











REIGATE & BANSTEAD BOROUGH COUNCIL

A23 GREAT STREET

DESIGN CODE SUPPLEMENTARY PLANNING DOCUMENT (CONSULTATION DRAFT)

DECEMBER 2023

Reigate & Banstead BOROUGH COUNCIL
Banstead | Horley | Redhill | Reigate

URBAN INITIATIVES STUDIO

urban movement

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DESIGN CODES

PART A: VISION FOR THE A23 GREAT STREET

CHAPTER 1: INTRODUCTION

1.1 ABOUT THE DESIGN CODE

OVERVIEW

1.1.1 The Design Code is focused on delivering a co-ordinated response to the design of development along a stretch of the A23 extending north to south from Gatton Park on the northern edge of Redhill to the Longbridge roundabout on the southwestern edge of Horley, a distance of approximately 10 km.

1.1.2 The route is located in the south-eastern portion of Reigate & Banstead Borough; a part of the Borough where the Local Plan identifies opportunity for change and development.

1.1.3 It passes through a variety of different environments – the urban heart of Redhill town centre, the more mixed-use approaches into the town centre, the smaller settlements at Earlswood and Salfords, the wooded Earlswood Common and open agricultural fields south of Salford and the suburban edge of Horley Town Centre.

1.1.4 Whilst the road provides an important strategic movement function for cars and other vehicles it does not function well for pedestrians and cyclists. Footways are often sub-standard, traffic speeds are high and the provision for cyclists is mixed with dedicated provision on parts of the route but disappearing at critical locations. In places the road is hard to cross, severing communities from facilities and open spaces which are located across the other side.

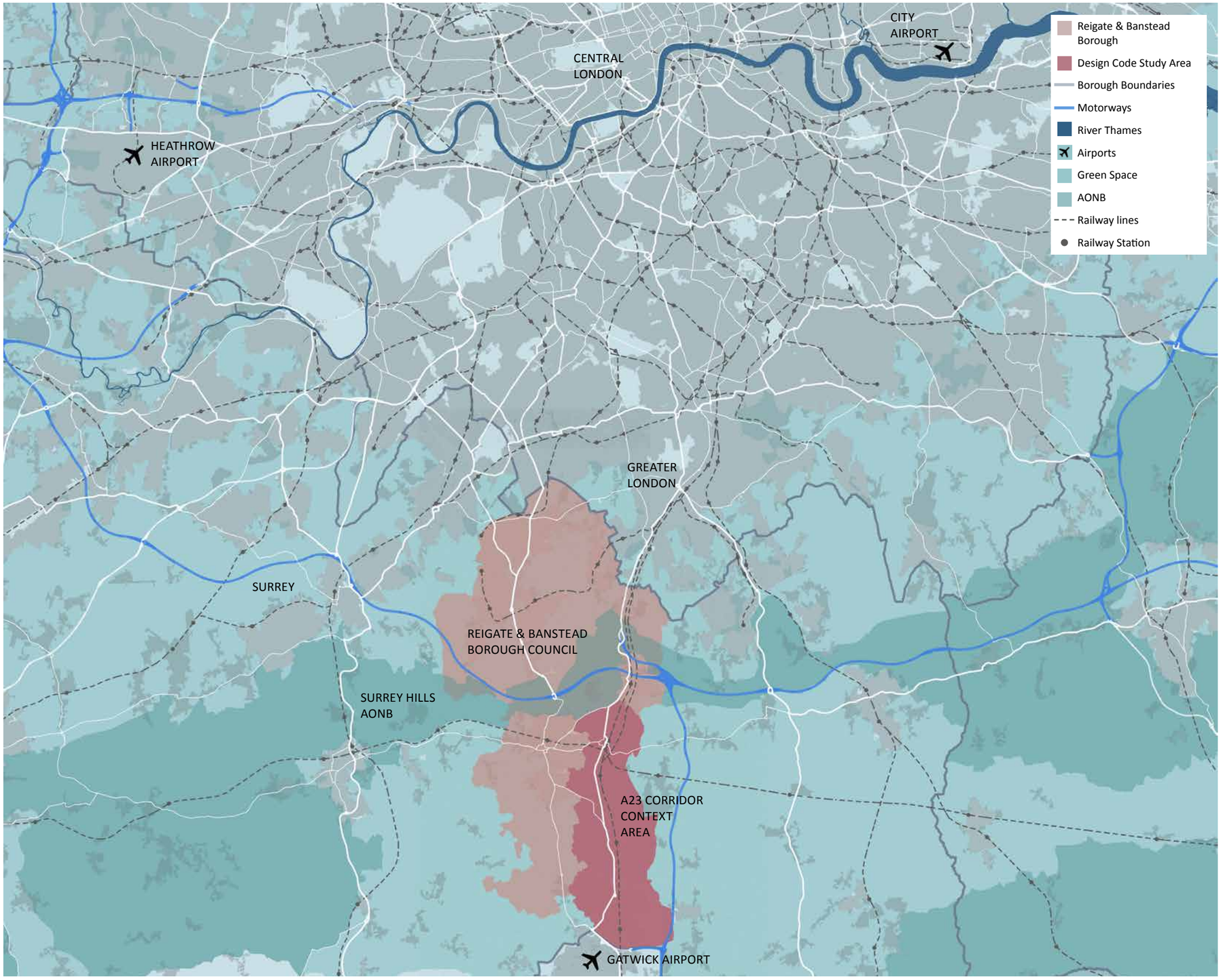

Figure 1.1: Wider Context

1.1 ABOUT THE DESIGN CODE

1.1.5 The built form and public realm are often uninspiring with buildings backing on to the street space in many places and with an uncoordinated approach to the design of public areas which are often overly dominated by grey infrastructure and obtrusive signage and a lack of trees and other vegetation. The route neither presents an inviting place to spend time and nor does it provide an engaging environment to travel along.

1.1.6 As a society we are facing a number of Grand Challenges. Nationally the population is ageing and becoming more unhealthy, we are experiencing a climate crisis and biodiversity is reducing at an alarming rate. Many people are feeling more isolated and are unable to access housing to meet their needs. We are seeing big shifts in the way we live our lives with high streets needing to reinvent themselves as people's shopping habits change and with many people spending more time working from home. The way we think about and design places must respond to these challenges.

1.1.7 This Design Code aims to address these challenges whilst also delivering Public Value for the residents and visitors to the borough. It focuses on creating places that help to improve the quality of our life and well-being and takes a coordinated approach to the design of development along the route.

1.1.8 The Grand Challenges and Public Values are set out in Section 2 of this Code and directly inform the ambition to make the A23 Reigate & Banstead's Great Street.

1.1.9 The Design Code aims to deliver around four principal themes:

- To make the area work better for pedestrians and cyclists;
- To improve access to open spaces and parks;
- To identify opportunities for development; and
- To raise the quality of design.

Image 1.1: St Matthew's Church Redhill

Image 1.2: The Belfry Shopping Centre, Redhill town centre

Image 1.3: Vernacular architecture in Redhill town cente

Image 1.4: Recent development in Redhill town centre creates a poor interface with the street

Image 1.5: Southern approach to Redhill town centre

Image 1.6: Parade of modest scale shops south of Redhill

1.1 ABOUT THE DESIGN CODE

Image 1.7: The A23 passes through Earlswood Common

Image 1.10: The A23 at South Earlswood

Image 1.13: Salfords's railway station

Image 1.16: Part of Horley High Street has been pedestrianised

Image 1.8: In some places a bi-directional shared walking/ cycle route already exists alongside the A23

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Image 1.14: Recent development in Horley

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Image 1.12: Views of the open countryside from the A23

Image 1.15: Residential street in Horley

Image 1.18: Recently built homes at Westvale Park, Horley

1.2 POLICY CONTEXT

POLICY CONTEXT

NATIONAL POLICY CONTEXT

1.2.1 Paragraph 126 of the National Planning Policy Framework (February 2021) states that: *'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.'*

1.2.2 Paragraph 128 states *'To provide maximum clarity about design expectations at an early stage, all 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 which reflect local character and design preferences. Design guides and codes provide a local framework for creating beautiful and distinctive places with a consistent and high quality standard of design.'*

1.2.3 The National Model Design Code identifies codes as *'a set of simple, concise, illustrated design requirements that are visual and numerical wherever possible to provide specific, detailed parameters for the physical development of a site or area.'*

1.2.4 The National Model Design Code makes clear that communities need to be involved at each stage of the process to prepare a Code in order to gain measurable community support.

1.2.5 It also establishes a structure for the codes around the ten characteristics of a 'Well designed places' as identified in the National Design Guide. These characteristics or themes are interconnected and codes may therefore be cross cutting over several themes. Codes are specific to place and not all aspects will necessarily be covered in all codes.

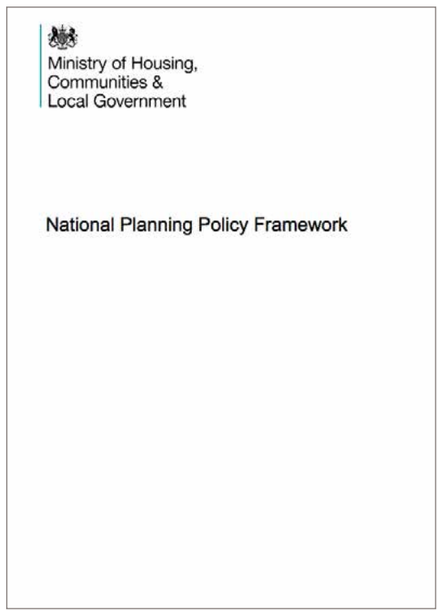
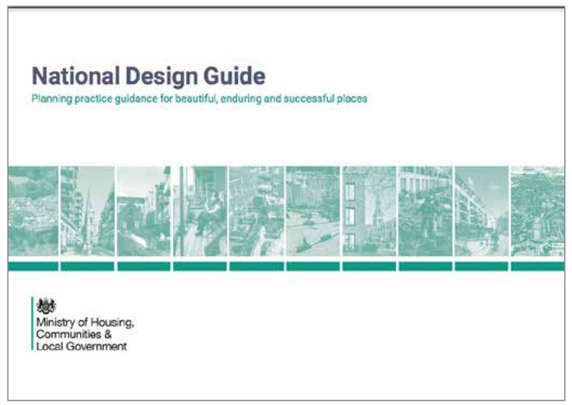


Image 1.19: National Planning Policy Framework (2021)



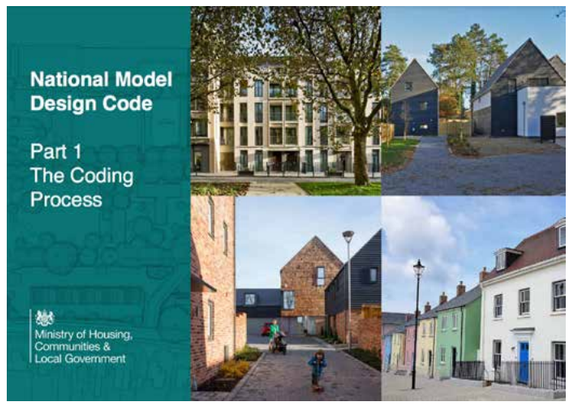


Image 1.20: National Design Guide (2019) and National Model Design Code (2021)

SURREY POLICY

1.2.6 In 2022 Surrey County Council, the highway authority in Reigate & Banstead, adopted a Healthy Streets for Surrey Design Guide. This aims to create streets which are safe and green, and beautiful and resilient across the county. The guide provides three levels of guidance including mandatory design practices (codes) for the design of streets. The Healthy Streets for Surrey Design Guide has recently been adapted as a Digital Tool and can be found on the Surrey County Council website.

1.2.7 The Healthy Streets for Surrey Design Guide provides high level design principles that apply across the whole county. The Design Code for the A23 Great Street takes these principles as a starting point for preparing more place specific codes that respond to the particular conditions and character of the study area.

Image 1.21: Healthy Streets for Surrey (2022)

1.2 POLICY CONTEXT

REIGATE & BANSTEAD BOROUGH COUNCIL POLICY

1.2.8 The Reigate & Banstead Borough Council Core Strategy (2014) aims to deliver *'Sustainable growth, whilst protecting the attractive, accessible and well-maintained borough that our residents and communities value.'*

1.2.9 In its corporate plan, 'Reigate & Banstead 2025', the Council has committed to being proactive about tackling climate change and reducing environmental impact.

1.2.10 Design Policies are provided within the Development Management Plan (2019). Policy DES1: Design of new development, sets criteria for design that *'Promotes and reinforces local distinctiveness and respects the character of the surrounding area, including positive physical characteristics of local neighbourhoods and the visual appearance of the immediate street scene'.*

1.2.11 The Council has prepared and adopted a number of Supplementary Planning Documents including a Local Character and Distinctiveness Design Guide (June 2021) and Climate Change and Sustainable Construction SPD (September 2021).

1.2.12 The Design Code is to be adopted as a Supplementary Planning Document (SPD) in support of the Local Plan. Once adopted, the Design Code will be a material consideration in determining planning application

Image 1.22: Reigate & Banstead Local Plan: Core Strategy (2014)

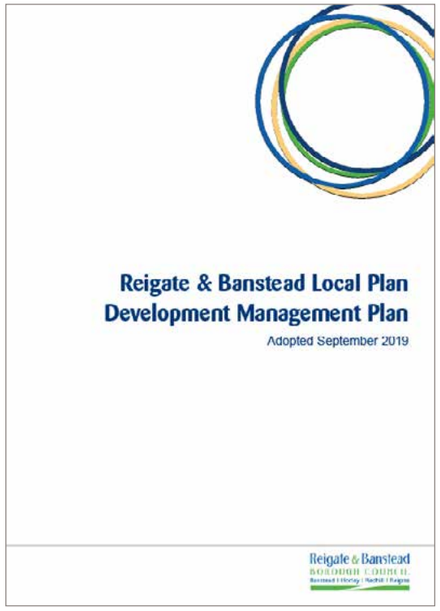


Image 1.23: Reigate & Banstead Local Plan Development Management Plan (2019)

Image 1.24: Reigate & Banstead Local Character & Distinctiveness Design Guide SPD (2021)

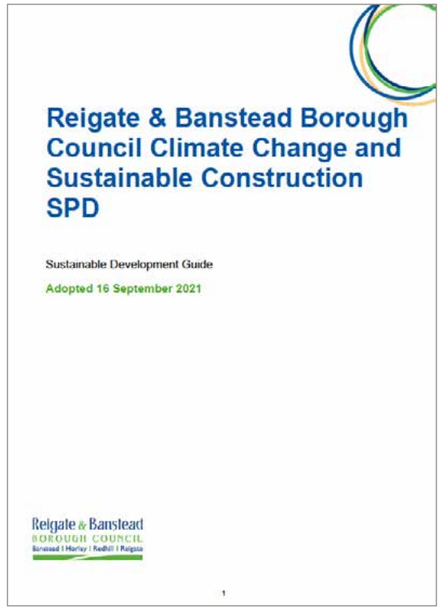


Image 1.25: Reigate & Banstead Climate Change and Sustainable Construction SPD (2021)

1.3 PREPARING THE DESIGN CODE

OVERVIEW

1.3.1 A Design Code sets rules that development must adhere to. These should provide certainty to developers and landowners about what is expected of them when promoting development in an area and also assurance to the local community about how their area may change over time and how new development can contribute to a better functioning, more beautiful and successful place in the future.

1.3.2 In order to create the Code it is essential to understand what it is that is desirable to achieve. The design code is place specific but must also respond to strategic issues or challenges beyond the study area itself. It must also align with the existing policy framework both nationally and locally.

1.3.3 The Design Code for the A23 Great Street is community focused aiming to address issues and challenges in a way that will improve the lives of those people living, working or visiting the area. In other words the Code aims to deliver **Public Value**.

1.3.4 The Code has been prepared through a rigorous and logical process. This starts at a strategic level with an understanding of the challenges facing society and how this may impact on the way that we plan our towns and cities. These are identified as the **Grand Challenges.** We have then considered how addressing these issues can deliver **Public Value** – tangible benefits to all members of the public that enhance quality of life.

1.3.5 Ensuring that the Code is place specific means understanding the **Context**, the features and element both within the landscape and built form that make the area distinctive, provide identity and that can be reinforced or enhanced in the future. Whilst it is important to understand the strengths of the study area, it is equally important to identify what is not working so well, the barriers to movement, areas with fragmented built form that detract from the area and areas deficient in quality open space or other facilities and services important to people's quality of life.

1.3.6 Having established the Grand Challenges, Public Value and Context these have then been synthesised to establish a series of **Ambitions** for the A23 Great Street.

1.3.7 The **Design Codes** themselves are drawn from these Ambitions and are a prescriptive set of rules that aim to deliver the **Ambitions** on the ground.

1.3.8 It should be noted that the Design Code has been based on existing policy and best-practice guidance. These sources are referenced throughout the document for 'Further Reading' as they provide additional background on the Design Codes.

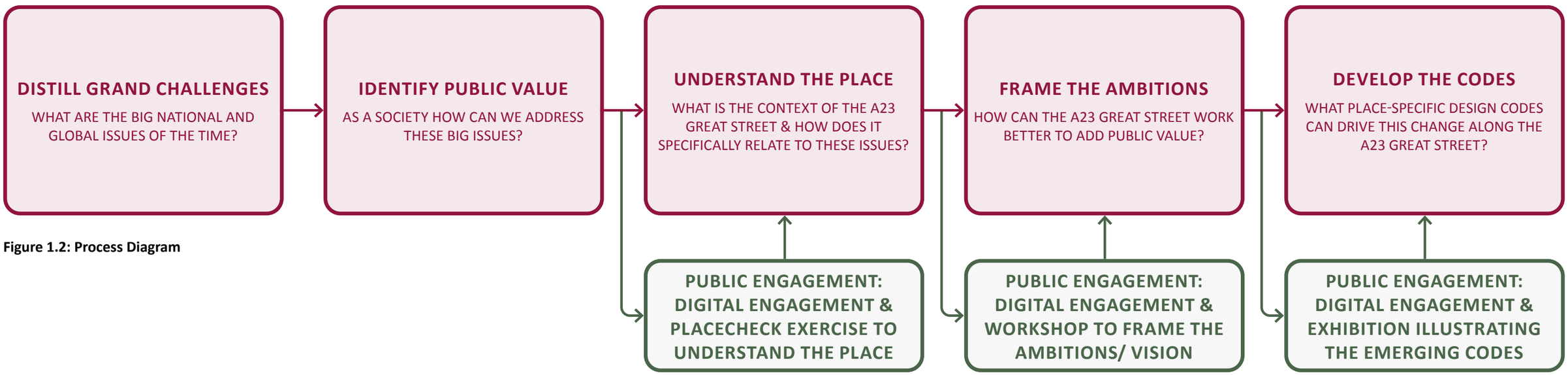


Figure 1.2: Process Diagram

1.3 PREPARING THE DESIGN CODE

STAKEHOLDER AND COMMUNITY ENGAGEMENT

1.3.9 Stakeholders and the wider public have been involved throughout the preparation of the Design Code and their comments have informed the emerging Code. Invited stakeholder workshops were held in Redhill, Salfords and Horley to introduce the process and purpose of the Design Code in September 2022. A second round of workshops was held in November/December 2022 to present the Grand Challenges, Public Value and draft design principles and ambitions. Finally, a public drop-in exhibition was held in March 2023 to allow the public to comment on the emerging codes.

1.3.10 It was recognised that many people do not want to or are unable to attend the in-person consultation events and information about the Design Code was made available on a public engagement platform 'Commonplace' through the duration of the Design Code process. Initially people were invited to make a comment about their area through planting a flag on a plan of the wider study area. This allowed them to indicate what they like about the area, or highlight an issue or concern that could be addressed through the Code. Subsequently they were asked to comment on the Grand Challenges, Public Value and draft design principles and ambitions.

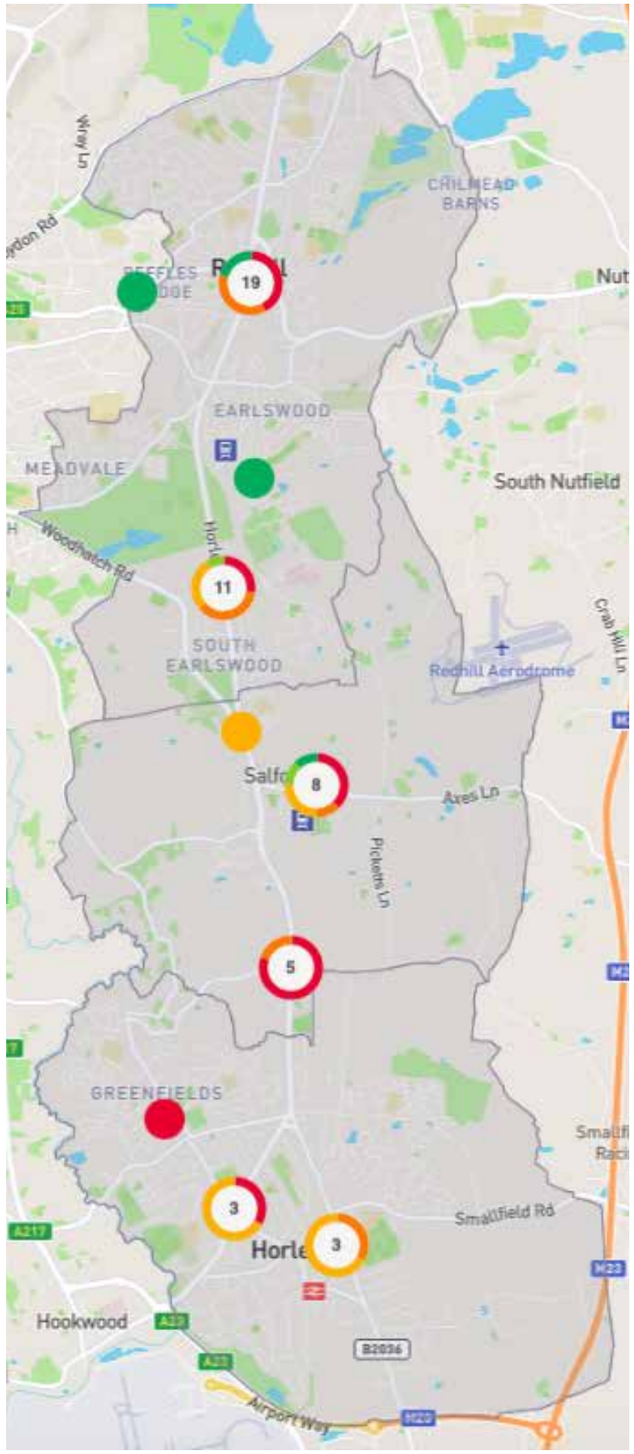


Figure 1.3: Map-based comments made on the Commonplace platform

*"Earlswood and Redhill Commons are **steeped in history**, however the information boards are quite limited on the history. The information boards do not fit with the character, bring green and metallic for a municipal park rather than Nature Reserve. Transition from golf course to a great green space is very slow. **Careful tree planting, to break up the golf course required**. New picnic area and tables and a cafe that blends properly. There should be a Friends Of group."*

*"**Undesirable walking route** to Memorial Park. **Busy road and unattractive car park**."*

*"The council needs to up its game and start a tree planting program in our town roads, this will **help lower the temperature, provide shade for humans and support wildlife biodiversity.**"*

*"On a typical day Redhill centre is **buzzing** with good footfall and a fantastic market full of life. **The public realm however seems tired and a number of the trees are struggling to survive.** Would've nice to see an upgrade for the area with quality, **hard wearing materials and trees designed to live for 100 years**!*

*At night the centre struggles and can feel **unsafe**. Perhaps some thoughts to support the nighttime economy would be beneficial, I hope coming cinema can help this"*

*"As a road of **historic value** would be nice to enhance further with a history information board, improved road features such as cobbled Road to slow speeding traffic from the pub. Also improve drainage as makes some pathways unusable in wet weather"*

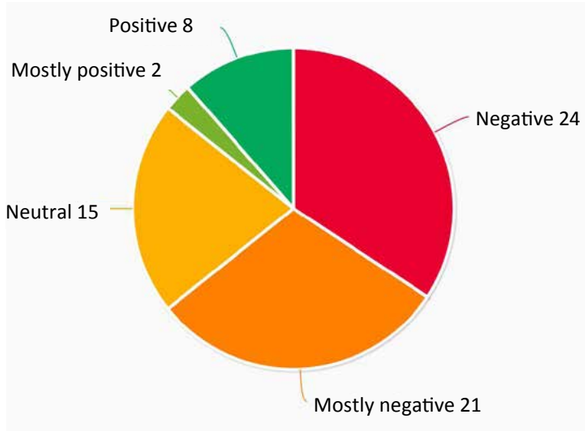


Figure 1.4: Public sentiment about the existing A23 Great Street area

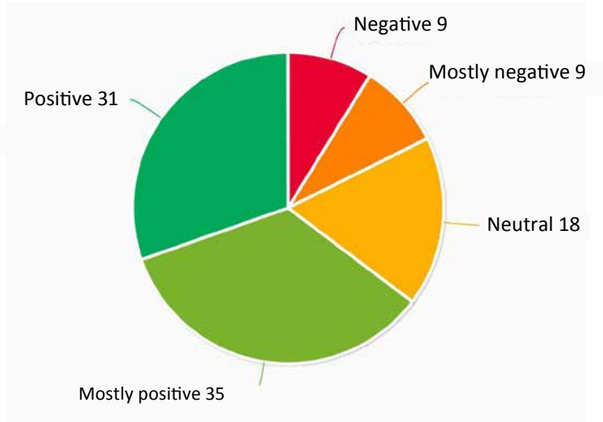


Figure 1.5: Public sentiment about the A23 Great Street Vision

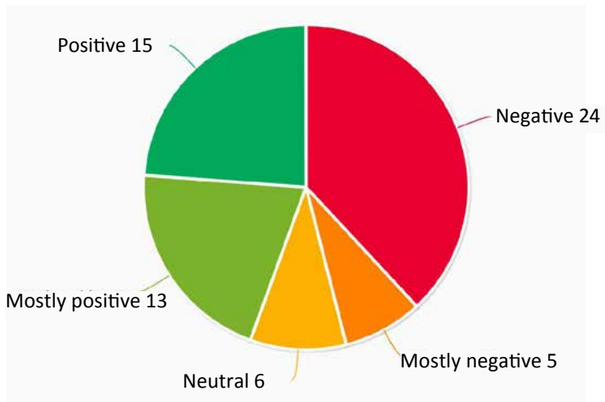


Figure 1.6: Public sentiment about the A23 Great Street ambition statements

1.4 HOW TO USE THE DESIGN CODE

THE CODE AS A TOOL

1.4.1 This Design Code provides a set of rules that development must adhere to along the length of the A23 Great Street from Gatton Park on the northern edge of Redhill to the Longbridge roundabout on the western edge of Horley.

1.4.2 All development that interfaces with the Great Street will need to meet the requirements of the Design Code.

1.4.3 It will form an essential tool for anyone charged with preparing or assessing the quality of planning applications or emerging proposals including:

- Developers, builders and local residents in considering potential development proposals;
- Design professionals, in drawing up proposals along or that interface with the A23 Great Street;
- Town and parish councils, statutory and non-statutory consultees and the public in commenting on planning applications; and
- The Borough Council, in determining planning applications and in upholding decisions at planning appeals.

1.4.4 A number of indicative plans and sketches have been prepared to demonstrate how the codes may be applied in locations along the A23 Great Street. **These are shown for illustrative purposes only and are not proposed designs for the places in question.**

1.5 THE GRAND CHALLENGES

GRAND CHALLENGES

1.5.1 There are a number of significant challenges facing our communities both at a national and in some cases international level. Whilst addressing each of these requires a long-term strategic approach, decisions taken at a local level can make a significant difference to the quality of life and opportunity for people living, working or visiting the borough of Reigate & Banstead. Understanding the challenges and responding to them forms a starting point for preparation of the Code. Refer also to 'Demographics on page 24 for more information about how these challenges manifest in the study area.

1.5.2 Twelve 'Grand Challenges' are identified here:

AGEING POPULATION

"By 2030, one in five people in the UK (21.8%) will be aged 65 or over... 2 million pensioners in the UK live in poverty... 1 in 14 people over the age of 65 have dementia."

SOCIAL MOBILITY

"Individuals from lower socio-economic backgrounds face significant obstacles throughout their life."

HIGH STREETS

"Towns with a defined sense of place and role beyond template retail have shown greater resilience."

CLIMATE CRISIS

"If we fail to limit global warming to 1.5°C we risk reaching climatic tipping points like the melting of arctic permafrost – releasing millennia of stored greenhouse gases."

HEALTH AND OBESITY CRISIS

"In 2019, 64 per cent of adults in England were overweight, with 28 per cent being obese and 3 per cent morbidly obese."

CLONE TOWNS

"Many town centres that have undergone substantial regeneration have lost their sense of place...[to] chain stores built for the demands of inflexible business models that provide the ideal degree of sterility to house a string of big, clone town retailers."

AIR POLLUTION

"Poor air quality remains the greatest environmental risk to public health in the UK. It is known to exacerbate the impact of preexisting health conditions, such as respiratory and cardio-vascular illnesses, especially for the elderly and infants."

SOCIAL ISOLATION

"The quality and quantity of social relationships affect physical and mental health and risk of mortality."

SENSE OF PLACE

"All around us we see ugly and unadaptable buildings, decaying neighbourhoods and new estates that spoil some treasured piece of countryside or are parasitic on existing places not regenerative of them."

HOUSING CRISIS

"The Government's stated target is for 300,000 new homes per year to be developed by the mid-2020s. Other estimates put the level of need at up to 340,000 new homes per year. Current delivery is not at this level."

ECONOMIC PRODUCTIVITY

"If productivity had continued to grow at two percent per year in the last decade, it would have meant an extra £5,000per worker per year on average".

BIODIVERSITY

"We are in danger of presiding over massive human-induced extinctions when we should instead be recognising the intrinsic value of the wildlife and plants that are our fellow inhabitants of this planet."

1.6 GENERATING PUBLIC VALUE

1.6.1 The performance of town centres is nearly always quantified in purely financial terms – occupancy rates, rental yields, footfall and spend. Equally, the performance of streets tends to be measured in terms of journey times and delay. These metrics miss many of the things that we value most in life because they are difficult to quantify in this way. When we invest in our town centres, streets and public spaces, the things that we really value are often missing from any assessment of their success.

1.6.2 There are many ways in which our streets and public spaces can make our lives richer, but which, historically, have failed to be taken into account in their design and appraisal. The Design Code SPD for the A23 Great Street aims to address this through focusing on things that will improve people's quality of life.

1.6.3 These **Public Values** were positively received through the early stage consultation.

- **We want to stay healthy**, which means building incidental exercise into our daily routines as well as convenient access to leisure facilities, being able to access fresh food, having clean air to breathe and safe streets to travel along and being able to access medical care when we need to.
- **We want to build meaningful relationships and spend more time with the people we care about**, our partners, our children and grandchildren, and our friends, which requires an efficient and reliable transport network (meaning that we don't waste our lives stuck in traffic) as well as access to places to meet such as parks and town squares.
- **We want social contact, a sense of community and a feeling that we are all looking out for each other**, which means residential streets that encourage informal encounters through shared spaces that are inviting and convivial.
- **We want to be less stressed**, which means spending time in, and connecting with, nature through street trees and greening.
- **We want to be able to rest and get good quality sleep**, which means not being disturbed by road noise, particularly at night.
- **We want our imaginations to be sparked**, which means finding art and culture in our everyday lives through streets that offer surprise and delight as well as being able to access places such as theatres, music venues, cinemas, sports venues and galleries.
- **We want to access well-paying, meaningful work**, which means affordable, convenient transport to employment opportunities as well as attracting good employers to locate in the borough.
- **We want to be able to live independent lives**, which means addressing issues relating to personal security as well as making places accessible for all, particularly those with disabilities, young people, women and older people.
- **We want to be able to give back** by helping in our local communities and doing things for charity with neighbourhood streets that provide a sense of shared responsibility for our local area.
- **We want life-long learning as well as to be creative**, which means convenient access to schools and colleges as well as community centres, local halls and libraries where we can meet with others to share in our hobbies and pastimes.
- **We want our children to inherit a world that provides them with at least the same opportunities as we've had**, which means protecting our natural resources and minimising the ecological damage that can result from the ways that we travel.

CHAPTER 2: UNDERSTANDING THE LOCAL CONTEXT

2.1 THE STUDY AREA AND WIDER CONTEXT

2.1.1 Whilst the Design Code SPD is focused on the A23 Great Street, the study area for the Code takes in a broader area extending from Redhill in the north to Horley in the south and embracing a variety of different environments both urban and rural. It is located in the south-eastern part of Reigate & Banstead Borough and has good access to both the national railway network, with connections directly into London Victoria, and to the strategic road network including the M25 and M23. Gatwick Airport is located immediately to the south of Horley.

2.1.2 The borough has a variety of natural landscapes included the Surrey Hills Area of Outstanding Natural Beauty (AONB) which extends east to west to the north of the study area (the boundaries are currently under review) and Earlswood Common to the south of Redhill. Much of the open landscape within the borough is designated as Green Belt which forms an important part of the open character of the area by defining distinct settlement boundaries for Redhill, Salfords and Horley.

2.1.3 Reigate & Banstead is a relatively affluent and prosperous area, with low levels of unemployment compared to regional and national averages. Its locational advantages have attracted many business to locate within the area and it is a popular place to live.

2.1.4 Within the borough there are four main settlements and two of these, Redhill and Horley are located within the study area. Redhill adjoins the older settlement at Reigate and grew rapidly with the coming of the railways in the 19th century. Whilst Horley also grew as a railway town, most of its growth took place in the latter part of the 20th century. The A23 links the two settlements and passes through a number of smaller places including South Earlswood and Salfords. The East Surrey Hospital is also located within South Earlswood.

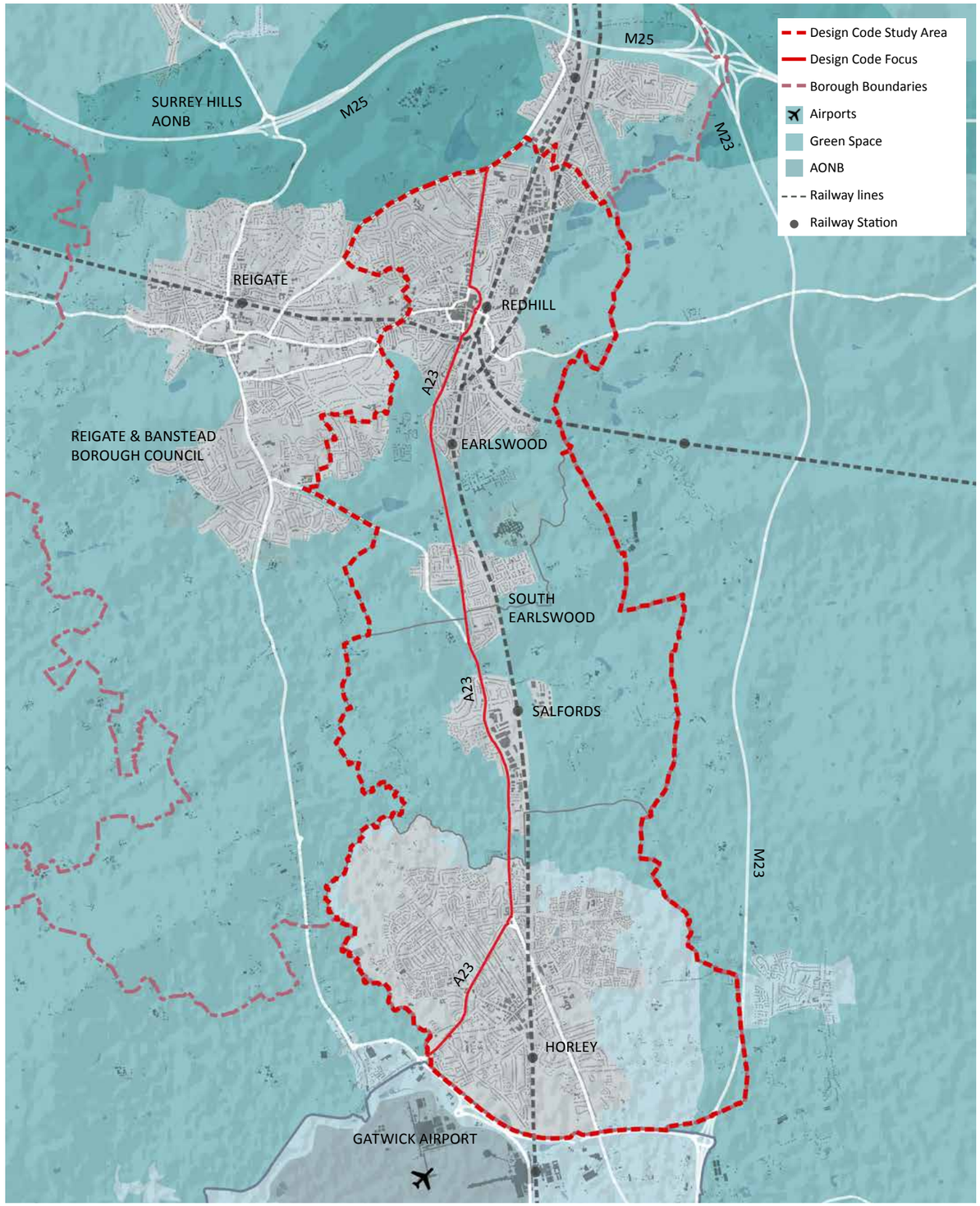


Figure 2.1: Study Area Context

LANDSCAPE CHARACTER AND INFRASTRUCTURE

2.2.1 England's landscape is subdivided into 159 National Character Areas (NCA) each of which has a distinct and recognisable character at a National scale. Their boundaries follow natural lines in the landscape, not county or district boundaries.

2.2.2 The northern part of the study area is within the Wealden Greensand NCA an undulating landscape with significant areas of woodland. The southern part is within the Low Weald NCA a broad low lying clay vale which is predominantly agricultural but which also includes some densely wooded areas.

2.2.3 To the north of the study are the chalk hills of the North Downs NCA.

2.2.4 The structure and relief of the landscape is fundamentally influenced by the underlying geology. The process of weathering, erosion and deposition influence the shape and form of the landscape and its drainage and soils. In turn, these influence patterns of vegetation and land use.

2.2.5 The building materials that we see in the local vernacular are derived from the materials available within the natural landscape. In the North Downs flint walls and Wealden brick; the Greensand stone walls and red tiles of the Wealden Greensand and strong orange red bricks and tiles of the Low Weald.

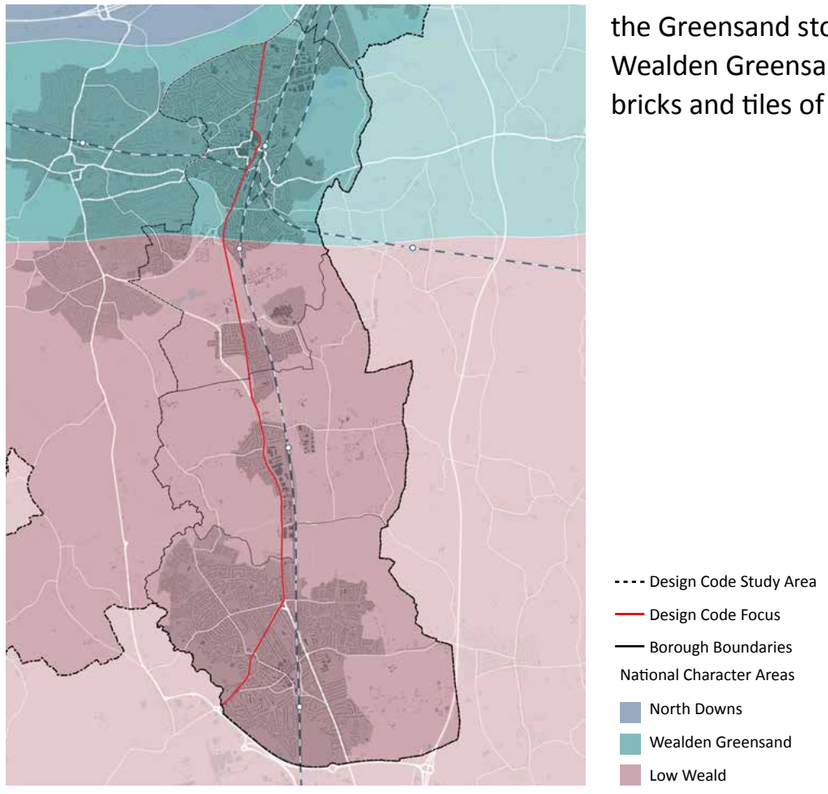


Figure 2.2: National Landscape Character Areas

HISTORIC EVOLUTION, ASSETS AND VERNACULAR CHARACTER

2.2.6 Redhill was a hamlet in the 19th century and its growth can be attributed to the arrival of the London to Brighton railway line with a station opening in 1841. Parts of the Victorian centre remain including Station Road which leads from the station towards the town centre and is designated as a conservation area. Much of the historic fine grain character of the town centre has however been redeveloped with larger footprint office developments, shopping centres and some post-war housing areas. There are however many Victorian residential suburbs particularly to the south of the town and in Earlswood.

2.2.7 Horley also grew with the arrival of the railway and much of the early fine grain development remains in the heart of the town centre and in the grid of streets extending northward from the centre.

2.2.8 In both towns brick is the predominant building material.

2.2.9 Both towns have seen significant expansion through the 20th century with extensive areas of suburban housing built in the inter-war and post-war years. Since the Millennium two new urban extensions have been built on the northern edge of Horley and new residential development at a dense urban scale has been built in the heart of Redhill town centre around the station.

2.2.10 Straddling the A23 between Redhill and Horley are two smaller settlements, South Earlswood and Salfords. Both are suburban in character with most homes dating from the latter part of the 20th century.

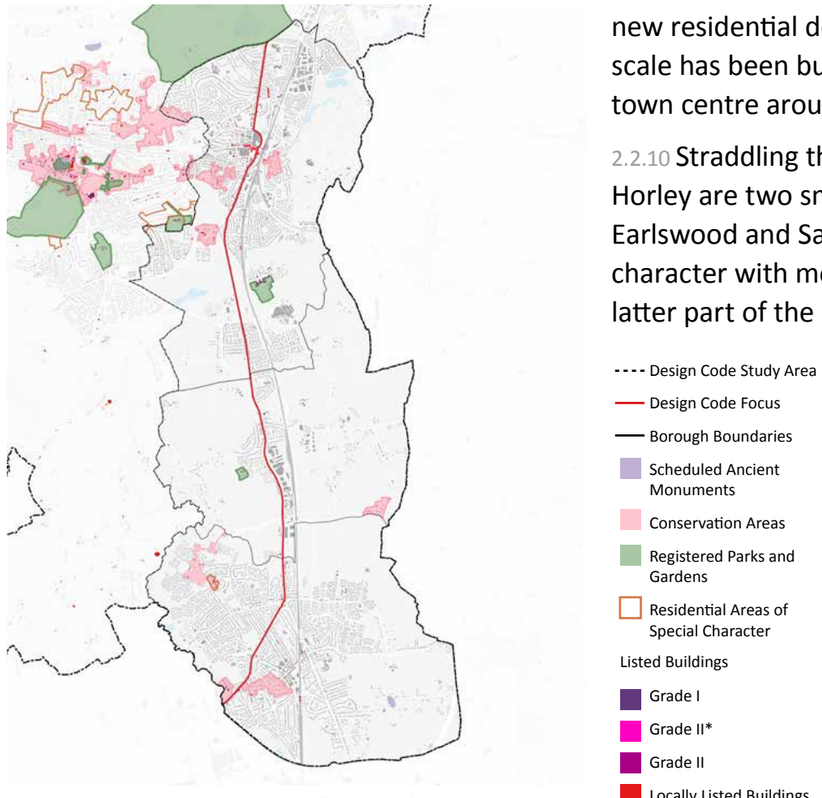


Figure 2.3: Heritage Assets (as of September 2022)

CHARACTER OF THE CORRIDOR

2.2.11 A typological analysis of the urban fabric of the study area has been carried out to identify area types and is indicated in Figure 2.4. This identifies functional typologies covering open spaces/landscape, town centres, institutional, employment and residential uses and their respective area types. Area types often derive from different periods of development and display common characteristics in respect of their layout, building typology and form, organisation and height, densities and their inherent place qualities.

