Homes England

Making homes happen

Streets for a Healthy Life:

A companion guide to Building for a Healthy Life

(Issue 01)

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TBC in later document release

Queniborough, Leicestershire (photo courtesy of Stefan Kruczkowski)

Acknowledgements

Project Team

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Sounding Board

Further advice was received from an invited Sounding Board consisting of:

- DfT
- Trees and Design Action Group (TDAG)
- Staffordshire County Council
- Taylor Wimpey

Case Studies

A number of case studies were investigated in the compilation of the document. Examples included have been chosen because they represent good practice in the street typology illustrated.

These are listed below, along with the individuals who provided assistance:

- Blueprint
- David Milner (Create Streets)
- David McKenna (Street Spirit Design)
- David Ubaka (David Ubaka Placemakers)
- Jim Stephenson (Marmalade Lane)
- Robert Evans (Evans Vettori Architects)
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- Nicola Handa (Leicester City Council)
- Robert Huxford (Urban Design Group)
- Roger Evans (Studio Real)
- Sebastian Weise (PlaceChangers Ltd)
- Stefan Kruczkowski (Urban Design Doctor Ltd)
- Sue McGlynn (Sue McGlynn Urban Design)

01. Introduction

This document has been prepared to illustrate and explain what good residential streets look like, and how they function. Homes England uses Building for a Healthy Life as its toolkit to guide the design of our schemes, and this document should help us, and our partners, achieve the healthy streets envisaged by the toolkit.

Designed to be read online it will be expanded and revised over time, adding further street typologies and technical details.

It forms a companion to 'Building for a Healthy Life' (BHL) and 'Manual for Streets' (MfS) and has been designed to allow a broad range of people to use it: members of a local community, local councillors, developers, planning and highway authorities; allowing those involved in a proposed new development to focus their thoughts, discussions and efforts on the things that matter when creating streets that contribute towards good places to live.

Purpose of the Document

The purpose of this document is to show what can be achieved in creating adopted highways that are first and foremost places for people, achieving wider benefits such as spaces for people to socialise and play, better public health, biodiversity, reduced carbon emissions, improved water quality and slower run-off.

The separation between planning and highways policy and legislation can also present problems. In some places planning and highway authorities work well together towards the achievement of common goals, but we found other cases (including in unitary authorities) where they expressed different views over the designs of new streets. Homes England has therefore prepared this guidance to outline our involvement in the process, and how we encourage developers to embrace new thinking to help create better places to live.

The 2019 Housing Design Audit for England found that *'the least successful design elements nationally relate to overly engineered highways...These problems led to unattractive and unfriendly environments dominated by large areas of hard surfaces (tarmac or brick paviours), parked cars and bins.'*

The report of the Building Better, Building Beautiful Commission commented that *'overly car-dominated places tend to be less attractive or popular places in which to spend time'*. The Commission called for *'more visual and measured detail and clarity and prescription ... on street layout for different street types such as tree lined avenues, lanes, courtyards, squares, variable width streets and other typologies.'* This document is intended to help meet this need.

A revised Manual for Streets is now in the course of preparation, which this document will help to inform. In the interim Homes England will make reference to it when working with local authorities and developers in planning and designing streets in new developments.

Principal Functions Of Streets

Streets have many functions, and whenever schemes and designs are being developed it will be essential to consider all of their functions, to achieve and maintain a high standard of design which can be maintained cost effectively. Streets exist primarily to accommodate the movement of people and goods, whether on foot or in any type of vehicle. In addition, they give access to and from buildings of all types and contribute to their lighting and ventilation. They are a route for utilities and drainage, and are used for storage, particularly for vehicles. They are public spaces, used by everyone, thus enabling essential social interactions of all kinds, from formal gatherings to chance meetings. All these demands must be given due consideration if adequate, satisfying and attractive street environments are to be created and maintained.

In order to ensure all aspects are considered in the design of new streets, this document has been organised around the five principal street functions derived from 'Manual for Streets'. These are:

Throughout this guide we will refer to these functions, and photographs have been annotated and colour coded according to them.

Place

Movement

Access

Parking

Drainage, Utilities & street lighting

Place

The place function is essentially what distinguishes a street from a road. Roads take you from one place to another, but a street is a place in its own right. The sense of place is fundamental to a richer and more fulfilling environment. It comes largely from creating a strong relationship between the street and the buildings and spaces that frame it.

Defining the relative importance of particular streets / roads in terms of place and movement functions should inform subsequent design choices. An important principle of Manual for Streets is that when planning new developments, achieving a good place should come before designing street alignments, cross-sections and other details. Streets should be fitted around significant buildings, public spaces, important views, topography, sunlight, microclimate and biodiversity. Understand where positive local character comes from in the local area, and its streets and blocks, and dimensions, and use this to help inspire new streets.

A sense of place encompasses a number of aspects, most notably the street's:

- Local distinctiveness
- Visual quality
- Propensity to encourage social activity (e.g. play, neighbours chatting)

The location of buildings in relation to the street, the choice of surface materials, presence of planting and street furniture has a large part to play in achieving a sense of place. Designing in landscape to streets is an opportunity to improve quality and enhance biodiversity.

The adjacent diagram shows an extract from Manual for Streets illustrating typical road and street types in the Place and Movement hierarchy.

Movement

Providing for movement along a street is vital, but it should not be considered independently of the street's other functions. Movement both along and across the street should be considered together and in balance, in the overall design.

