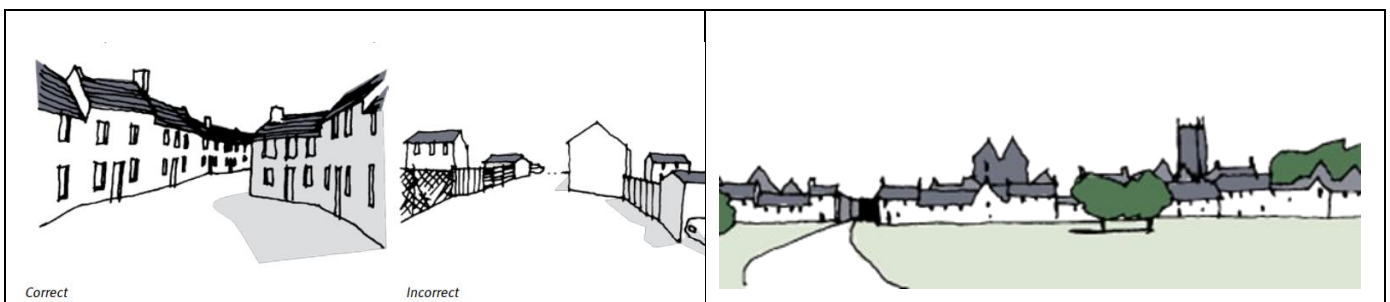


Above: Commonwealth Drive, Crawley.

5.26 Unlike high-rise high-density schemes, the average building height shown in the images below is three storeys on average. The overall form of such places is comparable to historic towns such as Malmesbury, Wiltshire (see Chapter 1). Commonwealth Drive above is only a little denser than such places and as such the average height here is 3.5-4 storeys.



Moderate density illustrations taken from the Essex Design Guide (2018)





Terraces at upper levels which allow for alternative, useable private outdoor space to be located for top level duplex dwellings.

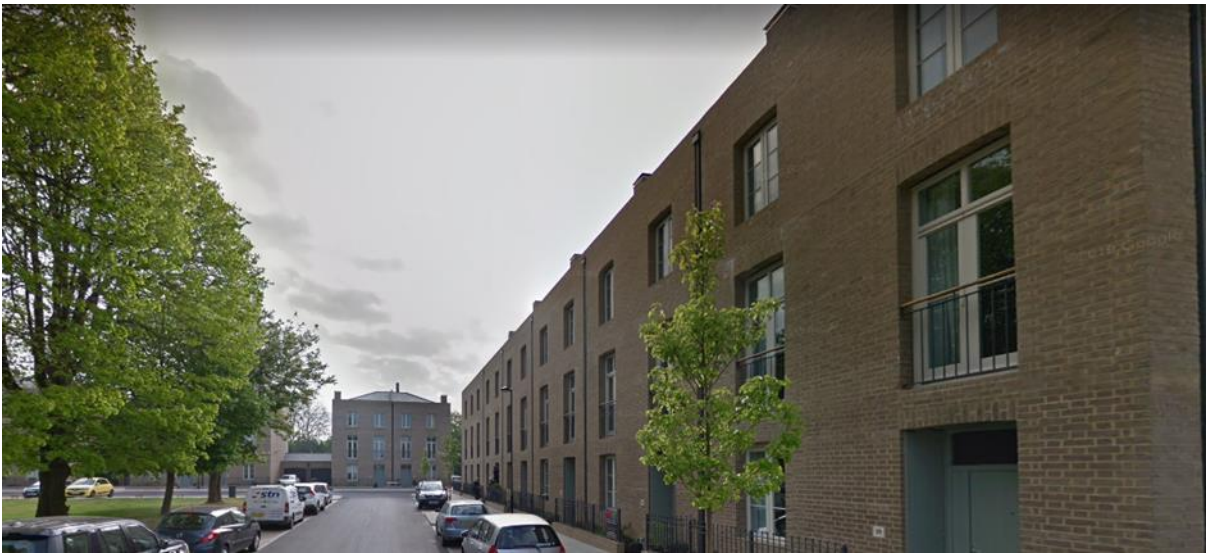


Double storey of Private Car parking located under raised private garden decks.

Accordia, Cambridge



Roussillon Park, Chichester



Roussillon Park, Chichester



Royal Way, Great Kneighton, Cambridge (below)



Broadfield Barton, Oxford (below)



6. Compact development and the CBC Draft Strategic Housing Land Availability Assessment (SHLAA)

- 6.1 This chapter focuses on the sites and broad locations identified in the Strategic Housing Land Availability Assessment (SHLAA) that will form part of the evidence base for Crawley's submission Local Plan.
- 6.2 Chapter 6 reviews the following SHLAA categories as prepared to support the submission draft of the 2023 Local Plan for Regulation 19 Consultation:
- (D) Local Plan Key Housing Allocations. (Policy H2) ('Developable', Years 6-16)
 - (E) Local Plan Key Town Centre Opportunity Sites (Policies H2 & TC3)
 - (F) Broad Locations (East of London Road and Town Centre) (Policy H2)
 - (G) Suitable sites that are 'deliverable' (5-29 units)
 - (H) Suitable sites that are 'developable' (5-29 units, Years 6-16).
- 6.3 The review particularly aims to:
1. Assess and confirm the density ranges proposed in the SHLAA.
 2. Assess the allocation sites in relation to draft Local Plan policy criteria which apply to efficient use of land and compact development.
 3. Consider the suitability of sites for compact development in relation to the key Compact Development Principles (CDP), outlined in Chapter 4.
- 6.4 The table below outlines a summary list of individual considerations and parameters which should apply to new development proposals in order to achieve compact form and which was used to guide a desktop analysis of the sites contained in the SHLAA. This:
- a) lists the relevant policy requirements of the draft 2023 Local Plan which particularly relate to compact form and density ranges in excess of 60 dwellings per hectare, along with key Compact Development Principles (CDP) from Chapter 4 which relate to, complement or align with draft Submission Crawley Borough Local Plan policies (each under red policy headings); and
 - b) lists further CDP principles and suggestions which are not specifically noted in the draft Submission Crawley Borough Local Plan (see blue headings), as they are already outlined in the NDG and NMDC.
- 6.5 The desktop study is a high-level review and, as such, determinations are primarily made by a basic methodology focused on the two foundational Compact development principles, 1 and 2, in order to determine minimum achievable density range potential, i.e. quality and proximity of public transport infrastructure and overarching attractive/quality existing area character attributes. An example of such individual determinations is shown below in paragraph 6.10 for Site 16, the first SHLAA site reviewed.