2.2.12 Some parts of the study area are of special architectural or historic interest and have been designated as conservation areas (as indicated in Figure 2.3). These include historic hamlets around which the current settlements have grown and Victorian and Edwardian neighbourhoods close to Redhill and Horley town centre. These historic areas make a strong contribution to the character of the area.

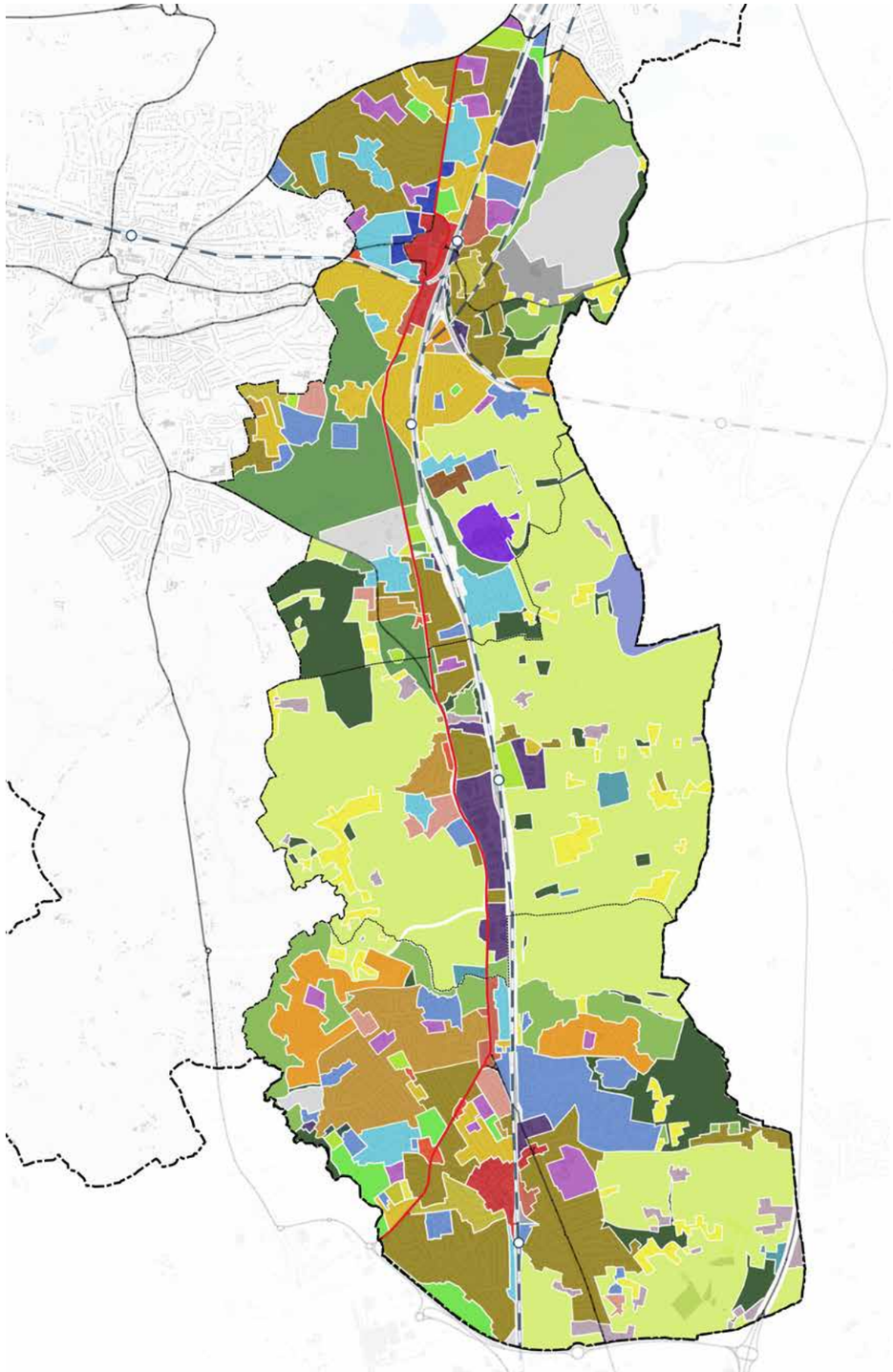


Figure 2.4: Townscape Character Areas

INTERFACE CHARACTER

2.2.13 The area types that interface with the corridor have been simplified to identify broad categories of frontage condition to which particular codes apply.

2.2.14 These are:

- Central urban area;
- Edge of centre urban area;
- Suburban area; and
- Industrial interface.

2.2.15 The four interface types are indicated in Figure 2.5.

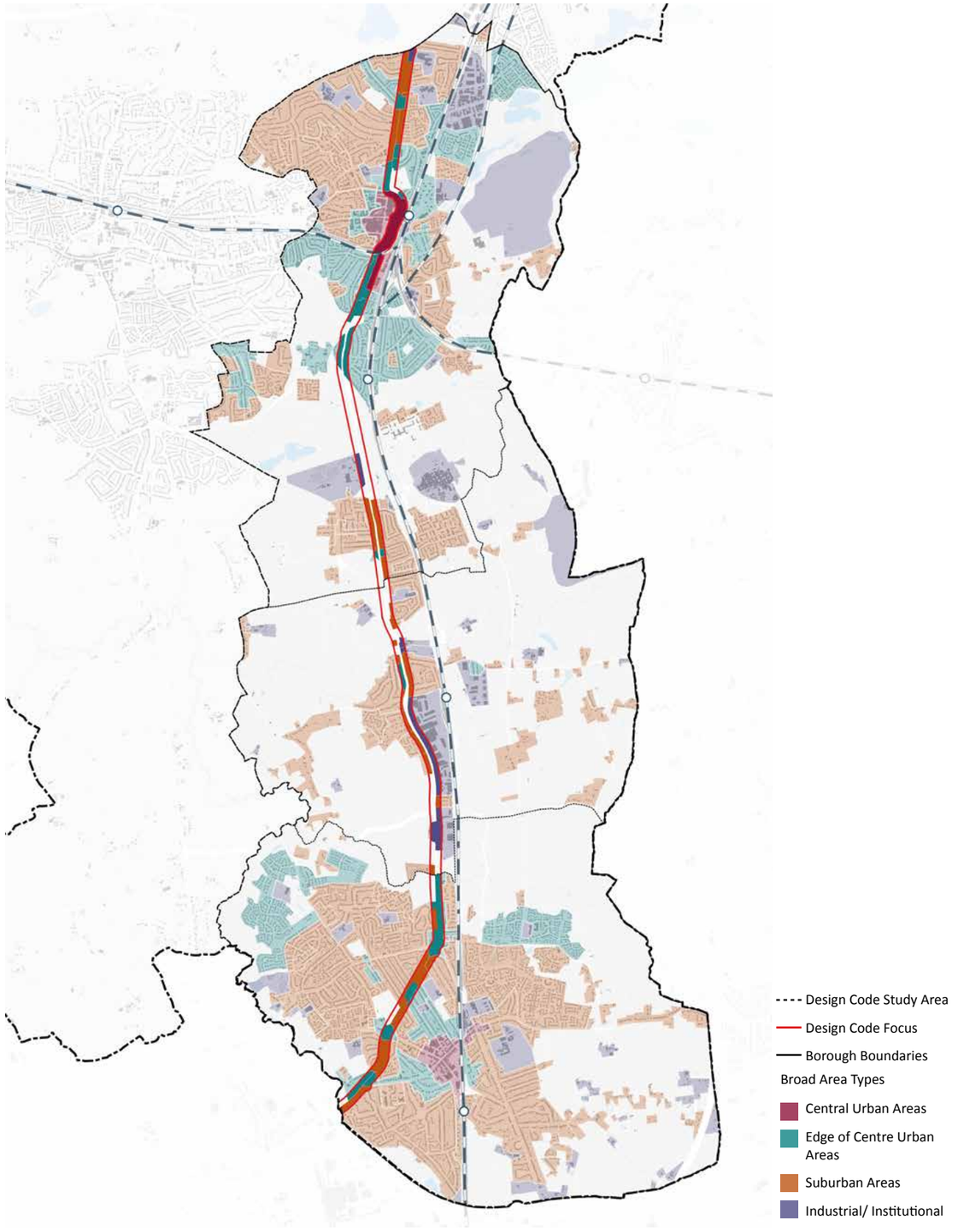


Figure 2.5: Simplified Area Types

DEMOGRAPHICS

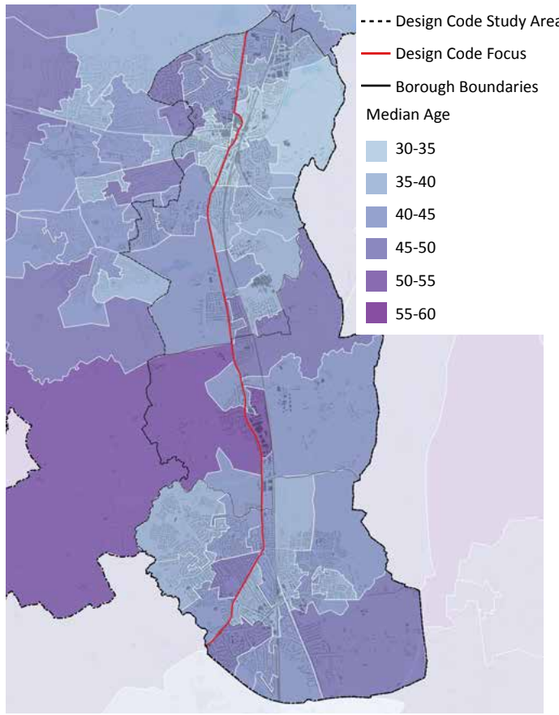


Figure 2.6: Median Age

AGE OF POPULATION

2.2.16 The population in Reigate & Banstead is ageing. Currently 18% of the population are aged over 65. This is anticipated to increase to 25% by 2041.

2.2.17 However this does not apply uniformly across the borough. Those people living in the more rural parts of the borough are on average older. Redhill and parts of Horley have a relatively young population with a median age of 30-40 years old.

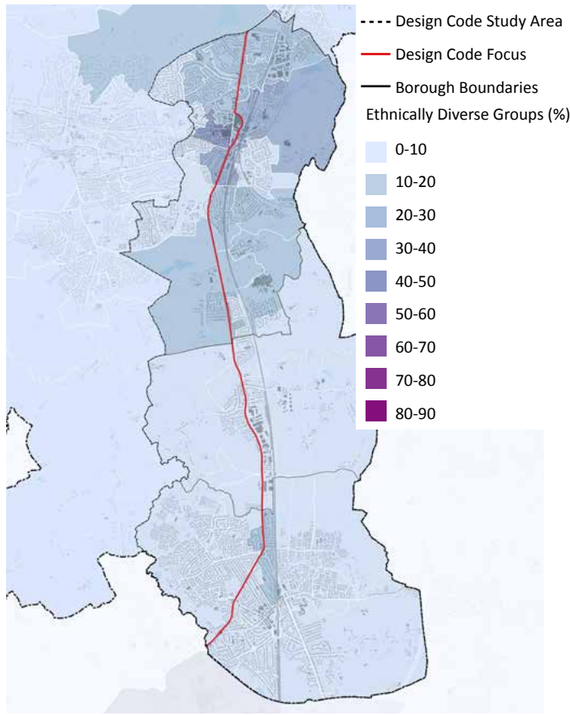


Figure 2.7: Ethnically Diverse Population

ETHNICITY

2.2.18 In 2021, 84.4% of people in Reigate & Banstead identified their ethnic group within the "White" category (compared with 90.6% in 2011). 7.5% of Reigate & Banstead residents identified their ethnic group within the "Asian, Asian British or Asian Welsh" category, up from 5.1% in 2011.

2.2.19 The town centres of Redhill and Horley have a more ethnically diverse population than the suburban and rural areas.

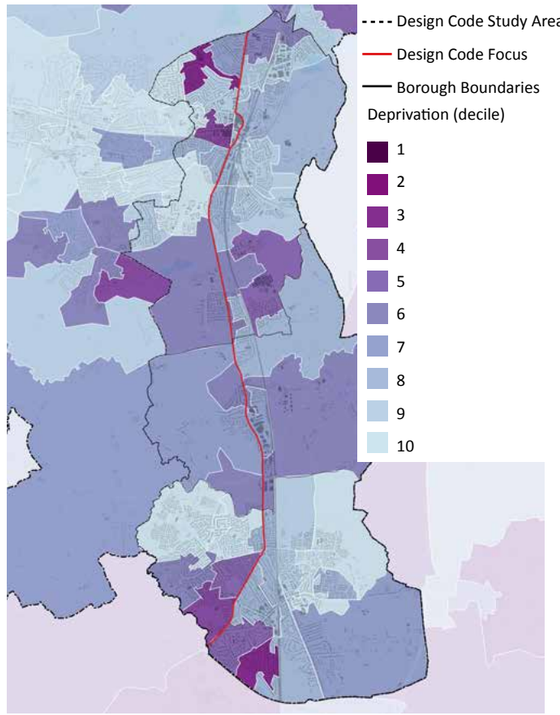


Figure 2.8: Multiple Indices of Deprivation

DEPRIVATION

2.2.20 Reigate & Banstead is a relatively affluent borough which does not suffer from significant levels of deprivation. Overall, the borough is ranked 276 out of 317 local authorities in England (1 is most deprived).

2.2.21 There are however pockets of higher deprivation within the study area, particularly towards the west of Redhill town centre, in suburban areas to the north west of Redhill centre and south west of Horley centre and east of the railway in South Earlswood.

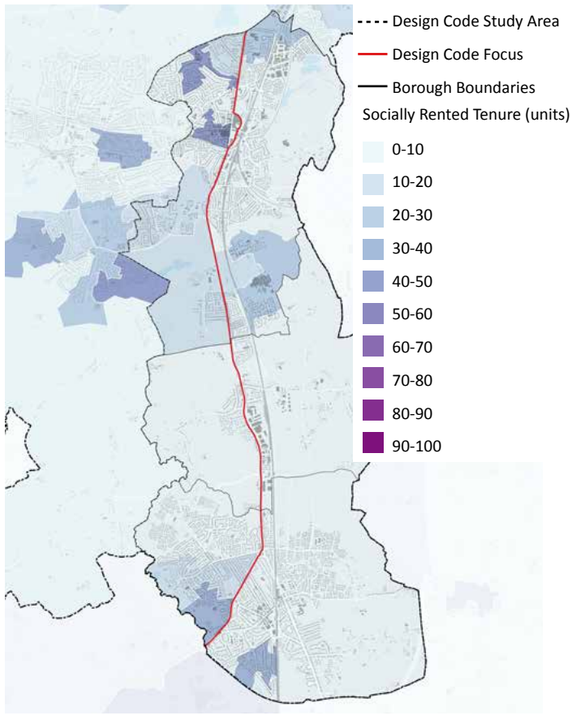


Figure 2.9: Socially Rented Tenures

HOUSING TENURE

2.2.22 In common with much of the county of Surrey, average house prices in Reigate & Banstead are significantly above the regional and national averages. According to Land Registry information during the last quarter of 2019, the average house price within the borough was £602,441. This compares to an average house price for the UK of £231,855.

2.2.23 Socially rented tenures in the study area are located towards the west of Redhill town centre, in suburban areas to the north west of Redhill centre and south west of Horley centre and east of the railway in South Earlswood. These coincide with the areas with greater deprivation.

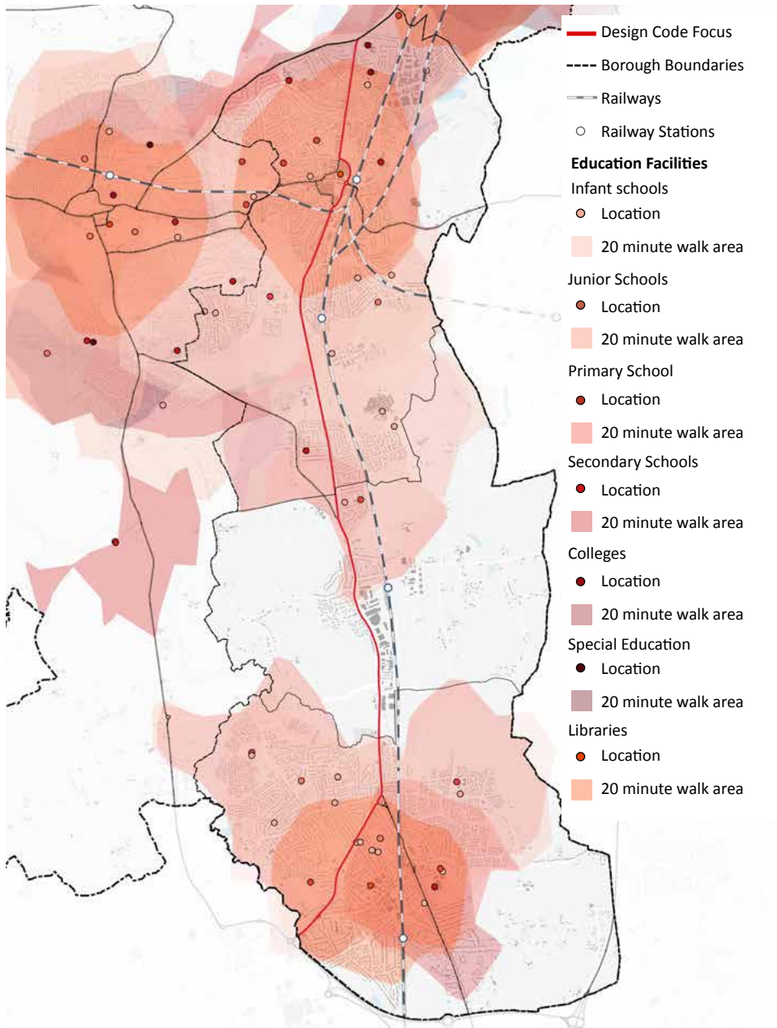
2.3 WALKABILITY & 20-MINUTE NEIGHBOURHOOD

ACCESS TO FACILITIES AND AMENITIES

2.3.1 In recent years increasing value has been placed on the ability to access all of one's day to day needs within 20 minutes of your home through a network of attractive and safe walking and cycling routes. This is a core objective of the Design Code and is in alignment with Surrey County Council's Local Transport Plan (LTP4) which aims to establish Liveable Neighbourhoods with key characteristics including '*increasing the comfort, safety and accessibility of walking and cycling; creating space for community facilities; creating attractive local environments and welcoming neighbourhoods that people want to live in; reducing the dominance of cars and goods vehicles resulting in improved safety, air quality and noise pollution to encourage more walking, cycling and social interactions.*'

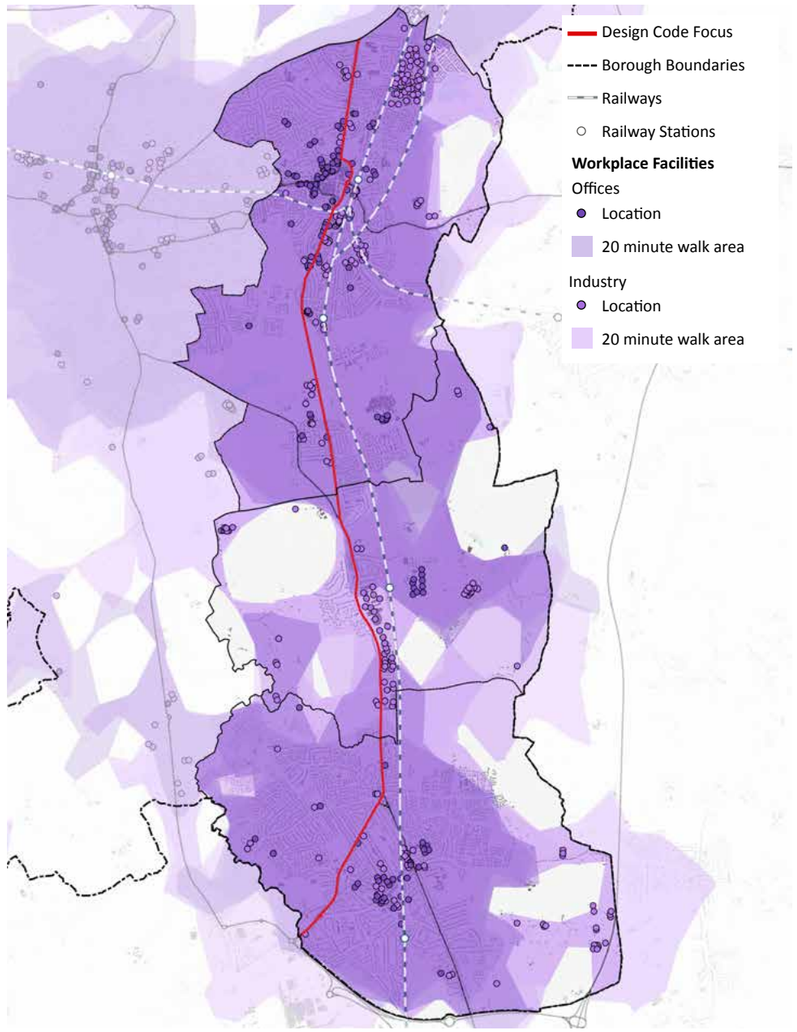
2.3.2 The accessibility of education, employment, public transport, nutrition, health and care, recreation and leisure have been assessed and is indicated in diagrams on this and the following pages.

2.3.3 Facilities have been identified and mapped and 1,200m isochrones (based on the typical distance that may be walked in 20 minutes) mapped. These isochrones measure distances along existing walking routes rather than measuring as the crow flies. Colours are stronger where access to several facilities overlaps. For the public transport plan the walking distance to bus stops is mapped using 400m isochrones; for railway stations the isochrones remain at 1,200m. See Appendix A for walkbands for each type of mapped facility.



EDUCATION

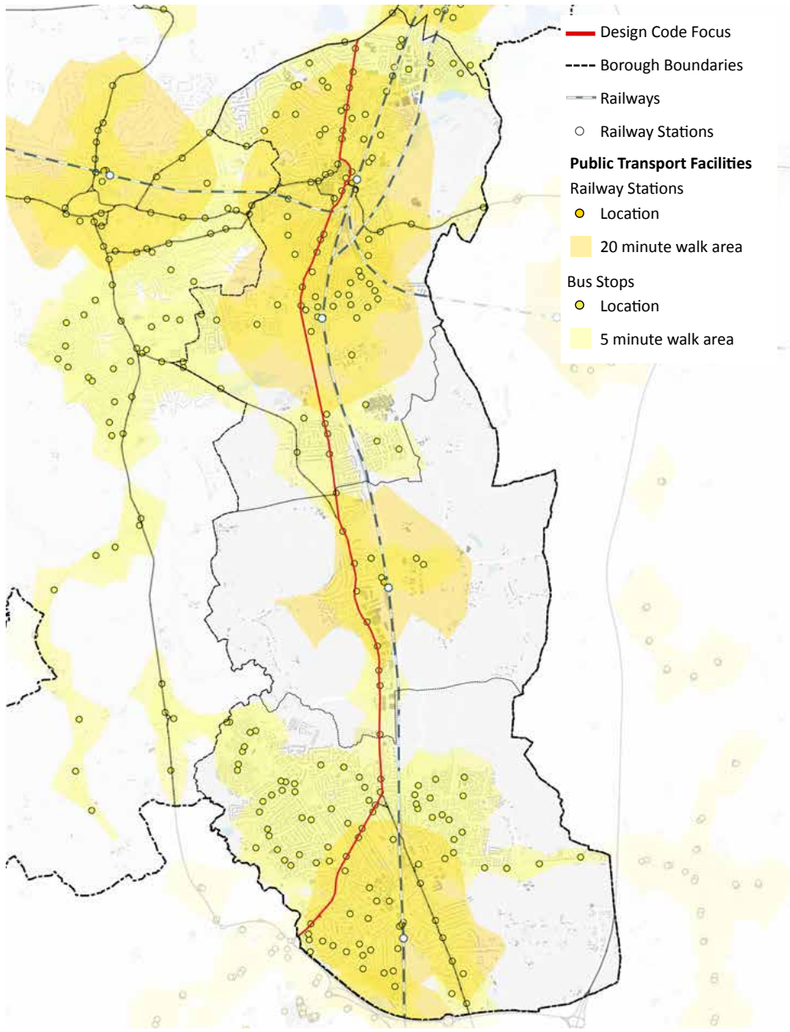
- A high proportion of residents live more than 20 minutes walk from infant schools, and junior or primary schools. Many have to cross the A23 to access the closest school;
- Most residents outside of Redhill must travel to access a secondary school or further education college; and
- Only residents living close to Redhill and Horley centre have good access to a library.



WORKSPACE

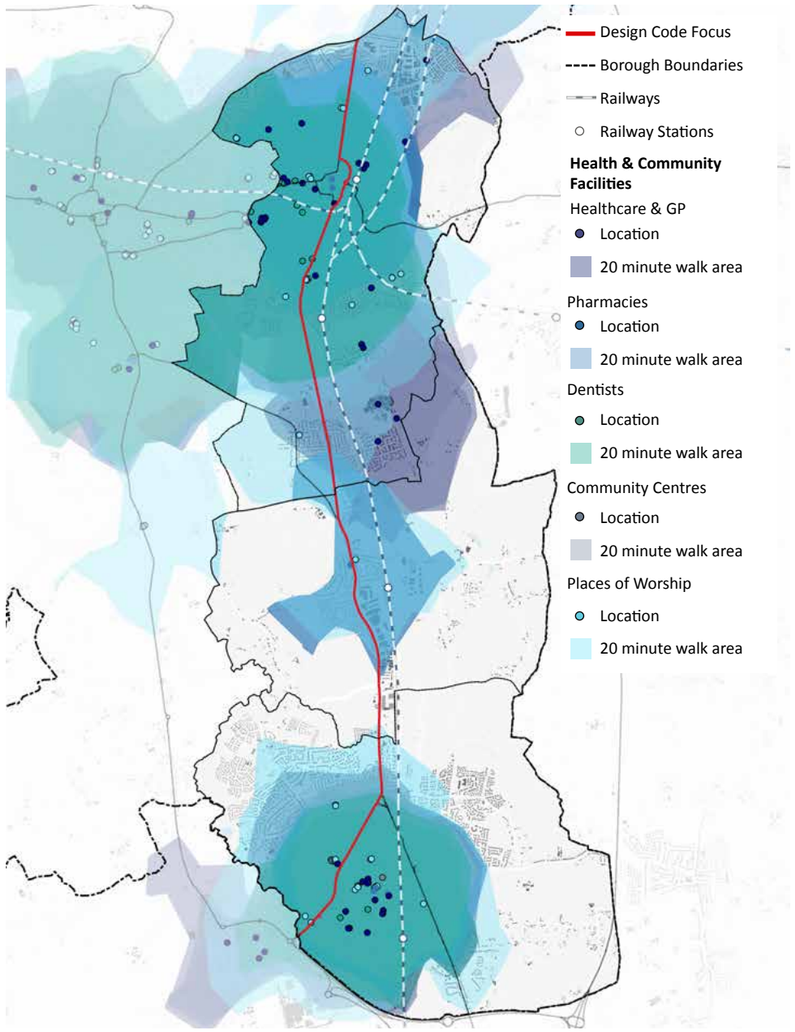
- Almost all residents are within walking distance of a workspace, although of course it may not be where they work.

2.3 WALKABILITY & 20-MINUTE NEIGHBOURHOOD



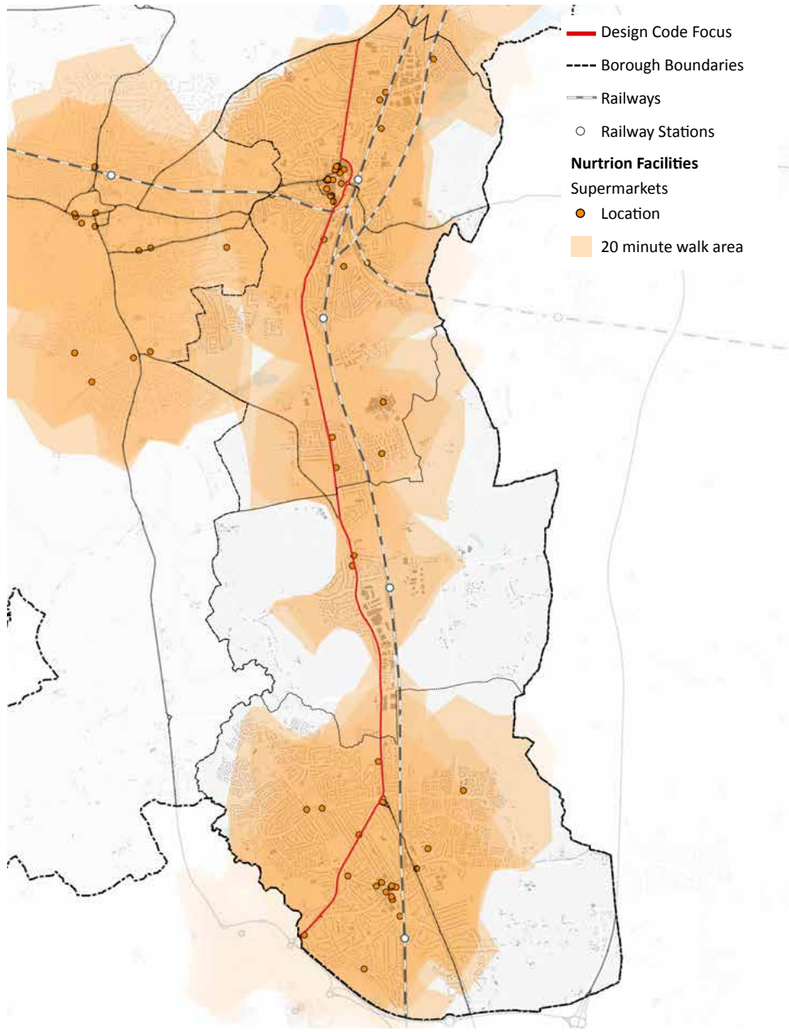
PUBLIC TRANSPORT

- The majority of residents live within 400m of a bus stop and the proximity of Gatwick airport means that there are many services running along the A23; and
- Although the study area is well served by rail a high proportion of residents live more than 20 minutes walk from a railway station including most residents in South Earlwood and many residents in Horley. Good cycle infrastructure is particularly important for these residents.



HEALTH AND COMMUNITY FACILITIES

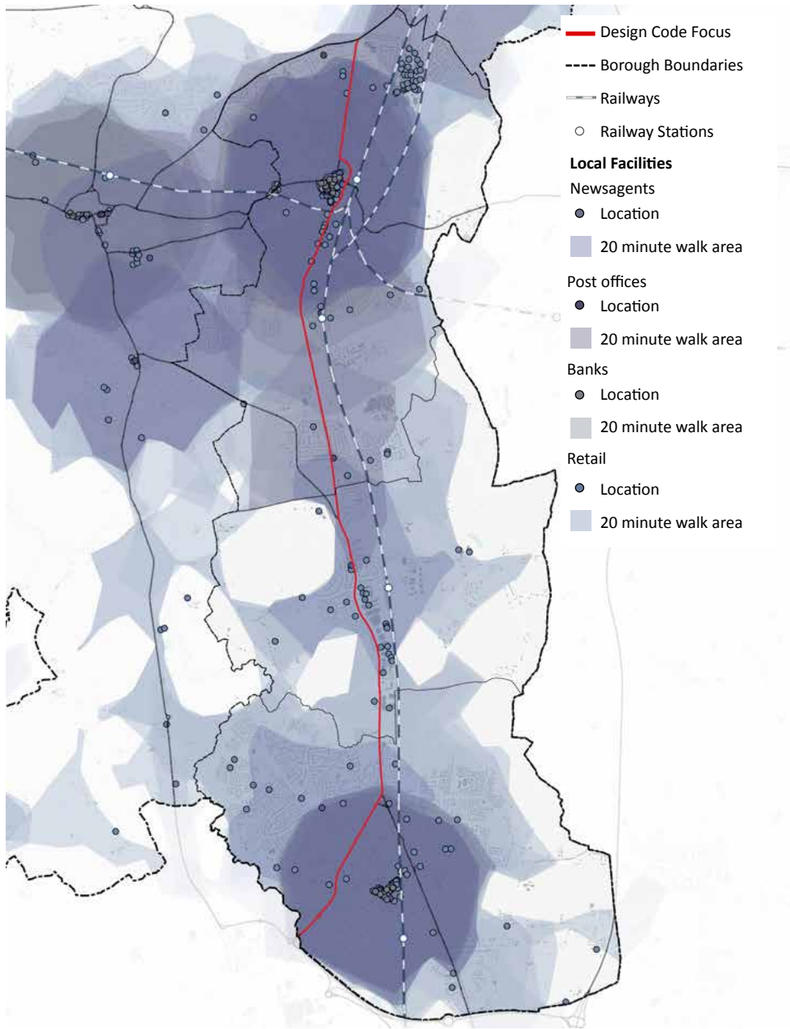
- Access to healthcare and GP practices is good in Redhill and Earlswood (including to East Surrey Hospital) but there is no healthcare facility in Salfords and residents living on the edge of Horley must travel into the town centre which is more than 20 minutes walk away;
- Salfords residents, like those in living in Redhill and near to the centre of Horley have access to a pharmacy but many Horley residents and residents of South Earlswood and Earlswood do not have easy access to a pharmacy;
- There are dental practices in Horley and Redhill; other residents do not have easy access to dental care; and
- Many residents must cross the A23 to access healthcare facilities.



NUTRITION (POTENTIAL TO BUY FRESH FOOD)

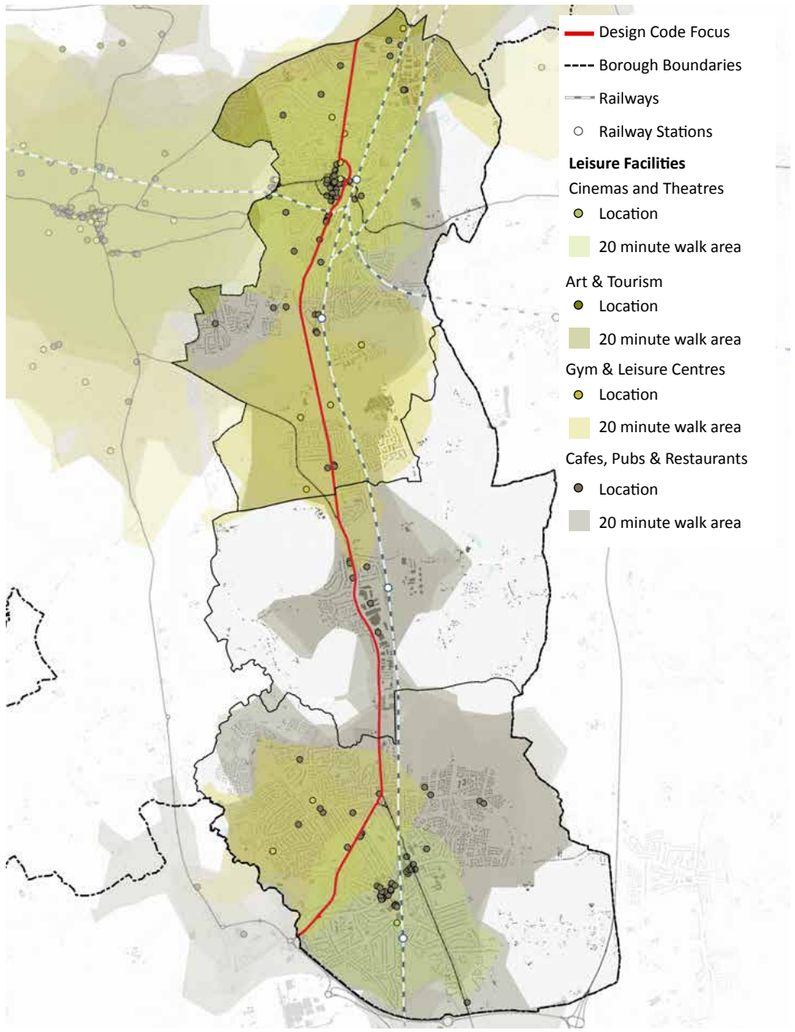
- Most residents live within 20 minutes walk of a shop selling fresh food. Those living close to Redhill or Horley town centres have more choice.

2.3 WALKABILITY & 20-MINUTE NEIGHBOURHOOD



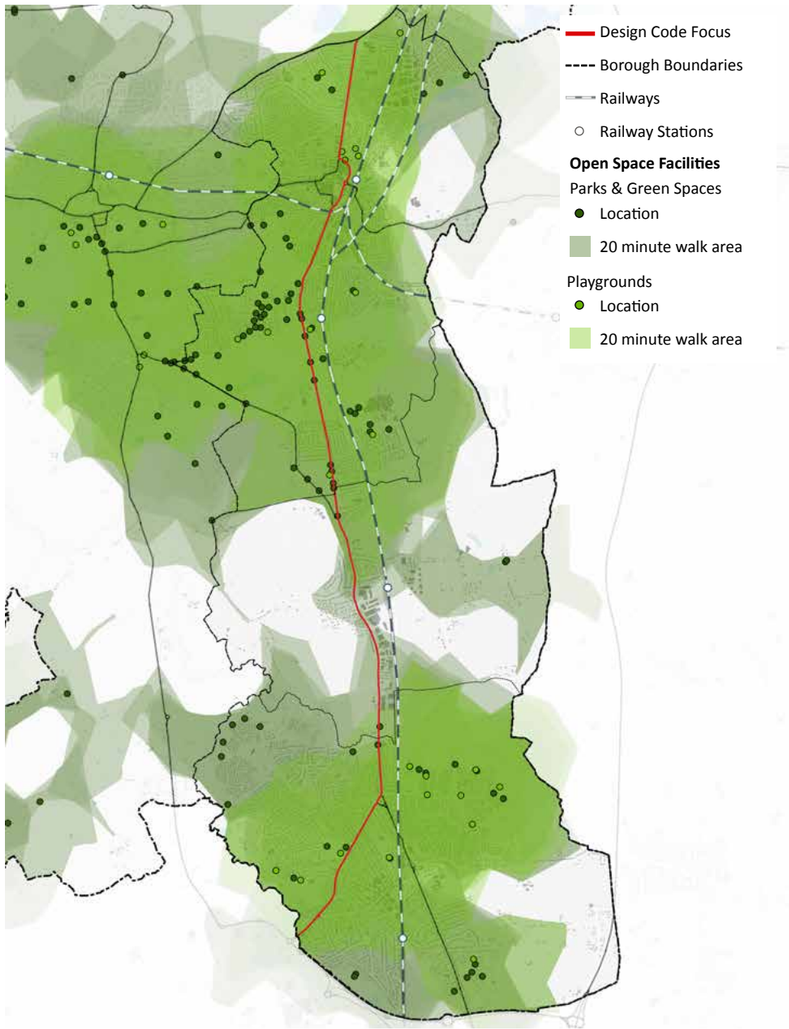
SHOPS AND OTHER SERVICES

- Most residents live within 20 minutes walk of a shop. Those living close to Redhill or Horley town centres have more choice.
- Only residents living in Redhill, Earlswood and near to Horley Centre have easy access to a post office or bank.



LEISURE AND CULTURE

- Most residents live within walking distance of a café, bar or restaurant;
- Most residents have access to a leisure centre or gym however those living in the eastern part of Horley and in Salfords do not;
- There is a small amateur theatre in Horley and a cinema/ theatre in Redhill (the Harlequin centre) but residents outside of these centres must travel; and
- There are no museums, art galleries or tourist attractions within the area.



OPEN SPACES

- Whilst residents in Redhill and Earlsfield have access to open spaces many residents within the study area do not have good access to public open spaces and parks.

CHAPTER 3: OUR AMBITIONS FOR THE A23 GREAT STREET

3.1 AMBITIONS

3.1.1 The Grand Challenges, Public Values and the specific context of the A23 as it extends from Redhill to Horley have been synthesised into a series of **Ambitions** for the A23 Great Street. These ambitions also aim to deliver around the four principal themes of the Design Code:

- To make the area work better for pedestrians and cyclists;
- To improve access to open spaces and parks;
- To identify opportunities for development; and
- To raise the quality of design.

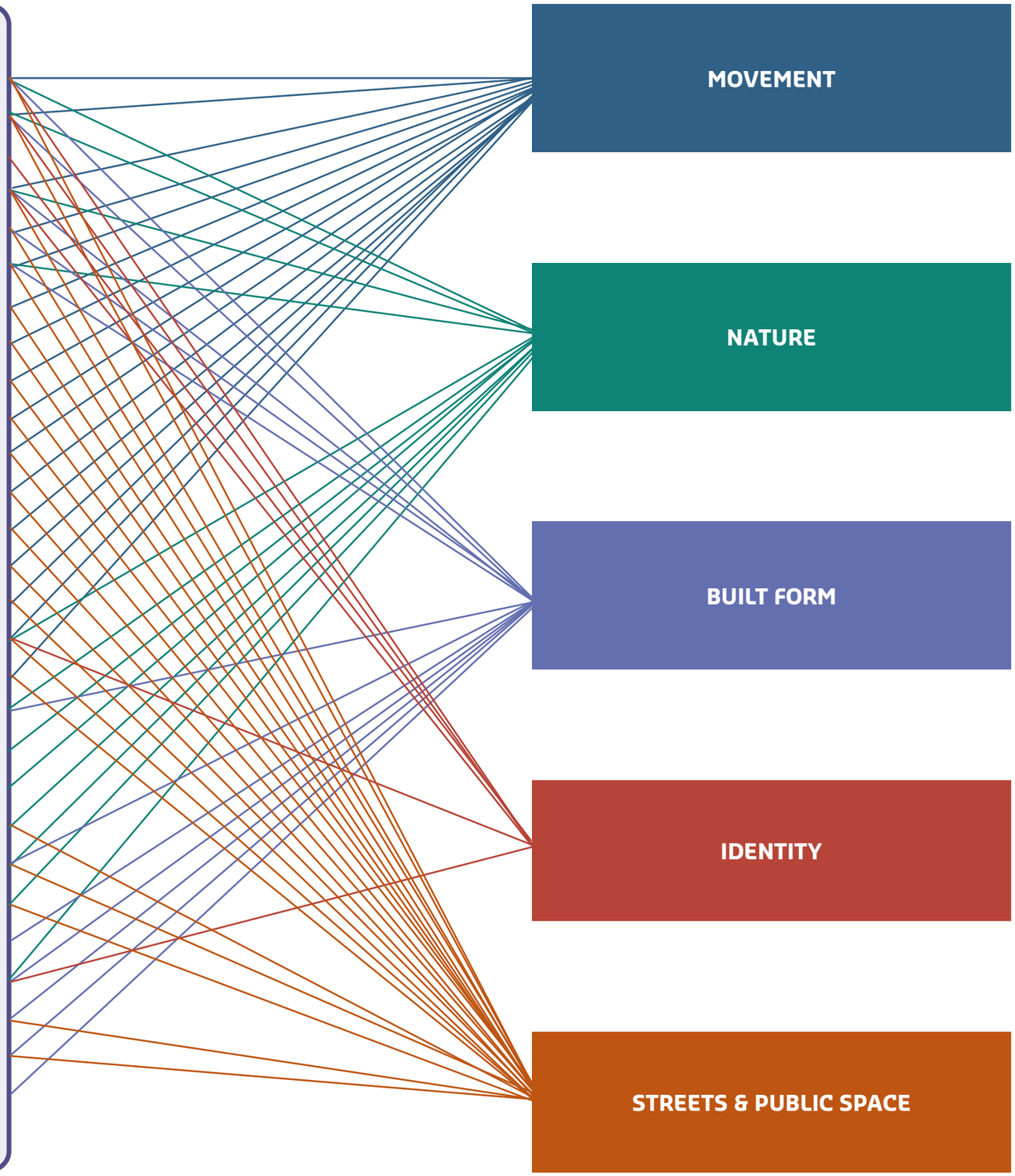
3.1.2 These ambitions directly inform the Design Codes that are set out within Part B of this document. This is diagrammatically illustrated in Figure 3.1.