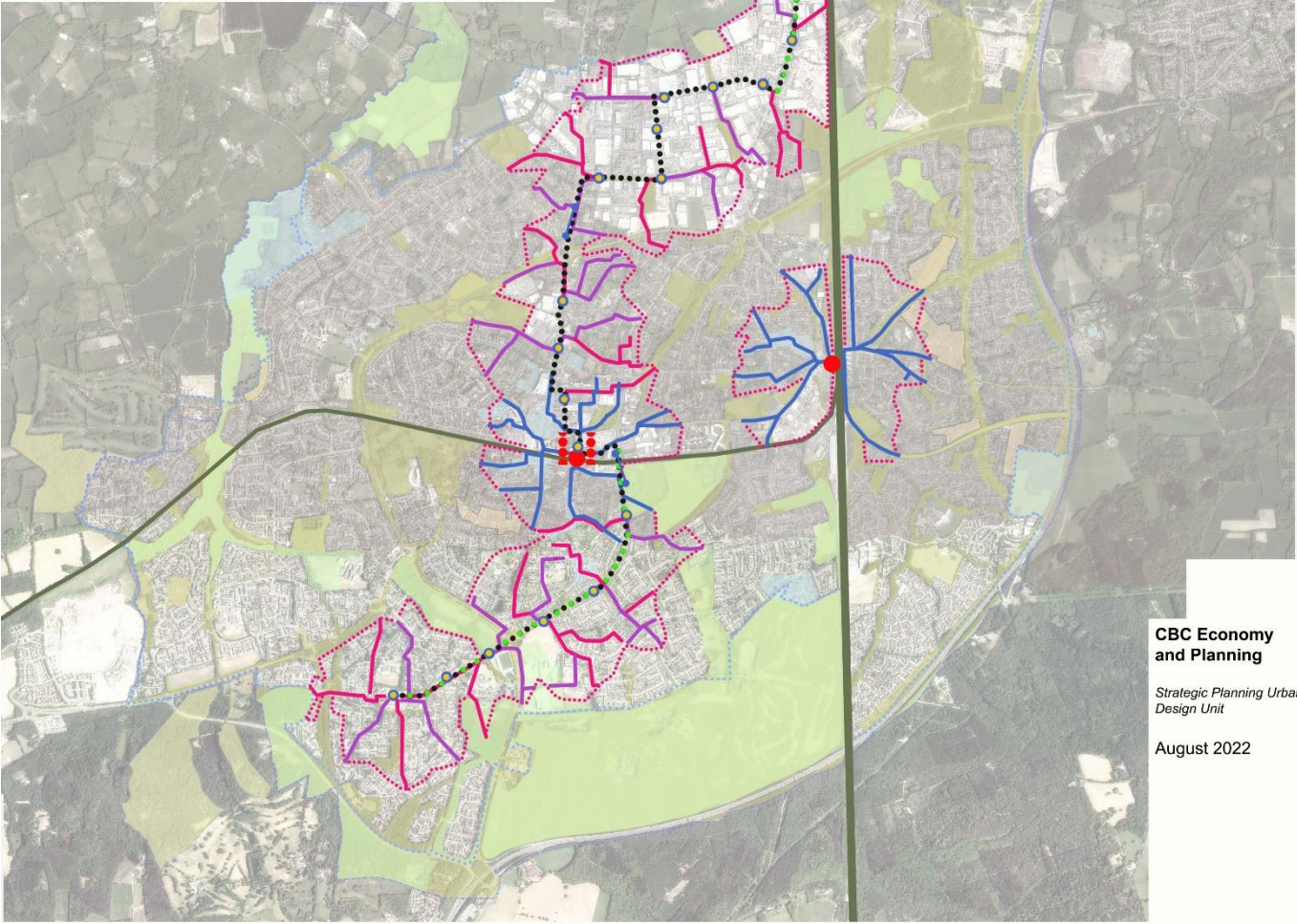
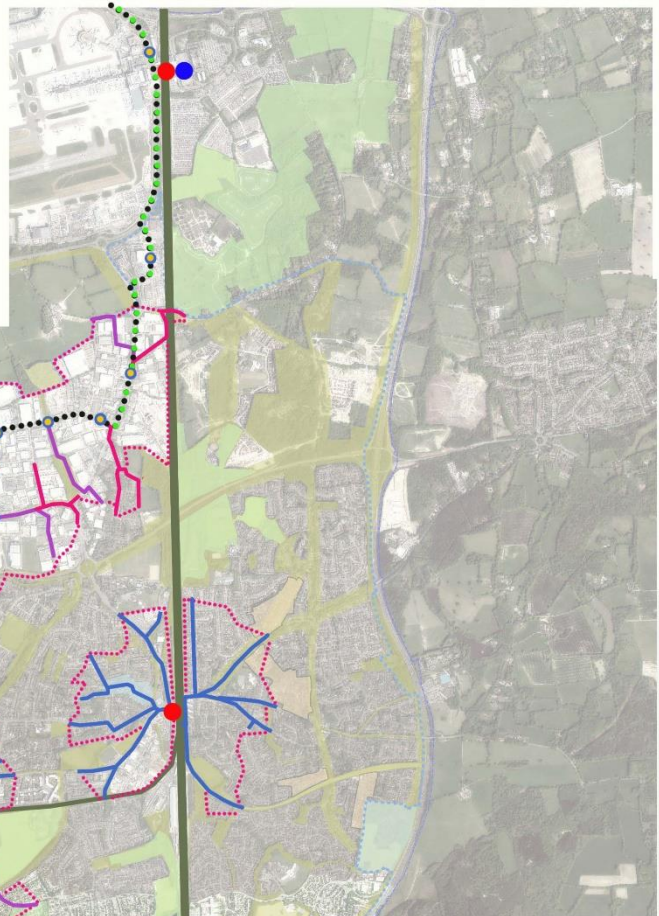
Local Plan Policy or Compact Development Principle (CDP) Topic.	CDP ref:
CL2 National Design Guide (NDG) National Model Design Code (NMDC)	
For all development: are locally formulated design codes or guides (a) in place or (b) the proposal relies on the NMDC parameters and principles?	4,5
For all development: do concept design proposals align with the parameters and principles of the NMDC or local relevant design code?	1,2,4,6
For large development: has the site promoter supported the local authority in bringing forward locally formulated design codes related to the site?	5,6
CL2 Existing Character and New Opportunities (for major applications)	
Has the promoter demonstrated and documented how the positive and valued components of existing wider area rural/urban structure has guided & directed the form of new development?	1