Figure 3.1: Shaping the Vision

3.1 AMBITIONS

FRAME THE AMBITIONS

1. To create a street that is beautiful
2. To respond to the historic character and distinctiveness of Surrey and the local area
3. To enhance the sense of arrival and provide greater identity to the centres
4. To create appropriate settings that support and encourage public life
5. To create an environment that is accessible to all and improves personal safety
6. To increase climate change resilience
7. To provide attractive alternatives to the private car
8. To improve access to strategic transport links by active modes
9. To improve road safety particularly for pedestrians and cyclists
10. To provide a continuous high-quality cycling facility
11. To provide pedestrian priority over vehicles
12. To provide better active travel crossings and connections
13. To provide safe, convenient and legible routes to schools
14. To make drivers 'guests' within the place
15. To facilitate expeditious access by emergency vehicles
16. To deliver a consistent, well-maintained public realm
17. To minimise street clutter and formalise its location
18. To improve access to open spaces and nature
19. To reduce unnecessary hard surfaces and replace these with green
20. To link green spaces in a connected network
21. To plant more street trees
22. To deliver biodiversity net gain
23. To manage all water run-off within the confines of the corridor
24. To identify opportunity for development that reinforces character and distinctiveness
25. To ensure that development responds to and enhances the natural environment
26. To provide a more consistent building frontage to the street
27. To provide eyes on the street to improve feelings of safety
28. To provide development that is flexible and can change over time



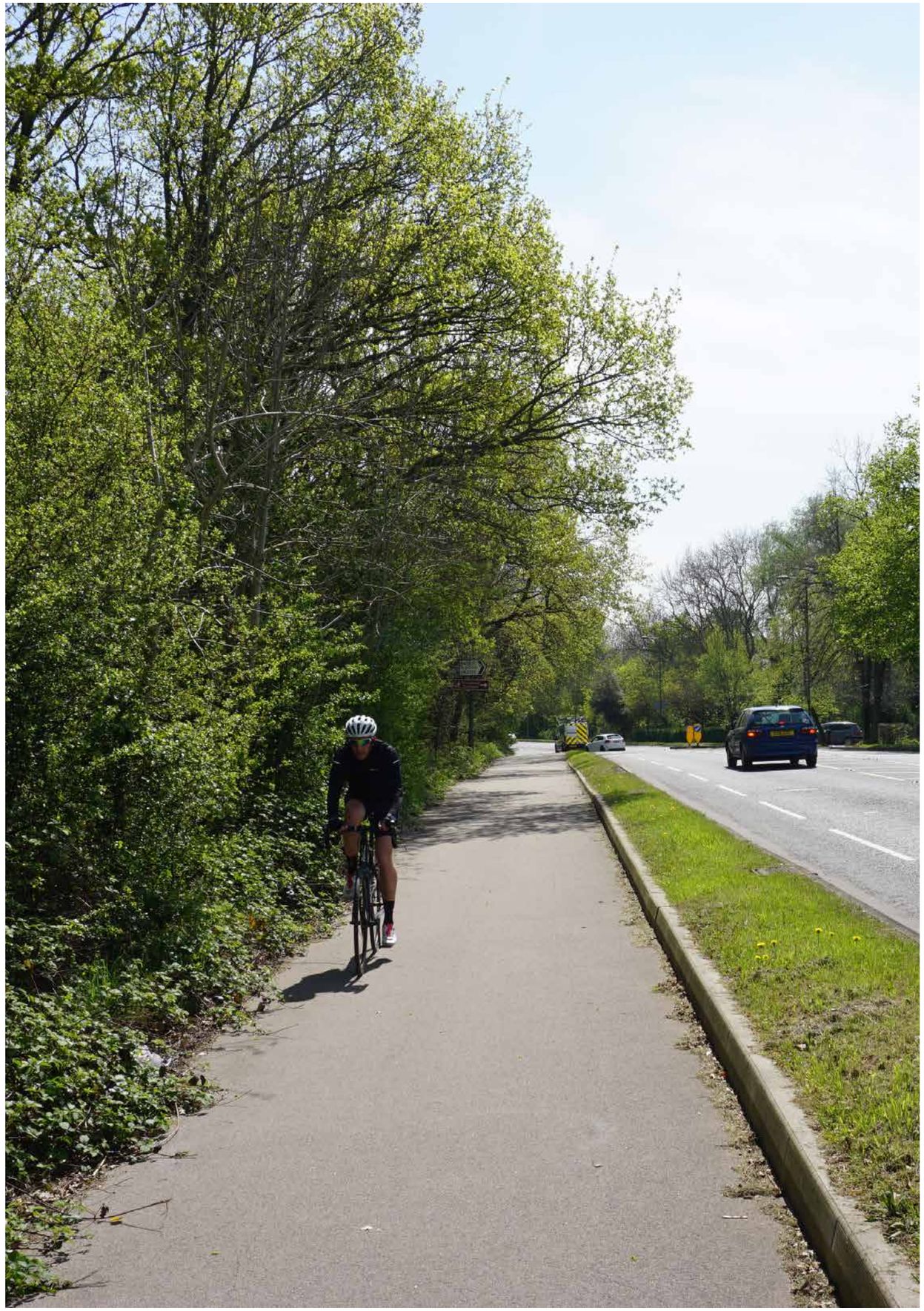
PART B:DESIGN CODES

CHAPTER 4: MOVEMENT

The design of the A23 corridor between Redhill and Horley often appears confused between whether it should form part of the trunk road network or part of the local highway network. This document makes plain that its design must respond to the latter. Whilst sections may carry in excess of 20,000 vehicles per day and certain junctions can sometimes experience congestion and delay, the A23 corridor is fundamentally a street that connects and passes through a number of towns and smaller centres, as well as being the street that many people call home. Its design must respond to this context, encouraging drivers to behave in a manner that is appropriate.

Given the above, it is worth highlighting a number of statements from the Institution of Civil Engineers' Briefing Note: Street Design Standards Current and Withdrawn Practice (2020). It notes that *'Unless a street is part of the trunk road network, DMRB **must not** be used where other, more appropriate guidance exists.'* It goes on to state that *'All highways projects **must** demonstrate how they help to address wider policy objectives relating to: climate change; economic productivity; an ageing population; air pollution; the housing crisis; social mobility; the health and obesity crisis; social isolation; biodiversity; and struggling high streets.'* Finally, it notes that *'Councils have a duty of care to both careful and negligent road users. They **must** have regard to the limited ability of children to judge the speed of oncoming vehicles. They also need to consider the relationship between vehicle speed and accident causation, and the severity of injury.'* The above, general advice **must** be followed in the design of the A23 corridor.

The Design Code for the A23 Great Street takes the principles in the Healthy Streets for Surrey Design Guide as a starting point for preparing the Movement design codes. The Design Codes have also been established in alignment with recognised guidance and best practice; these sources are referenced throughout as 'Further Reading' and provide additional background.



4.1 ENHANCING CONNECTIVITY

CODE M1 - ENHANCING CONNECTIVITY ACROSS THE STREET

Development should contribute to enhanced pedestrian and cycling connectivity across the A23 to improve access to facilities and amenities either side of the route. Figure 4.1 indicates locations where safe and convenient pedestrian crossings are recommended.

4.1.1 The crossing locations have been identified through a review of facilities and amenities to either side of the A23 and represent those locations where there will be a desire to cross the route in order to achieve access.

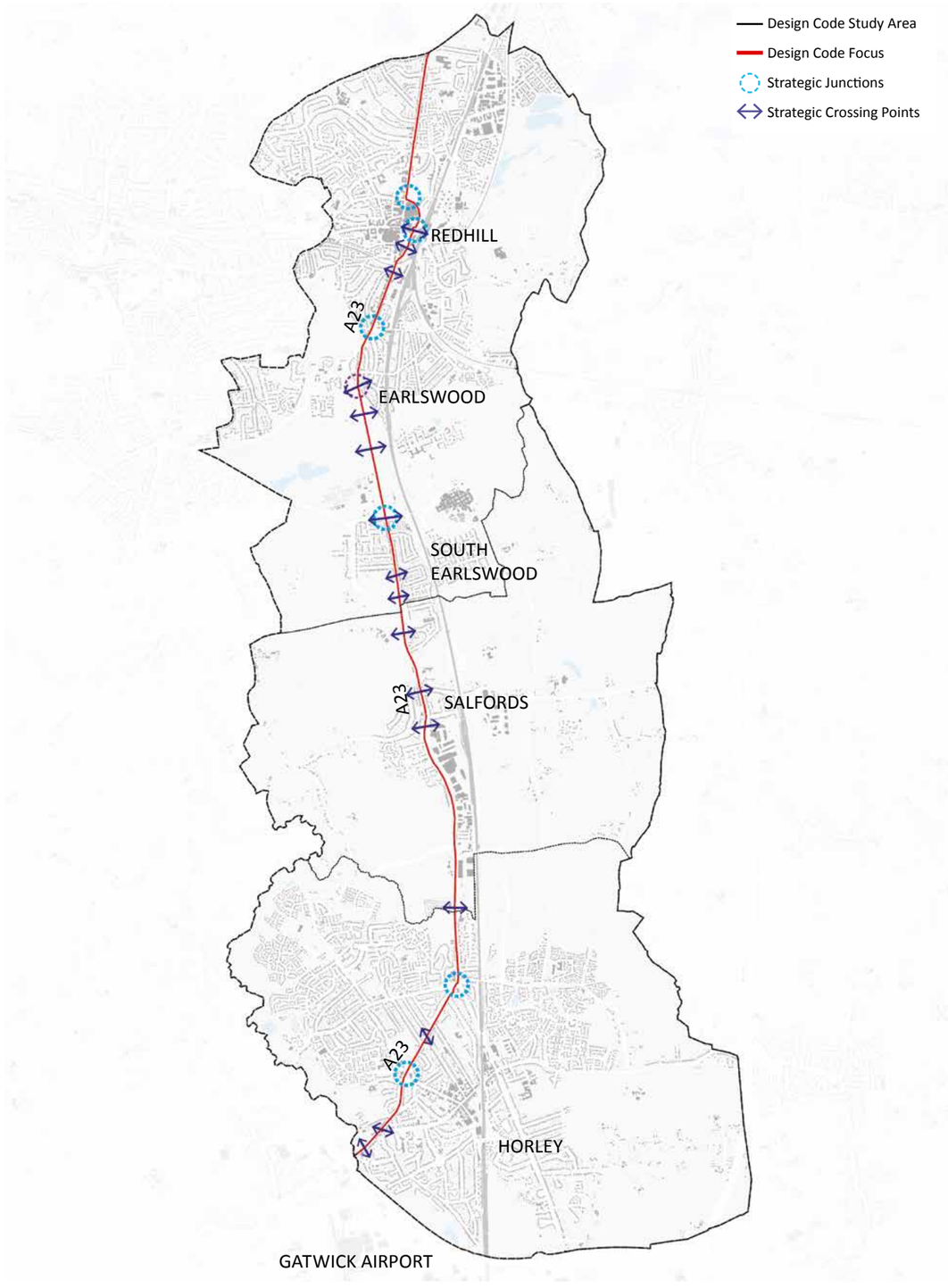


Figure 4.1: Strategic connectivity and junctions

4.2 INCLUSIVE STREET DESIGN

CODE M2 - FOOTWAY DESIGN

Footway Widths

The following criteria should be met with regard to footway widths:

- Footways in quiet locations (flows of <600 pedestrians an hour) should have 2m or more of clear width for walking
- Footways in moderately busy locations (flows of 600 to 1200 pedestrians an hour) should have 2.5m or more of clear width for walking
- Footways in busy locations (flows of >1200 pedestrians an hour) should have 3m or more of clear width for walking

Tactile Paving

Every flush surface or dropped kerb between the footway and carriageway should be marked with appropriate tactile paving to enable blind and visually impaired people to identify the 'edge' of the footway in the absence of a kerb upstand.

Further Reading:

- Further guidance on the appropriate application of tactile paving is contained within the Department for Transport document *Guidance on the Use of Tactile Paving Surfaces (Dec 2021).*
- Transport for London's Healthy Streets Check for Designers

Image 4.1: Consistent footways free of obstructions

CODE M3 - BI-DIRECTIONAL CYCLE ROUTE

A segregated, bi-directional cycle track should be provided at footway level along the entire eastern side of the A23 Great Street, positioned between the footway and carriageway.

Width

The segregated, bi-directional cycle track should be a minimum of 2.5m in width, increasing to 3.0m where the highway width permits, in-line with the **Street Codes set out in Chapter 8.**

Buffer

The minimum horizontal separation between the carriageway and the footway level bi-directional cycle track should be 0.5m (up from the 0.0m in LTN 1/20).

Advanced Stop Lines

Advanced stop lines should be installed where it is conceivable that they may be useful to cyclists, even where the footway level bi-directional facility already exists. They should be a minimum of 5m deep. (Note: the provision of advanced stop lines does not constitute a high-quality cycling environment at signalised junctions and is in no-way an alternative to the bidirectional facility).

Materials

A colour and tonal contrast, and different surface material should be used for the footway level bi-directional cycle track (buff tone bitmacadam) and the adjacent footway (flagged or bitmacadam). Furthermore, use of a white line to segregate the cycle track from the footway should not be used. Rather, a raised strip which is trapezoidal in cross section and that is detectable by a long cane user should be used.

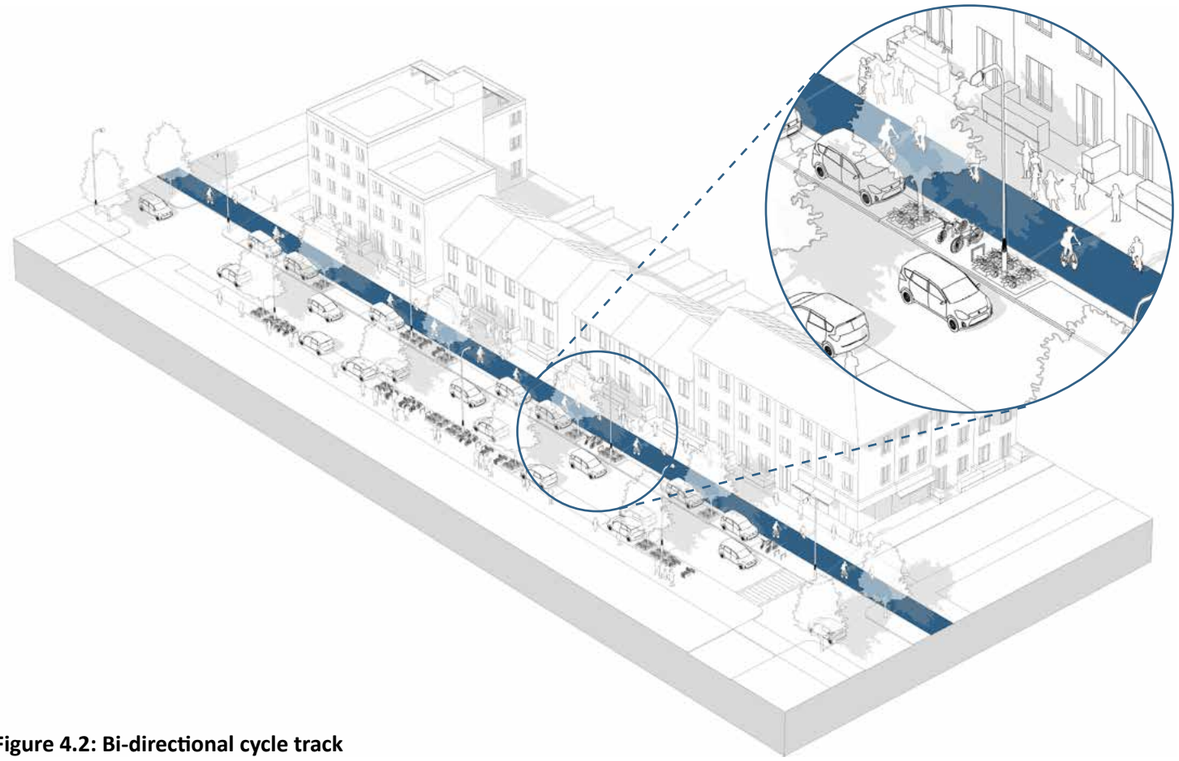


Figure 4.2: Bi-directional cycle track

Further Reading:

- Local Transport Note 1/20: Cycle Infrastructure Design, Department for Transport (July 2020)

4.2.1 The overarching aim for the Great Street in relation to cycling is to provide a segregated, bi-directional cycle track at footway level along the entire eastern side of the A23 Great Street, positioned between the footway and carriageway. This provides both pedestrians and cyclists with a higher level of provision than the current unsegregated, shared use footway facilities that extend along much of the route at present.

4.2.2 As Local Transport Note 1/20: Cycle Infrastructure Design notes *'Shared use facilities are generally not favoured by either pedestrians or cyclists, particularly when flows are high. It can create particular difficulties for visually impaired people. Actual conflict may be rare, but the interactions between people moving at different speeds can be perceived to be unsafe and inaccessible, particularly by vulnerable pedestrians. This adversely affects the comfort of both types of user, as well as directness for the cyclist.'*

4.2.3 The Department for Transport document, Local Transport Note 1/20: Cycle Infrastructure Design (July 2020) could not be clearer when it states that *'to receive Government funding for local highways investment where the main element is not cycling or walking, there will be a presumption that schemes must deliver or improve cycling infrastructure to the standards in this Local Transport Note, unless it can be shown that there is little or no need for cycling in the particular highway scheme [which does not apply to the A23 corridor]… In short, schemes which do not follow this guidance will not be funded.'*

4.2.4 Whether changes are made using Government funding or any other source of funding, any changes to the A23 corridor should, as a minimum, be compliant with LTN 1/20 (please check specific dimensions, some of which are enhanced over LTN 1/20, in **Chapter 8**).

APPLYING THE CODE: EXAMPLE 1 - SOUTH HORLEY

Figure 4.3: South Horley plan

Image 4.2: Existing (credit: Google)

Figure 4.4: Sketch indicating application of the code on the A23 in south Horley including introduction of a bi-directional cycle lane, and planted verges / raingardens.

CODE M4 - STREET FURNITURE, PEDESTRIAN GUARDRAIL AND SEATING

Street Furniture

Street furniture **must** be located within a single 'furniture zone' between the main pedestrian flow and the carriageway. Where possible and appropriate, road name signage should be incorporated on the face of the corner building to reduce street clutter.

Pedestrian Guardrailing

Pedestrian guardrails **must not** be used to separate the pavement and the carriageway, instead softer and more permeable solutions, such as trees and greenery, should be used.

Where there is believed to be no alternative other than to use pedestrian guardrailing, such as where there is a significant and unresolvable drop between the footway and the carriageway or an intractable road safety issue, then the guidance for Manual for Street 2 **must** be followed – *'…highway authorities should start with the presumption that no guardrailing is necessary. If it is considered that it may be needed, only the minimum amount should be installed, after considering all other ways of resolving the issue.'*

Seating

The distance between resting points (a bench, bus shelter, etc.) in built-up areas should be no more than 100m in quieter areas and 50m in busy areas.

Further Reading:

- Development Management Policy DES1 Criterion 4
- Manual for Street 2
- Inclusive Mobility, Department for Transport (Dec 2021)
- Local Transport Note 2/09: Pedestrian Guardrailing
- Healthy Streets for Surrey Design Guide
- Transport for London's Streetscape Guidance (Fourth Edition, 2022 Rev 2

4.2.5 The above code builds upon the requirements within the Healthy Streets for Surrey Design Guide that states '*Where possible items should be placed within a 'furniture zone' to provide a continuous full width pavement.'* This aligns with other, existing guidance, such as Transport for London's Streetscape Guidance (Fourth Edition, 2022 Rev 2), which states that *'The furniture zone is provided adjacent to the kerb zone to coordinate street furniture in a consistent arrangement which maximises the unobstructed width of the footway for pedestrian use.'*

4.2.6 The code relating to pedestrian guardrail is taken from Healthy Streets for Surrey Design Guide and this position is supported by Local Transport Note 2/09: Pedestrian Guardrailing, whose research into the safety records of junctions with and without pedestrian guardrailing concluded that *'For all of the different types of site taken together, total and pedestrian collision frequencies were higher at sites with guardrailing.'*

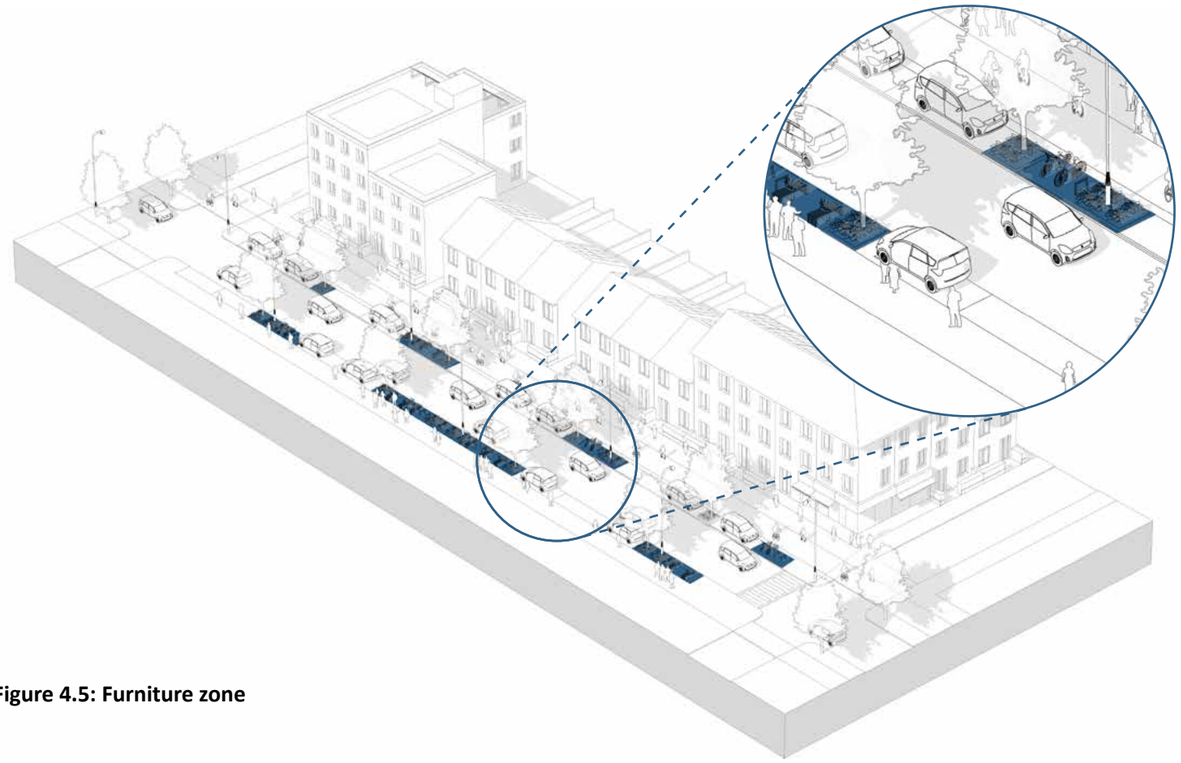


Figure 4.5: Furniture zone

4.2.7 The code in relation to the provision of seating is in-line with the guidance from the Department for Transport's document Inclusive Mobility (Dec 2021).

4.2.8 As Transport for London's Guide to the Healthy Streets Indicators points out, *'Lack of resting places can limit mobility for some people, particularly those who are ill, injured, older or very young. Ensuring there are places where people have room to stop or somewhere to rest benefits everyone, including local business, as people will be more willing to visit, spend time in, or meet other people on these streets.'*

Image 4.3: Public seating in furniture zone

CODE M5 - CARRIAGEWAY DESIGN, SURFACING, SIGNAGE AND MARKINGS

Lane Widths

Traffic lane widths between 3.2m and 3.9m should not be used along the Great Street. The preferred lane width is 3.2m resulting in a proposed carriageway width for the vast majority of the corridor of 6.4m (the major exception being the dualled sections).

Signage

The use of yellow or grey backing boards behind signs should only be used when essential to road safety. The presumption should be that no signs have a yellow backing and that the smallest effective version of a sign is used. The use of yellow backing should not be applied as a blanket policy across all signs in an area.

Road Markings

Centre line markings should be omitted from carriageways of 6.5m wide or less, or where the design speed is 30mph or under. This will apply to the majority of the A23 corridor given the preferred carriageway width of 6.4m. To clarify, centre line markings on two-way, two-lane sections of the A23 in urban areas should not be used unless they are marking a hazard. Furthermore, centre line markings and ghost island hatching should not be used on the exit from a central island.

Waiting Restrictions

All yellow lines along the corridor should be 50mm wide and primrose in colour. Furthermore, if yellow line markings are needed on the side road or main road they should not be taken across the side road entry treatment, but can, if necessary, continue across the mouth of the side road or terminated before the crossing point.

Coloured Carriageway Surfacing (Bus Lanes, etc.)

The general use of coloured surface courses should be avoided, and not just for the footway level, segregated, bi-directional cycle track, but also within the carriageway. Coloured surfacing should not be used by default rather it must only be used sparingly where there is a particular safety requirement.

Further Reading:

- Road Signs Manual (2018)
- Manual for Street 2 (2010)
- Local Transport Note 1/20: Cycle Infrastructure Design (July 2020)
- Healthy Streets for Surrey Design Guide
- Centreline Removal Trial, Transport for London (2014)

4.2.9 Avoiding lane widths of 3.2m and 3.9m is a development of the Healthy Streets for Surrey Design Guide. This aligns with the guidance contained within Local Transport Note 1/20: Cycle Infrastructure Design (July 2020), which states that *"[Traffic] Lanes between 3.2m and 3.9m wide allow motor vehicles to drive alongside a cyclist without crossing the centre line, but without any safety margin for the comfort and protection of cyclists. This will potentially lead to close overtaking behaviour that may endanger the cyclist."*

4.2.10 The code restricting use of yellow or grey backing boards behind road signs is in line with the Healthy Streets for Surrey Design Guide. This is supported by the Traffic Signs Manual: Chapter 4 – Warning Signs (2018), which states that *'They should be used very sparingly and not as a matter of course.'*

4.2.11 The code relating to the omission of centre line markings on carriageways of 6.5m width or less, or where the design speed is 30mph or under is in line with the Healthy Streets for Surrey Design Guide.

4.2.12 This approach is supported by research by Transport for London contained with the report Centreline Removal Trial (2014) that concluded *"There was a statistically significant reduction in vehicle speeds as a result of removing central markings on the carriageway"* following a study of three A roads in Outer London (one of which was the A23 itself as it passes between Coulsden and Purley) where they were not specifically marking a hazard.

4.2.13 Furthermore, the presumption must be that an approach triangle (1023) and Give Way sign (602) are not necessary at a priority T-junction unless proven otherwise.

4.2.14 The approach to waiting restriction markings fully complies with Chapter 5 of the Road Signs Manual (2018) as well as Manual for Street 2 (2010), which states *'Yellow lines are normally 75mm wide where the speed limit is 40mph or less and 100mm on higher speed carriageways, but a 50mm width is also lawful and can be used in 'areas regarded as environmentally sensitive' (Traffic Signs Manual Chapter 5). No definition is given for such areas, and so highway authorities have flexibility in using this width. Similarly while TSM advises that the standard yellow line colour is BS381C No.355 (lemon) the less striking No.310 (primrose) or No.353 (deep cream) colours may also be used. Special authorisation is not necessary for any of these shades.'*

4.2.15 The code relating to the use of coloured surfaces is in line with the Healthy Streets for Surrey Design Guide, and this approach is supported by Manual for Streets 2 (2010), which states that *'Coloured road surfacing has no legal significance. It adds to visual intrusion and should not be used by default. It should be reserved for situations where it is considered that it will have a particular safety benefit, and where this outweighs the aesthetic disadvantages.'*

CODE M6 - SPEED LIMITS

All urban areas, residential streets, town or village centres and places with significant interaction between pedestrians, cyclists, and motor vehicles (such as schools and markets) should be designed to a design speed of 20mph.

Figure 4.6 illustrates those locations along the corridor where a 20mph speed limit should be investigated with the Surrey County Council Highways department and through consultation with the appropriate authorities and stakeholders including the Surrey Police Road Safety and Traffic Management Team and Surrey Highways.

Further Reading:

- 20mph Research Study, Department for Transport (Nov 2018)
- Healthy Streets for Surrey Design Guide
- Surrey County Council, Setting local speed limits policy website

4.2.16 The 20mph speed limit code is in line with Healthy Streets for Surrey Design Guide.

4.2.17 Research by the Department for Transport (20mph Research Study, Nov. 2018) suggests that likely benefits of a 20mph speed limit include:

- Casualty reduction;
- Congestion reduction;
- Pollution reduction;
- Air quality improvements; and
- Improvements in conditions for, and encouraging, walking and cycling.

4.2.18 Surrey County Council's policy document, Setting Local Speeds Limits, provides further information on speed management for 20mph zones.

Figure 4.6: 20 mile per hour speed limit zones

CODE M7 - JUNCTION DESIGN AND SPACING

Continuous crossings [also known as continuous footways or Copenhagen crossings] should be used whenever a side street carrying less than 2,000 vehicles per day intersects with the A23.

Crossroads, or slightly staggered junctions, should be encouraged as this improves pedestrian permeability.

Junction visibility that does not meet the standards within MfS1 and MfS2 should not be used as a blanket objection to a junction design.

Priority junctions should not have right turn lanes unless traffic modelling explicitly demonstrates that it will create unacceptable journey time delays.

Standard DMRB roundabouts should not be used in areas of pedestrian activity in towns, villages and urban area. Mini and compact roundabouts, or roundels, are permitted.

The minimum number of signal heads and other signalling equipment should be used. Furthermore, the use of white backing boards to signals should not be used at junctions where the speed limit is 30mph or less.

Further Reading:

- Manual for Streets 2 (2010)
- Healthy Streets for Surrey Design Guide

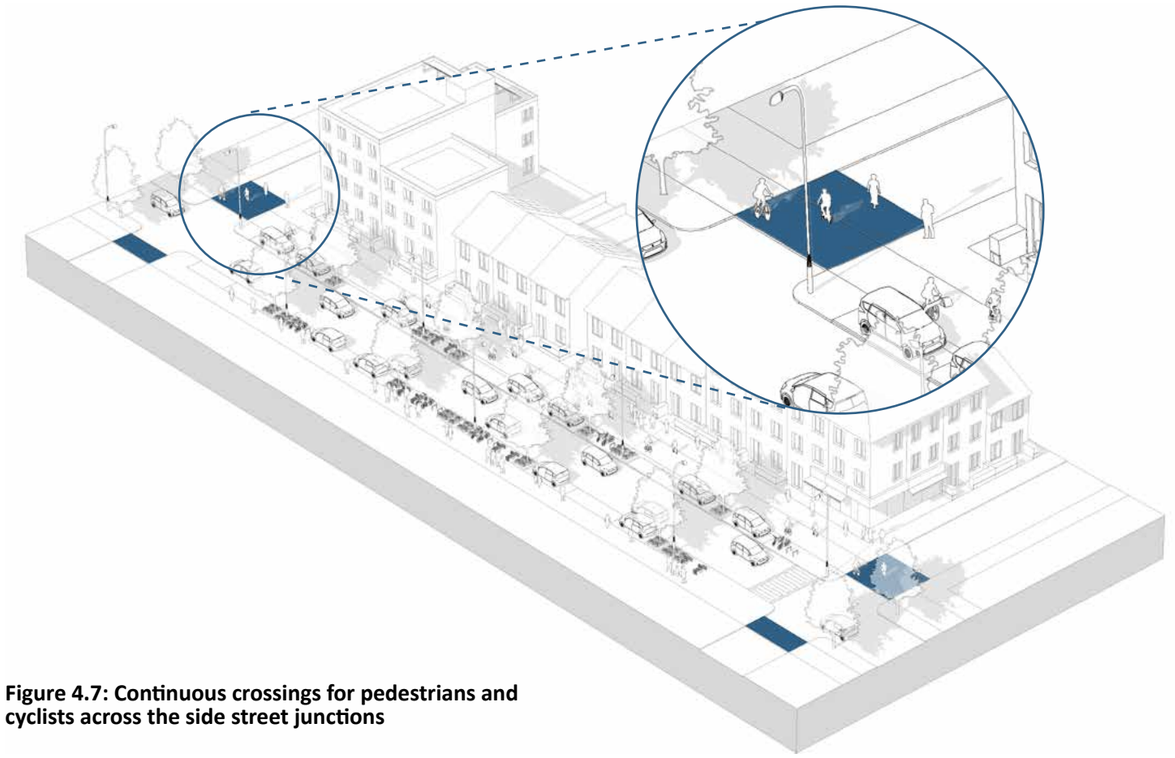


Figure 4.7: Continuous crossings for pedestrians and cyclists across the side street junctions

PRIORITY JUNCTIONS

4.2.19 The code relating to continuous crossings aligns with the Healthy Streets for Surrey Design Guide which states that continuous crossings must be used whenever a lower order street, such as a local street, connects to a higher order street, such as a primary street.

4.2.20 Manual for Streets 2 (2010) states that *'tight corner radii help pedestrians and cyclists to travel across and through junctions by reducing the speed of turning vehicles'.* It also notes that *'The Highway Code notes (Rule 170) that pedestrians who have started to cross a junction have priority'.*

4.2.21 Importantly, Manual for Streets 2 (2010) goes on to note that '*Designers are sometimes reluctant to use tight corner radii on the grounds that vehicles slowing to turn into the minor arm may cause shunt collisions on the major road. This may be the case where speeds are high, but in urban areas the overall emphasis of MfS is that speeds should be reduced to appropriate levels of 30mph or below through design and the use of tight corner radii is consistent with this approach… Moreover, there are junctions on very busy routes where tight corner radii have existed for a considerable time'.*

PRIORITY JUNCTION SPACING

4.2.22 As noted in Healthy Streets for Surrey, *'There is no minimum requirement for junction spacing on opposite sides of the street and crossroads, or slightly staggered junctions, should be encouraged.'* This is supported by Manual for Streets 2, which states that *'there appears to be little evidence that [junction] spacing criteria based on SSD [sight stopping distances] are justified on safety or other grounds'.*

VISIBILITY AT PRIORITY JUNCTIONS

4.2.23 Manual for Street 2 (2010) notes that *"It has often been assumed that a failure to provide visibility at priority junctions in accordance with the values recommended in MfS1 or DMRB…will result in an increased risk of injury collisions. Research carried out…for MfS2 has found no evidence of this."* It goes on to note that *"Longer X distances enable drivers to look for gaps as they approach a priority junction, which can increase the capacity of the minor arm, but can also mean that drivers may fail to take account of other road (vulnerable) users. TRL Report No 184 found that collision risk increased with greater minor-road sight distance."* Finally, it suggests that *"There are*

situations where it is desirable and appropriate to restrict forward visibility to control traffic speeds (see research in MfS1)"

RIGHT TURNING LANES

4.2.24 The code relating to right turning lanes is supported by Manual for Streets 2 (2010), which states that *'TD 42/95 recommends that consideration should be given to providing a right turning lane at priority junctions where the side road flow exceeds 500 vehicles per day, but this advice relates to trunk roads, where there is an emphasis on providing an unimpeded route for through traffic. It is a relatively low flow, and junctions without right turn lanes will often be able to cater for higher levels of turning traffic without resulting in significant congestion.'*

ROUNDABOUTS

4.2.25 The code relating to roundabouts is in line with Healthy Streets for Surrey Design Guide. This is supported by the ICE Briefing Sheet: Street Design Standards (2020), which states that *'Difficulties for cyclists and pedestrians and especially disabled people, along with inefficient use of land, are reasons not to use "normal roundabouts" in an urban area intended for people.'*

TRAFFIC SIGNALS

4.2.26 The code relating to minimising the number of signal heads and other signalling equipment is supported by Manual for Streets 2 (2010), which states that *'Traffic signals add to street clutter, particularly layouts that require large numbers of signal heads and other equipment. They can therefore have a severe visual impact.'*

4.2.27 Preventing the use of white backing boards to signals where the speed limit is 30mph or less is in line with Manual for Street 2 (2010) which states that: '*Most highway authorities specify backing boards with white borders to traffic signals, but they are not legally required. Local Transport Note 1/98 notes that backing boards may be omitted at urban sites where speeds are low and there are no distracting backgrounds.'* It is also worth noting that backing boards with white borders to traffic signals have not been used by default in London for over a decade. For example, the junction at Piccadilly Circus, which could be considered to have a distracting background, does not have backing boards to its signals.

Image 4.4: Example of crossover junction design

Image 4.5: Example of good practice junction design

CODE M8 - FRONTAGE ACCESS AND VEHICLE CROSSOVERS

Vehicle crossovers to private drives should not interrupt the footway or any existing or proposed cycling facilit.

Generic road safety concerns **must not** be used as a blanket objection to direct frontage access. Any safety concerns must be in response to site-specific issues.

Further Reading:

- ICE Briefing Sheet: Street Design Standards (2020)
- Manual for Streets 2 (2010)

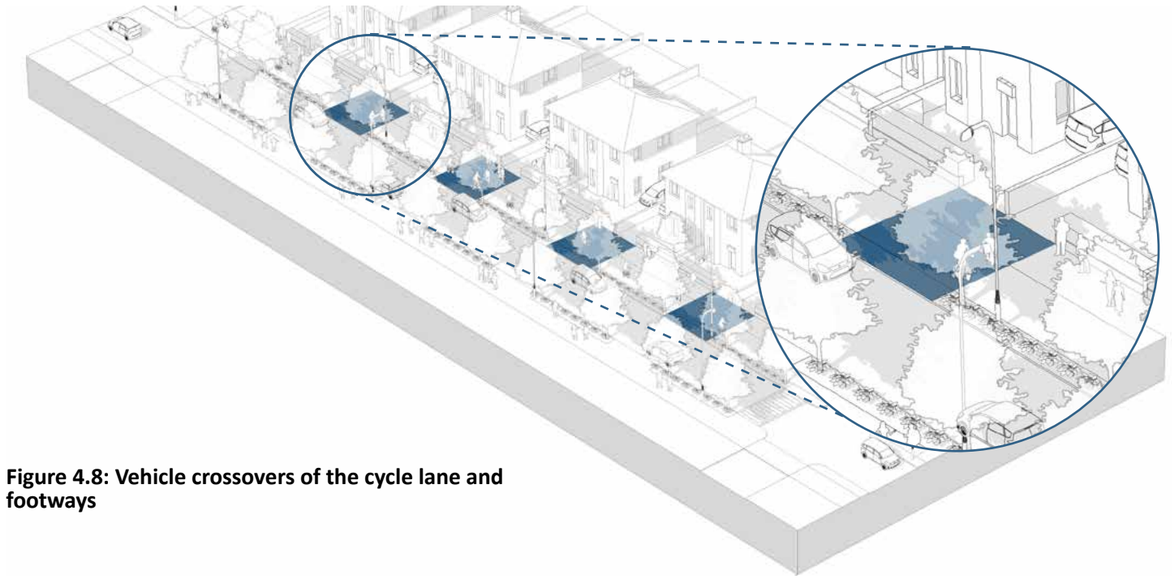


Figure 4.8: Vehicle crossovers of the cycle lane and footways

CODE M9 - PEDESTRIAN CROSSINGS

Informal pedestrian crossings should be a minimum of 2.8m in width.

Formal pedestrian crossings (Zebra crossings or signal controlled crossings) whether standalone or as part of a junction should be a minimum of 4m in width (unless they are part of a parallel walking/cycling crossing).

Formal pedestrian crossing should be provided within built up areas at least every 400m as an absolute minimum.

Further Reading:

- Active Travel England's Route Check tool
- Healthy Streets for Surrey Design Guide
- Transport for London's Healthy Streets

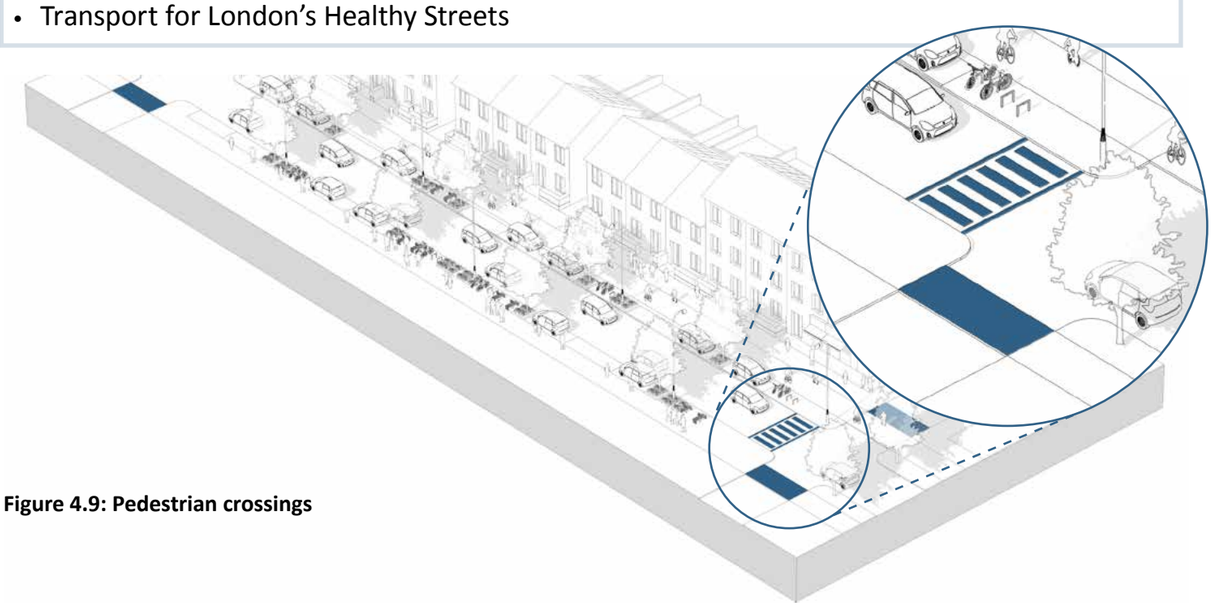


Figure 4.9: Pedestrian crossings

4.2.28 The code on vehicle crossovers is in-line with the guidance contained within the ICE Briefing Sheet: Street Design Standards (2020).

4.2.29 The code in relation to direct front access is supported by the guidance contained within Manual for Streets 2 (2010), which states that *'…applicable to all urban roads…providing direct frontage access is unlikely to have a significant disbenefits in road safety terms.'*

4.2.30 All primary pedestrian desire lines must be provided for, with informal crossings suitable on streets with up to 200 vehicles per hour and formal crossings required where flows are higher.

4.2.31 Active Travel England's Route Check tool, would require that those sections of the A23 that are to be covered by a proposed 20mph speed limit (urban settings with over 8,000 vehicles per day) must include a formal pedestrian crossing at least every 400m as an absolute minimum. Refer to Code M6.

4.3 PUBLIC TRANSPORT

CODE M10 - BUS PROVISION, STOPS AND WAITING FACILITIES

Along the A23 corridor, all bus stops should be located in the carriageway rather than in laybys unless there is a compelling safety reason.

Places for waiting should be attractive and comfortable and lit and bus stops should include a bus shelter. Bus stops adjacent to cycle paths should be fully transparent to ensure good intervisibility.