Have proposals set out a clear design vision which builds upon, protects, reinforces and enhances existing character?	1,4
Have visioning exercises identified new opportunities for wider area improvement (not just focused on the applicant site itself)?	4
Has the site promoter supported the local authority in bringing forward (a) area-based character assessment, and (b) visioning exercises to identify both site and wider opportunities for improvement?	-
CDP3 10-minute walking distance to areas of substantial and/or panoramic landscape	
For large applications: (a) does the site itself or (b) do wider area improvements readily enable/allow for this opportunity?	4
CL2 Built Form, Layout and Movement	
For major applications: policy requirements, (a) to (d) to be determined at pre-application stage unless a local design code is in place.	1,4,5
For major applications: have accurate 3D massing modelling being prepared to show the basic form of new proposals in relation to their existing setting/surrounding context, particularly from a street level perspective?	5
CL3 Sustainable Mode Share increase. Car use reduction and resulting scheme layout design.	
For all development: will the allocated site and intended use be able to capture direct walking and cycling desire lines through and around the site, translating and building upon the established evidence base of the LCWIP?	2,4
For all development: does the proposal put people before traffic and connect cycling and pedestrian paths to areas of rural open space and/or large urban areas of green open space?	1,2,3,4
Ensure new route alignments follow and provide clear, legible and obvious linkages to adjoining areas	2,4,5
Is a contribution required to fund or part-fund the delivery /improvement of such infrastructure?	2
CDP2 Note: Detail regarding existing suitable infrastructure is noted in Policies CL2, CL3 and CL4, which also indicates that developers can help to fund new infrastructure. The latter is primarily dependent on WSCC and DfT funding initiatives	
Are local authority or national resources available or planned to improve and expand (a) walking access to existing and /or (b) future provision of BRT or rail infrastructure?	2,4
CL4 Compact Development – Layout, Scale and Appearance	
For major applications: Which minimum density range applies to the site?	4
Where existing character allows, has development form being based on sustainable compact layout and scale (minimum 60 dwellings per hectare in specified areas)?	4
Is the site within 800m (10 mins walk) of Crawley/Three Bridges stations?	2,4
Is the site within 640m (8 min. walk) of stops or interchanges along existing segregated, high capacity, high frequent Bus Rapid Transit infrastructure?	2,4
Is the site within 5 minutes walking distance of basic facilities such as a newsagents, café or local supermarket and 10 minutes to a primary school or health centre?	2,4
CL2 The existing character of an area (for large applications) and Policy CL5 for significant size development	
Would limited desktop ABCA be appropriate?	1,4
Would ABCA be likely to allow for an increase in proposed density?	1,4
CL5 Compact Development – Layout, Scale and Appearance	
For significant development and for a group of smaller sites which, on aggregate, form substantial wider area development, masterplans will usually be required	4,5
Applications for particularly significant schemes may be asked to present to a design panel	4,5

6.6 Major applications must achieve minimum medium and high-density ranges (as set out in Local Plan Policy CL2-CL4) unless existing character precludes this, in the following locations mapped below (see Local Plan Policy CL3). Walking distances are assessed to take account of the actual walking distance where there are no barriers to pedestrian movement. Note: Ifield station is not included here as it does not have sufficient hourly train services to be considered high frequency.

Key:

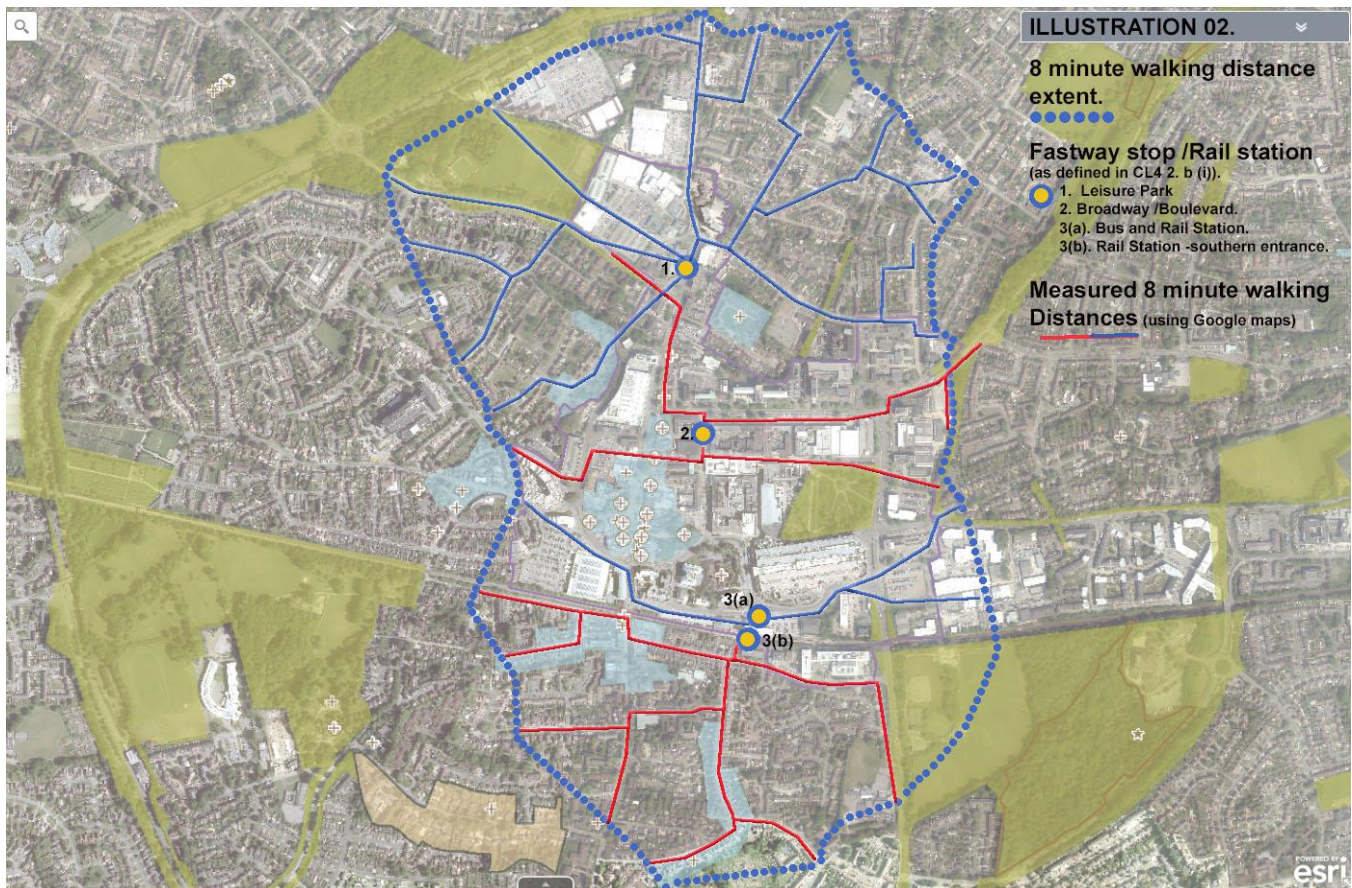
- [—] 800m /10 min. walk to Crawley or Three Bridges Train Stations.
- [—] 640m /8 min. walk to existing segregated, high capacity, high frequency Fastway (Bus Rapid Transit) corridors.
- [●] BRT stops. [—] dislocated BRT stop.
- [●●●] Fastway route 10. [●●●] Fastway route 10 and 20.
- [■] Crawley Town Centre Multi Modal interchange.
- [●] Three Bridges, Gatwick and Crawley train station.
- [—] Brighton main line. [—] Arun valley line.
- [●] Gatwick Airport coach station.



CBC Economy and Planning
Strategic Planning Urban Design Unit
August 2022

High capacity, high frequency public transport. (Existing).

Map 1. The geographical extent of walking distance from rail and BRT in Crawley.



Map 2. The geographical extent of walking distance from BRT stops in Crawley Town Centre.

6.7 Map 2 (above) is a close up of the Town Centre and illustrates 8 minutes / 640m walking distance from Fastway stops listed in Policy CL3 (See CL3 Reasoned justification). Note the southern half of the Town Centre is also covered by an additional walking isochrone (catchment area): the distances to Crawley train station (See blue lines in Map 1 above).

Individual site assessment

6.8 One of the primary purposes of this study has been to ensure consistent delivery of the draft Policies in the Submission Local Plan 2024 – 2040. As such, for each of the SHLAA sites, the following review lists the following:

- the indicative density as outlined in the earlier Reg 19 SHLAA draft;
- where increased density ranges can be achieved, a possible net increase or decrease in net dwelling totals.

6.9 This revision of all housing sites, especially where these have been allocated historically, has been prompted by the Local Plan Review, and the need to ensure the borough can meet as much of its housing need as possible, whilst maintaining the high quality environment for existing residents. Changes to national policy, including the NPPF in 2021 and the introduction of the NMDC, has provided a clear steer in ensuring land is used efficiently and development is sustainable and well-designed. Undertaking this process has allowed for the known potential housing sites in the borough to be critically assessed against the application of current best practice. This has given a clearer understanding of the potential housing supply, including windfalls, over the Local Plan period (2024 – 2040).

SHLAA Category (D) Local Plan Key Housing Allocations (Policy H2)

Desktop assessment example (based on methodology and summary table outlined in paragraph 6.2)

6.10 One example of this assessment using SHLAA Site 16: Land Adjacent to Desmond Anderson in Tilgate. The first table below shows a summary assessment and a detailed example of how the individual assessment criteria have been applied is illustrated in the second table below.

Note: A graphic traffic light colour indication is used in the tables below. **Red** shows a reduction in figures or incomplete output. **Yellow** illustrates improvements or increased figures. **Green** indicates work complete/no change.

Summary Assessment

Site Reference	16	Neighbourhood	Tilgate
Site Name / Address	Land Adjacent to Desmond Anderson		
Existing Land Use	Surplus Educational Land	Gross Dwellings	150
Demolitions	0	Net Dwellings	150
PDL / Greenfield	PDL & Greenfield	Current Density	-
PA. Number	-	Indicative SHLAA density	45dph
Lapse Date		Site Area (Gross hectares)	3.39
		CL4 min. density	60dph
Application type Current / Potential	C: Major. P: Large	Revised Net Dwellings total	205
Density range: Current / Potential	C: Low. P: Moderate	Additional dwellings	+60

Detailed Assessment Example

6.11 Each relevant policy topic is given a brief site-specific response which indicates the status or progress regarding individual assessment criteria as well as a brief assessment note (see column 2).

6.12 Column 3 provides a basic 'traffic light' indication of how the site measures against each requirement. In general, this indication relates to how far each of the individual requirements/policy topics, as applied to Site 16, confirms increased density range potential.

1. Local Plan Policy or Compact Development Principle (CDP) topic.	2	3
Policy CL2		
For all development: are locally formulated design codes or guides (a) in place or (b) the proposal relies on the NMDC parameters and principles?	(b)	
For all development: do concept design proposals align with the parameters and principles of the NMDC or local relevant design code.	Pending	n/a
For large development: has the site promoter supported the local authority in bringing forward locally formulated design codes related to the site?	No	
Policy CL2		
Has the promoter demonstrated and documented how the positive and valued components of existing wider area rural/urban structure has guided and directed the form of new development?	Pending	n/a
Have proposals setting out a clear design vision which builds upon, protects, reinforces and enhances existing character?	Pending	n/a
Have visioning exercises identified new opportunities for wider area improvement (not just focused on the applicant site itself)?	Pending	n/a
Has the site promoter supported the local authority in bringing forward (a) area based character assessment, and (b) visioning exercises to identify both site and wider opportunities for improvement?	No	
CDP3. 10-min. walk to substantial panoramic/rural landscape		
For large applications: (a) does the site itself or (b) do wider area improvements readily enable / allow for this opportunity?	Yes. Tilgate Pk	
Policy CL2		

For major applications: policy requirements, (a) to (d) to be determined at pre-application stage unless a local design code is in place.	Pending	n/a
For major applications: have accurate 3D massing modelling being prepared to show the basic form of new proposals in relation to their existing setting/surrounding context, particularly from a street level perspective?	Pending	n/a
Policy CL3		
For all development: will the allocated site and intended use be able to capture direct walking and cycling desire lines through and around the site, translating and building upon the established evidence base of the LCWIP?	Yes	
For all development: does the proposal put people before traffic and connect cycling and pedestrian paths to areas of rural open space and/or large urban areas of green open space?	Pending	n/a
Policy CL3		
Where existing character allows, has development form being based on sustainable compact layout and scale (minimum 60 dwellings per hectare)?	Viable	
Is the site within 800m (10 mins walk) of Crawley/Three Bridges stations?	No	n/a
Within 640m (8 min. walk) of stops or interchanges along existing segregated, high capacity, high frequent Bus Rapid Transit infrastructure?	Yes	
Is the site within 5 minutes walking distance of basic facilities such as a newsagents, café or local supermarket and 10 minutes to a primary school or health centre?	Yes. K2/Tilgate	
Is a contribution required to fund or part-fund the delivery /improvement or expansion of a, b and c to enable efficient use of land?	Not required	
CDP2 A viable, dependable and attractive alternative to private car use		
Are local authority or national resources available or planned to improve and expand (a) walking access to existing and/or (b) provision of BRT or rail infrastructure relevant to the allocated site?	Not required	
Policy CL4		
For major applications: Which minimum density range applies to the site?	Moderate	
For major applications: Confirm compliance with Policy CL4 locations 1, 2a, b or c?	2 c	
CDP1 The existing character of an area (for Large applications)		
Would limited Desktop ABCA be appropriate?	Likely	
Would ABCA be likely to allow for an increase in proposed density?	Yes	
CDP4 opportunities to improve existing urban environments		
For large applications above 45dph: are area based masterplans in place, with wider context opportunities identified	Neither	
Policy CL5		

Summary Assessment of all other Category (D) SHLAA sites

Site Reference	91	Neighbourhood	Three Bridges
Site Name / Address	Land Adjacent to Sutherland House, Russell Way		
Existing Land Use	B1 Offices.	Gross Dwellings	30
Demolitions	0	Net Dwellings	30
PDL / Greenfield	PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	85
Lapse Date	-	Site Area (Gross hectares)	0.35
		CL4 min. density	60dph
Application type Current / Potential	Major.	Revised Net Dwellings total	
Density range: Current / Potential	Moderate	Additional dwellings	NONE

Site Reference	27	Neighbourhood	Forge Wood
Site Name / Address	Land to the Southeast of Heathy Farm, Balcombe Road		
Existing Land Use	Greenfield.	Gross Dwellings	150
Demolitions	0	Net Dwellings	150
PDL / Greenfield	Greenfield.	Current Density	-

PA. Number	-	Indicative SHLAA density	36dph
Lapse Date	-	Site Area (Gross hectares)	4.15
		CL4 min. density	45dph
Application type Current / Potential	Major	Revised Net Dwellings total	188
Density range: Current / Potential	Low	Additional dwellings	+38

Site Reference	20	Neighbourhood	Southgate
Site Name / Address	Oakhurst Grange, Goffs Park Road		
Existing Land Use	Vacant care home site	Gross Dwellings	146 (bedrooms)
Demolitions	100 (bedrooms)	Net Dwellings	46 bedrooms
PDL / Greenfield	PDL	Current Density	
PA. Number	CR/2016/0972/FUL	Indicative SHLAA density	53dph Assuming 81 units
Lapse Date	Commenced	Site Area (Gross hectares)	1.51
		CL4 min. density	45dph
Application type Current / Potential	Major	Revised Net Dwellings total	-
Density range: Current / Potential	Low	Additional dwellings	-

Site Reference	82	Neighbourhood	Langley Green
Site Name / Address	Rushetts Road Play Area		
Existing Land Use	Play Areas/Open Space/Garages	Gross Dwellings	14
Demolitions	0	Net Dwellings	14
PDL / Greenfield	Greenfield/PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	35dph
Lapse Date	-	Site Area (Gross hectares)	0.4
		CL4 min. density	45dph
Application type Current / Potential	Major	Revised Net Dwellings total	18
Density range: Current / Potential	Low	Additional dwellings	+4

Site Reference	83	Neighbourhood	Southgate
Site Name / Address	St Catherine's Hospice, Malthouse Road		
Existing Land Use	Hospice providing palliative care	Gross Dwellings	60
Demolitions	0	Net Dwellings	60
PDL / Greenfield	PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	82dph
Lapse Date	-	Site Area (Gross hectares)	0.73
		CL4 min. density	60dph

Application type Current / Potential	Large	Revised Net Dwellings total	-
Density range: Current / Potential	Low - Moderate	Additional dwellings	-

Site Reference	24	Neighbourhood	Broadfield
Site Name / Address	The Imperial, Broadfield Barton		
Existing Land Use	Public house.	Gross Dwellings	19
Demolitions	1	Net Dwellings	18
PDL / Greenfield	PDL	Current Density	1
PA. Number	CR/2017/0519/FUL	Indicative SHLAA density	190dph
Lapse Date	22/11/2021	Site Area (Gross hectares)	0.1
		CL4 min. density	60dph
Application type Current / Potential	Major	Revised Net Dwellings total	-
Density range: Current / Potential	Upper Moderate	Additional dwellings	-