Further Reading:

- Healthy Streets for Surrey Design Guide
- Transport for London's Accessible Bus Stop Design Guidance

4.3.1 The Healthy Streets for Surrey Design Guide states that *'Bus laybys should not be used. They are an inefficient use of space and may reduce the ease of buses re-joining the main carriageway. They should only be used where stationary buses would cause a significant safety problem, which does not include queuing traffic.'* However, the specific guidance for both Avenue Primary Streets (Type 1(b)) and High Activity/Arterial High Street (Type 2(a)) – the two street types that cover the A23 corridor – state that *'Where no [bus] lane is provided, bus stops should be of the layby type [to] allow other traffic to pass.'*

4.3.2 The code on waiting facilities is in accordance with the Healthy Streets for Surrey Design Guide.

Image 4.6: High quality bus stop shelter

4.4 CAR PARKING

CODE M11 - CAR PARKING LOCATION AND DESIGN

On street car parking spaces should be broken up into groups of no more than three spaces, ideally separated by kerb build-outs that can incorporate trees, greenery, SuDS, EV chargers and bike parking to minimise the visual dominance of the cars.

Ideally, waiting and loading bays should be located at footway level rather than within widened sections of the carriageway wherever possible to help minimise the carriageway width and maximise footway widths when the bay is not occupied.

Further Reading:

- Healthy Streets for Surrey Design Guide

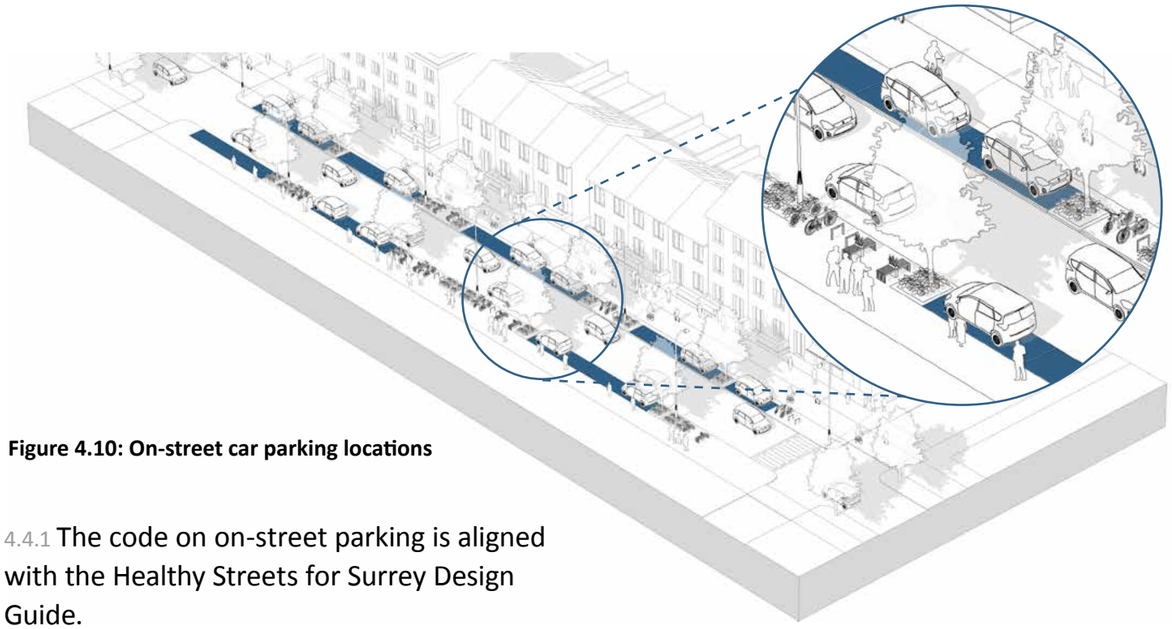


Figure 4.10: On-street car parking locations

4.4.1 The code on on-street parking is aligned with the Healthy Streets for Surrey Design Guide.

CODE M12 - ELECTRIC CHARGING POINTS

The default choice for locating EV charging infrastructure should be in-line with a parking spaces and not within the footway clear zone. They should not compromise the minimum acceptable effective footway width.

Further Reading:

- Development Management Policy TAP1 Criterion 1f
- Healthy Streets for Surrey Design Guide
- Surrey Electric Vehicle Strategy

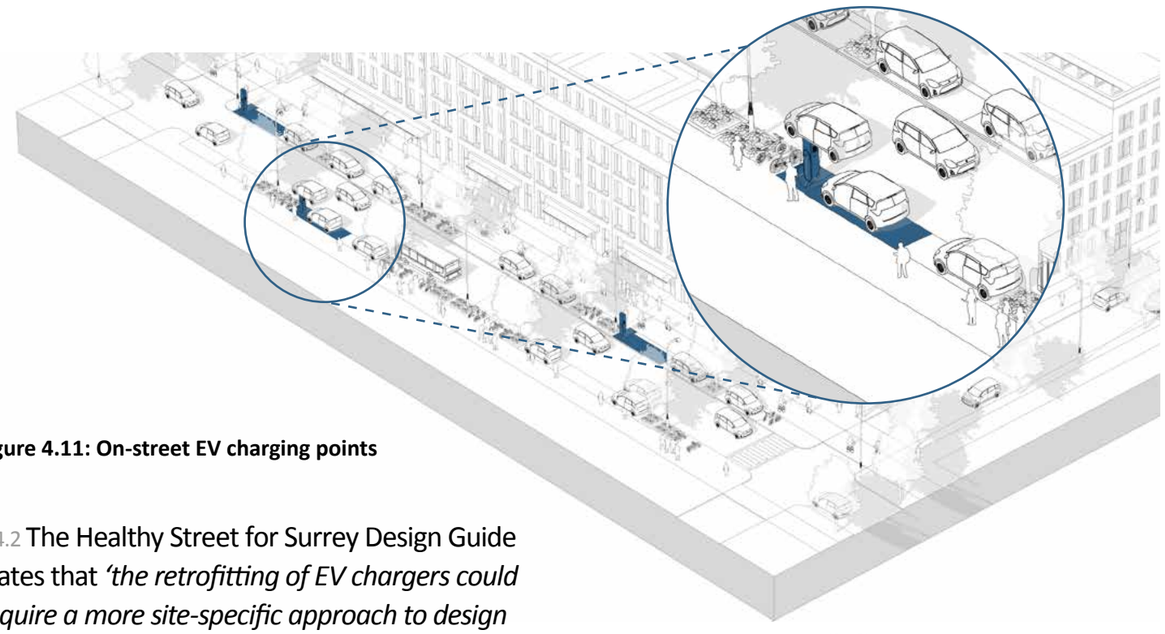


Figure 4.11: On-street EV charging points

4.4.2 The Healthy Street for Surrey Design Guide states that *'the retrofitting of EV chargers could require a more site-specific approach to design [than for new-build]. This should be discussed with SCC on a case-by-case basis but should make best use of this guidance.'*

4.4.3 However, the default choice for locating EV charging infrastructure must be within the carriageway or in-line with a footway-level parking pad. They must not compromise the minimum acceptable effective footway width.

Image 4.7: Example of EV charging point

4.5 CYCLE PARKING

CODE M13 - CYCLE PARKING LOCATION AND DESIGN

On street cycle parking **must** be located within a co-ordinated furniture zone and take account of the space required for the bicycles themselves and not simply the stands.

Further Reading:

- Local Transport Note 1/20: Cycle Infrastructure Design

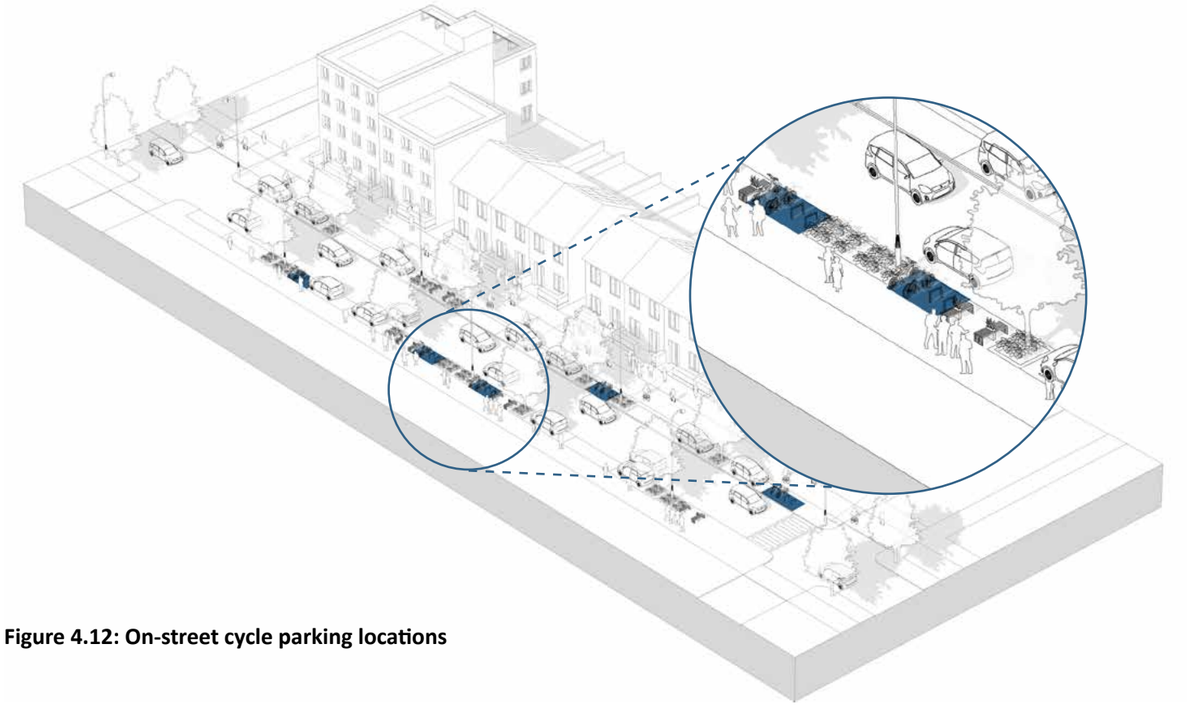


Figure 4.12: On-street cycle parking locations

Image 4.8: Coordinated cycle parking

4.5.1 The design of on-street cycle parking should follow the guidance contained within Local Transport Note 1/20: Cycle Infrastructure Design, which states that *'Extra care should… be taken to position cycle parking in locations that do not impinge on key pedestrian desire lines, but are still sufficient in volume and convenience of location to be of use to cyclists. The position of other existing or proposed street furniture, such as bus shelters or benches, should be taken into account. Stands should not be placed where they obstruct the flow of pedestrian traffic or reduce available footway width for pedestrians beyond the recommended minimum.'*

4.6 SERVICES & UTILITIES

CODE M14 - SERVICING OF DEVELOPMENT

Refuse collection **must not** dictate the design of a street but should be integrated. The needs of pedestrians and cyclists **must** be put first when considering street and junction design.

Consideration **must** also be given to the increased use of home deliveries and the need to accommodate relatively short-stay parking so that these activities can be carried out with the minimum of disruption, particularly for pedestrians and cyclists.

Further Reading:

- Development Management Policy DES1 Criterion 7
- 'Manual for Streets 2 (2010)
- Healthy Streets for Surrey Design Guide

4.6.1 The code on refuse collection aligns with the Healthy Streets for Surrey Design Guide. 'Manual for Streets 2 (2010) notes '*Larger vehicles can still negotiate junctions where minimal (1m or less) corner radii are used, depending on the width of the junction arms they are turning to and from.'* It goes on to note that *'Larger vehicles can still negotiate junctions'* by accepting *'that larger vehicles occasionally cross into the opposing lane.'*

Image 4.10: Street before addition of level loading pads

Image 4.9: Level loading pads

Image 4.11: Street after addition of level loading pads

4.7 CHECKLIST

HOW TO USE

This table provides a checklist for use by both the applicant and planning officer to check that appropriate consideration has been given to how an application responds to the Movement Codes.

CODE	DESCRIPTION	CHECK
CODE M1 - ENHANCING CONNECTIVITY ACROSS THE STREET	Does the design contribute to enhanced pedestrian and cycling connectivity across the A23?	
CODE M2 - FOOTWAY DESIGN	If your footway is in a quiet location (flows of <600 pedestrians an hour) does it have 2m or more of clear width for walking?	
	If your footway is in a moderately busy location (flows of 600-1200 pedestrians an hour) does it have 2.5m or more of clear width for walking?	
	If your footway is in a busy location (flows of >1200 pedestrians an hour) does it have 3m or more of clear width for walking?	
	Is every flush surface or dropped kerb between the footway and carriageway marked with appropriate tactile paving?	
CODE M3 - BI-DIRECTIONAL CYCLE ROUTE	Is a segregated, bi-directional cycle track provided at footway level along the entire eastern side of the A23 Great Street?	
	Is the cycle track a minimum of 2.5m in width, rising to 3.0m where the highway width permits?	
	Is the horizontal separation between the carriageway and the footway level at least 0.5m?	
	Will advance stop lines be installed and are they at least 5m deep?	
	Is a different surface material used for the footway and the cycle track?	
	Is a raised strip which is trapezoidal in cross section used to segregate the cycle track?	
CODE M4 - STREET FURNITURE, PEDESTRIAN GUARDRAIL AND SEATING	Is street furniture located in the single furniture zone?	
	Has pedestrian guardrailing not been used and has guidance in the Manual for Streets 2 been followed?	
	Are resting points in urban areas no more than 100m apart in quiet areas and 50m apart in busy areas?	
CODE M5 - CARRIAGEWAY DESIGN, SURFACING, SIGNAGE AND MARKINGS	Are traffic lanes widths not between 3.2 - 3.9m?	
	Have signs not used yellow backing and are they the smallest effective size?	
	Have centre lines not been used unless marking a hazard?	
	Have centre lines and ghost island hatching not been used?	
	Are yellow lines 50mm wide and primrose in colour?	
	Are yellow lines not taken across the side road entry?	
	Has coloured surfacing has been used sparingly?	
CODE M6 - SPEED LIMITS	Have all urban areas, residential streets, town or village centres and places with significant interaction between pedestrians, cyclists, and motor vehicles been designed for 20mph?	
	Has a 20mph speed limit be sought in the defined locations?	

4.7 CHECKLIST

CODE	DESCRIPTION	CHECK
CODE M7 - JUNCTION DESIGN AND SPACING	Have continuous crossings been used on all side streets carrying less than 2,000 vehicles?	
	Have designated right turn lanes not been used?	
	Have standard DMRB roundabouts not been used in towns, villages, or urban areas?	
	Have a minimum number of signal heads and signalling equipment been used?	
	Have white backing boards to signals not been used at junctions where the speed limit is 30mph or less?	
CODE M8 - FRONTAGE ACCESS AND VEHICLE CROSSOVERS	Do vehicle crossovers to private drives not interrupt the footway or bi-directional cycle route?	
	Are all safety concerns are in response to site-specific issues?	
CODE M9 - PEDESTRIAN CROSSINGS	Are informal pedestrian crossings a minimum of 2.8m in width?	
	Are formal pedestrian crossings a minimum of 4m in width?	
	Are formal pedestrian crossings provided at least every 400m in built up areas?	
CODE M10 - BUS PROVISION, STOPS AND WAITING FACILITIES	Are bus stops located in the carriageway?	
	Do bus stops include a bus shelter and are they attractive, comfortable and well-lit?	
CODE M11 - CAR PARKING LOCATION AND DESIGN	Are parking spaces provided in groups of no more than three spaces?	
	Are waiting and loading bays located at footway level?	
CODE M12 - ELECTRIC CHARGING POINTS	Is EV charging infrastructure in-line with a parking spaces and not within the footway clear zone or minimising the effective footway width?	
CODE M13 - CYCLE PARKING LOCATION AND DESIGN	Is cycle parking located within a coordinated furniture zone and does it take account of the space required for the bicycles themselves?	
CODE M14 - SERVICING OF DEVELOPMENT	Is refuse collection integrated into the design but not dictating the design of the street?	
	Have the needs of pedestrian and cyclists been put first in street design?	
	Has short term parking been considered?	

CHAPTER 5: NATURE

5.1 NETWORK OF OPEN SPACES

CODE N1 – IMPROVING ACCESS TO NATURE

When designing change along the A23 'Great Street' opportunity to improve access to and provide safe and convenient pedestrian and cycle connections between existing and new open spaces **must** be considered.

Green spaces **must** be connected to the street footways and cycle paths with either a shared footway or a footway with an adjacent cycling facility.

Chicanes, or other devices that attempt to prevent motor vehicle access (including motorcycles) onto open spaces, **must not** be used unless it can be proven than they will not also prevent access to disabled cyclists, tricycles, cargo bikes, wheelchairs or mobility scooters.

Further Reading:

- Development Management Policies DES1 and NHE4

5.1.1 Redhill, Earlswood, Salfords, Horley and the other smaller hamlets within the study area are set within open countryside. Much of this is farmland but there are also some significant open spaces including notable areas of common land to the south of Redhill at Redhill, Earlswood and Petridgewood Common, nature reserves east of Redhill town centre and a series of spaces delivered alongside new housing around Horley. In some parts of the area public rights of way provide walking routes through the countryside but other areas are less well served and access to open spaces for some residents could be significantly improved.

5.1.2 Access to nature has proven benefits to mental and physical health and should be easily and comfortably accessible to everyone.

5.1.3 In some places the A23, together with the north-south Redhill to Horley railway line, restricts access to open spaces. In other places access to nature initially requires walking alongside the A23 and the quality of this experience may act as a deterrent.

5.1.4 Access to nature can be improved through better pedestrian crossing facilities, enhancing the quality of the environment along the A23 Greet Street and through delivering new and improved connections from the street to the open spaces to either side. These connections must be accessible and welcoming.

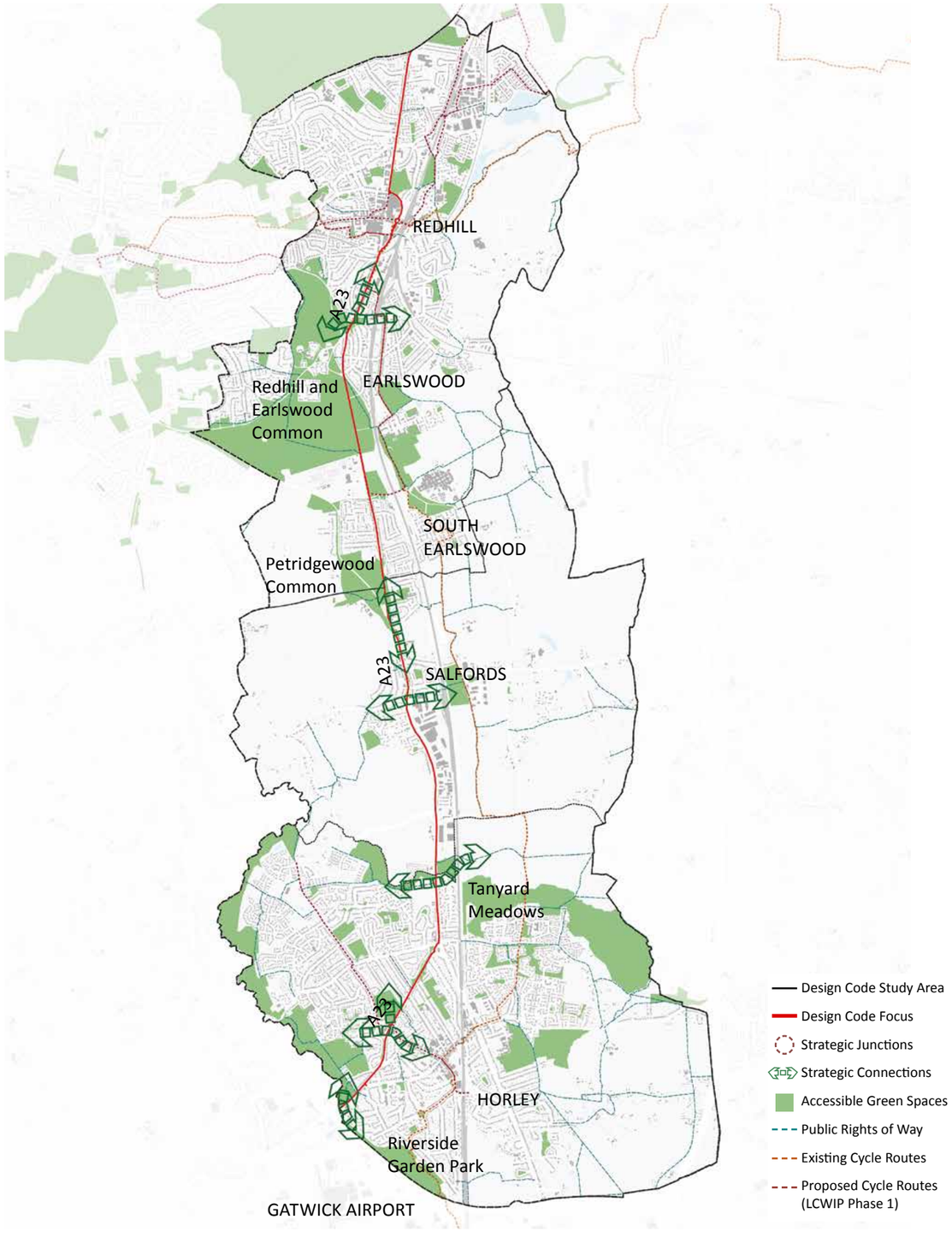


Figure 5.1: Existing green network

5.2 GREEN INFRASTRUCTURE

CODE N2 – PROTECTING EXISTING TREES & HEDGEROWS

Existing trees and hedgerows **must** be retained unless there is a strong justification to do otherwise.

Where healthy trees are proposed for removal these should be replaced with new trees. A ratio of 5 new trees to 1 healthy tree to be removed is recommended and new trees to be specified and planted in accordance with Code N5 - Provision of Street Trees and Code N6 – Tree Species and Planting.

Further Reading:

- Development Management Policies NHE3

5.2.1 Existing trees play an important role in relation to climate change mitigation, local character, amenity, habitat and biodiversity and every effort must be made to ensure their long-term survival.

5.2.2 When preparing proposals along the A23 Great Street existing trees must be surveyed in accordance with BS5837. All category A and B trees must be retained and protected in accordance with the British Standard. All Category C and U trees must be replaced with a new tree in accordance with Code N5 - Provision of Street Trees and Code N6 – Tree Species and Planting, in, or close to their current location to suit new layouts.

5.2.3 Category A and B trees (healthy trees as defined in the Code) that need to be removed to allow for development should be replaced at a ratio of 5 to 1 as set out in the Code above.

5.2.4 Tree surgery and remedial works recommended in the tree survey must be carried out as detailed.

Image 5.1: Existing mature trees in the study area

Image 5.2: Existing hedgerows in the study area

5.2 GREEN INFRASTRUCTURE

CODE N3 – PROTECTING EXISTING PLANTING AND GRASS VERGES

All healthy existing planting and grassed areas of ecological and/or amenity value should be retained and safeguarded except where they prevent the introduction of the bi-directional cycle track and footways. In these locations, the cycle track and footway should be installed to their minimum requirements locally to safeguard valuable existing planting.

All mown, species poor, grass verges should be converted into species rich wildflower verges appropriate to the location to enhance biodiversity. Refer also to Code N7 – Blue Infrastructure and Code N8 – Design to Enhance Biodiversity.

Further Reading:

- Plant Life's `The Good Verge Guide'

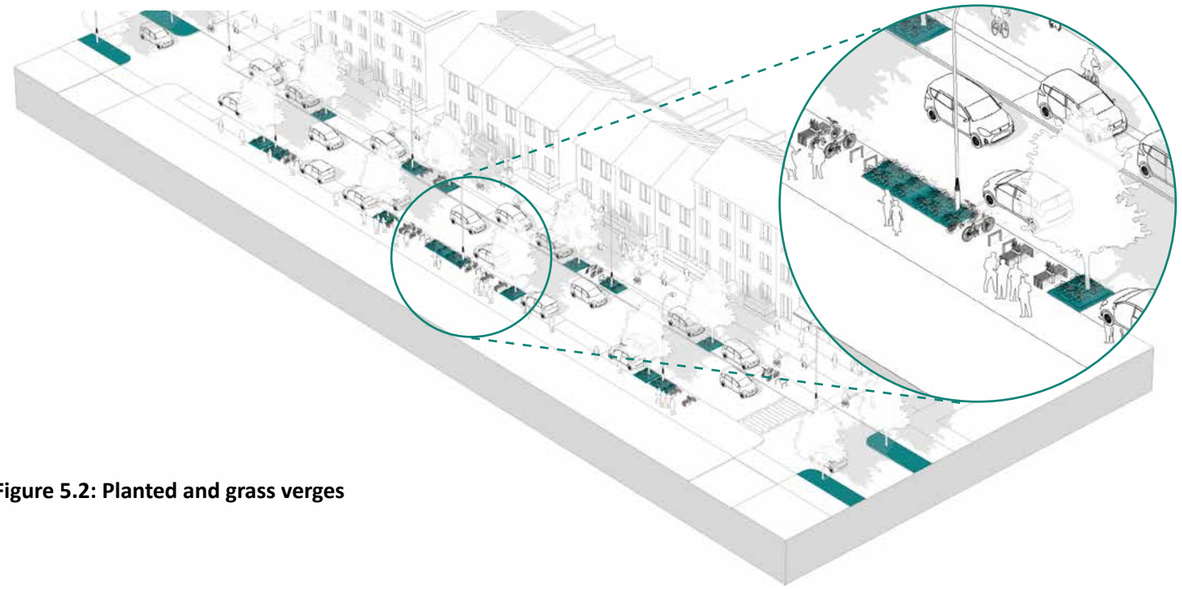


Figure 5.2: Planted and grass verges

5.2.5 Existing planting and grass verges can play an important role in relation to climate change mitigation, local character and amenity, habitat and biodiversity. Every effort must be made to ensure their long-term retention and where appropriate adaption to improve their contribution to biodiversity.

5.2.6 Existing planted areas including hedges, shrub beds and grass verges must be assessed to determine their ecological and amenity value and contribution to character. All planting and verges of value must be retained and protected or replaced locally where it does not prevent compliance with other requirements of this code particularly in relation to the provision of cycling and walking infrastructure.

5.2.7 When converting species poor grass verges into species rich wildflower verges, an appropriate management/planting plan must be prepared. Reference should be made to Plant Life's `The Good Verge Guide' or similar.

5.2 GREEN INFRASTRUCTURE

CODE N4 – PROVISION OF NEW GREEN INFRASTRUCTURE

All land that is not being used for movement or built development **must** be designed wholly or partly as Green Infrastructure with hard paved areas kept to a minimum. This includes, where appropriate, recreation and play spaces.

The typology and design of the Green Infrastructure features (hedgerow, verge, meadow etc.) **must** relate harmoniously to the prevailing local conditions and character and conform to good urban design practice.

Play elements should be incorporated into Green Infrastructure, where appropriate and be accessible to children.

Opportunity to introduce green-walls, climbing plants, green roofs and roof gardens as part of new development **must** be considered.

Further Reading:

- Development Management Policies NHE4

5.2.8 Green infrastructure plays an important role in relation to climate change mitigation, local character and amenity enhancement and habitat and biodiversity. Every effort must be made to preserve existing Green Infrastructure and establish new areas. It must be low maintenance and as self-sustaining as possible, to ensure its long-term survival.

5.2.9 Green Infrastructure can take the form of woodland, lone trees, hedgerows, hedges, shrub beds, meadows, mown grass verges, lawns and sports fields, wildflower verge, rain gardens, climbers, green-walls, green roofs and roof gardens and anything else that perform `ecosystem services'. An ecosystem service is any positive benefit that wildlife or ecosystems provide to people.

5.2.10 Where possible Green Infrastructure should be planted directly into the ground but raised planters will be permitted if there is an intended design function (a raised edge for sitting on for example) or a requirement to avoid utilities or other in ground obstacles.

5.2.11 Where Green Infrastructure cannot be installed in the ground, vertical planting, climbers and green walls, must be considered where appropriate on areas of blank wall or fence.

5.2.12 A pre-design site survey must be carried out to identify existing local Green Infrastructure features; locally thriving plant species and communities; ground and soil conditions, utilities and the micro-climatic conditions. The survey results must inform the typology and design of the Green Infrastructure feature.

5.2.13 Care must be taken when considering the introduction of play elements along the A23 Great Street. Adequate separation must be provided between play elements and the carriageway and this means that play elements are only likely to be possible within open spaces or local centres (e.g. Salfords) where the building line is set back from the street and more space may be available.

Image 5.3: Green infrastructure contributes to the quality and use of the public realm

5.2.14 Play areas and playful landscapes should be designed to blend with the landscape and use natural materials that are both robust and enduring but aesthetically pleasing.

5.2.15 Play areas should be designed to challenge and promote children's growth by providing opportunities for them to engage in multiple different types of play and to use their bodies and minds to interact with the environment and others.

5.2.16 This means providing an environment for:

- Active play – with opportunities for running, jumping, climbing, swinging, spinning and rolling;
- Sensory play – through use of different textures, smells (through planting design) and sounds;
- Creative and imaginative play – by providing props for role-play including play houses, stages, or other imaginary scenes; and
- Social play – with places to talk share and cooperate.

5.2.17 Playful landscapes aimed at younger children may be introduced in local centres but equipped play areas will need to be located where they are overlooked but away from homes to avoid causing nuisance to residents.

CODE N5 - PROVISION OF STREET TREES

Every effort **must** be made to plant trees along the length of the A23 'Great Street'. The width of the highway varies along the route and reference **must** be made to Codes S1 to S10 that provide further detail on the potential for and location of trees along different parts of the route.

Large forest trees, with broad canopies **must** be favoured over small trees with fastigiate habits where ground conditions (soil and utilities) allow and where this is appropriate in relation to the prevailing character and edge condition.

Street trees should be planted in the following locations and in order of preference:

- Soft roadside raingarden/verge;
- Soft cycle lane-footway separator raingarden/verge;
- Hard paved kerb zone;
- Soft corridor edge with a hedge/hedgerow or other Green Infrastructure planting; and
- Planters with a volume minimum of 3m3 in areas where pits cannot be excavated.

In some locations it may be more appropriate to plant trees within an existing hedge line or within a development plot. This will be dependent on the specific site context and will need to be justified.

Where the edge condition is open fields, large, spreading forest species should be planted as standalone `features' at 15 - 25m centres. Species should be native and match those growing locally.

Where the edge condition is woodland or existing trees, trees should be planted only to fill in gaps at centres to match the existing spacing. Species should be native and should match those growing locally. Trees can be omitted to preserve an important view to a local building or landscape feature.

Figure 5.3: Street trees

5.2.18 The vision for the A23 `Great Street' is that it will be tree lined along its length with a single line of deciduous trees on both sides to create (or enhance) an avenue/boulevard character.

5.2.19 Street trees create shade and shelter and are effective at carbon capture and, through photosynthesis, produce oxygen that improves the air quality. Native species can also provide habitat for hundreds of micro-organisms, insects, mammals and birds increasing the local bio-diversity and providing safe movement networks in otherwise hostile (street) environments.

5.2.20 They also provide visual amenity and where trees are planted between the carriageway and footway provide a separation and sense of protection from the roadspace. In urban areas they contribute to cooling through transpiration and reduce the urban heat island effect.

5.2.21 Trees also play an important role in carbon sequestration and oxygen production and this will be proportional to the surface area of foliage. Large forest trees, with broad canopies are therefore favoured wherever possible.

5.2 GREEN INFRASTRUCTURE

CODE N6 – TREE SPECIES AND PLANTING

Species: Generally new trees **must** be native and/or ecologically compatible and found to be thriving locally and suited to the soils and subsoils into which they will be planted.

Nursery stock size: All trees, regardless of their ultimate size **must** be planted as 20-25cm girth semi-mature specimens with a clear stem of at least 2.5m and certified as local provenance (regional).

Maintenance of the clear stem: As the tree grows and the crown spreads the clear stem **must** be increased to maintain sightlines and clearances.

Planting pits: All planting pits **must** be a minimum of 200mm bigger than the rootball in all directions.

Rootzone: Beyond the planting pit, the trees roots **must** be able to access a Rootzone that will be able to support the healthy growth of the tree into maturity. In most instances this should be the existing soil and subsoil beneath the verge and/or footway. If a Rootzone needs to be created at the time of planting, that extends under the adjacent paving, consideration **must** be given to creating a stable base for the paving. Typically, a designed structural soil matrix (e.g. the Stockholm method) or a proprietary `crate' system will be necessary.

Topsoil and subsoil: Improved as dug topsoils and subsoils are preferred. Ameliorants and conditioning **must** be carried out as recommended in the soil test report. If soil testing proves that the as-dug soils are unsuitable to support trees and cannot be improved, then manufactured growing mediums can be used. Stripped virgin topsoil **must** be avoided.

Surface finish to tree pits: In hard paved areas the soil or self-binding gravel **must** be lightly compacted to finish the pit flush with the adjacent paving. As soil or gravel settles additional material **must** be used to raise the level flush with the paving.

Support: All trees **must** be secured with either double stakes tied top and bottom or underground guyed.

Gator/watering bags and watering pipes: All trees **must** be fitted with a 70 litre watering bag that is connected to a perforated watering pipe that circumnavigates the top of the rootball 100 – 300mm below the finished ground level.

Aeration pipes: Where trees are planted in hard paved areas aeration pipes **must** be installed to the full depth of the rootball to ensure that the soil does not become anaerobic.

Barriers and deflectors: Root barriers **must** only be used where trees are planted adjacent to utilities. Root deflectors **must** be used when a tree is planted in hard paved areas and less than 1m2 of tree pit is left exposed

Tree planting **must** be co-ordinated with street lighting columns to allow carriageways, cycle tracks and footways to be properly illuminated. New trees should not be planted within 3m of any building.

Image 5.4: High quality street tree planting

5.2.22 The choice of tree species and preparation and requirements in relation to ground conditions and planting are important to ensure that trees are suitable and appropriate for their location, contribute to local character and are provided with conditions that enable them to grow and thrive.

5.2.23 An underground utitlities survey (C2 Enquiry) should be carried out and verified on site prior to developing the planting plan and excavating the planting pits. A pre-design site survey must be carried out to determine the prevailing local townscape/landscape character, microclimate and existing tree species thriving in the locale. A soil survey/tree pit trial excavation must be carried to inform species choice and check for utilities.

5.3 BLUE INFRASTRUCTURE

CODE N7 – BLUE INFRASTRUCTURE

All planting beds and verges **must** be designed as raingardens or other suitable SuDS (attenuating tree pits, swales and or soakaways where technically feasible), where they can usefully fulfil that function, and abut impermeable hard areas such as the carriageway, cycle track and/or the footway and the crossfalls and finished levels can be designed accordingly.

All raingardens should be designed in accordance with the CIRIA SuDs manual and have at least a 100mm depth freeboard above the mulch layer to store water during heavy rain events. They **must** be planted with suitable, tree, shrub, grass and herbaceous species to maximise their biodiversity value and in line with other elements of this code. In all instances water **must** be able to either flow through the rain garden and/or down through the subsoils. The existing gulley and pipe drainage system **must** be retained as an overflow. The species mix for raingardens should generally be native and/or ecologically compatible within the permaculture ethos, that is: low maintenance and self-sustaining.

Existing watercourses are an asset to the area and development **must** respond positively to them. The siting, configuration, and orientation of proposed buildings should optimise views of the water, generate natural surveillance of water space and avoid overshadowing of the water. Wherever possible public access to the waterside should be provided. Where a culverted watercourse crosses a site consideration **must** be given to naturalising the watercourse to enhance biodiversity and improve access.

Further Reading:

- Development Management Policy CCF2 Criterion 4
- CIRIA SuDs Manual

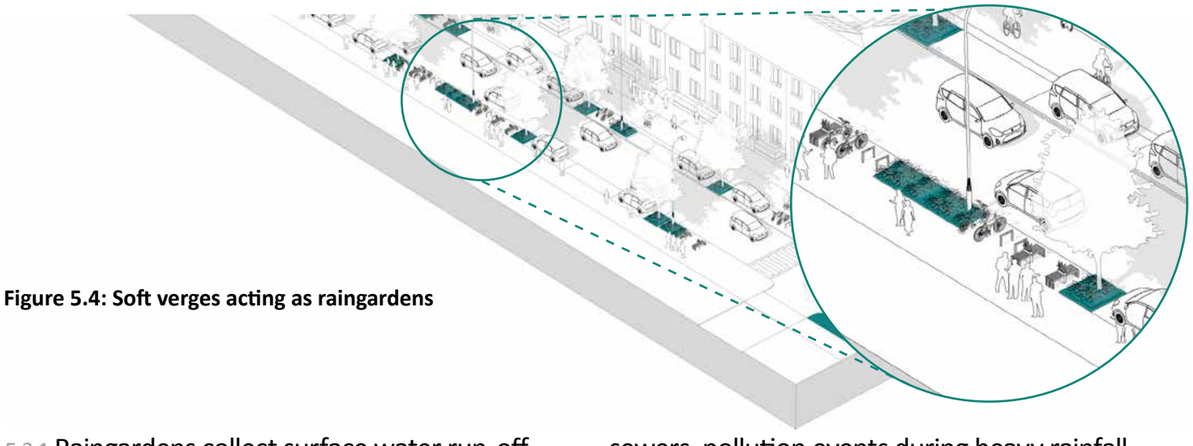


Figure 5.4: Soft verges acting as raingardens

5.3.1 Raingardens collect surface water run-off from hard paved areas which would otherwise flow quickly into the drainage system potentially causing flooding and/or in the case of combined sewers, pollution events during heavy rainfall. Through evapotranspiration they can recycle around 75% of the rainwater whilst improving the water quality of the remaining out flow.

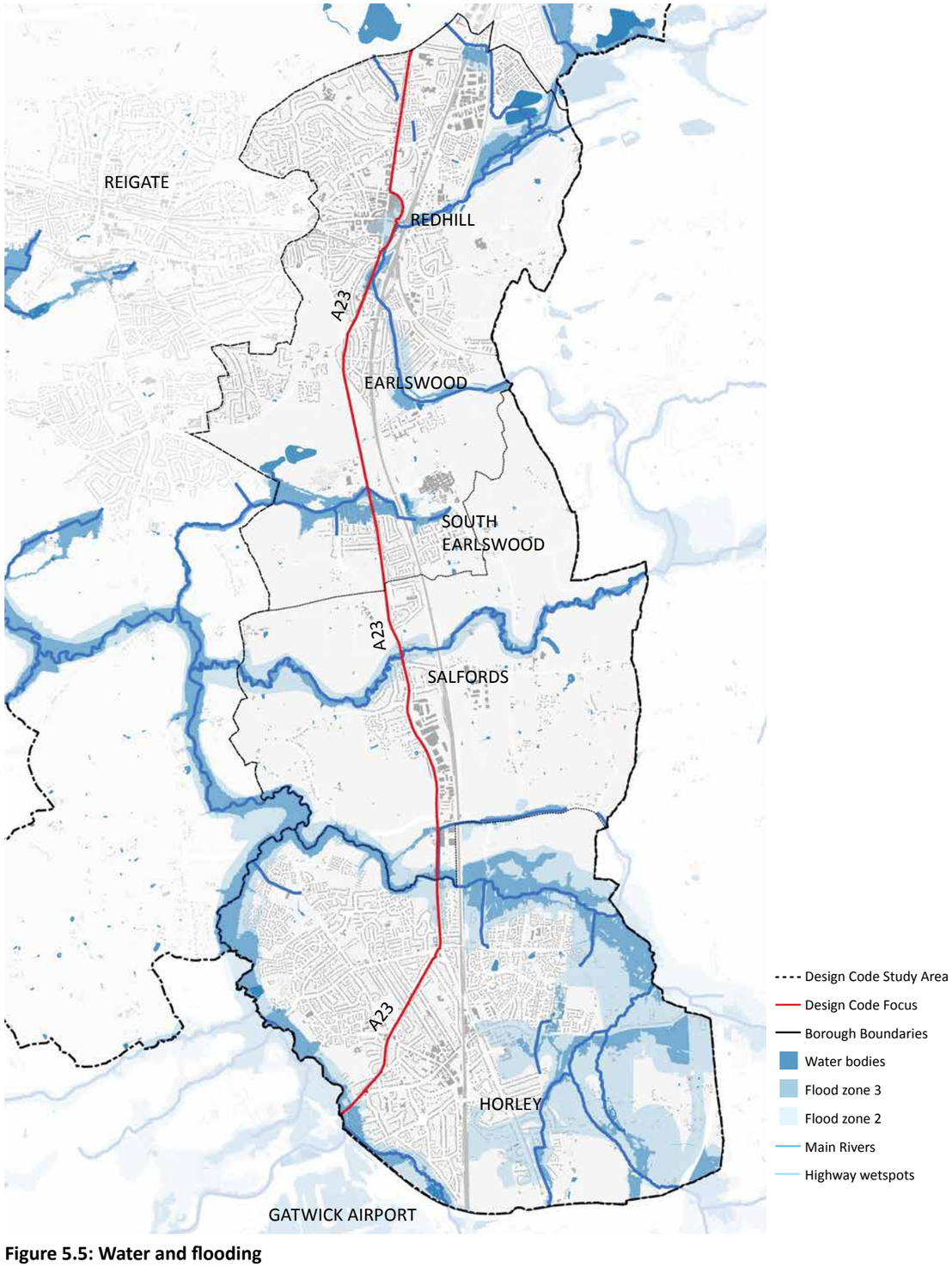


Figure 5.5: Water and flooding

5.4 BIODIVERSITY NET GAIN

CODE N8 – DESIGN TO ENHANCE BIODIVERSITY

Proposals **must** demonstrate: a Net Environmental Gain, compliance with the Local Nature Recovery Plan and the National Framework of Green Infrastructure Standards and show a Biodiversity net gain minimum of 10%.

Species planted along the A23 Great Street should generally be native and at least naturalised.

Further Reading:

- National Framework of Green Infrastructure Standards
- Local Nature Recovery Plan

5.4.1 The species used in Green Infrastructure should generally be native and/or ecologically compatible within the permaculture ethos, that is: low maintenance and self-sustaining. Green Infrastructure must maximise its biodiversity value whilst fulfilling its intended function.

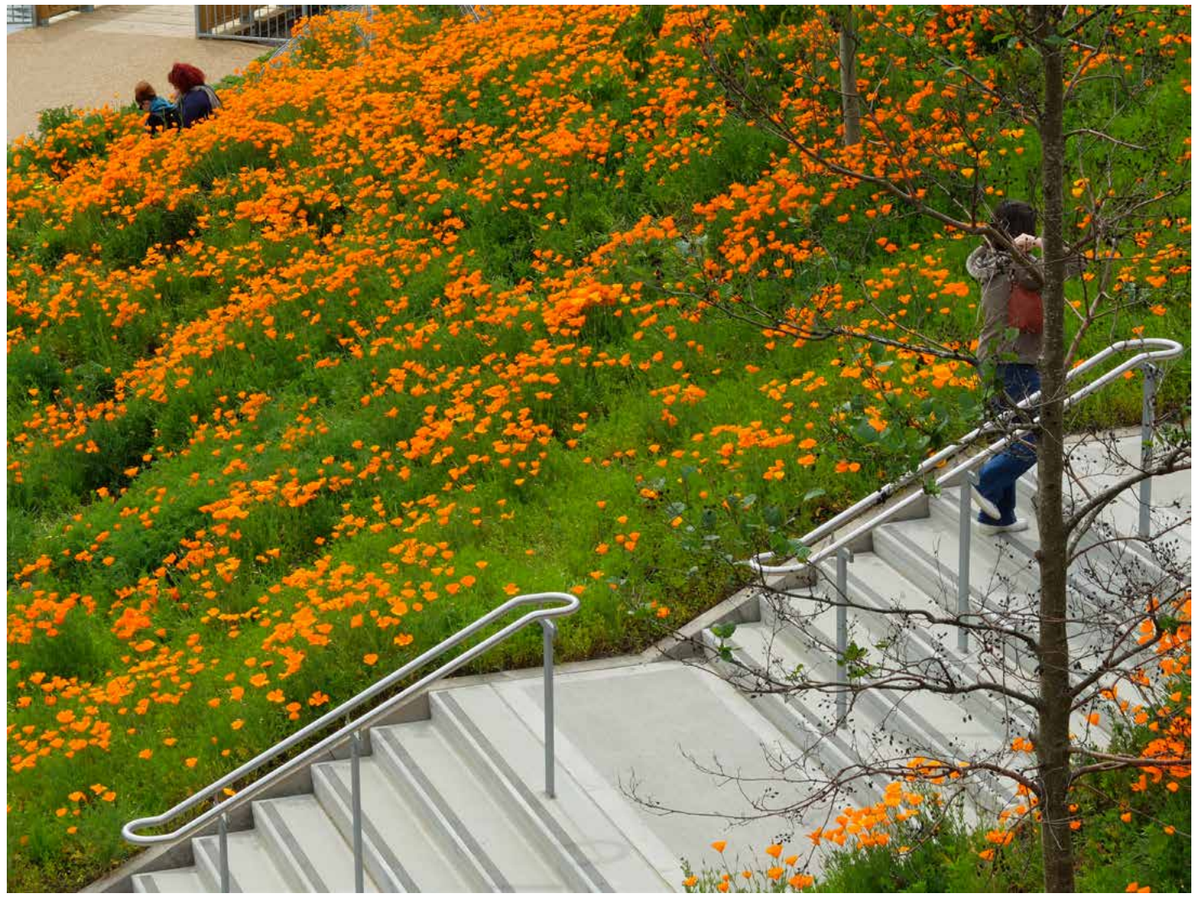


Image 5.5: Enhanced biodiversity

APPLYING THE CODE: EXAMPLE 2 - SOUTH SALFORDS

Figure 5.6: South Salfords Plan

Image 5.6: Existing (credit: Google)

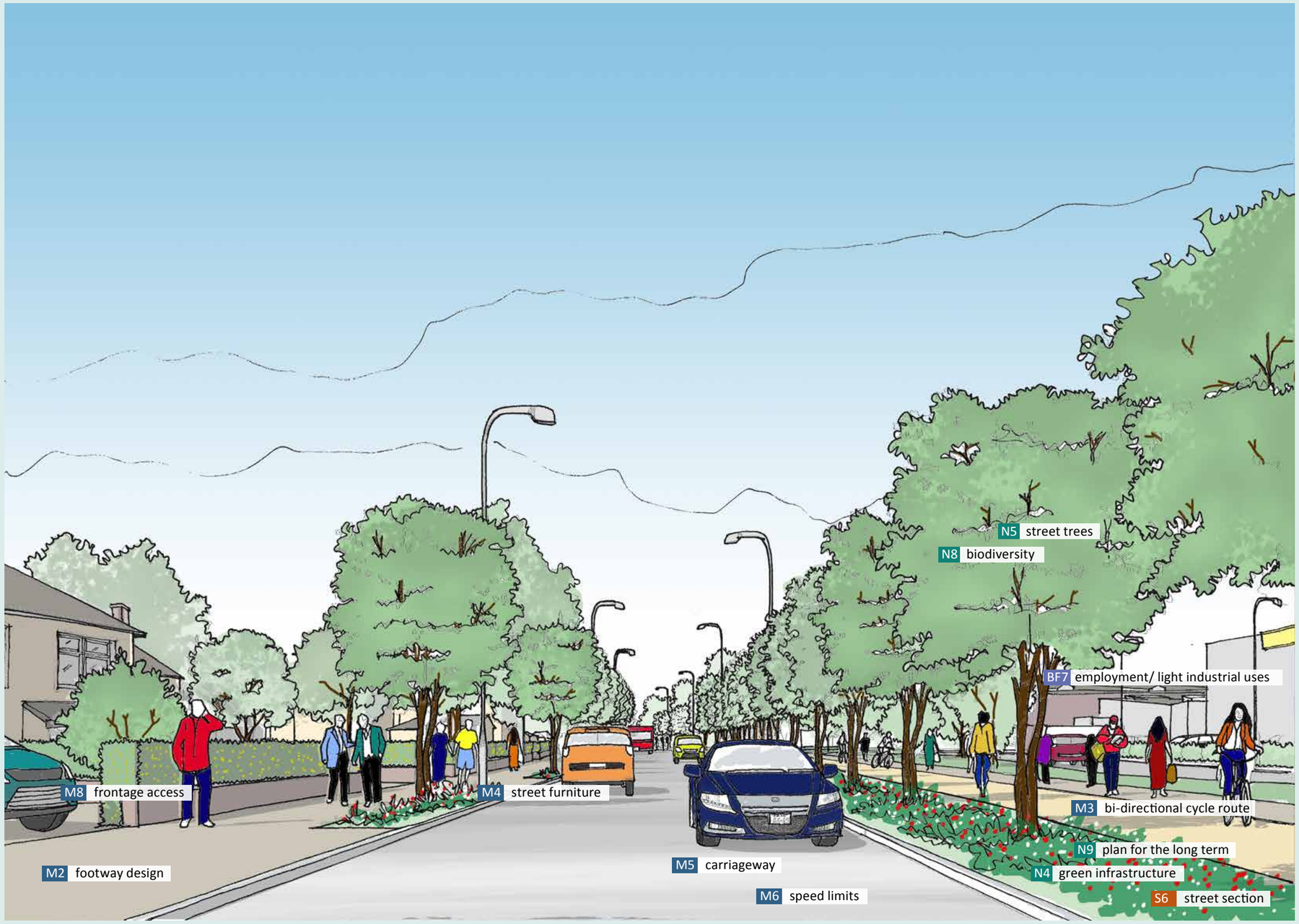


Figure 5.7: Sketch indicating application of the code on the A23 in south Salfords including introduction of street trees and planted verges / raingardens to enhance biodiversity

5.5 MAINTENANCE & MANAGEMENT

CODE N9 – PLAN FOR THE LONG TERM

The design of all Green Infrastructure **must** consider future maintenance and management from the outset. A long-term maintenance and management plan **must** be supplied for each typology of green infrastructure including raingarden systems.

Maintenance agreements with local organisations and voluntary groups will be accepted if competency and capacity can be proved.

Further Reading:

- Development Management Policy NEH4

5.5.1 Without appropriate future maintenance and management Green Infrastructure will not thrive and fulfil the functions that it is designed to achieve.

Image 5.7: Well-maintained green infrastructure

5.6 CHECKLIST

HOW TO USE

This table provides a checklist for use by both the applicant and planning officer to check that appropriate consideration has been given to how an application responds to the Nature Codes.

CODE	DESCRIPTION	CHECK
CODE N1 – IMPROVING ACCESS TO NATURE	Have green spaces been connected to the street footways and cycle paths with either a shared footway or a footway with an adjacent bi-directional cycle track?	
	If used, chicanes will not will not prevent access to disabled cyclists, tricycles, cargo bikes, wheelchairs or mobility scooters	
CODE N2 – PROTECTING EXISTING TREES & HEDGEROWS	Have existing trees and hedgerows been retained?	
	Have all removed healthy trees been replaced at a ratio of 5 new trees to 1 old tree?	
CODE N3 – PROTECTING EXISTING PLANTING AND GRASS VERGES	Have all healthy existing planting and grassed areas of ecological and/or amenity value been retained and safeguarded except where they prevent the introduction of the bi-directional cycle track and footways?	
	Has the cycle track and footway been designed to the minimum space requirements in areas with healthy existing planting and grassed areas of ecological and/or amenity value?	
	Have all mown, species poor, grass verges been converted into species rich wildflower verges?	
CODE N4 – PROVISION OF NEW GREEN INFRASTRUCTURE	Has all land that is not being used for movement or built development been designed wholly or partly as Green Infrastructure with hard paved areas kept to a minimum?	
	Does the typology and design of the Green Infrastructure features (hedgerow, verge, meadow etc.) relate harmoniously to the prevailing local conditions and character and conform to good urban design practice?	
	Have play elements been incorporated into Green Infrastructure?	
	Have opportunities to introduce green-walls, climbing plants, green roofs and roof gardens as part of new development been considered?	
CODE N5 - PROVISION OF STREET TREES	Has every effort been made to plant trees along the length of the A23 ‘Great Street’?	
	Have large forest trees with broad canopies been favoured over small trees with fastigiate habits?	
	Has tree planting been planning in accordance with the preferences in Code N5?	
	Has the edge condition been considered and appropriately responded too?	
	Are species native and matching those growing locally?	

5.6 CHECKLIST

CODE	DESCRIPTION	CHECK
CODE N6 – TREE SPECIES AND PLANTING	Are new trees native or ecologically compatible to the area they are planted?	
	Will all trees planted have a minimum of 20-25cm girth at time of planting?	
	Will the stem be maintained to remain clear?	
	Will trees be able to access a rootzone beyond the tree pit?	
	Have ameliorants and conditioning been applied or carried out as recommended in the soil test report?	
	Has stripped virgin topsoil been avoided?	
	Has the pit been made flush with the paving level?	
	Will all trees be supported by either double stakes tied top and bottom or underground guyed?	
	Have all trees been fitted with a 70 litre watering bag that is connected to a perforated watering pipe that circumnavigates the top of the rootball 100 – 300mm below the finished ground level?	
	Do trees planted in hard paved areas have aeration pipes installed to the full depth of the rootball to ensure that the soil does not become anaerobic?	
	Have root barriers been used for trees next to utilities?	
	Have root deflectors been used when a tree is planted in hard paved areas and less than 1m2 of tree pit is left exposed?	
	Is tree planting coordinated street lighting columns?	
CODE N7 – INCORPORATING SUDS IN STREET DESIGN	Are all planting beds and verges designed as raingardens or other suitable SuDS where appropriate?	
	Are all raingardens designed in accordance with the CIRIA SuDs manual?	
	Are all raingardens are planted with suitable, tree, shrub, grass and herbaceous species to maximise their biodiversity value?	
	Is water is able to flow through raingarden or through topsoil?	
	The existing gully and pipe drainage are retained for overflow.	
	Have existing watercourses been positively responded to?	
	Does the siting, configuration, and orientation of proposed buildings respond positively to watercourses?	
	Has consideration been given to naturalising all culverted watercourses?	
CODE N8 – DESIGN TO ENHANCE BIODIVERSITY	Do proposals demonstrate: a Net Environmental Gain, compliance with the Local Nature Recovery Plan and the National Framework of Green Infrastructure Standards and show a Biodiversity net gain minimum of 10%?	
CODE N9 – PLAN FOR THE LONG TERM	Do all planting and landscape designs consider future maintenance and management?	
	Has a long-term maintenance and management plan has been supplied for each typology of green infrastructure including raingarden systems?	

CHAPTER 6: BUILT FORM

6.1 INTRODUCTION

6.1.1 The character and quality of the built form varies along the A23. This has been assessed and typological character types (Area Types) and the broad character of the street frontage (Interface Character) are identified in Chapter 2.

6.1.2 Figure 6.1 to Figure 6.4 identify sites that through their development or intensification can contribute to making the A23 a Great Street. Some of these sites are already identified as allocations within the Local Plan, others offer potential for intensification to deliver an enhanced frontage to the street and to improve legibility and enhance sense of place. The Built Form Codes provide design principles that must be followed when promoting development on these sites. The Codes also apply to any other site that might be brought forward alongside the A23.

6.1.3 Several of the sites include or are in the setting of heritage assets. The impact on their significance will need to be taken into consideration alongside the Built Form Codes provided in this chapter.

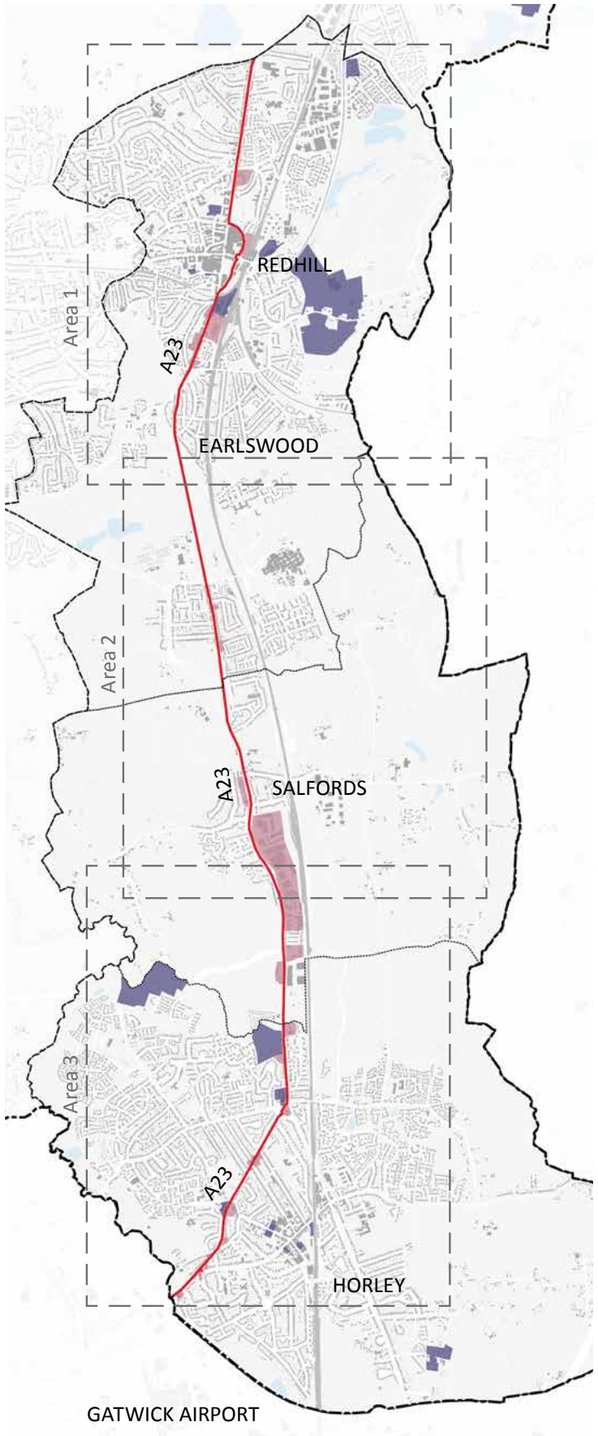


Figure 6.1: Sites with opportunity for development

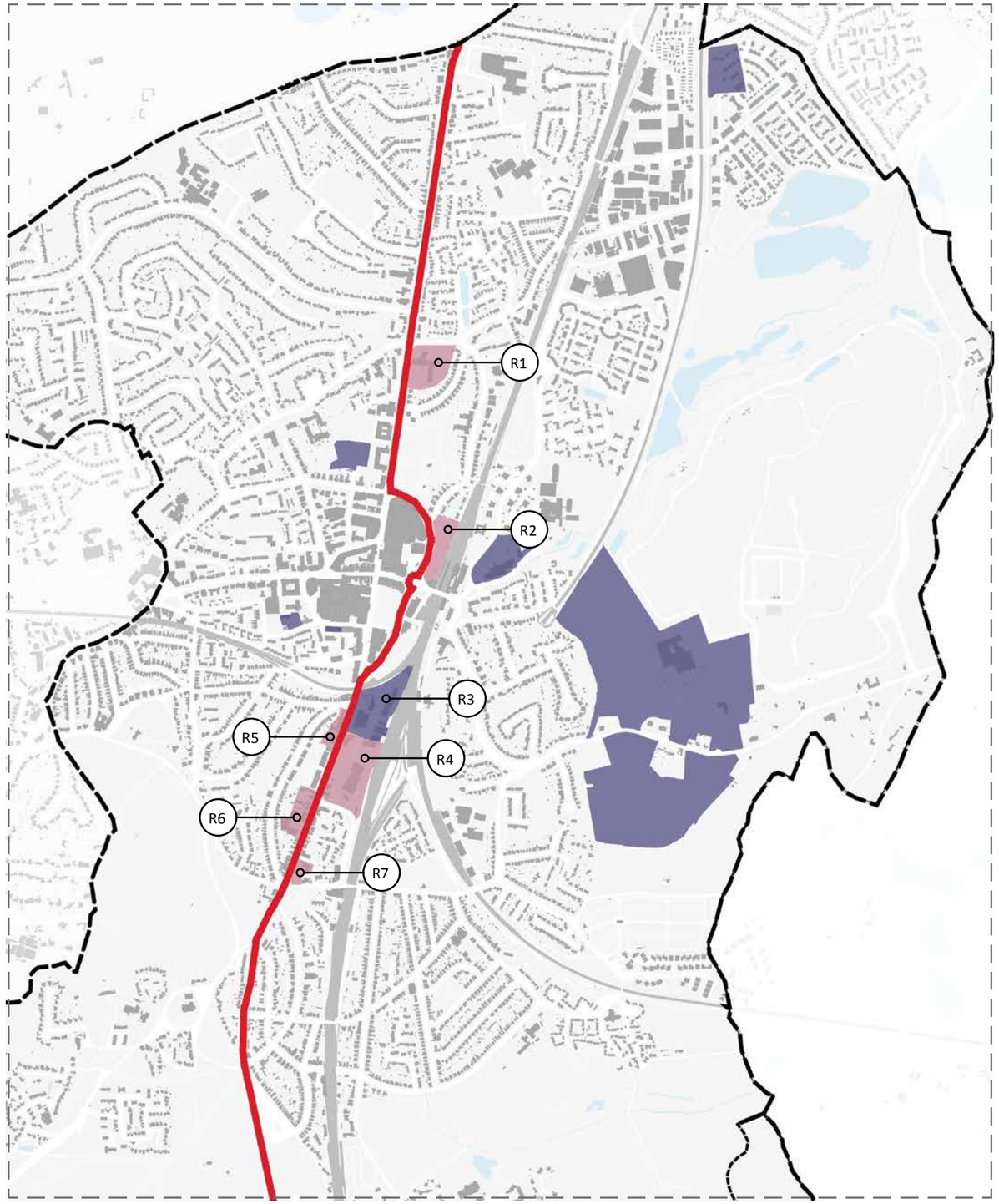


Figure 6.2: Identification of sites in Area 1 - Redhill

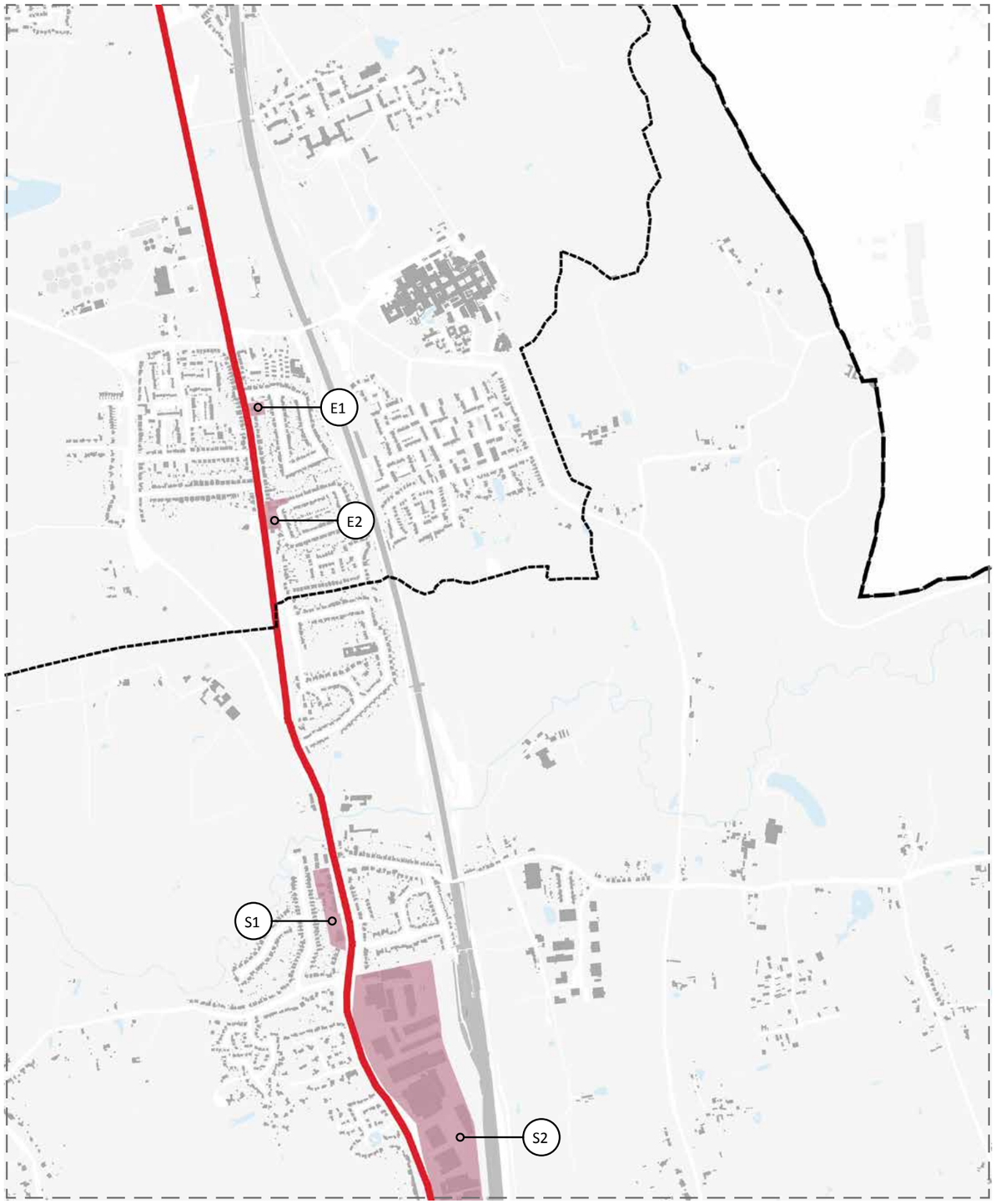


Figure 6.3: Identification of sites in Area 2 - Salfords & Earlswood

Figure 6.4: Identification of sites in Area 3 - Salfords & Horley

6.1 INTRODUCTION

SITE	DESCRIPTION	TYPE
R1	SES Water Site, Redhill	Design Code Enhancement Site
R2	Train Station car park, Redhill	Design Code Enhancement Site
R3	Reading Arch Road/Brighton Road North, Redhill	Site Allocation
R4	Halfords and B&Q site, Redhill	Design Code Enhancement Site
R5	Parade of shops, Redhill	Design Code Enhancement Site
R6	Parade of shops and Honda dealership, Redhill	Design Code Enhancement Site
R7	Sea Cadets site	Design Code Enhancement Site
E1	Shell Station, South Earlswood	Design Code Enhancement Site
E2	Parade of shops, South Earlswood	Design Code Enhancement Site
S1	Parade of shops, Salfords	Design Code Enhancement Site
S2	Industrial estate, Salfords	Design Code Enhancement Site
S3	Industrial estate, Salfords	Design Code Enhancement Site
S4	Lawsons, Salfords	Design Code Enhancement Site
H1	Best Western Hotel, Horley	Design Code Enhancement Site
H2	Vacant site, Horley	Site Allocation
H3	Sainsbury's Petrol Station, Horley	Design Code Enhancement Site
H4	Former Chequers Hotel, Horley	Site Allocation
H5	Shell Station, Horley	Design Code Enhancement Site
H6	Parade of shops, Horley	Design Code Enhancement Site
H7	59-61 Brighton Road, Horley	Site Allocation
H8	Greene King Pub, Horley	Design Code Enhancement Site
H9	Gatwick White House Hotel, Horley	Design Code Enhancement Site
H10	39 Brighton Road, Horley	Design Code Enhancement Site
H11	The Corner House Hotel, Horley	Design Code Enhancement Site
H12	Acorn Lodge Gatwick, Horley	Design Code Enhancement Site
H13	Co-op Food and Petrol, Horley	Design Code Enhancement Site

Table 1: List of sites offering potential for development

CODE BF1 – STREET ENCLOSURE AND FRONTAGE

New development should provide strong enclosure and frontage to the street space and be built to respond to and reinforce established building lines.

For vacant sites where there is no established building line the location of the building frontage should be set back sufficiently to accommodate the required width for a bi-directional cycle route, and footway. This will apply to sites R2, R3 and R4.

Buildings should be arranged with public areas to the front and private areas to the rear and so that buildings overlook and provide animated frontages and natural surveillance to the street space. In most locations buildings will be set back from the street space in order to provide privacy – refer to Code BF5.

Buildings should orientate their primary frontage towards the A23 (the main street) and plant rooms, bin stores, servicing areas and cycle stores should not be located fronting onto this route.

The extent to which a frontage is required to be continuous will depend on its location and the existing and emerging character. The following rules apply:

- Within Central Urban Areas new development should form part of coherent blocks and provide continuous frontage to the street space. This applies to sites R2, R3, R4 and R5.
- Within Local Centres and Edge of Centre Urban Areas modest breaks in the frontage of no wider than 4m, providing access to the rear of plots, will be permitted. This applies to sites R1, R6, E2, S1, H1, H3, H4, H5, H6, H7, and H8. Whilst sites E1, S4, H2 and H13 are currently located within suburban areas intensification will deliver a more urban character and the same principle applies;
- For corner sites frontage should be continuous on the main street to reinforce these important locations along the street. This applies to sites R7, H9, H10, H11, and H12. Refer also to Code BF4.
- In suburban areas continuous building frontage is not required and planting on property boundaries can help to achieve a sense of enclosure and continuity to the street space.

6.2.1 The A23 is the main street through the study area and passes through a range of conditions from town centres to more suburban areas and open countryside. Refer to Figure 2.5 which identifies Central Urban Areas, Edge of Centre Urban Areas and Suburban Areas.

6.2.2 How buildings respond to street space will have an important impact on the character of the street. Development must respond to the particular context of its location and can, through providing a positive frontage and interface, enhance the overall quality of the corridor and contribute to making the A23 a Great Street.

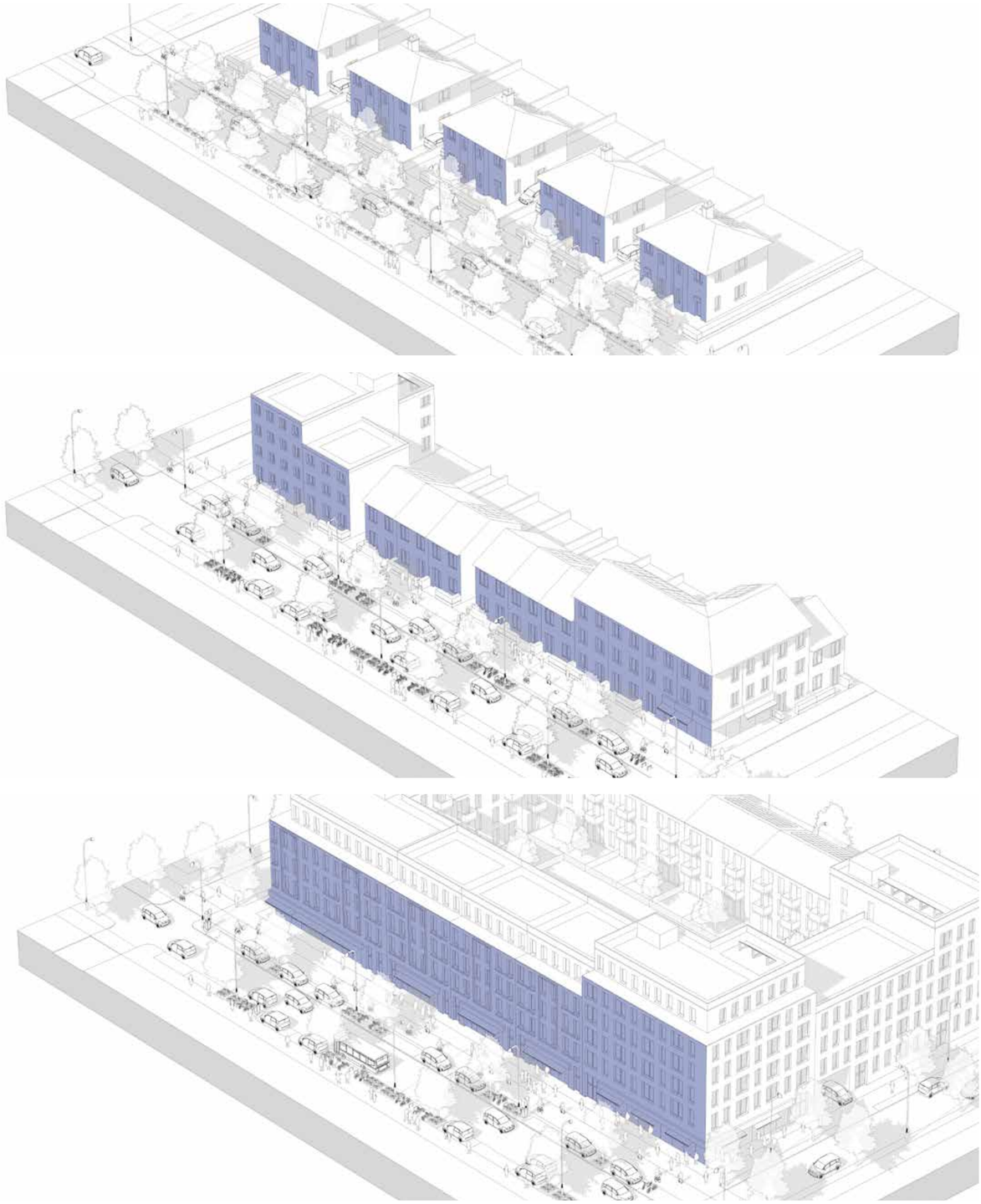


Figure 6.5: Consistent building line in different contexts; TOP Suburban; MIDDLE Edge of Centre Urban Areas; and BOTTOM Central Urban Areas

CODE BF2 – ACTIVE FRONTAGES

In town and local centre locations new development should normally provide non-residential uses at ground floor level and these should be designed to provide an 'active' frontage to the street. The floor to ceiling height at ground floor level should be a minimum of 4 metres to provide flexibility on its future use. This applies to new development on sites R2, R3, R4, R5, E2, S1, H4, H5, H6, H7 and H8.

Where active uses are promoted buildings should normally front directly onto the public realm or street space

Residential buildings that do not incorporate ground floor non-residential uses should have a privacy strip (refer to Code BF5) and be designed to avoid bedrooms at the ground floor level overlooking the public realm as this can reduce privacy for residents and passive surveillance of the public realm. It is often more appropriate to incorporate duplex units on the ground and first floor of apartment buildings to avoid such scenarios.

Image 6.1: Active frontages

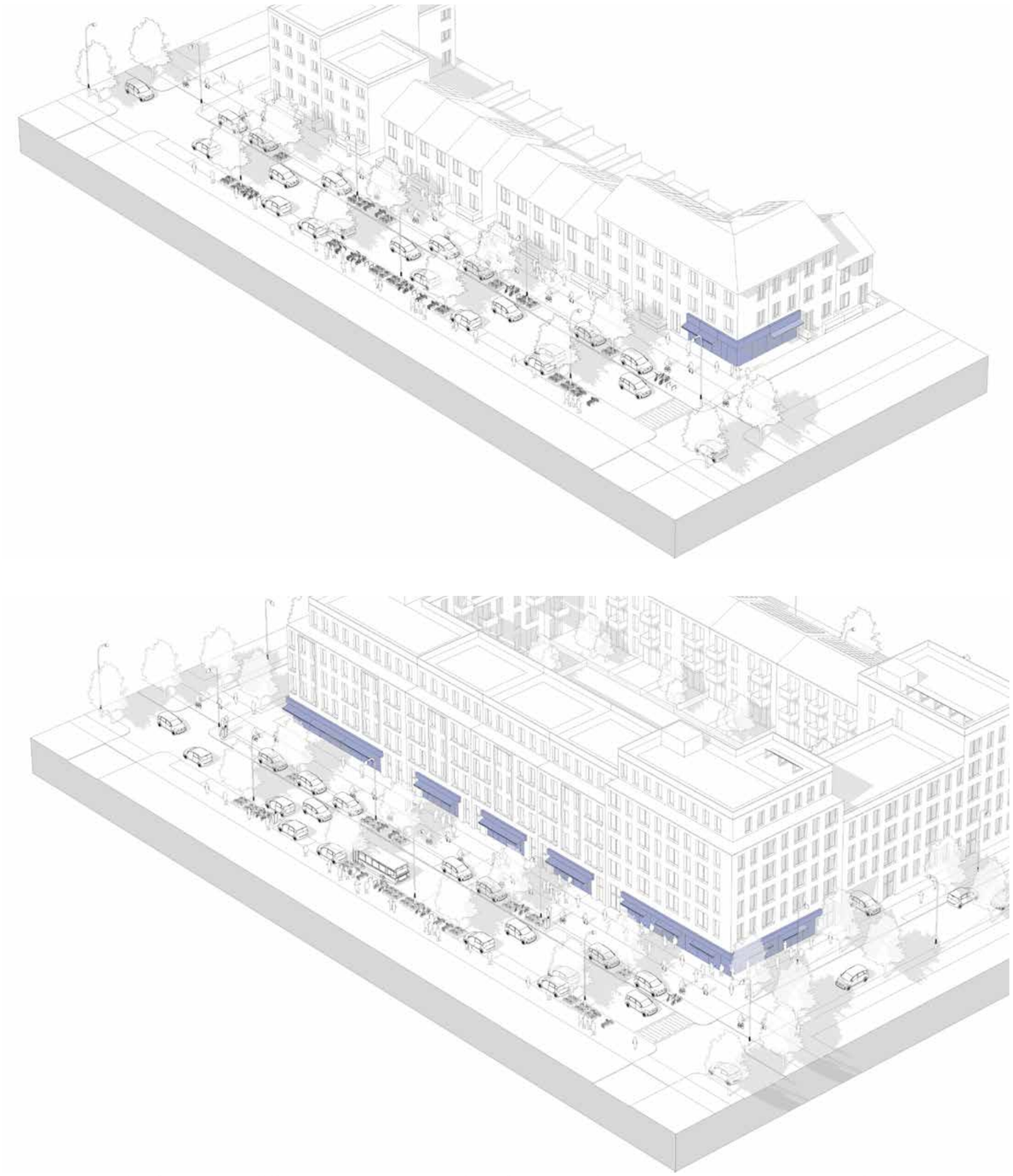


Figure 6.6: Active frontage in different contexts: TOP Edge of Centre Urban Areas; and BOTTOM Central Urban Areas

APPLYING THE CODE: EXAMPLE 3 - BRIGHTON ROAD ON SOUTHERN APPROACH TO REDHILL

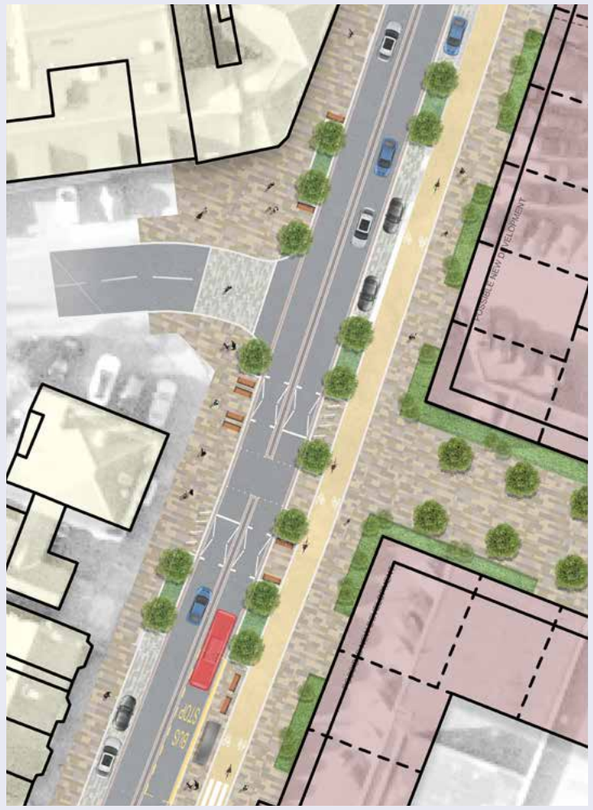


Figure 6.8: Redhill southern approach plan

Image 6.2: Existing (credit: Google)

Figure 6.7: Sketch indicating application of the code on the A23 on the southern approach into Redhill including new development that provides enclosure and frontage to the street.

CODE BF3 – SCALE AND MASSING

New development **must** respond to the scale, massing and grain of adjacent areas and the existing context (urban or suburban), character and location along the A23 corridor. Refer also to Code ID1, Code ID2 and Code ID3.

Subtle variations in height can be used to add visual interest. This can be achieved with differing ridge and eaves heights, as commonly found in traditional streets, or through the use of set back floors in contemporary developments. Similarly, variations in frontage widths and plan forms can add further interest to the street scene. This can be appropriate in both urban and suburban locations.

The following building heights, represented as number of residential storeys, are considered appropriate on the street frontage of sites identified along the A23 corridor:

- Dense urban scale: up to 5 storeys + additional set back storey (Site R2);
- Urban scale: up to 4 storeys + additional set back storey (Sites R3 and R4);
- Urban scale/local centres/corner site within suburban areas: up to 3 storeys + additional set back storey (R1, R5, R6, R7, E2, S1, S4, H4, H5, H6, H7, H8, and H13); and
- Suburban scale: up to 2 storeys + additional set back storey within the roofscape (E1, H9, H10, H11, H12).

These height ranges are considered as a guide and proposals **must** demonstrate that the scale, height and massing of development:

- Does not cause unacceptable impacts on adjacent properties in respect of daylighting, sunlighting and overlooking; and
- That it does not adversely impact on views of the wider townscape.

Consideration **must** also be given to the provision of car parking within higher density schemes and applicants will need to promote solutions that do not adversely impact on the quality of the streets and spaces (refer to Code BF9 – On Plot Parking on page 80).

Further Reading: Development Management Policy DES1

6.2.3 Buildings of greater height combined with a more continuous street frontage will provide a greater sense of enclosure to the street and help to emphasise local centres and urban/ town centre locations and deliver greater legibility along the corridor. Excessive height can however impact on the character of the street space creating a canyon effect that is oppressive and overshadowing the street.

6.2.4 Development that is of a greater scale, height and massing than the existing context can have both adverse local impacts in respect of daylighting, overshadowing, views and microclimate and adverse visual impacts from further afield particularly if a proposal is on elevated land.

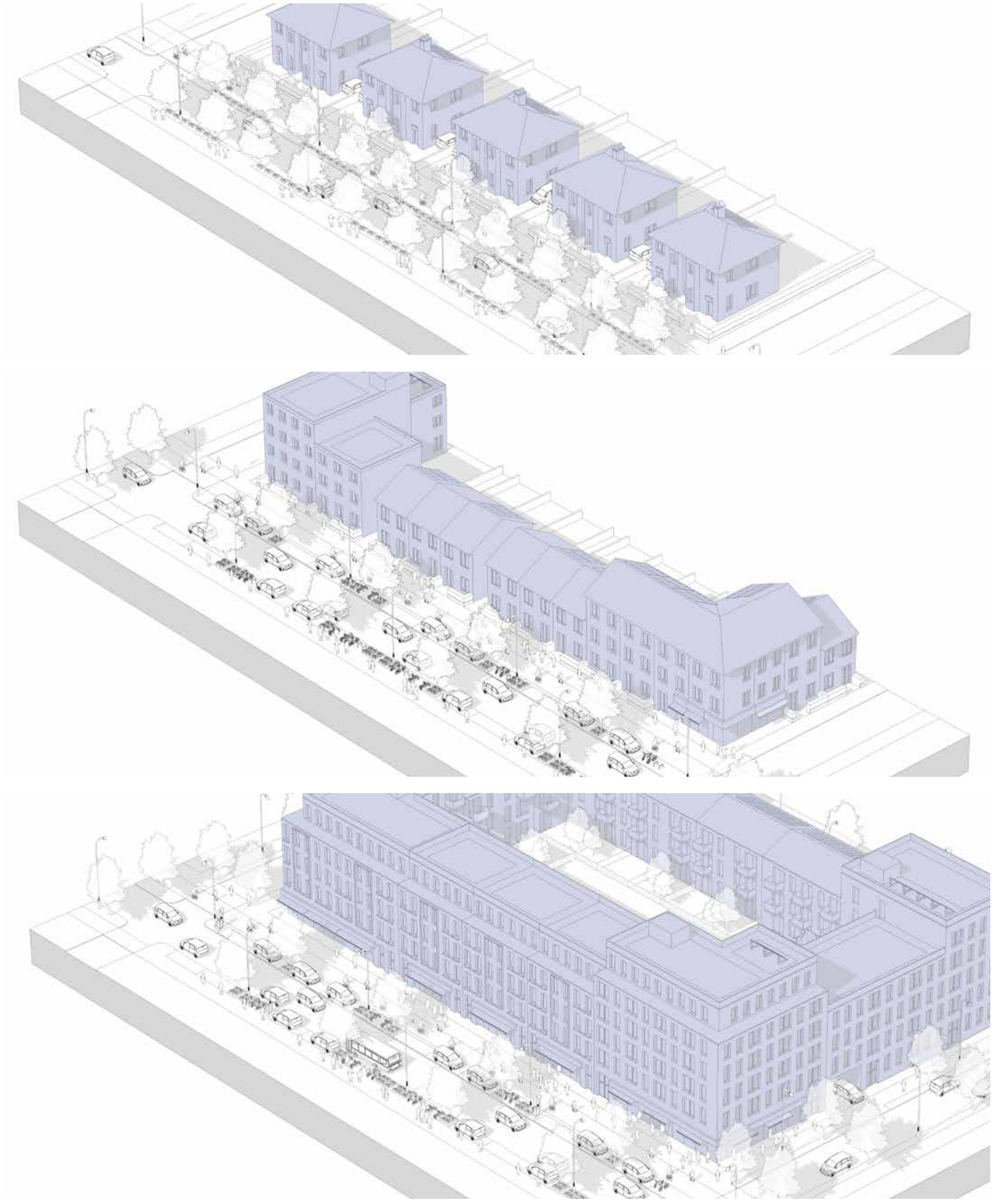


Figure 6.9: Scale and massing of buildings: TOP Suburban; MIDDLE Edge of Centre Urban Areas; and BOTTOM Central Urban Areas

CODE BF4 – CORNERS AND JUNCTIONS

Particular attention **must** be given to corner buildings (those located on the intersection of two streets). These buildings should be designed so that they 'turn the corner' providing active frontages to both the main street and to the side street. 'L' shaped buildings maintaining continuity of built frontage and incorporating corner windows and entrances are promoted in these locations. Corner buildings on prominent sites can enhance legibility but this **must** be achieved through careful articulation and design of the buildings façade rather than through the use of distinctive materials that are not characteristic of the area. Exposed, blank gable ends with no windows fronting the public realm will not be acceptable.

Corner plots may be a good location for community buildings and are often suitable for apartment buildings where additional height may be appropriate to mark the corner (for instance on sites R1, R8, H9, H10, H11 and H12). Apartment buildings may be deeper in floorplan than houses and as such care should be taken to avoid buildings appearing bulky. These larger buildings should be broken down into a hierarchy of simple rectangular elements and should step down adjacent to lower scale buildings. Refer also to Code ID3 – High Quality Distinctive Design.