Site Reference	25	Neighbourhood	Three Bridges
Site Name / Address	Tinsley Lane Playing Fields		
Existing Land Use	Playing fields/sports facilities.	Gross Dwellings	120
Demolitions	0	Net Dwellings	120
PDL / Greenfield	Greenfield	Current Density	-
PA. Number	(Pending CR/2021/0355/OUT)	Indicative SHLAA density	63dph
Lapse Date		Site Area (Gross hectares)	3
		CL4 min. density	60dph
Application type Current / Potential	Large	Revised Net Dwellings total	-
Density range: Current / Potential	Moderate	Additional dwellings	-

SHLAA Category (E) Local Plan Key Town Centre Opportunity Sites (Policies H2 & TC3)

Site Reference	28	Neighbourhood	Northgate
Site Name / Address	11-13 The Boulevard		
	Built and occupied	Net Dwellings	91
CL4 min. density	200	Current Density	337

Site Reference	31	Neighbourhood	Northgate
Site Name / Address	County Buildings		
Existing Land Use	Office buildings, vacant land and parking.	Gross Dwellings	100
Demolitions	0	Net Dwellings	100
PDL / Greenfield	PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	93dph
Lapse Date	-	Site Area (Gross hectares)	1.07
		CL4 min. density	200dph

Application type Current / Potential	Large	Revised Net Dwellings total	215
Density range: Current / Potential	High	Additional dwellings	115

Site Reference	30	Neighbourhood	Three Bridges
Site Name / Address	Crawley College		
Existing Land Use	Further Education College.	Gross Dwellings	400
Demolitions	0	Net Dwellings	400
PDL / Greenfield	PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	131dph
Lapse Date	-	Site Area (Gross hectares)	3.05 (revision is 1.8)
		CL4 min. density	200dph
Application type Current / Potential	Large	Revised Net Dwellings total	363
Density range: Current / Potential	High	Additional dwellings	-37

Site Reference	32	Neighbourhood	
Site Name / Address	Crawley Station and Car Parks PA. Number CR/2016/0294/OUT		
Lapse Date	Reserved matters application approved and full permission awaiting discharge of planning conditions	Site Area (Gross hectares)	0.89

Site Reference	33	Neighbourhood	Northgate
Site Name / Address	Land at Cross Keys		
Existing Land Use	Car park, church hall and former rectory	Gross Dwellings	20
Demolitions	0	Net Dwellings	20
PDL / Greenfield	PDL/Greenfield	Current Density	-
PA. Number	-	Indicative SHLAA density	83dph
Lapse Date	-	Site Area (Gross hectares)	0.24
		CL4 min. density	Heritage Character dependent
Application type Current / Potential	Major	Revised Net Dwellings total	45 - 60
Density range: Current / Potential	Low to low Moderate	Additional dwellings	-8

Site Reference	35	Neighbourhood	Northgate
Site Name / Address	Town Hall, The Boulevard		
Existing Land Use	Council offices, meeting rooms, civic hall and parking.	Gross Dwellings	182
Demolitions	0	Net Dwellings	182
PDL / Greenfield	PDL	Current Density	

PA. Number	CR/2017/0997/OUT	Indicative SHLAA density	182dph
Lapse Date	Subject to Reserved Matters Approval	Site Area (Gross hectares)	1
		CL4 min. density	200dph
Application type Current / Potential	Large	Revised Net Dwellings total	tbd
Density range: Current / Potential	High	Additional dwellings	Likely circa -26

Site Reference	34	Neighbourhood	Three Bridges
Site Name / Address	Telford Place, Haslett Avenue		
Existing Land Use	Previously Developed Land; Temporary Use of Site for car parking.	Gross Dwellings	300
Demolitions	0	Net Dwellings	300
PDL / Greenfield	PDL	Current Density	
PA. Number	-	Indicative SHLAA density	178
Lapse Date	-	Site Area (Gross hectares)	1.68
		CL4 min. density	200
Application type Current / Potential	Large	Revised Net Dwellings total	380
Density range: Current / Potential	C: Moderate. P: High	Additional dwellings	+80

SHLAA Category (F) Broad Locations (East of London Rd. and Town Centre) (Policy H2)

Site Reference	38	Neighbourhood	Northgate
Site Name / Address	138-144 London Road		
Existing Land Use	Residential properties and adjoining curtilage	Gross Dwellings	12
Demolitions	4	Net Dwellings	8
PDL / Greenfield	PDL/Greenfield	Current Density	21
PA. Number	-	Indicative SHLAA density	63
Lapse Date	-	Site Area (Gross hectares)	0.19
		CL4 min. density	60
Application type Current / Potential	Large	Revised Net Dwellings total	-
Density range: Current / Potential	Moderate	Additional dwellings	-

Site Reference	39	Neighbourhood	Northgate
Site Name / Address	21, 25, 27 and 29 Tushmore Lane		
Existing Land Use	Residential properties and adjoining curtilage	Gross Dwellings	63
Demolitions	4	Net Dwellings	59
PDL / Greenfield	PDL/Greenfield	Current Density	6.6
PA. Number	-	Indicative SHLAA density	105dph

Lapse Date	-	Site Area (Gross hectares)	0.6
		CL4 min. density	60dph
Application type Current / Potential	Large	Revised Net Dwellings total	-
Density range: Current / Potential	Moderate	Additional dwellings	-

Site Reference	40	Neighbourhood	Northgate
Site Name / Address	Oak Tree Filling Station, 114 London Road		
Existing Land Use	Hand car wash and hair salon.	Gross Dwellings	17
Demolitions	0	Net Dwellings	17
PDL / Greenfield	PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	100dph
Lapse Date	-	Site Area (Gross hectares)	0.17
		CL4 min. density	60dph
Application type Current / Potential	Major	Revised Net Dwellings total	-
Density range: Current / Potential	Moderate	Additional dwellings	-