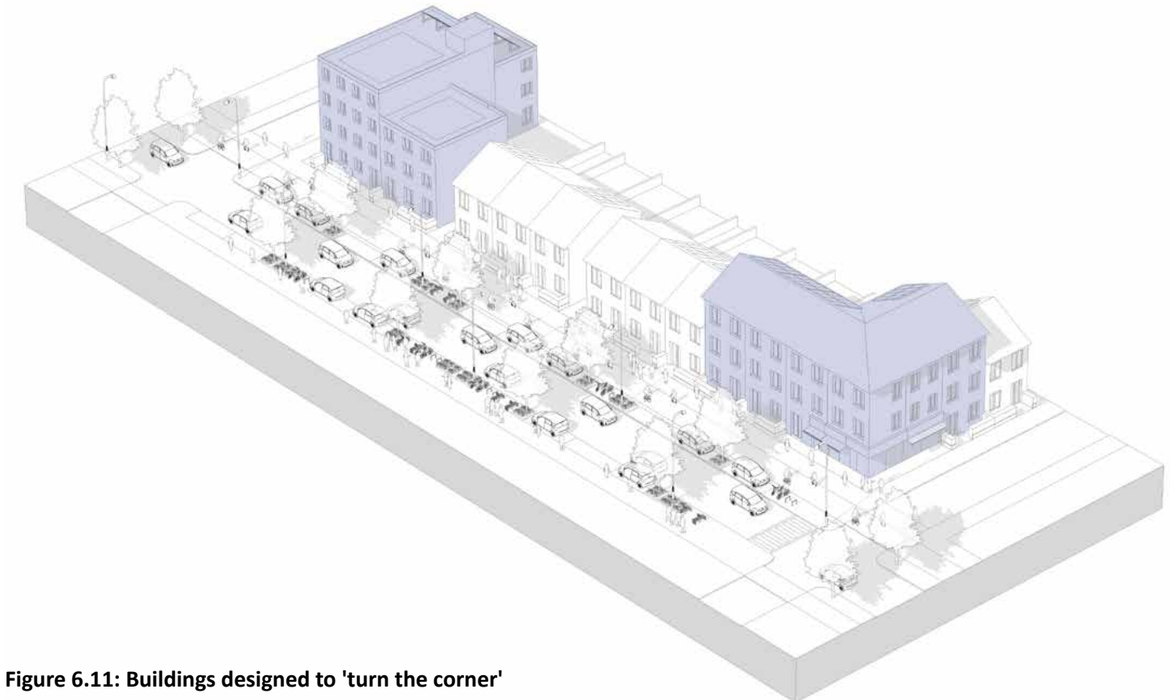


Figure 6.11: Buildings designed to 'turn the corner'

CODE BF5 – PRIVACY, INTERFACE AND PLOT BOUNDARY

In town or village centre locations where buildings have an active ground floor frontage, buildings will be located directly to the rear of the footway or public realm, but in most cases properties should have a boundary that defines public and private space.

Boundary treatments should be reflective of the area and local traditions in terms of height, structure and materials and should not impair natural surveillance or wildlife movement.

Outside of town centre locations the preferred boundary treatment is a low wall (up to 450mm) together with hedge planting. Within town centre locations a metal railing up to an overall height 1100mm may be mounted on the wall to provide a greater level of security. Brick pillars may be used to define the edge of the wall and off which to hang a gate. Pillars and gates should be no higher than 1100mm. In rural locations, hedges without walls and timber posts are encouraged.

For larger developments boundary treatments should be coordinated to contribute to the character of the street.

The depth of the front garden or privacy strip will depend on location and context and the established building line. For larger developments that establish new building lines (for example Sites R1, R2, R3 and R4) the private defensible space/privacy strip should be between 1.5 and 3.0m. Greater widths are not acceptable as this reduces enclosure to the street.

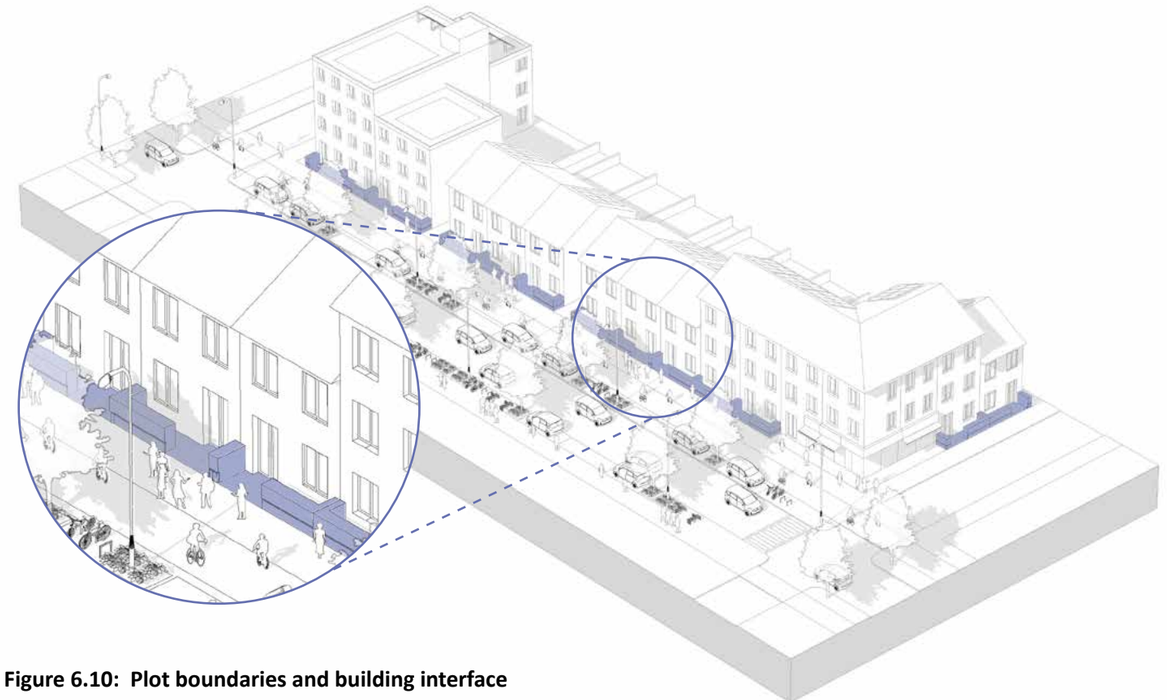


Figure 6.10: Plot boundaries and building interface

Image 6.3: Historic frontage defines and animates the street space in Horley town centre

CODE BF6 – BUILDING ENTRANCES

Main entrances to houses, ground floor flats, communal entrances for flats and non-residential uses should directly face onto the street and be clearly visible from the public realm.

All building entrances should be welcoming and easily identifiable to help improve legibility.

The scale and style of an entrance should relate to its function. The more important the function of the building, the more impressive the entrance should be. For example, a public building should have a larger and more prominent entrance than a house.

For apartment buildings entrances to shared stair cores should be taken directly from the street and should be generously proportioned, well lit by natural light and naturally ventilated.

Ground floor dwellings within apartment buildings should have individual entrances direct from the street. This increases the animation of the public realm and reduces the numbers of dwellings served by communal cores.

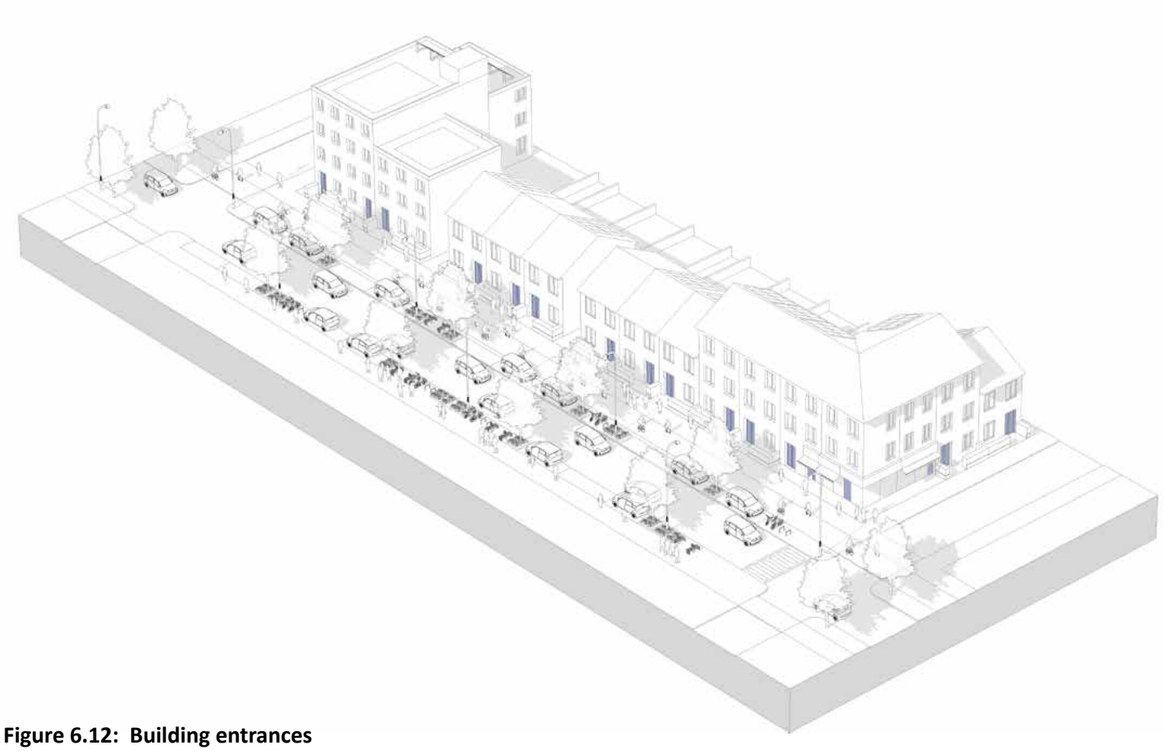


Figure 6.12: Building entrances

Image 6.4: Main entrances face the public realm and plot boundary defined by a hedge

CODE BF7 – EMPLOYMENT/ LIGHT INDUSTRIAL USE

Along the A23 existing employment areas are often located adjacent to residential areas and the interface between the two uses **must** be carefully considered to avoid overshadowing, loss of daylight or impacts on privacy.

Employment areas should be laid out so that:

- Buildings front onto and create a positive interface with the street with parking and servicing provided to the rear;
- Buildings follow the established building line (as set out in Code BF1 – Street Enclosure and Frontage on page 71); and
- Building entrances are clearly identifiable and provide accessible and legible access for people arriving by foot or cycle.

Where employment areas or infrastructure are located in the countryside (sites S2 and S3) particular consideration **must** be given to visual impact. Commercial buildings or infrastructure by virtue of their size can have significant impact on their landscape setting. Careful consideration **must** be given to materials, colours and finishes to reduce visibility. Generally muted colours and tones should be used and reflective materials avoided.

The landscape and public realm should form the dominant feature within employment areas with the buildings forming a more neutral background.

Signage should be designed to minimise its impact and ensure that it is not overbearing on the streetscape or out of proportion with the scale of buildings.

Image 6.5: Example of light industrial building integrated with the landscape © Carolyn Gifford (CC BY-NC 2.0)

6.3 DEVELOPMENT DELIVERED AS PART OF BLOCKS

CODE BF8 – STREET BLOCK PRINCIPLES

Development within Central Urban Areas and Edge of Centre Urban Areas (as defined in Figure 2.5 on page 23) should normally be delivered as perimeter blocks or part of a perimeter block (for smaller sites).

This form of development is preferred as it:

- Optimises connections to surrounding areas;
- Provides a clear distinction between public and private spaces;
- Enhances permeability and legibility;
- Generates building frontages that face the street and thereby increases natural surveillance and activity on the street;
- Creates secure and private rear gardens and elevations;
- Can work at any scale or location; and
- Promotes attractive street frontages.

The block size and shape will vary according to the density of development, location along the A23 Great Street and mix of uses. Blocks should take into account of natural features, orientation and topography.

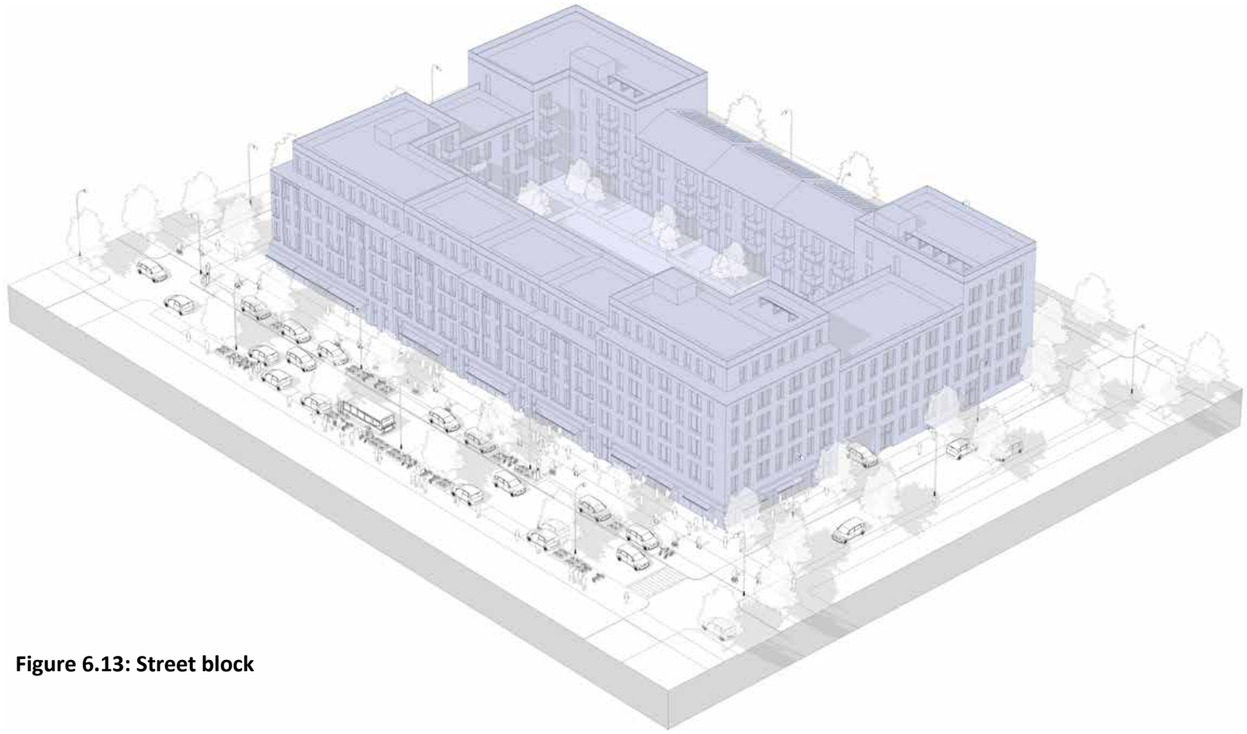


Figure 6.13: Street block

6.3 DEVELOPMENT DELIVERED AS PART OF BLOCKS

CODE BF9 – ON PLOT PARKING

The quality of the street environment should be the primary consideration when considering the provision of car parking as part of development. In some cases a combination of on-street and on-plot car parking will be required. Refer also to Code M11 - Car Parking Location and Design on page 47 in relation to on-street car parking.

In Central Urban Areas on-plot car parking should normally be accommodated to the rear of buildings within the block so that it is not visually intrusive on the street space. Car parking may be at ground floor level wrapped by buildings and with a landscaped deck above or underground. In some locations development may take advantage of topography to reduce the need for excavation. Wherever possible access to car parking areas should be from secondary streets rather than from the A23. These access points should be designed to minimise impact on the street space.

In suburban locations car parking may be located to the side of dwellings or within rear parking courts overlooked by mews dwellings. Tandem parking arrangements to the side of dwellings are also acceptable provided that they provide adequate space for two vehicles to be accommodated. Parking in front of dwellings should normally be avoided.

Rear parking courts should normally include mews dwellings to provide overlooking and natural surveillance and should be small scale and gated. They should only serve properties that are located around the court. Surface treatment within courtyards should be permeable and they should include soft landscape. Entrances to parking courts should be designed to create a semi-private appearance and courts should be secure.

6.3.1 The accommodation of parking represents a significant design challenge. If poorly designed, parking can have a significant negative impact on the appearance of the public realm and street.

6.3.2 A balanced approach should be taken to achieve convenient parking in close proximity to households whilst reducing the dominance of parking on the street scene. This will normally result in a range of parking solutions being considered. Areas of planting or street trees can help to reduce impacts. The suitability of parking solutions will vary depending on the location and nature of the proposal.

6.3.3 Whilst on plot parking in front of dwellings is historically a popular model it sets buildings well back from the street space has greater visual impact and can restrict informal surveillance of the street space. In line with Healthy Streets for Surrey Design Guide this approach will not be permitted. The requirement for mews dwellings in rear courtyard areas is also taken from Healthy Streets for Surrey Design Guide.

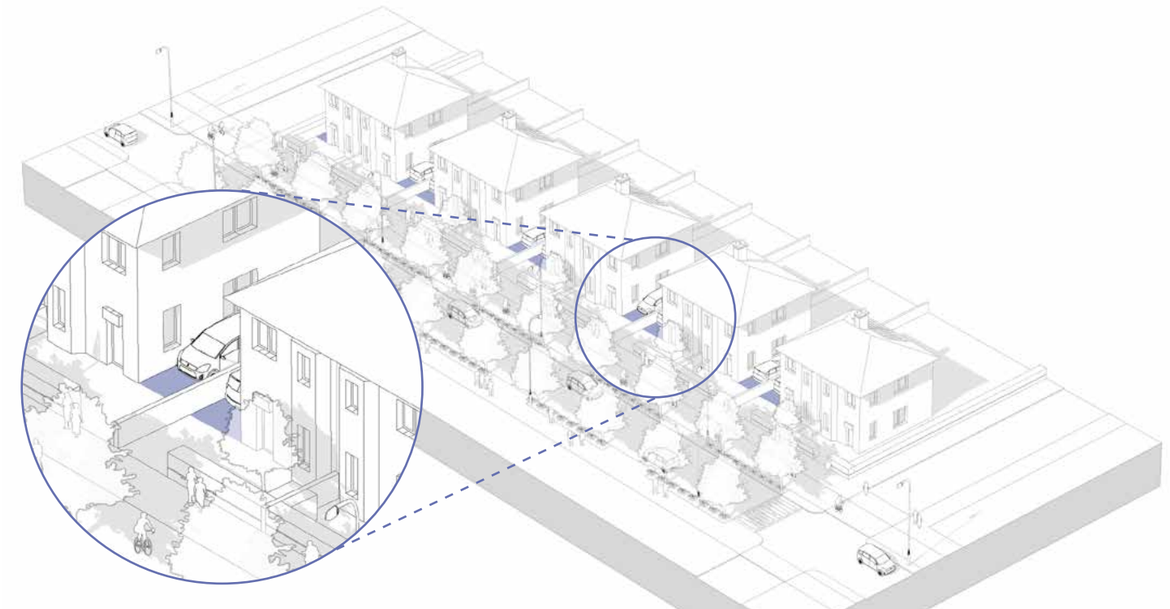


Figure 6.14: On plot parking to the side of properties in suburban areas

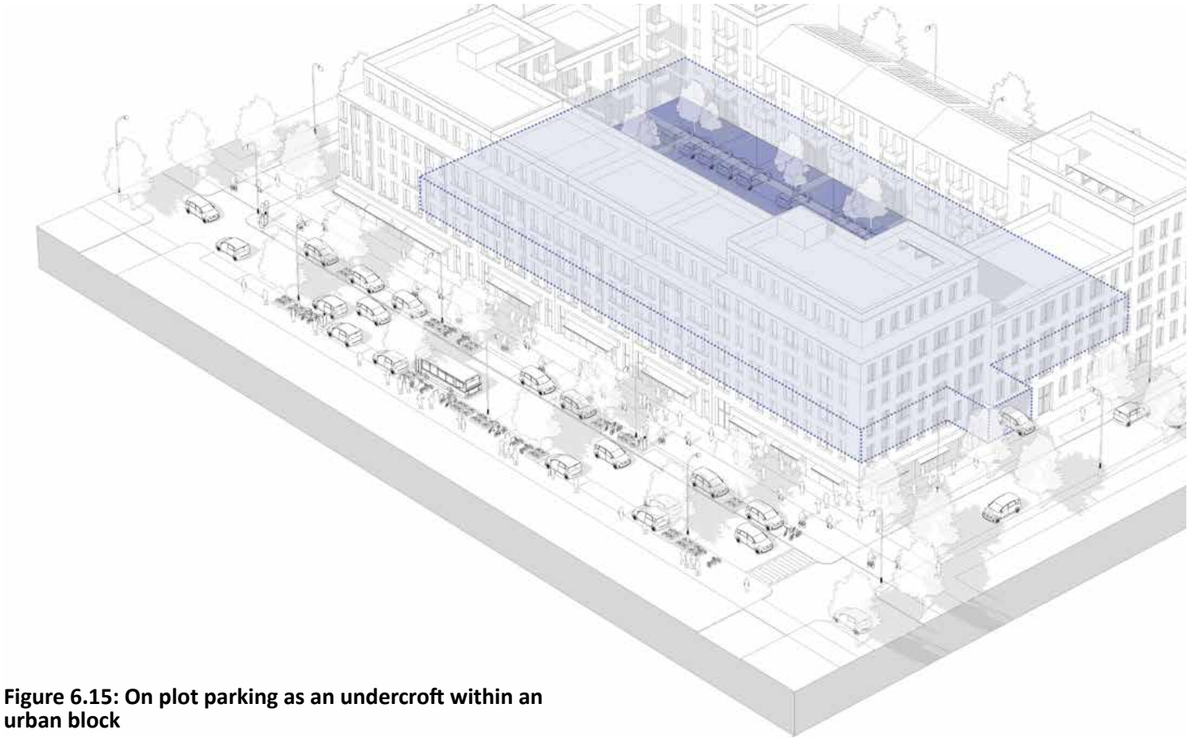


Figure 6.15: On plot parking as an undercroft within an urban block

6.3 DEVELOPMENT DELIVERED AS PART OF BLOCKS

CODE BF10 – AMENITY SPACE

All dwellings **must** have level access to one or more of the following forms of private outside spaces: a garden, terrace, roof garden, courtyard garden or balcony. The use of roof areas, including podiums, and courtyards for additional private or shared outside space is encouraged.

A minimum of 5 sqm of private outdoor space is required for all 2 person dwellings and an extra 1 sqm should be provided for each additional occupant. The required minimum width and minimum depth for all balconies and other private external spaces is 1500mm.

Balconies should be designed to provide some shelter and privacy from neighbouring properties. This can be achieved using screens or by setting the balcony back within the facade. Balconies should have solid floors draining to a downpipe.

In areas where noise or air pollution levels on the A23 corridor are high, consideration **must** be given to provision of ventilated winter gardens in lieu of balconies or locating balconies to the rear facade of properties, away from the poor air quality/noise source. Other opportunities to mitigate the impacts of poor air quality should also be explored for instance through planting.

Residential gardens in suburban areas should be a minimum 10m depth.

Further Reading:

- Development Management Policy DES5
- HCA legacy Housing Quality Indicators, English Partnerships 2007
- London Housing Design Guide 2010

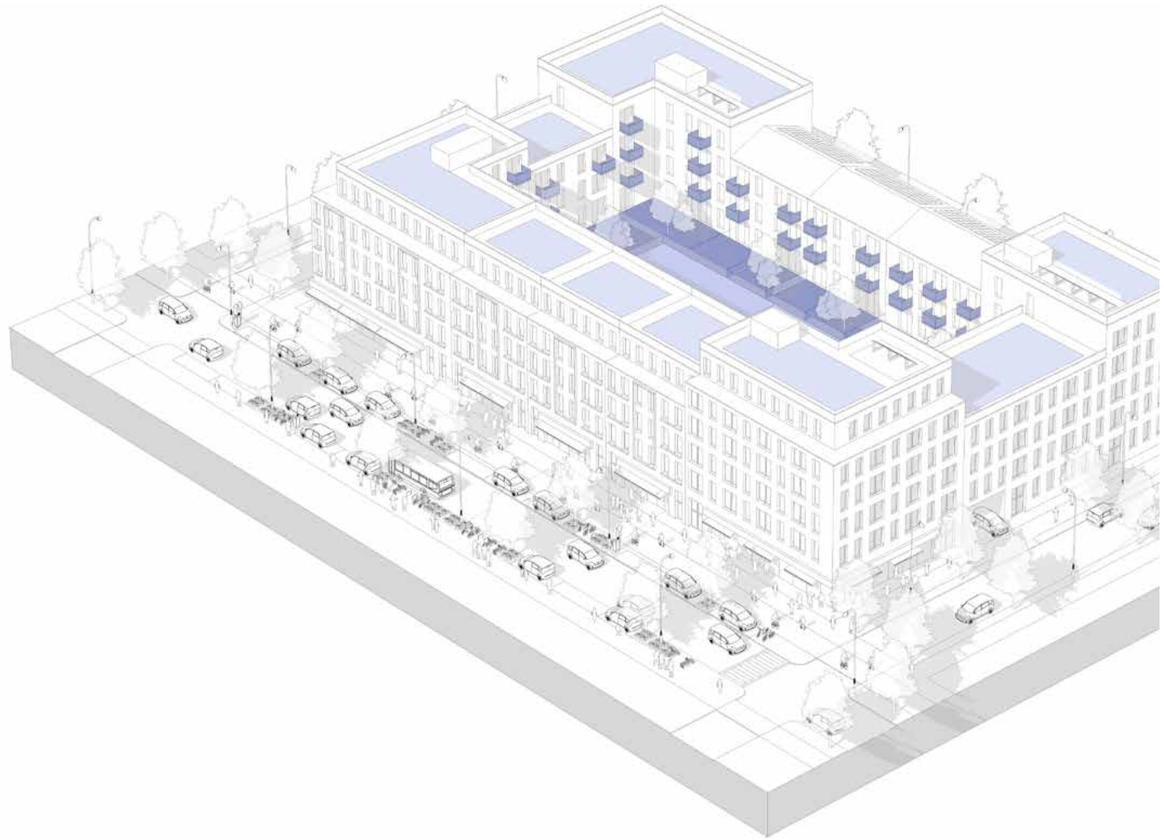


Figure 6.16: Provision of amenity space within an urban block

6.3.4 RBBC DMP Policy DES5 requires that residential development should *'Make adequate provision for outdoor amenity space, including balconies and roof terraces, and/or communal outdoor space.'*

6.3.5 Outdoor amenity space standards are based on the furniture, access and activity requirements of the HCA legacy Housing Quality Indicators Version 4, 2007, and drying space and private open space requirements of the Code for Sustainable Homes Technical Guide, 2009, ENE4 and HEA3.

6.3.6 The minimum balcony sizes are based on the Quality Standards: Delivering Quality Places, (former) English Partnerships, 2007, the furniture, access and activity requirements of the HCA legacy Housing Quality Indicators Version 4, 2007, and drying space and private open space requirements of the Code for Sustainable Homes Technical Guide, 2009.

6.3.7 Further detail on balconies and response to air and noise quality issues is drawn from the London Housing Design Guide 2010.

6.3 DEVELOPMENT DELIVERED AS PART OF BLOCKS

CODE BF11 – SERVICING, PLANT AND CYCLE STORE

Bins stores plant and cycle stores **must** be discretely located within development so that they have minimal impact on the street space. As set out in Code BF1 plant rooms, bin stores, servicing areas and cycle stores **must not** be located fronting onto or interfacing with the main street (the A23).

Refuse and recycling storage **must** be located:

- Within secure and well ventilated areas;
- Where they are neither visually obtrusive or where they obstruct passive surveillance of the street; and
- Where they may be easily accessed from properties but where they will not cause nuisance through unpleasant odours or noise.

In apartment buildings or non-residential buildings cycle parking/storage **must** be located in a secure, convenient and easily accessible storeroom, close to the buildings main entrance and close to the street. For individual dwellings secure, covered cycle storage should be accommodated in a convenient location either within the rear garden, a car port, garage or outbuilding.

Further Reading:

- Development Management Policy DES5
- Development Management Policy TAP1 and Annex 4 Parking

Image 6.6: Servicing is well-integrated into the design of the development within the rear parking court

6.3.8 RBBC DMP states in Annex 4 parking standards that: *'The provision of long stay cycle parking (for example for residents of new housing developments) should be in the form of secure, weatherproof facilities. For flats and similar communal residential developments, cycle parking must be integral to the building unless it would not be physically feasible and be in the form of 'Sheffield' racks and/or storage lockers/cupboards allocated to each unit. For houses, provision for secure cycle parking should be made within the curtilage of the dwelling.'*

6.3.9 Locating cycle parking in convenient accessible and secure locations makes it more likely that people will choose to cycle. Adequate provision will also ensure that visual amenity is not affected for instance through storing of cycles on balconies.

6.3.10 The code aligns with RBBC guidance document 'Making Space for Waste' which requires accessible and sensitively designed and located waste and recycling bin storage.

6.4 ENERGY EFFICIENT BUILDINGS

CODE BF12 – ENERGY EFFICIENT AND SUSTAINABLE DESIGN

Retrofit First approach

Before considering wholesale demolition of existing structures, consideration **must** be given to the potential reuse of existing building stock and infrastructure. Applicants will need to demonstrate that retrofit has been explored and discounted as a viable alternative to more carbon intensive new development

Sustainable building design

Developments should aim to achieve high sustainability credentials and should minimise the overall environmental footprint of the development over its lifetime. The following considerations to deliver energy efficient and sustainable design **must** be given to all new build development:

- The reuse of existing buildings or materials, where relevant;
- The use of materials with low embodied energy;
- The use of sustainable materials that are locally sourced wherever possible;
- Incorporating high levels of insulation (in combination with air tightness and temperature control systems) including the use of materials with a high thermal mass, such as stone or brick, which store heat and release it slowly;
- Orientation and design of buildings and roofs to maximise daylight/sunlight penetration and solar gain, whilst also avoiding overheating;
- The use of green roofs or walls to reduce stormwater runoff, increase sound-proofing and biodiversity;
- Incorporating renewable energy including photovoltaics, solar thermal water heating, ground and air source heat pumps;

The use of low flow technology in water fittings, rainwater harvesting systems and grey water recycling systems to reduce water consumption to 110 litres/person/ day (maximum as per RBBC DMP Policy CCF1); and

Laying out development to support identified opportunities for decentralised renewable or low carbon energy systems such as district heating networks.

Existing natural features, particularly mature trees, should be retained whenever possible (refer to Code N3 – Protecting existing planting and grass verges) and consideration given to how green infrastructure and biodiversity can be enhanced within the design.

Photovoltaics **must** be siting on the rear plane of the roof where they are not visible from the street.

Further Reading: Development Management Policy CCF1

Figure 6.17: Sustainable design

6.4.1 Construction has a significant carbon-impact which accounts for around 35-40% of the United Kingdom's total carbon emissions utilising substantial volumes of non-renewable resources and generating pollution and waste. The UK Government has pledged to achieve net zero carbon by 2050 and in its corporate plan, 'Reigate & Banstead 2025', the Council has committed to being proactive about tackling climate change and reducing environmental impact.

6.4.2 Urban form and building typology has a significant impact on the energy efficiency of buildings. Site layouts and building typology and fabric can be designed to maximise passive sustainability and avoid creating places where the user is reliant on extensive heating and cooling to mitigate against the impacts of poor orientation that increases solar gains or heat loss.

6.4.3 The construction industry's traditional approach to demolish and rebuild from scratch is resource and carbon intensive. According to the Department for the Environment, Food and Rural Affairs (Defra), 62% of the total annual waste generated by the UK is construction and demolition waste. This, coupled with the United Kingdom's 2050 carbon neutrality target, form a clear picture that retrofit of existing building stock is a much more viable way to cut back on emissions and physical waste.

6.4.4 A building's structure typically accounts for two thirds (or more) of its embodied carbon. Before demolishing, reuse should always be considered to determine if it is a viable option. Reusing/refurbishing existing buildings will usually save a large amount of potential emissions in comparison to building from new.

6.4.5 In alignment with the National Design Guide paragraph 47, the sensitive retrofit of existing building stock can add a high quality to a design and help root a development to the place. Adapting heritage buildings and sites adds a richness and depth to a place and is often a more sustainable method of delivering development.

6.4.6 The code principles also align with the RBBC Climate Change and Sustainable Construction SPD.

6.5 CHECKLIST

HOW TO USE

This table provides a checklist for use by both the applicant and planning officer to check that appropriate consideration has been given to how an application responds to the Built Form Codes.

CODE	DESCRIPTION	CHECK
CODE BF1 – STREET ENCLOSURE AND FRONTAGE	Does new development provide strong enclosure and frontage to the street space and will it be built to respond to and reinforce established building lines?	
	On vacant sites, has the building line been set back to accommodate the required width for a bi-directional cycle route, and footway?	
	Have buildings been arranged with public areas to the front and private areas to the rear?	
	Are buildings orientated with their primary frontage towards the A23 (the main street) and plant rooms, bin stores, servicing areas and cycle stores not located fronting onto this route?	
	Within Central Urban Areas does new development form part of coherent blocks and provide continuous frontage to the street space?	
CODE BF2 – ACTIVE FRONTAGES	In town and local centre locations, does new development have a minimum 4m floor to ceiling ground floor height?	
	Do residential buildings that do not incorporate ground floor non-residential uses have a privacy strip?	
CODE BF3 – SCALE AND MASSING	Does new development respond to the scale, massing and grain of adjacent areas and the existing context (urban or suburban) and location along the A23 corridor?	
	Do proposals demonstrate that the scale, height and massing of development does not cause unacceptable impacts on adjacent properties in respect of daylighting, sunlighting and overlooking; and does not adversely impact on views of the wider townscape?	
	Has consideration been given to the provision of car parking within higher density schemes?	
CODE BF4 – CORNERS AND JUNCTIONS	Has additional consideration been given to corner buildings?	
	Are buildings on prominent corner sites carefully articulated and designed?	
CODE BF5 – PRIVACY, INTERFACE AND PLOT BOUNDARY	Do properties have a boundary that defines public and private space?	
	Are boundary treatments reflective of the area and local traditions in terms of height, structure and materials and should not impair natural surveillance or wildlife movement?	
	Are pillars and gates no higher than 1100mm?	
	In larger developments, are boundary treatments coordinated to contribute to the character of the street?	
	Is the private defensible space/privacy strip between 1.5 and 3.0m?	
CODE BF6 – BUILDING ENTRANCES	Do main entrances to houses, ground floor flats, communal entrances for flats and non-residential uses directly face onto the street and are they clearly visible from the public realm?	
	Are all building entrances welcoming and easily identifiable to help improve legibility?	
	Does the scale and style of an entrance relate to its function?	
	Are shared stair cores taken directly from the street?	
	Do all ground floor dwellings within apartment buildings have individual entrances direct from the street?	

6.5 CHECKLIST

CODE	DESCRIPTION	CHECK
CODE BF7 – EMPLOYMENT/ LIGHT INDUSTRIAL USE	Has the interface between existing employment areas and residential areas been carefully considered to avoid overshadowing, loss of daylight or impacts on privacy?	
	Are employment areas laid out in accordance with Code BF7?	
	Has visual impact been considered?	
	Has careful consideration been given to materials, colours and finishes to reduce visibility?	
	Does the landscape and public realm form the dominant feature within employment areas with the buildings forming a more neutral background?	
	Has signage been designed to minimise its impact and ensure that it is not overbearing on the streetscape or out of proportion with the scale of buildings?	
CODE BF8 – STREET BLOCK PRINCIPLES	Within central and edge of centre urban areas has development been delivered as perimeter blocks or part of a perimeter block?	
CODE BF9 – ON PLOT PARKING	Has the quality of the street environment been considered for all car parking provision?	
	In central urban areas, has on-plot car parking has been accommodated to the rear of buildings within the block so that it is not visually intrusive on the street space?	
	Have car parking access points been designed to minimise impact on the street space?	
	Has parking in front of dwellings been avoided?	
	Do rear parking courts include mews dwellings to provide overlooking and natural surveillance?	
	Are rear parking courts small scale and gated?	
	Do rear parking courts only serve properties that are located around the court?	
	Is the surface treatment within courtyards permeable and does it include soft landscape?	
	Are entrances to parking courts designed to create a semi-private appearance and courts are secure?	
CODE BF10 – AMENITY SPACE	Do all dwellings have level access to one or more forms of private outside spaces?	
	Have the minimum private outdoor space requirements been met in accordance with Code BF10?	
	In areas where noise or air pollution levels on the A23 corridor are high, has consideration been given to provision of ventilated winter gardens in lieu of balconies or locating balconies to the rear facade of properties, away from the poor air quality/noise source?	
CODE BF11 – SERVICING, PLANT AND CYCLE STORE	Are bins stores, plant and cycle stores discretely located within development so that they have minimal impact on the street space?	
	Have refuse and recycling storage been located in alignment with Code BF11?	
	In apartment buildings or non-residential buildings, is cycle parking/storage located in a secure, convenient and easily accessible storeroom?	
CODE BF12 – ENERGY EFFICIENT AND SUSTAINABLE DESIGN	Has consideration been give to the potential reuse of existing building stock and infrastructure?	
	Have energy efficient and sustainable design considerations been made in alignment with Code BF12?	
	Are photovoltaics located on the rear plane of the roof away from the street?	

CHAPTER 7: IDENTITY

CODE ID1 – PATTERN & GRAIN OF DEVELOPMENT

The pattern or grain of development should respond to and reflect the prevailing grain of the built form and the location along the A23 corridor. When larger footprint buildings are promoted within a finer grain frontage the building form should be subdivided to maintain the rhythm of the elevation fronting the street. Façade and roofscape design can help to reinforce this pattern. For residential development, subtle variations in height can be used to add visual interest in places where there is an existing consistent eaves line (refer also to Code BF3 – Scale and Massing on page 74).

Further Reading:

- RBBC Character and Distinctiveness SPD

7.1.1 The RBBC Character and Distinctiveness SPD states that *'development should reflect the surrounding urban grain'*, that *'the width of plot and … the general pattern of gaps between side elevations and side space between dwellings and to boundaries should be respected'* and that *'visual separation between dwellings should be retained'.*

7.1.2 This varies in different parts of the A23 corridor. In older Victorian suburbs and within Horley town centre, parts of Redhill town centre and within local centres in Earlswood and Salfords, streets are fronted by terraces of properties with each located on a narrow plot providing a fine grain frontage that has a rhythm with a strong verticality to it. This provides character and distinctiveness to these areas and designing new development to respond to this rhythm and verticality both in respect of form and façade design will help to strengthen identity and sense of place.

7.1.3 In suburban areas buildings are set within plots and the gaps between buildings and the roof form and pitch forms an important part of the character of these areas revealing skyline and views to landscape beyond the streetspace. This provides a different rhythm and character to the streetspace.

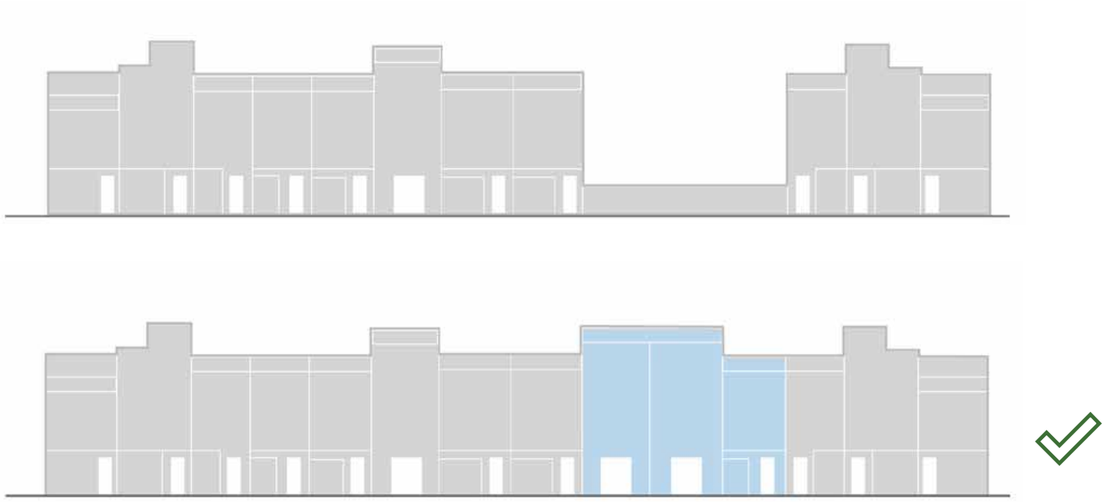


Figure 7.1: Development must reflect the typical urban grain, scale of buildings and the pattern of the existing settlement

Figure 7.2: Where a larger building is proposed, its mass must be broken down to respond to and be proportional to the surrounding context

Figure 7.3: New development must avoid creating stark contrasts, detracting from coherence, breaking the rhythm and grain of a street and become overbearing

APPLYING THE CODE: EXAMPLE 5 - BRIGHTON ROAD THROUGH SALFORDS

Figure 7.4: Salfords plan

Image 7.1: Existing (credit: Google)

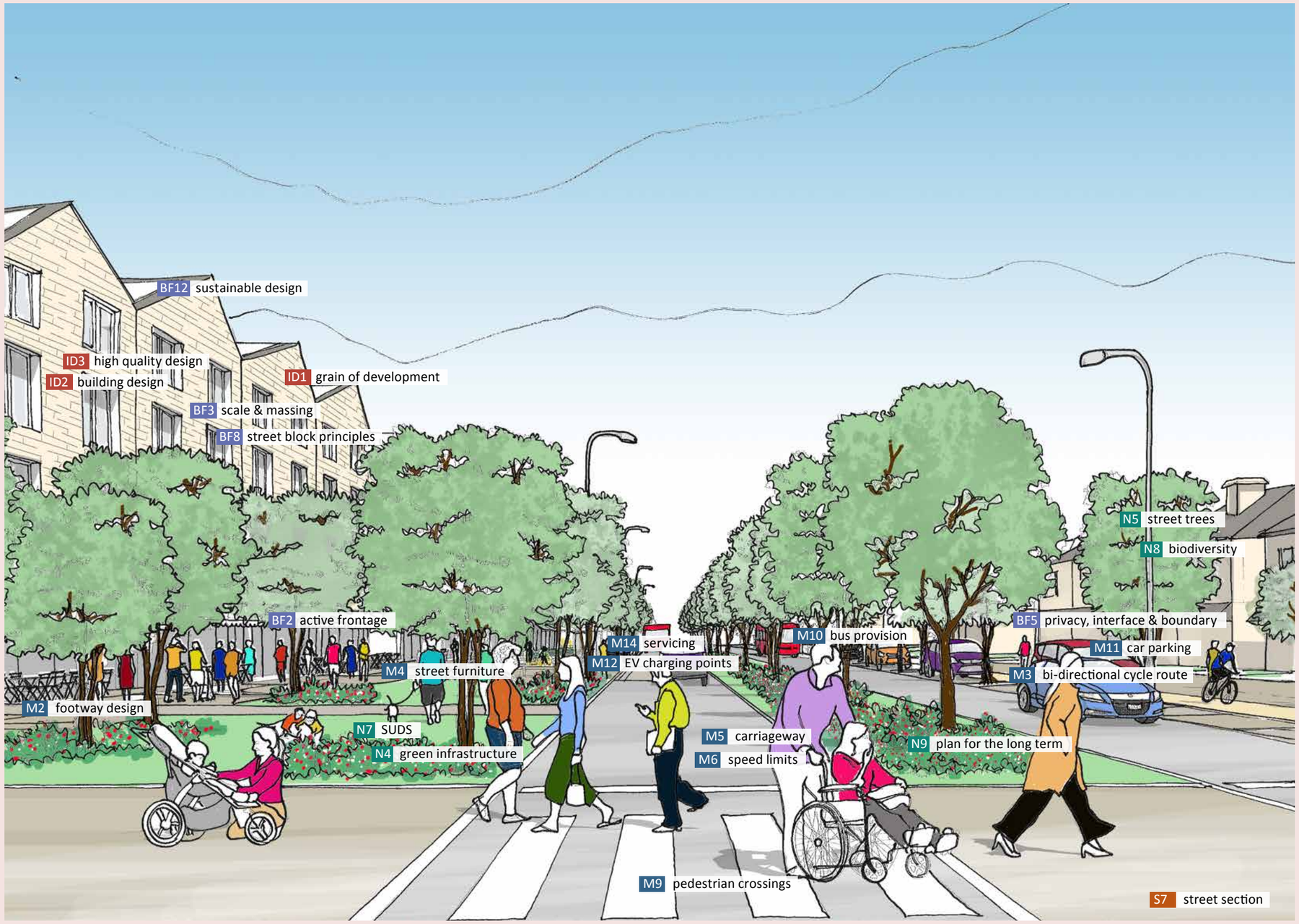


Figure 7.5: Sketch indicating application of the code on the A23 on Brighton Road in Salfords including reducing carriageway widths, introducing car parking parallel to the street and providing a more attractive public realm setting for shops and services in the local centre.

7.1 RESPONDING TO CHARACTER

CODE ID2 – BUILDING DESIGN

The design of new development should establish an architectural approach and identity borne from the Surrey vernacular.