Site Reference	41	Neighbourhood	West Green
Site Name / Address	1 - 7 Pegler Way		
Existing Land Use	Retail (A-class) units (some vacant) and mosque	Gross Dwellings	20
Demolitions	0	Net Dwellings	20
PDL / Greenfield	PDL	Current Density	
PA. Number	-	Indicative SHLAA density	166dph
Lapse Date	-	Site Area (Gross hectares)	0.12
		CL4 min. density	60dph
Application type Current / Potential	Major	Revised Net Dwellings total	-
Density range: Current / Potential	Moderate due to Adjacent conservation area	Additional dwellings	-

Site Reference	42	Neighbourhood	West Green
Site Name / Address	Brittingham House, Orchard Street		
Existing Land Use	Retail (A-class) uses and offices.	Gross Dwellings	24
Demolitions	0	Net Dwellings	24
PDL / Greenfield	PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	184dph
Lapse Date	-	Site Area (Gross hectares)	0.13
		CL4 min. density	60dph

Application type Current / Potential	Major	Revised Net Dwellings total	-
Density range: Current / Potential	Moderate due to Adjacent Conservation Area	Additional dwellings	-7

Site Reference	43	Neighbourhood	West Green
Site Address	Fire Station, Ifield Avenue		
Existing Land Use	Previously developed land Public (fire) services	Gross Dwellings	48
Demolitions	0	Net Dwellings	48
PDL / Greenfield	PDL	Current Density	106
Lapse Date		Site Area (Gross hectares)	0.45
		CL4 min. density	60dph
Application type Current / Potential	C: Major. P: Large	Revised Net Dwellings total	-
Density range: Current / Potential	Moderate	Additional dwellings	

Site Reference	44	Neighbourhood	West Green
Site Name	Land at the Rear of the George Hotel		
Existing Land Use	Hand car wash, parking residential dwelling.	Gross Dwellings	10
Demolitions	1	Net Dwellings	9
PDL / Greenfield	PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	34dph
Lapse Date	-	Site Area (Gross hectares)	0.29
		CL4 min. density	45-60dph
Application type Current / Potential	P: Major	Revised Net Dwellings total	14
Density range: Current / Potential	Low – Moderate (Subject to Heritage setting)	Additional dwellings	+5

Site Reference	45	Neighbourhood	Northgate
Site Name	Parkside Car Park		
Existing Land Use	Car Parking	Gross Dwellings	10
Demolitions	0	Net Dwellings	10
PDL / Greenfield	PDL	Current Density	-
PA. Number	-	Indicative SHLAA density	43dph
Lapse Date	-	Site Area (Gross hectares)	0.23
		CL4 min. density	130dph
Application type Current / Potential	Major	Revised Net Dwellings total	30
Density range: Current / Potential	C: Low. P: Upper Moderate	Additional dwellings	20

SHLAA Category (G) Suitable sites that are 'deliverable' (5-29 units), Years 1-5 (2021/22-2025/26) and (H) Suitable sites that are 'developable' (5-29 units), Years 6-16 (2026/27-2036/37)

Site Reference	85	Neighbourhood	Tilgate
Site Name / Address	Former Age Concern Building, Shackleton Road		
Demolitions	8	Gross Dwellings	8

Site Area (Gross hectares)	0.14	Net Dwellings	8
Density range: Current / Potential	Lower Moderate	Indicative SHLAA density	57dph
CL4 min. density	60dph	Revised Net Dwellings total	-
		Additional dwellings	-

Site Reference	48	Neighbourhood	lfield
Site Name / Address	2 – 12 Friston Walk		
Demolitions	6	Gross Dwellings	21
Site Area (Gross hectares)	0.53	Net Dwellings	15
Density range: Current / Potential	C: Under minimum. P: Low	Indicative SHLAA density	39dph
CL4 min. density	45dph	Revised Net Dwellings total	18
		Additional dwellings	+3

Site Reference	49	Neighbourhood	lfield
Site Name / Address	40 Springfield Road		
Demolitions	6	Gross Dwellings	8
Site Area (Gross hectares)	0.06	Net Dwellings	8
Density range: Current / Potential	C: Moderate	Indicative SHLAA density	133dph
CL4 min. density	45dph	Revised Net Dwellings total	-
		Additional dwellings	-

Site Reference	56	Neighbourhood	Southgate
Site Name / Address	46 – 48 Goffs Park Road		
Demolitions	1	Gross Dwellings	10
Site Area (Gross hectares)	0.28	Net Dwellings	9
Density range: Current / Potential	low	Indicative SHLAA density	36dph
CL4 min. density	45dph	Revised Net Dwellings total	13
		Additional dwellings	+4

Site Reference	57	Neighbourhood	West Green
Site Name/ Address	96 – 102 North Road		
Existing Land Use	Four large dwelling houses	Gross Dwellings	10
Demolitions	4	Net Dwellings	6
PDL / Greenfield	PDL/Greenfield	Current Density	11dph
PA. Number		Indicative SHLAA density	28
Lapse Date		Site Area (Gross hectares)	0.36
		CL4 min. density	45dph
Application type Current / Potential	Major	Revised Net Dwellings total.	+11

Site Reference	86	Neighbourhood	Furnace Green
Site Name / Address	Furnace Green Community Centre		
Existing Land Use	Community Centre and associated grassed area	Gross Dwellings	20
Demolitions	0	Net Dwellings	20
PDL / Greenfield	PDL/Greenfield	Current Density	-

PA. Number	-	Indicative SHLAA density	80dph
Lapse Date	-	Site Area (Gross hectares)	0.25
		CL4 min. density	45dph
Application type Current / Potential	Major	Revised Net Dwellings total	15
Density range: Current / Potential	Low	Additional dwellings	-5

Site Reference	59	Neighbourhood	Pound Hill
Site Name / Address	Harwood, Blaxley and Forest Way, Balcombe Road		
Existing Land Use	Three large detached dwelling houses and gardens.	Gross Dwellings	6
Demolitions	3	Net Dwellings	3
PDL / Greenfield	PDL/Greenfield	Current Density	4
PA. Number	-	Indicative SHLAA density	8dph
Lapse Date	-	Site Area (Gross hectares)	0.73
		CL4 min. density	35dph max
Application type Current / Potential	Major	Revised Net Dwellings total	9
Density range: Current / Potential	Low (Existing character a major constraint)	Additional dwellings	+6