The facade and elevational treatment, roofscape fenestration and materials used in existing buildings within the locality should be a starting point for the consideration of architectural design of new buildings. However this **must not** result in poor pastiche replicas that present a parody of traditional buildings. Instead a re-interpretation of key aspects of their form should be demonstrated; for instance, their symmetrical layout, window to wall ratio, and proportions and placement of windows and doors.

The architectural approach **must** consider:

- Elevational treatment and façade design;
- A choice of window design that is determined by the overall design approach;
- A simple roofscape and form that creates a harmonious composition and minimises the visual impact of downpipes and guttering;
- Incorporation of set back upper floors, balconies or winter gardens (in Central Urban Areas and Edge of Centre Urban Areas), or dormer windows (in Suburban Areas) informed by the character and appearance of the local vernacular;
- A contemporary interpretation of traditional chimneys (where appropriate); and
- A context appropriate palette of good quality materials, with a preference for local materials and/or materials with low embodied energy. The durability and resistance to weathering of materials is an important consideration in selection.

Brick and clay tiles are the predominant material in the area with local red and orange bricks together with London stocks most common. Tile hanging is also a common feature in the area.

The following materials are not considerd appropriate and should not be used:

- Weatherboarding - whilst this material was commonly used in the area it is not durable;
- Render - it is not appropriate on the A23 corridor where exposure to vehicle emissions is likely to cause discolouration; and
- Flint – not a vernacular material south of the M25.

Further Reading:

- RBBC Development Management Plan
- RBBC Character and Distinctiveness SPD

Image 7.2: Flemish bond handmade red brickwork with burnt headers (image from RBBC Character and Distinctiveness SPD)

Image 7.3: Stock brick and clay tile hanging

Image 7.4: Vernacular architecture in Redhill town centre

7.2 EMPHASISING PLACES ALONG THE GREAT STREET

CODE ID3 – HIGH QUALITY DISTINCTIVE DESIGN

Particular attention **must** be given to the design of development at identified nodes along the A23 Great Street. These represent 'moments' along the route that should stand out and be memorable for anyone moving along the corridor – the local and town centres that help to provide identity and strengthen sense of place.

In some locations there may be opportunity to enhance the settings of buildings through provision of a public space acting as a meeting or gathering point for the community and/or to deliver a distinctive architectural design that emphasises the location. Public art can help to provide local identity and should be considered in these locations. As in any other location on the Great Street the design of buildings and the public realm should respond to context (refer to Code ID2).

7.2.1 Particular scrutiny will be given to the design of proposals in locations identified as nodes in Figure 7.6 to ensure that they contribute to enhancing the identity and sense of place on the Great Street. Proposals must relate to the place and reinforce its identity rather than promoting a special design that is out of character. This applies equally to the design of the public realm and a highly urban public space proposed in a local centre in a suburban setting will not be considered appropriate. Grassed areas and native planting can help to deliver a more appropriate feel commonly found in Surrey's village centres.

7.2.2 Heritage assets along the A23 (for instance listed and locally listed building and other listed assets such as historic milemarkers) contribute to the distinct local identity and character of the place. Where possible their setting should be enhanced to strengthen the character of the street.

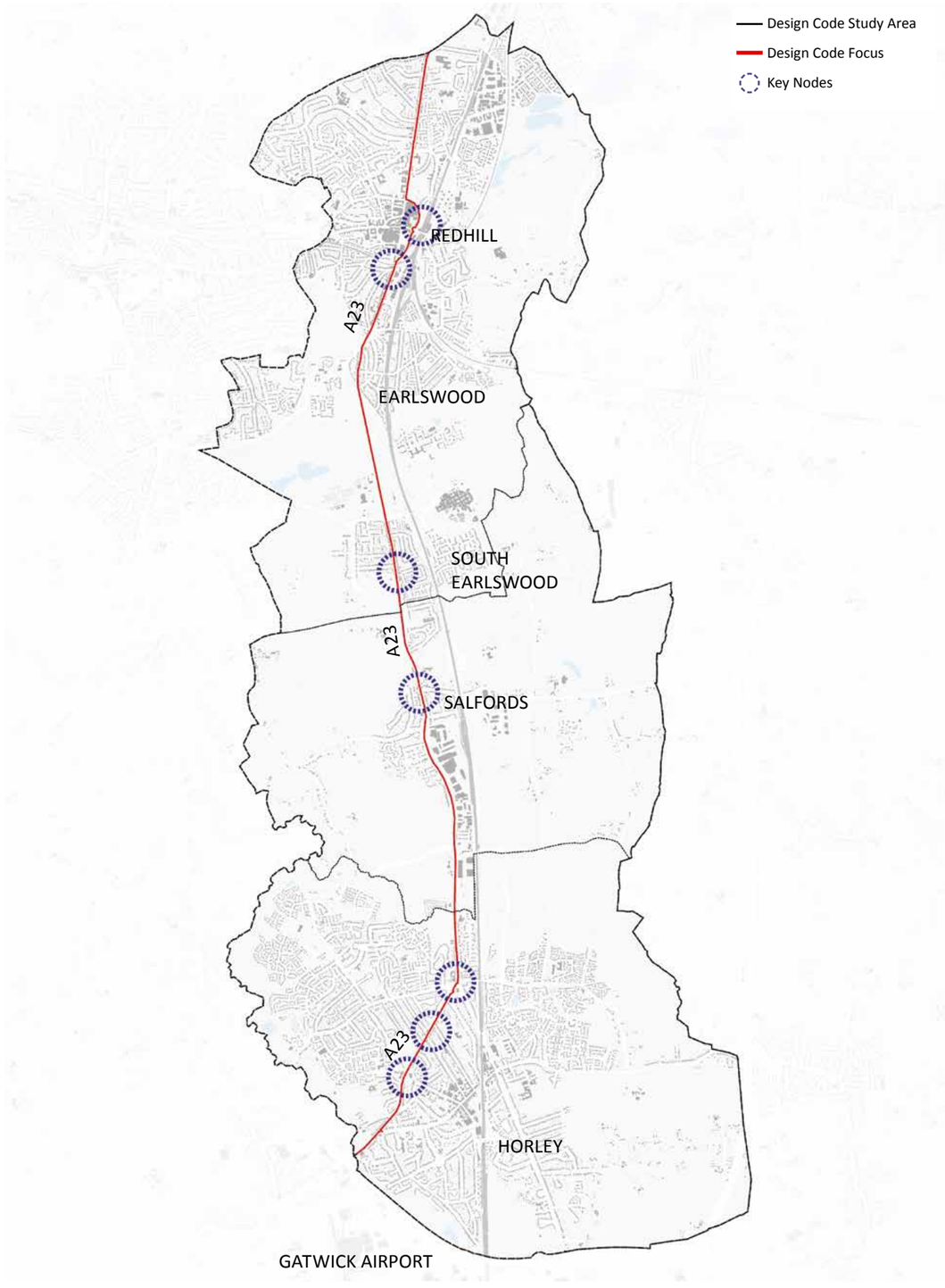


Figure 7.6: Nodes that require high quality distinctive design

7.3 CHECKLIST

HOW TO USE

This table provides a checklist for use by both the applicant and planning officer to check that appropriate consideration has been given to how an application responds to the Identity Codes.

CODE	DESCRIPTION	CHECK
CODE ID1 – PATTERN & GRAIN OF DEVELOPMENT	Does the pattern or grain of development respond to and reflect the prevailing grain of the built form and the location along the A23 corridor?	
CODE ID2 – BUILDING DESIGN	Does the design of new development establish an architectural approach and identity borne from the Surrey vernacular?	
	Have poor pastiche replicas that present a parody of traditional buildings been avoided?	
	Does the architectural approach considers the elements in Code ID2 and not use the inappropriate materials?	
CODE ID3 – HIGH QUALITY DISTINCTIVE DESIGN	Has particular attention been given to the design of development at identified nodes along the A23 Great Street?	
	Does the design of buildings and the public realm respond to the context?	

CHAPTER 8: STREETS & PUBLIC SPACE

8.1 INTRODUCTION

HEALTHY STREETS FOR SURREY

8.1.1 The Healthy Streets for Surrey Design Guide sets out a number of typologies for streets across the County. The typologies are based on the National Model Design Code street types, with additional sub categories, and adjusted for Surrey's context. The street typologies provide parameters for the carriageway, footways and cycleways as well as street parking, provision of street trees and the development interface.

8.1.2 The street types are determined by the importance of their place and movement functions, not their desired capacity or design speed.

8.1.3 Using the classification in the Healthy Streets for Surrey Design Guide the A23 in Reigate & Banstead is a primary street type and fits into the Avenue category (refer to Figure 8.1).

8.1.4 A typical plan and section of an Avenue street type is provided within the Healthy Streets for Surrey Design Guide (copied here in Figure 8.2 and Figure 8.3). This however provides a fairly generic solution that might work when planning and designing a new 'Avenue' type street but is not deliverable in the more constrained environment of the existing A23.

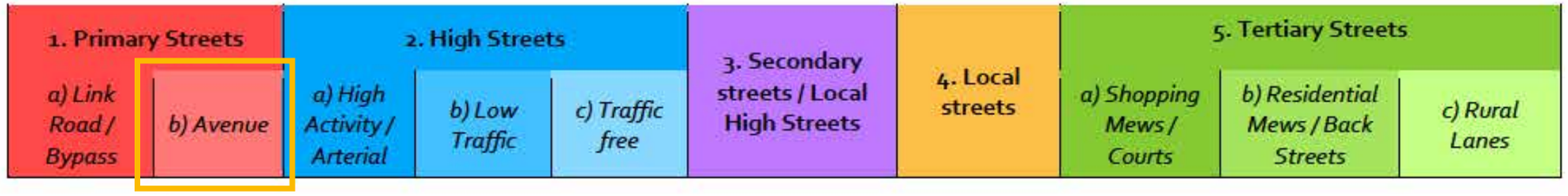


Figure 8.1: The A23 fits within the the 'Avenue' typology defined within the Healthy Streets for Surrey Design Guide

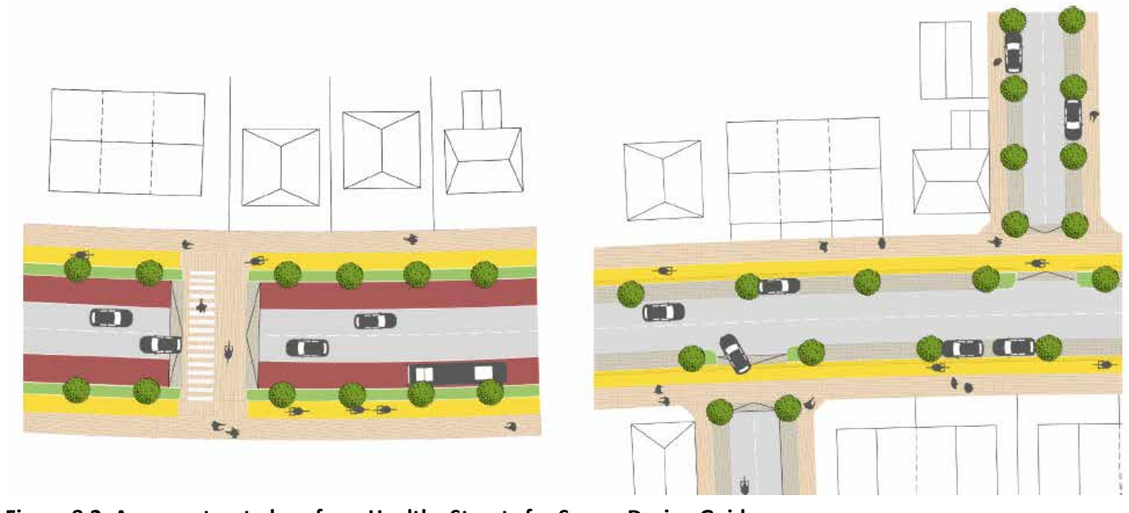


Figure 8.2: Avenue street plans from Healthy Streets for Surrey Design Guide

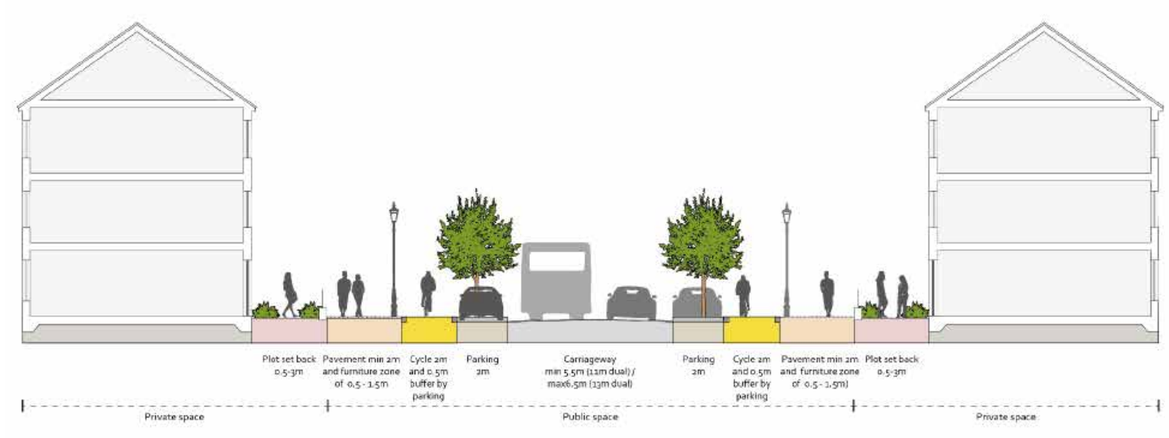


Figure 8.3: Avenue street section from Healthy Streets for Surrey Design Guide

APPLYING THE AVENUE STREET TYPE ON THE A23 GREAT STREET

8.1.5 The A23 Great Street passes through a range of environments, some urban, some sub-urban and some rural. The effective highway width (defined by the distance between existing buildings, by the distance between private plots to either side of the street or by the back of the highway verge in rural areas) varies considerably from approximately 12.9m up to approximately 20.0m. In many locations there simply is not enough space to accommodate the Avenue Street type as shown in the Healthy Streets for Surrey Design Guide. Use of the space available is therefore prioritised to achieve the ambitions for the Great Street. Priorities are set out in the adjacent flowchart (Figure 8.4).

8.1.6 Ten street typologies are set out in Codes S1 through to S10 based on these priorities and local conditions (for instance the need to retain on street parking to serve existing properties).

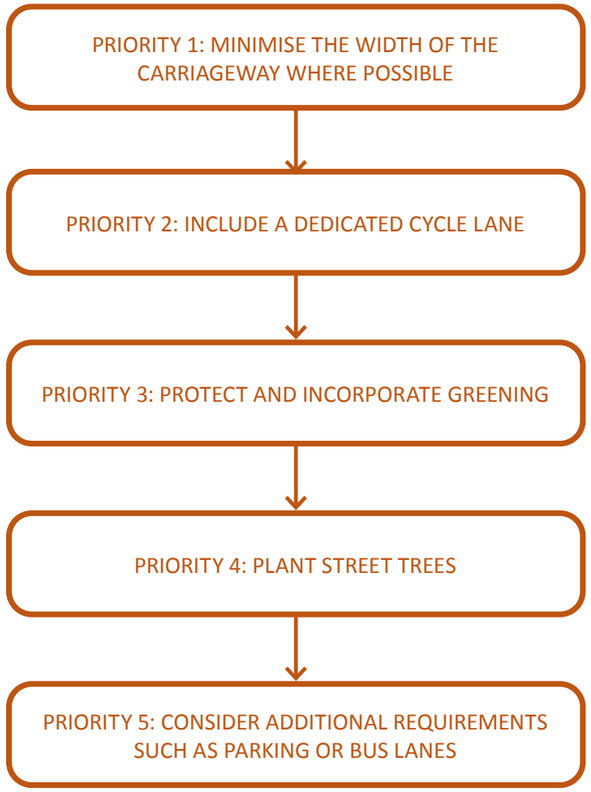


Figure 8.4: A23 Street Design Priorities

8.1 INTRODUCTION

CORRIDOR WIDTH

8.1.7 The Street Codes respond to varying street widths along the route which are indicated in Figure 8.5 to Figure 8.8. A second flowchart is provided at Figure 8.9 to assist the process of applying the appropriate Street Code for a particular part of the route.

8.1.8 For parts of the A23 a bi-directional cycle track is already in place on the eastern side of the street and this is therefore taken as the starting point for the street typologies. The Street Codes reflect the Movement, Nature, Built Form, and Identity Codes already set out in the Design Code.

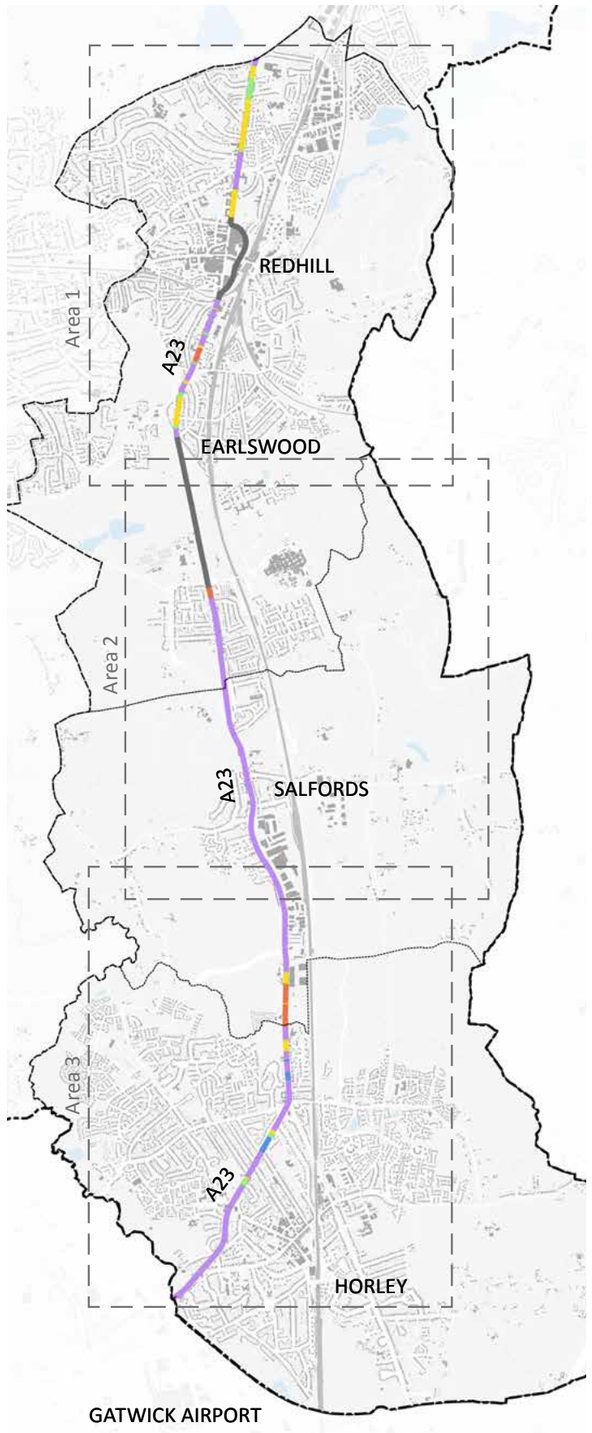


Figure 8.5: Rationalised effective highway width plan

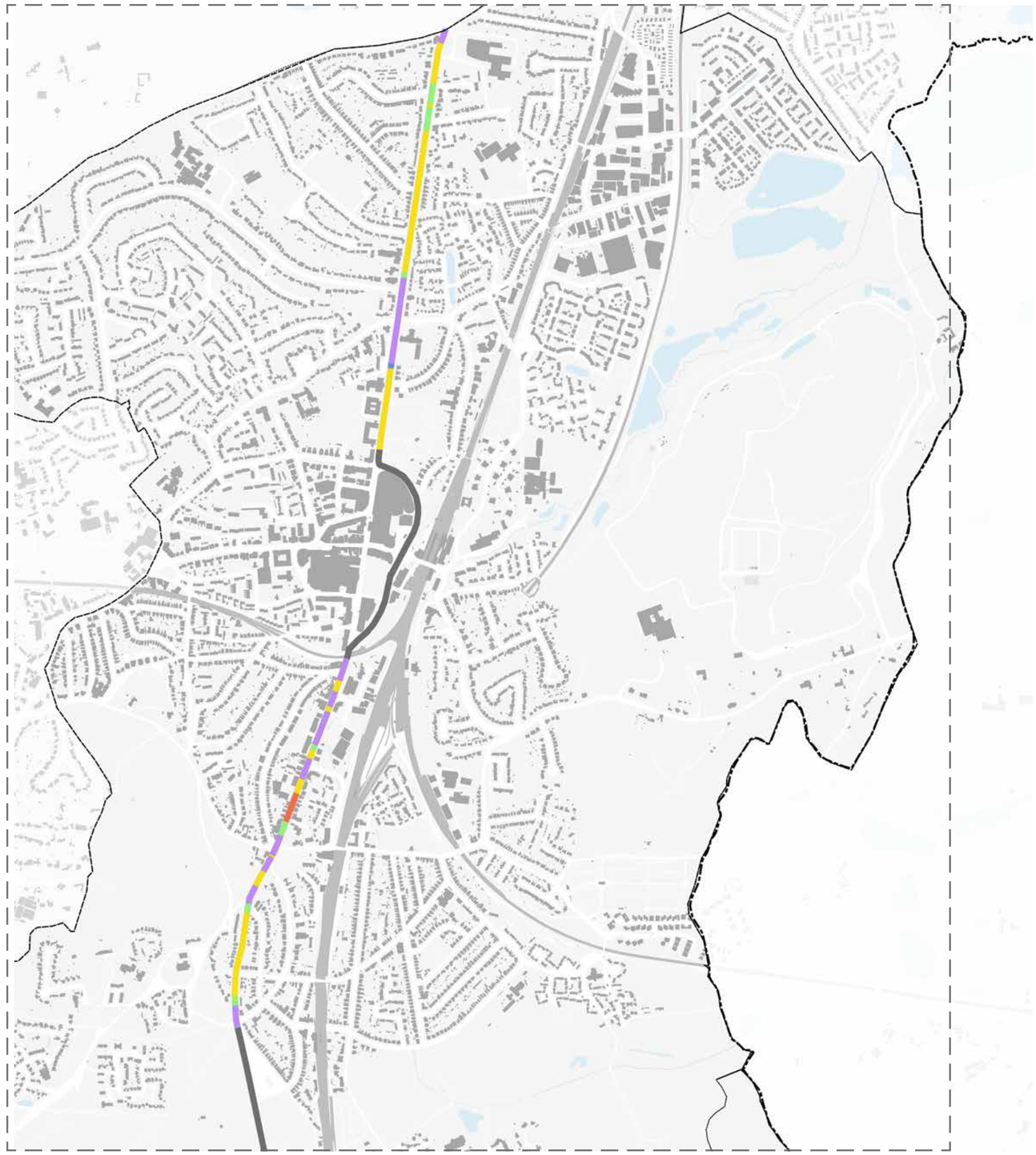


Figure 8.6: Rationalised effective highway width plan - Area 1

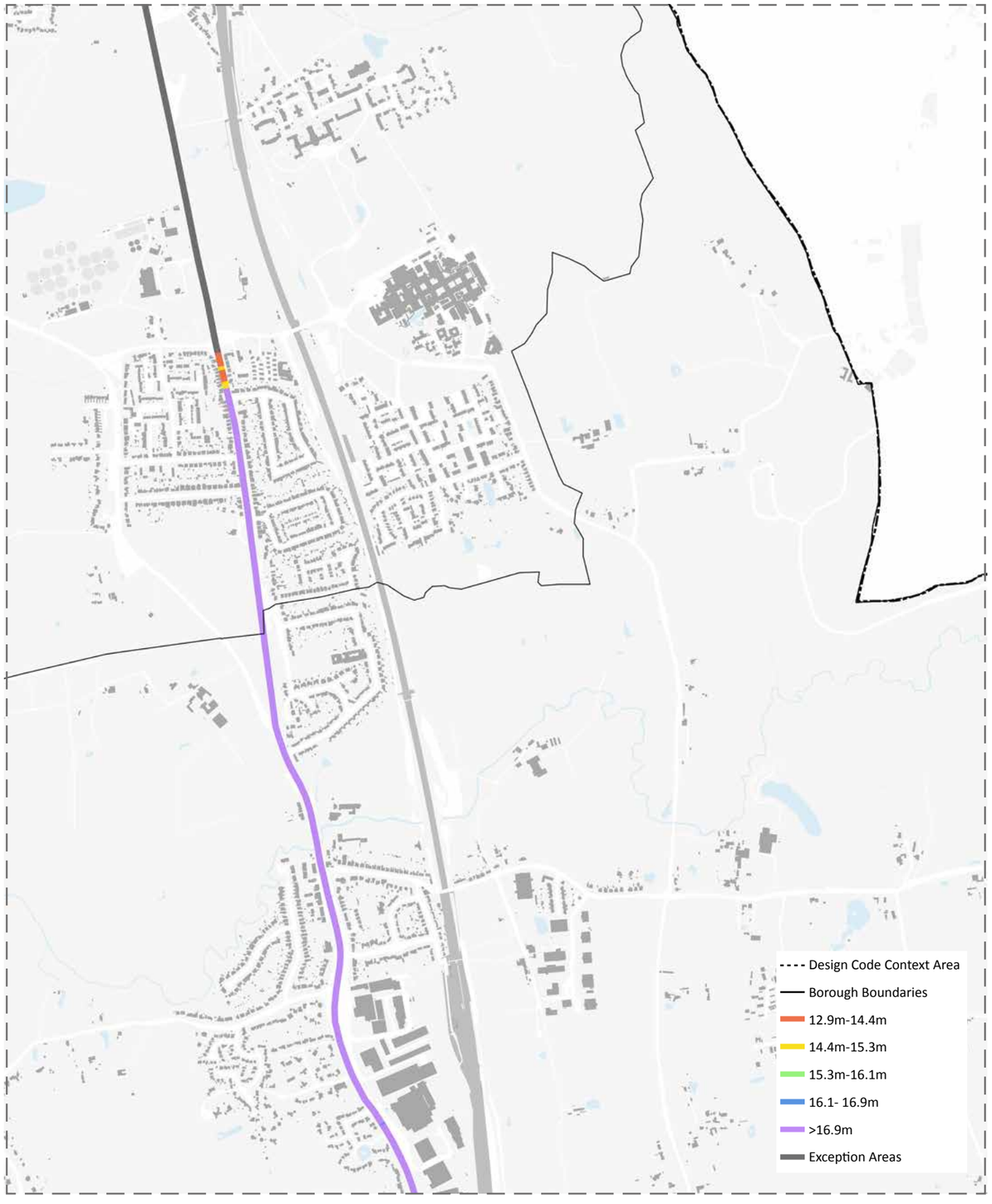


Figure 8.7: Rationalised effective highway width plan - Area 2

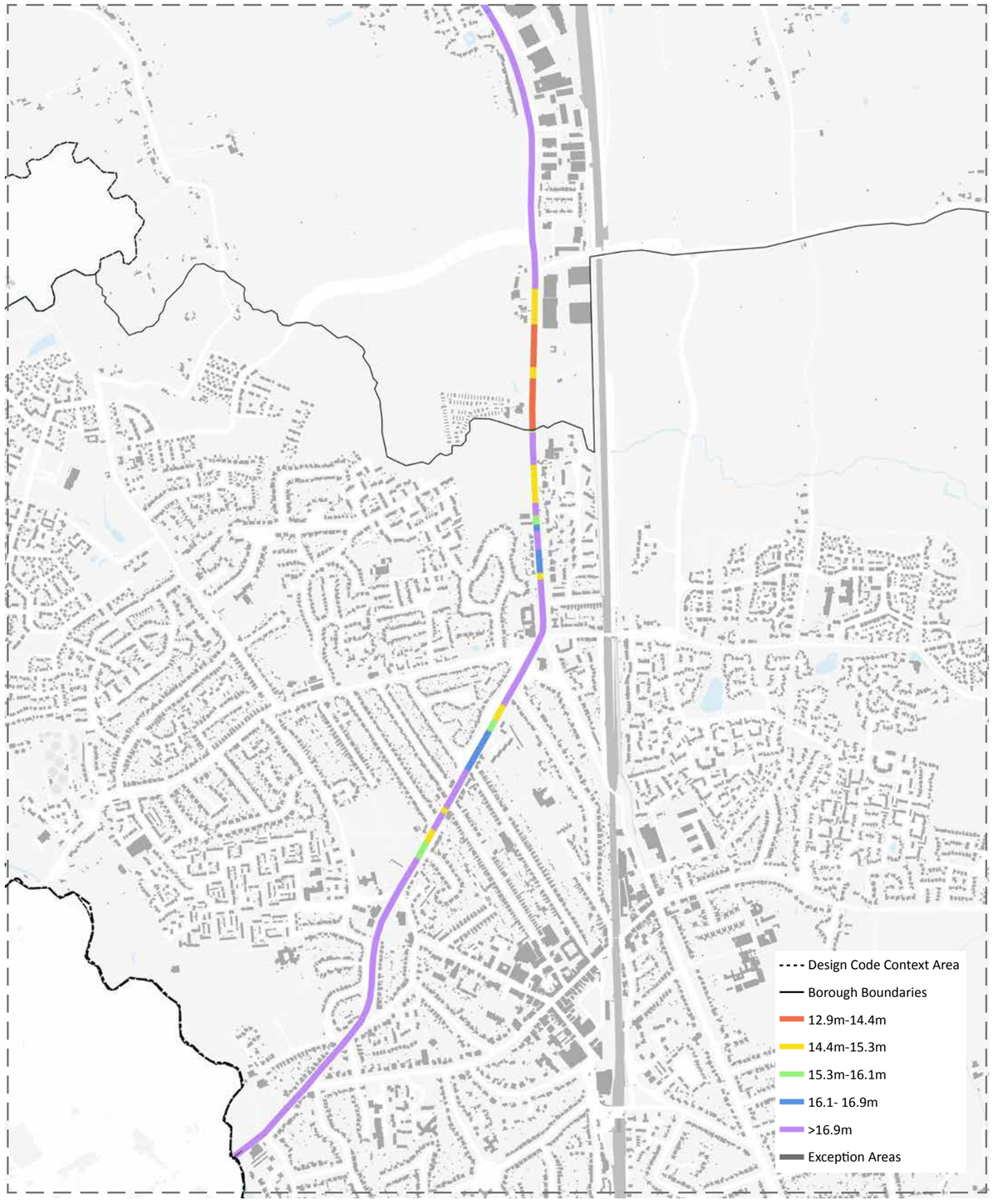
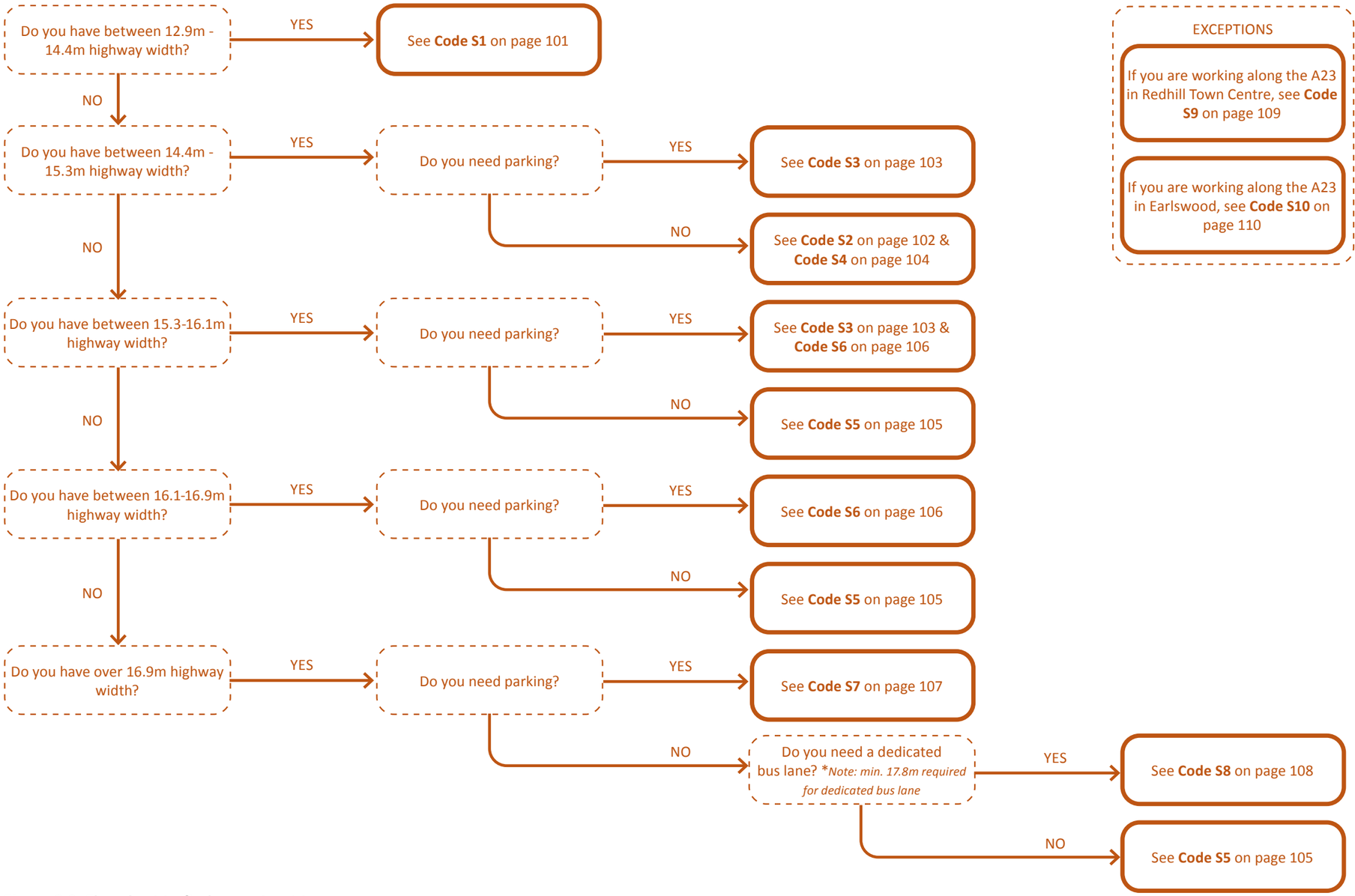


Figure 8.8: Rationalised effective highway width plan - Area 3

8.2 STREET SECTIONS

FINDING YOUR STREET TYPE



EXCEPTIONS

If you are working along the A23 in Redhill Town Centre, see **Code S9** on page 109

If you are working along the A23 in Earlswood, see **Code S10** on page 110

Figure 8.9: Flowchart to find your street type

CODE S1 – NARROW STREET WITH SHARED FOOTWAY AND CYCLE ROUTE

Code S1 applies in areas where the width of the corridor is **between 12.9m and 14.4m** (excluding Privacy Strips or Frontage Zones). These areas are designated in orange in Figures 8.5 to 8.8.

Reference	Description	Recommended Dimension
SZ	Shared footway zone and cycle zone	3.5m (minimum)
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
FZ+KZ	Furniture Zone + Kerbzone - Lighting - Bins and other furniture	0.5m (minimum)
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

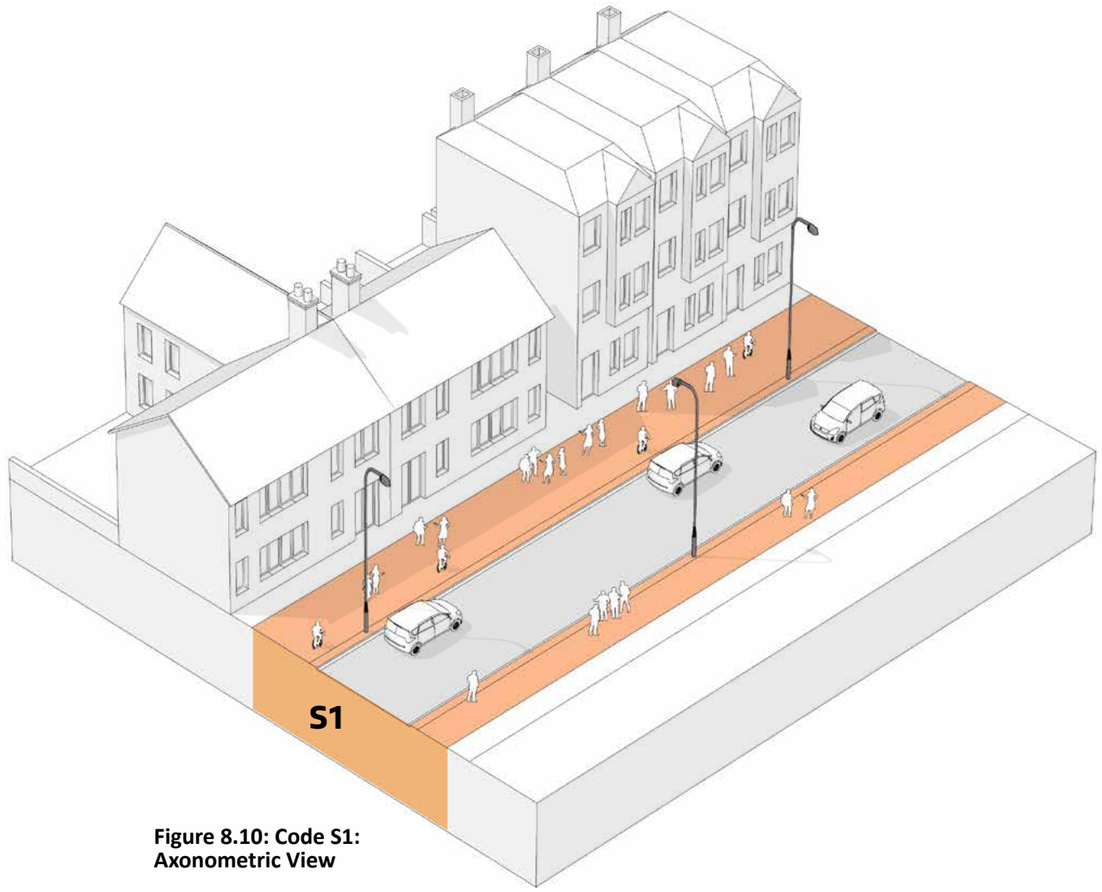


Figure 8.10: Code S1: Axonometric View

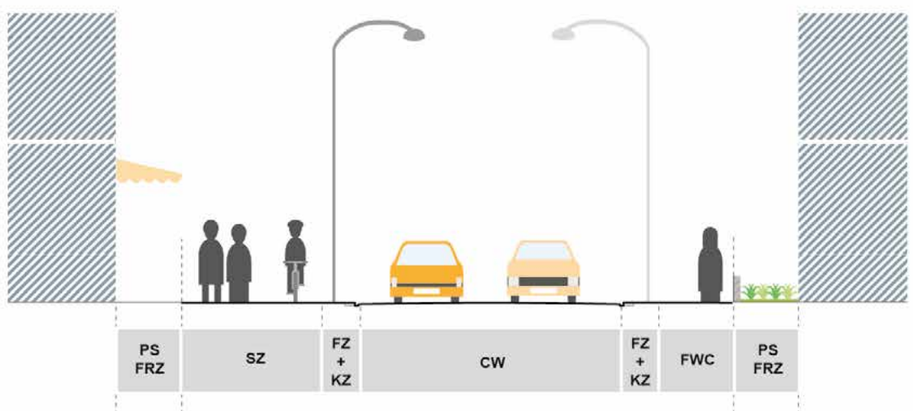


Figure 8.11: Code S1: Cross Section

CODE S2 – NARROW STREET WITH SEGREGATED CYCLE ROUTE AND FOOTWAY

Code S2 applies in areas where the width of the corridor is between 14.4m to 14.6m (excluding Privacy Strips or Frontage Zones). These areas are designated in yellow in Figures 8.5 to 8.8.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
CL	Dedicated bi-directional cycle lane (See Code M3 - Bi-directional Cycle Route)	2.5m (minimum)
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
FZ	Furniture Zone - Lighting - Bins and other furniture	0.5m (minimum)
KZ+PV	Kerbzone -if kerbzone is >0.9m a planted verge **must** be incorporated	0.5m-<1.2m
KZ+PV+FZ	Kerbzone + Furniture Zone -Lighting - if kerbzone is >0.9m a planted verge **must** be incorporated	0.5m-<1.2m
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

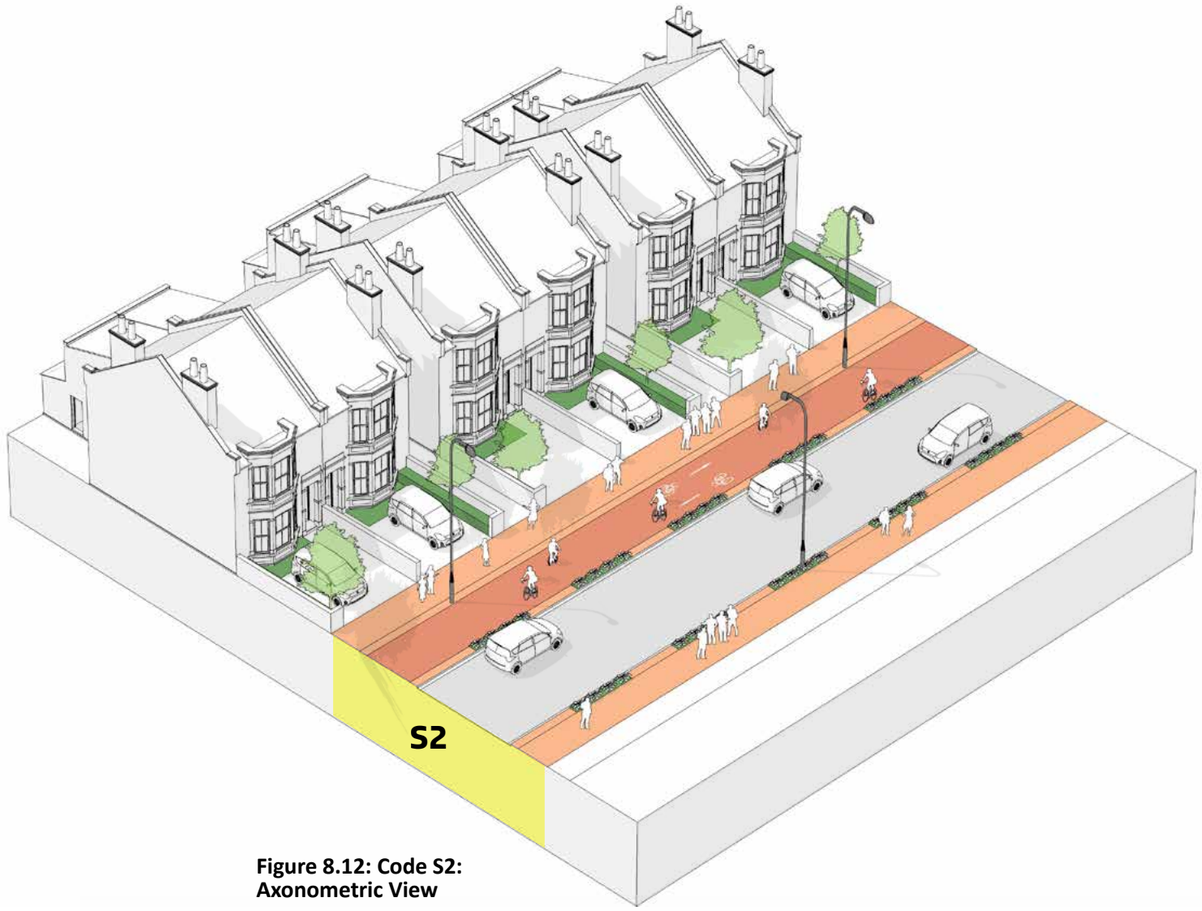


Figure 8.12: Code S2: Axonometric View

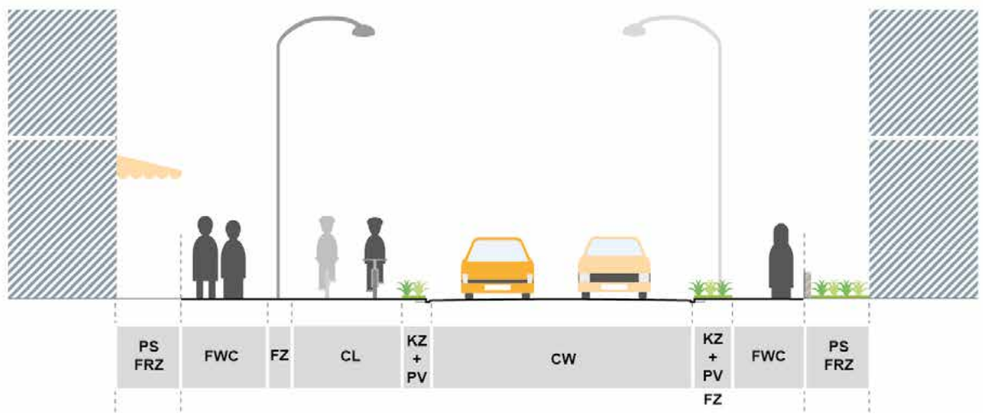


Figure 8.13: Code S2: Cross Section

8.2 STREET SECTIONS

CODE S3 – NARROW STREET WITH ON-STREET PARKING

Code S3 applies in areas where the width of the corridor is between 14.4m to 15.4m (excluding Privacy Strips or Frontage Zones). This width range falls within the areas that are designated in yellow and green in Figures 8.5 to 8.8.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
SZ	Shared footway zone and cycle zone	3.5m (minimum)
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
FZ+KZ	Furniture Zone + Kerbzone - Lighting - Bins and other furniture	0.5m (minimum)
KZ/FZ/PP	Kerb Zone + Furniture Zone + Parking Pad - Parking and loading bays should be at footway level - Seating - Lighting - Bins and other furniture - Cycle stands	2m
PV/RG	Planted Verge/ Rain Garden - Tree Planting (every 3 parking bays) - SUDs/Landscaping A three species mix of large spreading trees **must** be planted at 20m centres where there is parking and at 8-12m centres in other areas on one side of the street only and 1m back from the kerb face.	Included in KZ/FZ/PP zone
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