Site Reference	87	Neighbourhood	Three Bridges
Site Name / Address	Land at Gales Place and West Way		
Existing Land Use	Residential gardens, community/employment buildings and garages	Gross Dwellings	30
Demolitions	0	Net Dwellings	30
PDL / Greenfield	PDL/Greenfield	Current Density	-
PA. Number	-	Indicative SHLAA density	38dph
Lapse Date	-	Site Area (Gross hectares)	0.78
		CL4 min. density	45-60dph
Application type Current / Potential	Large	Revised Net Dwellings total	30
Density range: Current / Potential	Low / Moderate	Additional dwellings	+30

Site Reference	88	Neighbourhood	Tilgate
Site Name / Address	Land at Peterborough Road		
Demolitions	0	Gross Dwellings	12
Site Area (Gross hectares)	0.26	Net Dwellings	12
Density range: Current / Potential	Low	Indicative SHLAA density	46dph
CL4 min. density	45dph	Revised Net Dwellings total	0
		Additional dwellings	0

Site Reference	50	Neighbourhood	West Green
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Site Name / Address	Dingle Close/Ifield Road, Rear Gardens		
Demolitions	0	Gross Dwellings	18
Site Area (Gross hectares)	0.7	Net Dwellings	18
Density range: Current / Potential	Low	Indicative SHLAA density	26dph
CL4 min. density	45dph	Revised Net Dwellings total	31
		Additional dwellings	+13

Site Reference	51	Neighbourhood	West Green
Site Name / Address	Snell Hatch/Ifield Road, Rear Gardens		
Demolitions	0	Gross Dwellings	15
Site Area (Gross hectares)	0.5	Net Dwellings	15
Density range: Current / Potential	Low	Indicative SHLAA density	30dph
CL4 min. density	45dph	Revised Net Dwellings total.	22
		Additional dwellings	+7

SHLAA Category (I) Sites that are suitable but currently undeliverable / undevelopable

Site Reference	36	Neighbourhood	Northgate
Site Name / Address	102 – 112 London Road & 2 – 4 Tushmore Lane		
Demolitions	8	Gross Dwellings	44
Site Area (Gross hectares)	0.39	Net Dwellings	36
Density range: Current / Potential	Moderate	Indicative SHLAA density	112dph
CL4 min. density	60-200dph	Revised Net Dwellings total.	-
		Additional dwellings	-

Site Reference	37	Neighbourhood	Northgate
Site Name / Address	116 – 136 London Road		
Demolitions	11	Gross Dwellings	64
Site Area (Gross hectares)	0.56	Net Dwellings	53
Density range: Current / Potential	Moderate	Indicative SHLAA density	114dph
CL4 min. density	60-200dph	Revised Net Dwellings total.	-
		Additional dwellings	-

Site Reference	55	Neighbourhood	Pound Hill
Site Name / Address	31 & 33 Blackwater Lane		
Demolitions	2	Gross Dwellings	8
Site Area (Gross hectares)	0.53	Net Dwellings	6

Density range: Current / Potential	No minimum due to character	Indicative SHLAA density	15dph
CL4 min. density	-	Revised Net Dwellings total.	-
		Additional dwellings	

Site Reference	58	Neighbourhood	West Green
Site Name / Address	Crawley Hospital Site		
Demolitions	0	Gross Dwellings	180
Site Area (Gross hectares)	2.77	Net Dwellings	180
Density range: Current / Potential	C: Moderate / Low	Indicative SHLAA density	65dph
CL4 min. density	45dph	Revised Net Dwellings total.	
		Additional dwellings	

Site Reference	100	Neighbourhood	Pound Hill
Site Name / Address	Bristol Close		
Demolitions	0	Gross Dwellings	10
Site Area (Gross hectares)	0.15	Net Dwellings	10
Density range: Current / Potential	Low	Indicative SHLAA density	67dph
CL4 min. density	45dph	Revised Net Dwellings total	7
		Additional dwellings	-3

Site Reference	101	Neighbourhood	Pound Hill
Site Name / Address	Knepp Close		
Demolitions	0	Gross Dwellings	12
Site Area (Gross hectares)		Net Dwellings	12
Density range: Current / Potential	Very Low due to Existing Character	Indicative SHLAA density	32dph
CL4 min. density	N/A	Revised Net Dwellings total	3
		Additional dwellings	-9/10

Site Reference	102	Neighbourhood	Northgate
Site Name / Address	Northgate Place		
Demolitions	0	Gross Dwellings	14
Site Area (Gross hectares)	0.23	Net Dwellings	14
Density range: Current / Potential	Moderate	Indicative SHLAA density	61dph
CL4 min. density	60dph	Revised Net Dwellings total	23
		Additional dwellings	+9

Site Reference	103	Neighbourhood	Broadfield
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Site Name / Address	Lansbury Road		
Demolitions	0	Gross Dwellings	20
Site Area (Gross hectares)	0.17	Net Dwellings	20
Density range: Current / Potential	Moderate - high	Indicative SHLAA density	118dph
CL4 min. density	200dph	Revised Net Dwellings total	40
		Additional dwellings	+20

Site Reference	104	Neighbourhood	Langley Green
Site Name / Address	Langley Green Farm		
Demolitions	0	Gross Dwellings	30
Site Area (Gross hectares)	0.6	Net Dwellings	30
Density range: Current / Potential	Low	Indicative SHLAA density	50dph
CL4 min. density	ABCA dependent – Max 45dph (but unlikely due to character and heritage constraints)	Revised Net Dwellings total	0
		Additional dwellings	0

One sample from SHLAA Category (C)

Site Reference	53	Neighbourhood	Three Bridges
Site Name / Address	Pacific House, Hazelwick Avenue		
Existing Land Use	B1 Offices	PA. Number CR/2021/0455/PA3 Lapse Date: 10/08/2024	
Demolitions	0	Gross Dwellings	20
PDL / Greenfield	PDL	Net Dwellings	20
Site Area (Gross hectares)	0.17	Current Density	-
New Density	235dph	Indicative density	118dph
Application type: Current / Potential	C: Major P: Large	Revised Net Dwellings total	40
Density range: Current / Potential	C: Moderate P: High	Change in Net Dwellings	+ 20