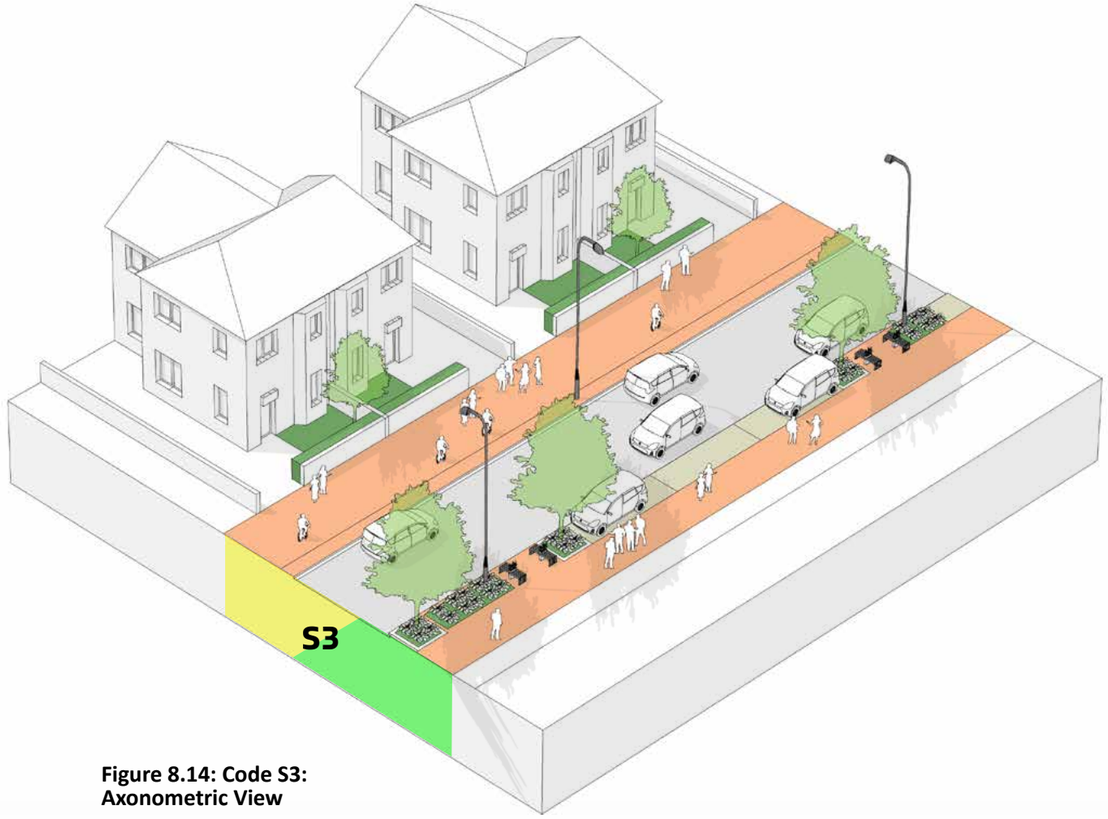


Figure 8.14: Code S3: Axonometric View

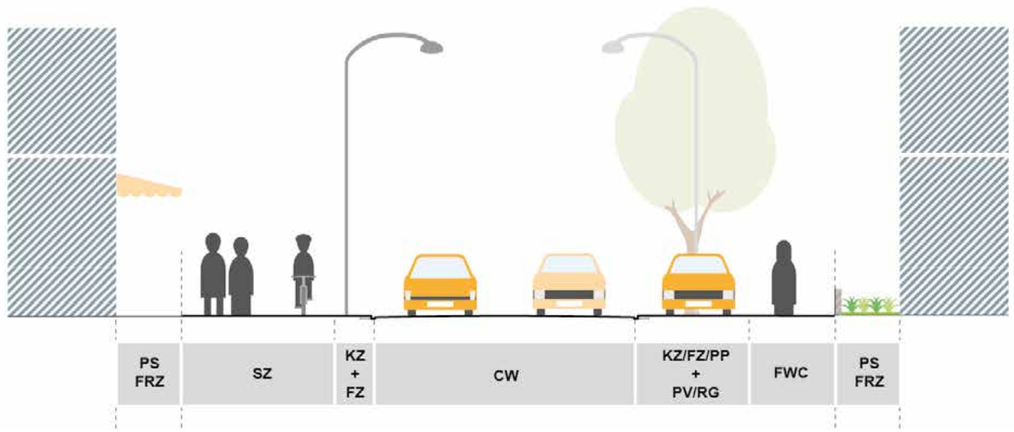


Figure 8.15: Code S3: Cross Section

CODE S4 – STREET WITH SEGREGATED CYCLE ROUTE AND FOOTWAY

Code S4 applies in areas where the width of the corridor is between 14.6m to 15.3m (excluding Privacy Strips or Frontage Zones). This width range falls within the areas that are designated in green in Figures 8.5 to 8.8.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
CL	Dedicated bi-directional cycle lane (See Code M3 - Bi-directional Cycle Route)	2.5m (minimum) - 3.0m
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
KZ/FZ	Kerb Zone + Furniture Zone - Seating - Lighting - Bins and other furniture - Cycle stands	1.2m (minimum)
PV/RG	Planted Verge/ Rain Garden - Tree Planting - SUDs/Landscaping A three species mix of large and/or medium sized trees **must** be planted at 8-12m centres on the cycle track side of the street only, 0.6m back from the kerb face and within a raingarden/soft verge.	Included in KZ/FZ zone
FZ+KZ+PV	Furniture Zone + Kerbzone - Lighting - Bins and other furniture -if kerbzone is >0.9m a planted verge **must** be incorporated	0.5m (minimum) - <1.2m
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

Figure 8.16: Code S4: Axonometric View

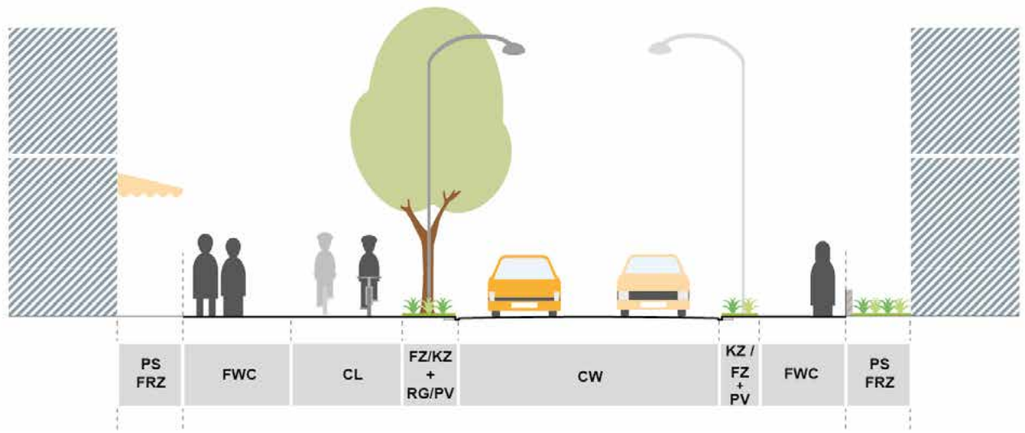


Figure 8.17: Code S4: Cross Section

CODE S5 – STREET WITH AVENUE OF TREES

Code S5 applies in areas where the width of the corridor is **between 15.3 to maximum corridor width**. This width range falls within the areas that are designated in green and blue in Figures 8.5 to 8.8.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
CL	Dedicated bi-directional cycle lane (See Code M3 - Bi-directional Cycle Route)	2.5m (minimum) - 3.0m
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
KZ/FZ	Kerb Zone + Furniture Zone - Seating - Lighting - Bins and other furniture - Cycle stands -if kerbzone is 1.2m+, a tree line **must** be incorporated (see below)	1.2m (minimum)
PV+RG	Planted Verge + Raingarden - Tree Planting - SUDs/Landscaping A three species mix of large and/or medium sized trees **must** be planted at 8-12m centres on both sides of the street, 0.6m back from the kerb face and within a raingarden/soft verge which is at least 1.2m wide.	Included in KZ/FZ zone
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

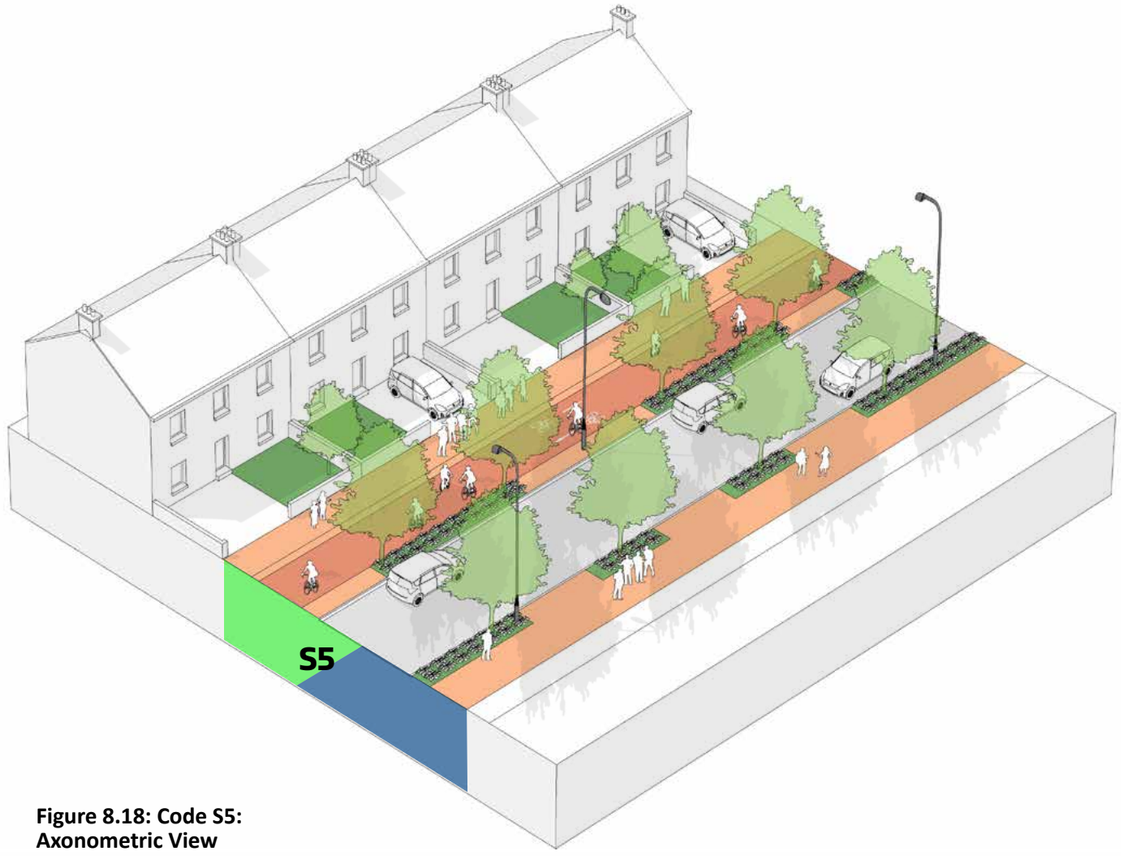


Figure 8.18: Code S5: Axonometric View

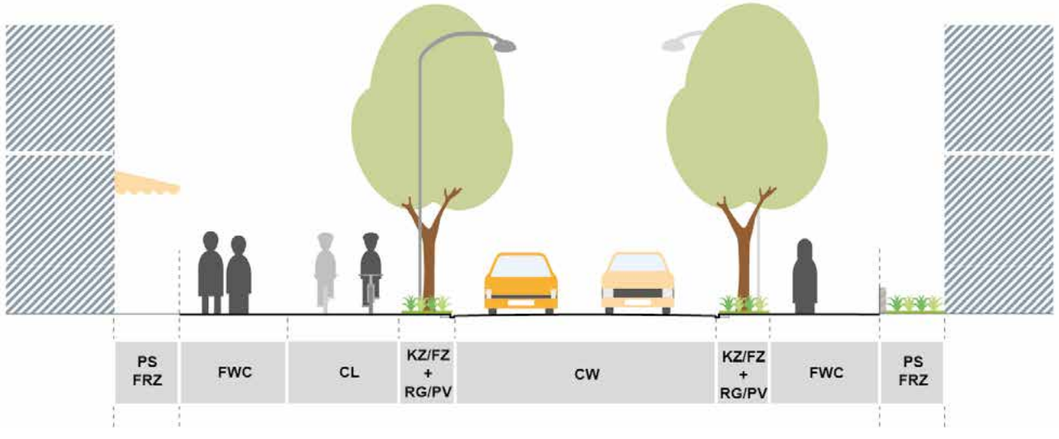


Figure 8.19: Code S5: Cross Section

CODE S6 – STREET WITH ON-STREET PARKING

Code S6 applies in areas where the width of the corridor is **between 15.4 to 16.9m**. These areas are designated in blue in Figures 8.5 to 8.8.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
CL	Dedicated bi-directional cycle lane (See Code M3 - Bi-directional Cycle Route)	2.5m (minimum) - 3.0m
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
KZ/FZ	Furniture Zone + Kerbzone - Lighting - Bins and other furniture -if kerbzone is 0.9m-<1.2m a planted verge **must** be incorporated -if kerbzone is 1.2m+, a tree line **must** be incorporated (see requirements below)	0.5m (minimum)
KZ/FZ/PP	Kerb Zone + Furniture Zone + Parking Pad - Parking and loading bays should be at footway level - Parking should be on opposite side from cycle track, unless need on same side is justified - Seating - Lighting - Bins and other furniture - Cycle stands	2m
PV/RG	Planted Verge/ Rain Garden - Tree Planting (every 3 parking bays) - SUDs/Landscaping If KZ/FZ is 1.2m+, trees **must** be planted. A three species mix of large and/or medium sized trees **must** be planted at 8-12m on the cycle track side of the street only, 0.6m back from the kerb face and within a raingarden/soft verge. A three species mix of large spreading trees **must** be planted at 20m centres where there is parking and at 8-12m centres in other areas on one side of the street only and 1m back from the kerb face.	Included in KZ/FZ zone & KZ/FZ/PP zone
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

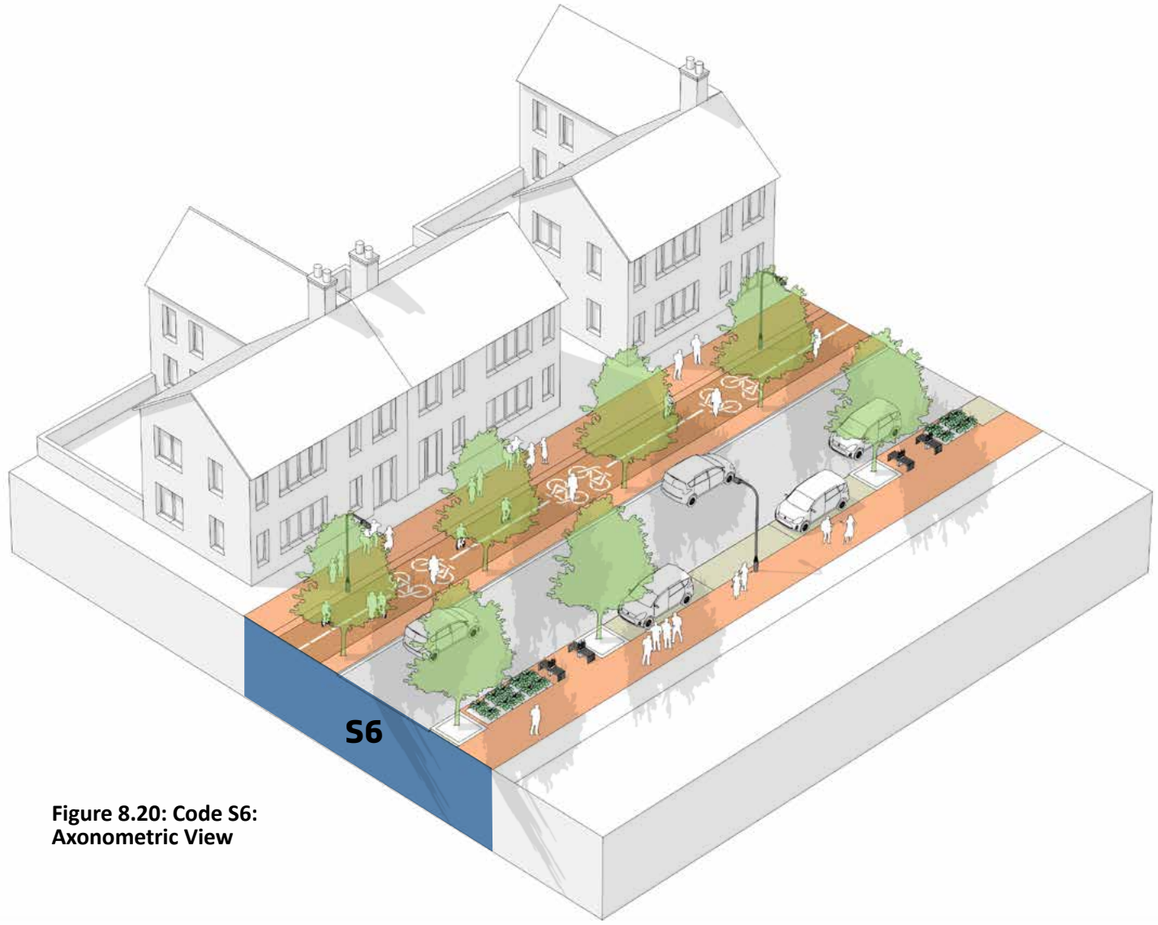


Figure 8.20: Code S6: Axonometric View

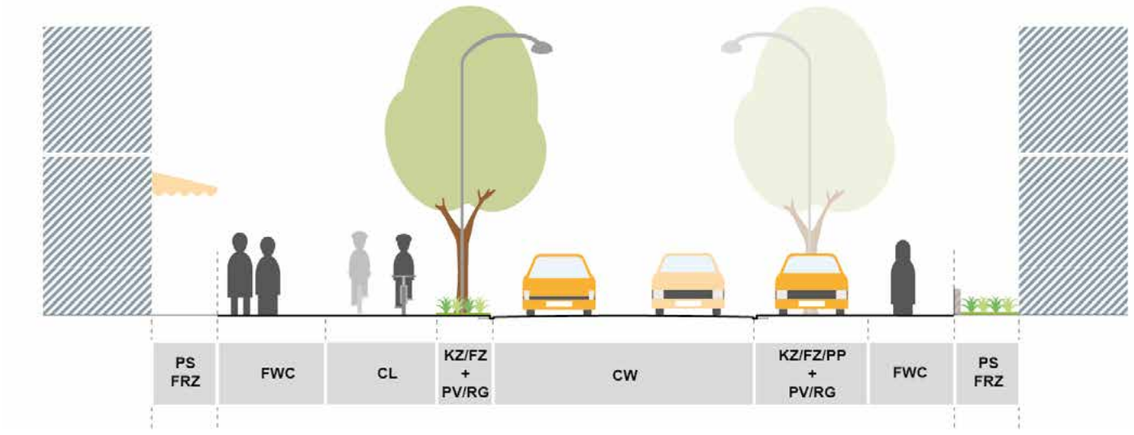


Figure 8.21: Code S6: Cross Section

CODE S7 – WIDE STREET WITH ON-STREET PARKING

Code S7 applies in areas where the width of the corridor is **between 16.9m and the maximum corridor width**. This width range falls within the areas designated in blue and purple in Figures 8.5 to 8.8.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
CL	Dedicated bi-directional cycle lane (See Code M3 - Bi-directional Cycle Route)	2.5m (minimum) - 3.0m
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
KZ/FZ/PP	Kerb Zone + Furniture Zone + Parking Pad - Parking and loading bays should be at footway level - Seating - Lighting - Bins and other furniture - Cycle stands	2m
PV/RG	Planted Verge/ Rain Garden - Tree Planting (every 3 parking bays) - SUDs/Landscaping A three species mix of large spreading trees **must** planted at 20m centres where there is parking and at 8-12m centres in other areas on one side of the street only and 1m back from the kerb face.	Included in KZ/FZ/PP zone
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

Figure 8.22: Code S7: Axonometric View

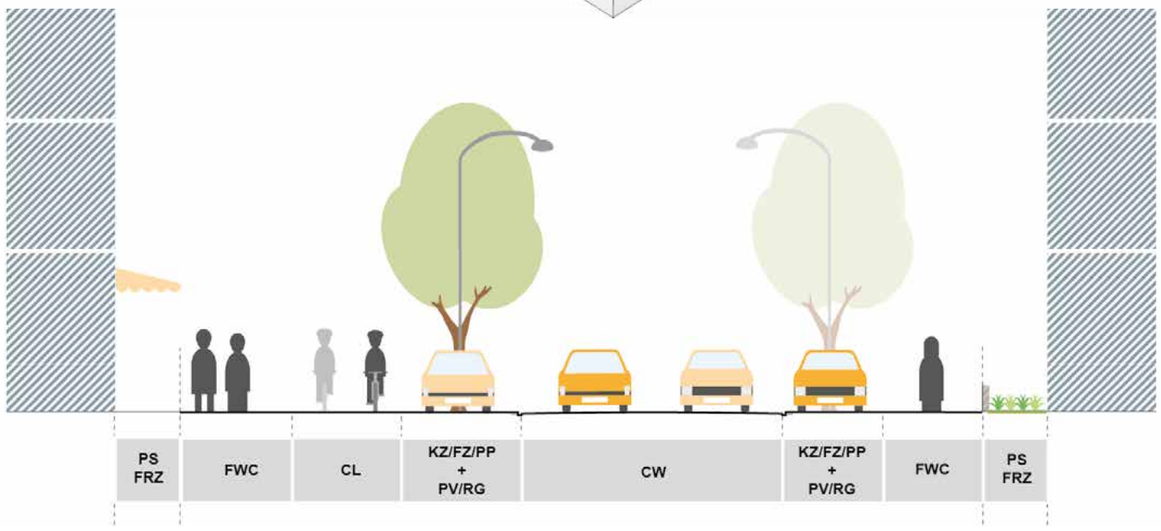


Figure 8.23: Code S7: Cross Section

CODE S8 – STREET WITH DEDICATED BUS LANE

Code S8 applies in areas where the width of the corridor is between 17.8m and the maximum corridor width. This width range falls within the areas designated in blue and purple in Figures 8.5 to 8.8.

If a dedicated bus lane is mandatory in areas where there is less width, there is an option to consider a 3.5m shared footway as an alternative to the dedicated footway and cycle track. This is not a preferred option and should only be considered where all other options have been explored. This would enable a dedicated bus lane to be implemented in corridor widths >16.6m which also falls within the areas designated in blue.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
BL	Bus Lane (See Code M10 - Bus Provision, Stops and Waiting Facilities)	3.2m
CL	Dedicated bi-directional cycle lane (See Code M3 - Bi-directional Cycle Route)	2.5m (minimum) - 3.0m
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
FWC	Footway Clear Zone	2m (minimum)
FZ+KZ	Furniture Zone + Kerbzone - Seating - Lighting - Bins and other furniture - Cycle stands	1.2m+ (minimum)
PV+RG	Planted Verge + Raingarden - Tree Planting - SUDs/Landscaping A three species mix of large and/or medium sized trees **must** be planted at 8-12m centres on the cycle track side of the street only, 0.6m back from the kerb face and within a raingarden/soft verge which is at least 1.2m wide.	Included in FZ+KZ zone
FZ+KZ	Furniture Zone + Kerbzone - Lighting - Bins and other furniture	0.5m (minimum)
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

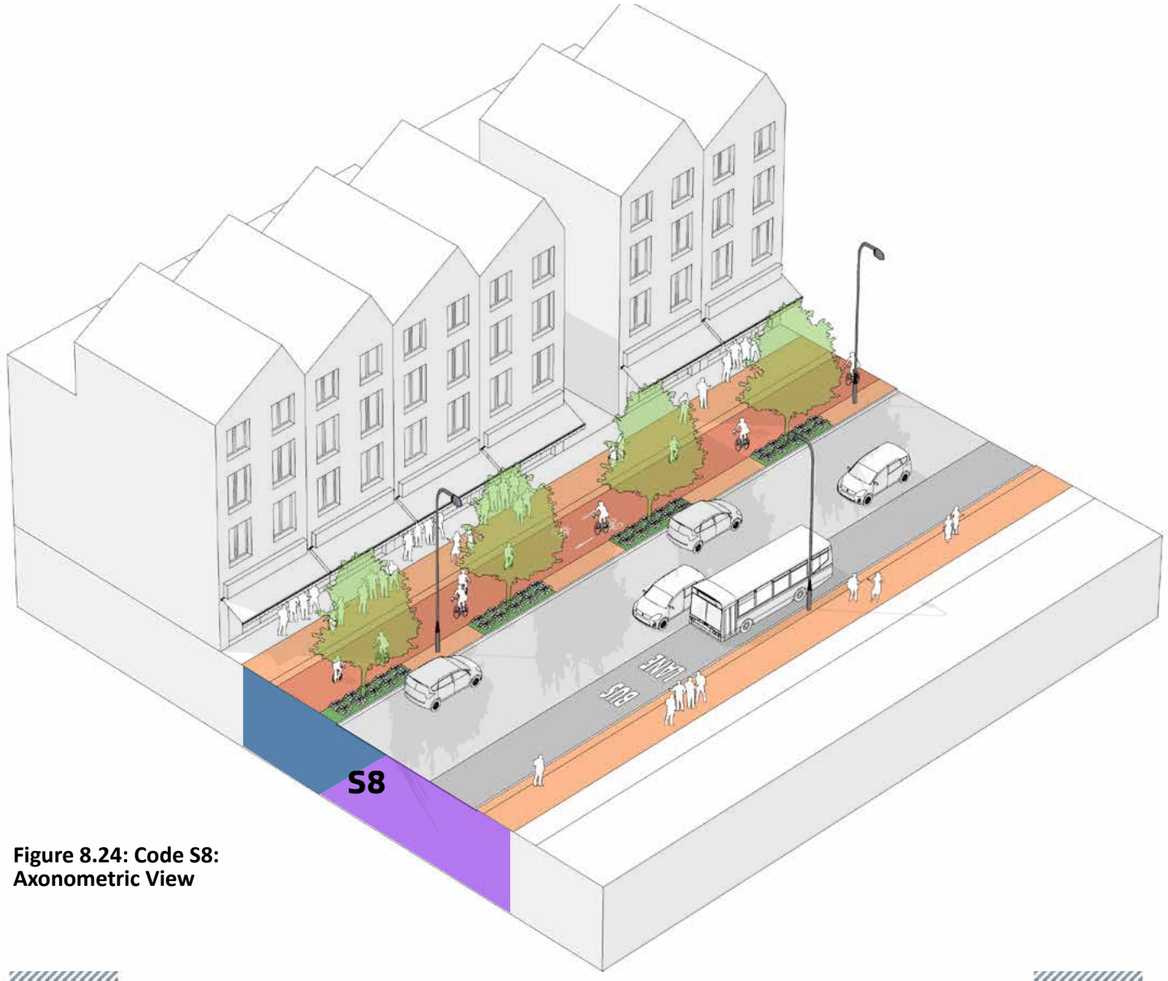


Figure 8.24: Code S8: Axonometric View

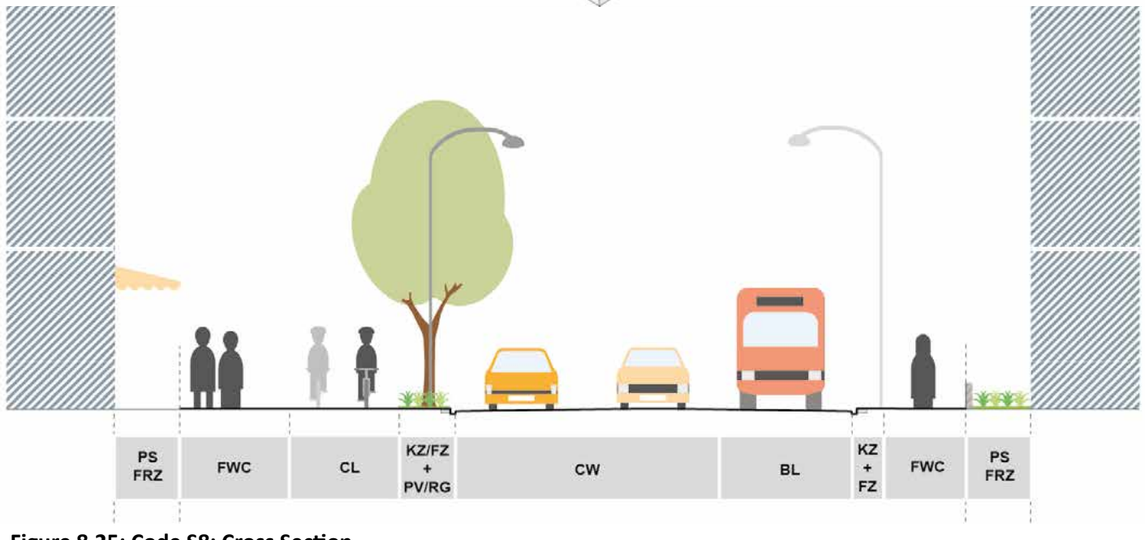


Figure 8.25: Code S8: Cross Section

CODE S9 – STREET AROUND REDHILL TOWN CENTRE

Code S9 shows an exceptional situation along the corridor where the street passes around Redhill Town Centre and is a dual lane carriageway.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
CL	Dedicated bi-directional cycle lane (See Code M3 - Bi-directional Cycle Route)	2.5m (minimum) - 3.0m
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
FZ	Furniture Zone - Lighting - Bins and other furniture	0.5m (minimum)
KZ	Kerbzone -if kerbzone is 1.2m+, a tree line should be incorporated	1.2m+ (minimum)
FZ+KZ	Furniture Zone + Kerbzone - Seating - Lighting - Bins and other furniture - Cycle stands	1.2m+ (minimum)
PV+RG	Planted Verge + Raingarden - Tree Planting - SUDs/Landscaping A three species mix of large spreading trees **must** planted at 8-12m centres on both sides of the street only and 0.6m back from the kerb face and within a raingarden/soft verge which is at least 1.2m wide.	Included in FZ+KZ zone
PS	Privacy Strip outside residential ground floor (See Code BF5 – Privacy, Interface and Plot Boundary) - front garden - defensible space	1.5m (minimum)
FRZ	Frontage Zone (See Code BF1 – Street Enclosure and Frontage) - Extended footway outside active ground floors, entrances, - Footway seating (where permitted) - Furniture for public use - Landscaping/SUDS - front garden/forecourt	1.5m (minimum)

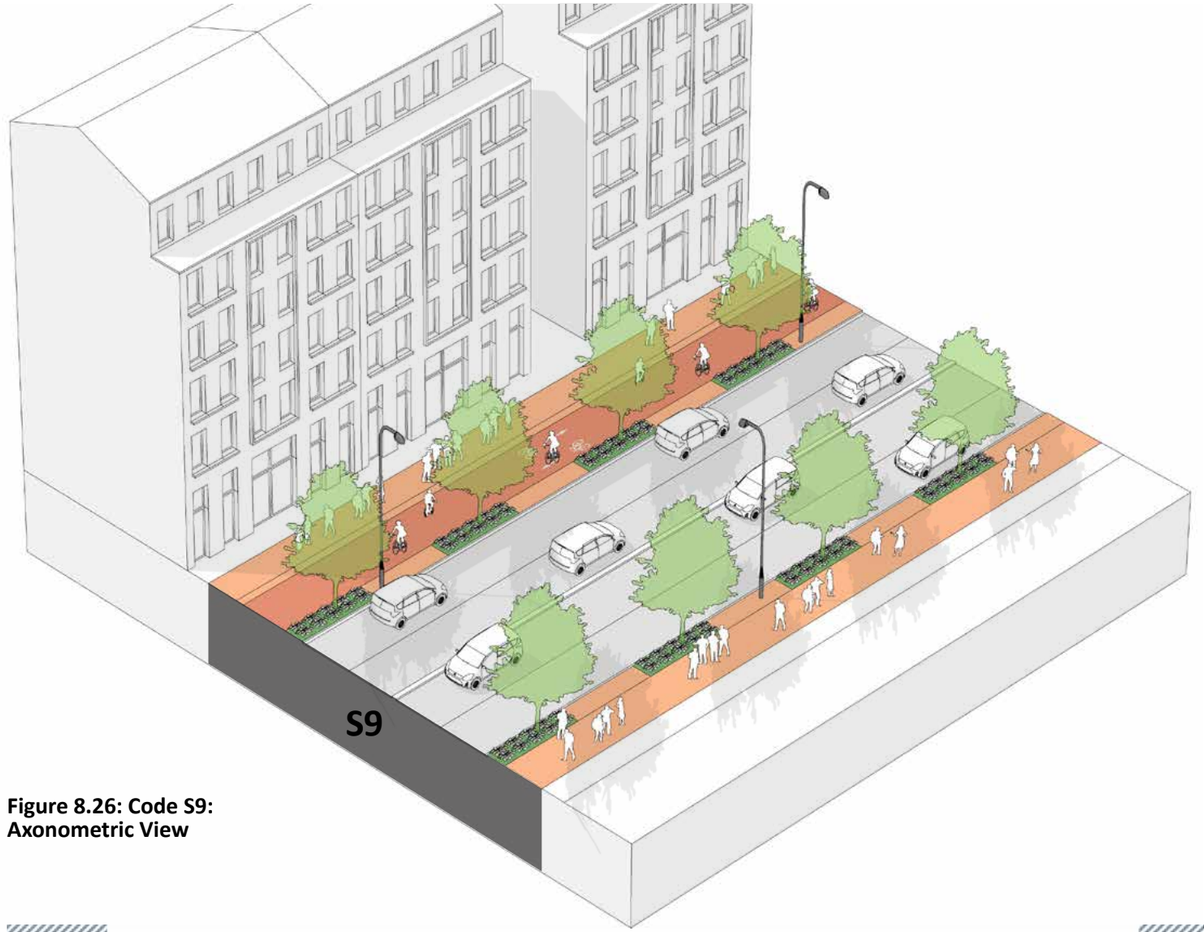


Figure 8.26: Code S9: Axonometric View

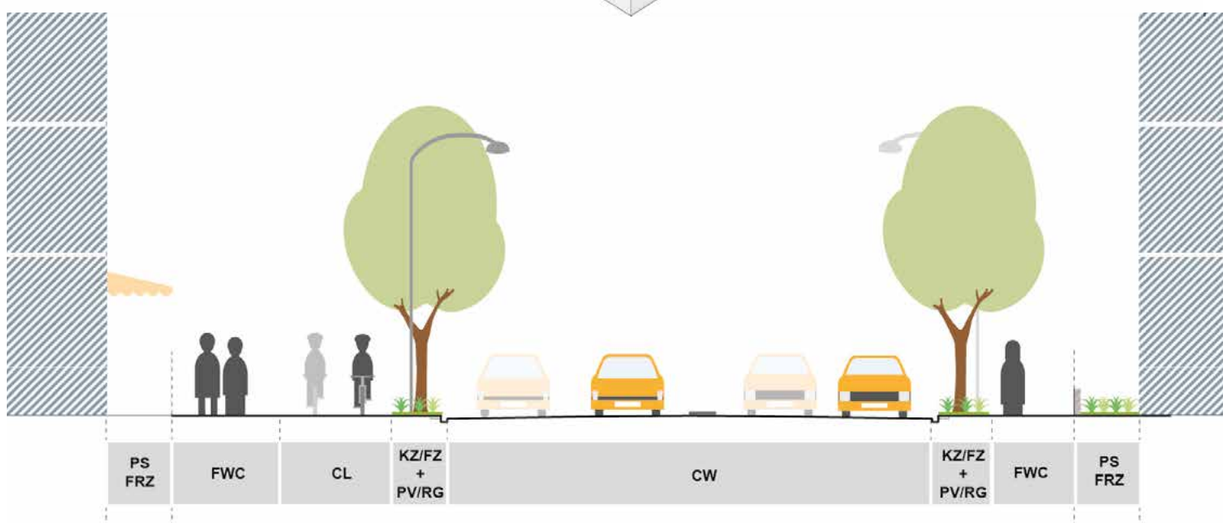


Figure 8.27: Code S9: Cross Section

CODE S10 – STREET THROUGH EARLSWOOD

Code S10 shows an exceptional situation along the corridor where the street passes through Earlswood.

Reference	Description	Recommended Dimension
CW	Carriageway (See Code M5 - Carriageway Design, Surfacing, Signage and Markings)	6.4m
CL	Dedicated bi-directional cycle lane (See Code M3 - Bi-directional Cycle Route)	2.5m (minimum) - 3.0m
FWC	Footway Clear Zone (See Code M2 - Footway Design)	2m (minimum)
KZ	Kerbzone	0.5m
FZ	Furniture Zone - Seating - Lighting - Bins and other furniture	0.6m (minimum)
VZ	Vegetation Zone (See Code N2 – Protecting Existing Trees & Hedgerows on page 55 & Code N5 - Provision of Street Trees) A three species mix of large spreading trees **must** planted at 6-10m centres on both sides of the street only and 0.6m back from the kerb face and within a raingarden/soft separator verge between which is at least 1.2m wide.	Widths vary to maximise the retention of existing trees and vegetation

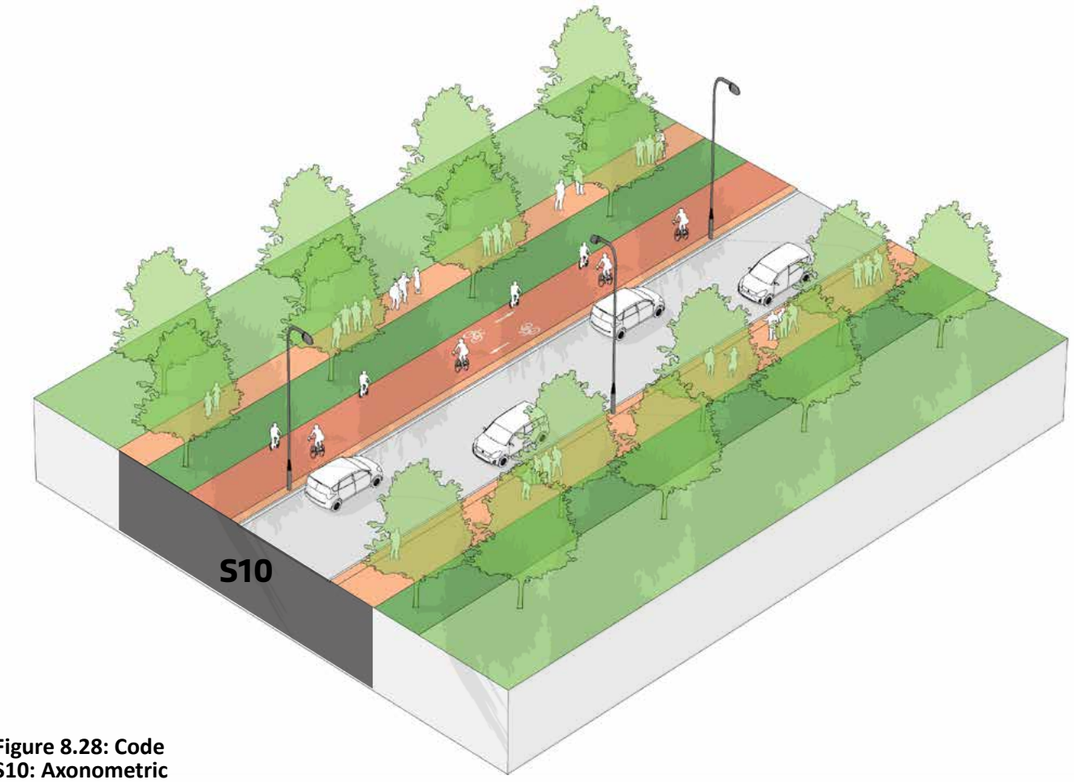


Figure 8.28: Code S10: Axonometric View

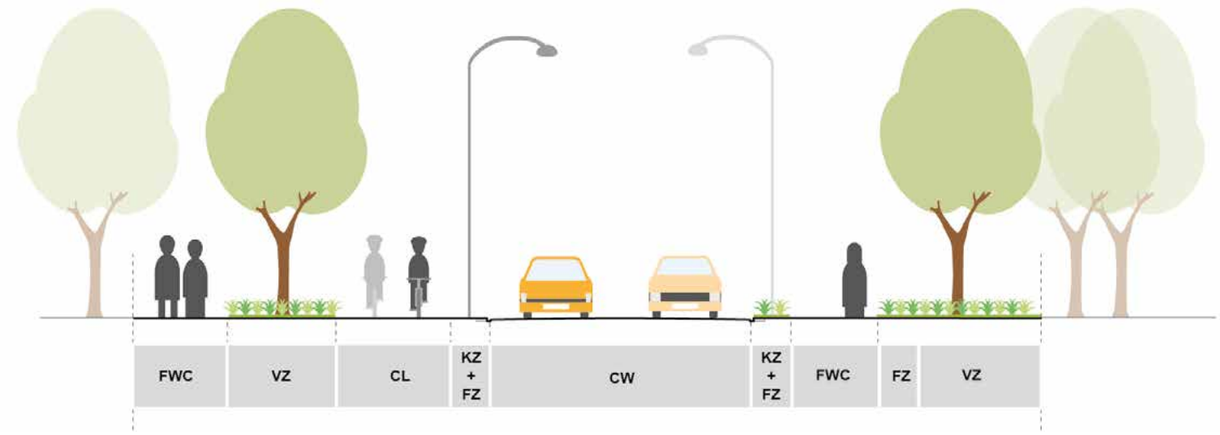


Figure 8.29: Code S10: Cross Section

URBAN INITIATIVES STUDIO

urban movement