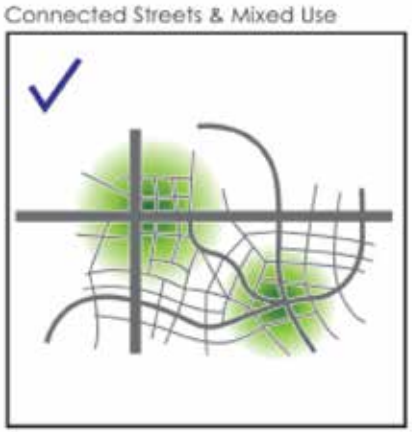
The need to cater for motor vehicles is well understood, but the passage of people on foot and cycle has often been neglected. Government Policy set out in 'Gear Change: A bold vision for cycling and walking' requires that all new housing and business development are built around making sustainable travel, including cycling and walking the first choice for journeys.

Walking, cycling and public transport are the most important modes of travel, offering a more sustainable alternative to the car, making a positive contribution to the overall character of a place, public health and to tackling climate change through reductions in carbon emissions. In urban areas, more than 40% of journeys were under two miles in 2017–18, and 58% of car journeys in 2018 were under five miles. For many people, these journeys are perfectly suited to cycling and walking. Manual for Streets recommends that these modes are considered first when designing new residential developments.

Alongside the design of individual streets, we also need to consider that the wider movement network ensures that peoples' daily needs are close enough and well connected so that they can be met within a short, safe and pleasant walk or cycle. Provision of a high-quality connected street and path network, which makes the walking and cycling routes as direct , safe & convenient as possible, whilst managing movement for motorised vehicles.

Andrew Cameron, WSP and Bob White, Kent County Council

Extract from Manual for Streets - Figure 2.5 showing typical road and street types in the Place and Movement hierarchy



Extract from Manual for Streets 2 Figure 2.4 - Connected Development

Access

Access to buildings and public spaces is another important function of streets. Pedestrian and cycle access should be designed for people of all ages and abilities.

Access for refuse vehicles is also important, but designing for the largest vehicle likely to enter a residential street runs the risk of allowing all other motorised vehicles to travel too fast. Whilst the need to accommodate large vehicles needs to be taken into account, in many cases they will be infrequent and it will be acceptable for them to use the whole carriageway. Access for service vehicles is considered in detail in Part 2 of this document.

Providing frontages that are directly accessible on foot and by cycle and that are overlooked from the street is highly desirable in most circumstances as this helps to ensure that streets are lively, active and secure places.

Car and Cycle Parking

Designers should provide secure and overlooked cycle parking that is as close to (if not closer) than car parking spaces (or car drop off bays) to the entrances of schools, shops and other services and facilities (see LTN 1/20 for further details).

Car parking is also a key function of many streets, although it is not always a requirement. A well-designed arrangement of on-street car parking provides convenient access to frontages and can add to the vitality of a street.

Conversely, poorly designed car parking can create safety problems and reduce the visual quality of a street.

Reducing car parking should not be used as a way of reducing levels of car use and ownership. Designers should anticipate realistic levels of car parking demand, guarding against displaced and anti-social parking; thinking about the availability and frequency of public transport and opportunities for active travel. However, car parking provision below normal demand levels can work successfully in sustainable locations when adequate on street parking controls are present.

Drainage, Utilities and Street Lighting

Streets are the main conduits for drainage and utilities. Buried services can have a major impact on the design and maintenance requirements of streets. Sustainable drainage systems bring environmental benefits, such as flood control, creating wildlife habitats and efficient wastewater recycling.

It can be anticipated that in the future the integration of emerging smart technology in street design will be an increasing consideration, and designers may need to respond to this now. Designers should discuss this with the Local Authorities and Homes England as part of the design process.

Street design helps promote slow speeds using attractive materials and planting.

Trent Basin, Nottingham (photo courtesy of Blueprint)

The Process

The planning system is in a period of significant reform and change. Alongside plans to change the approvals process, a national design code is proposed to tackle variance in the quality of new residential neighbourhoods. It is expected to extend to the detailing of the public realm, supported by a new edition of Manual for Streets but it will be several years before these changes come into effect. So to provide extra help in the short term, this guide aims to assist the development industry in being smarter about making sure design of streets shaped in pre-planning discussions meet the criteria employed by highways authorities tasked with their upkeep after planning approval. As the Powergram shows, at present the pre-planning meetings and the adoption processes may not optimise the way that street details will be delivered after approval.

This guide provides a set of street design that have been proven successful and which incorporate patterns of development and materials that should be transferable to multiple locations. This is the essence of this guide, to break down the composition of successful streets by identifying their dimensions, geometry and choice of materials. This is especially relevant now that many adoption authorities are having to make difficult choices about what they can afford to maintain.

This guide acknowledges the pressures facing adopting authorities, so proposes a range of solutions and ideas, recognising the variations in quality that will be affordable and best value in the particular circumstances. The guide seeks to encourage a public realm that supports walking and cycling and its function as a place for social interaction.

The table opposite shows the process by which streets in new developments will be developed.

In most cases streets in new developments will be planned and designed by the private sector and the Local Planning Authority will grant approval, initially through the award of planning permission.

Community and stakeholder engagement is a core part of the process. Engagement needs to begin as soon as there is an intention to submit a proposal for pre-application or planning permission, and must continue through the design process, setting up frameworks that allow communities to build upon the learnings of the process.

Post approval the Local Highway Authority will take responsibility for the approval of all new adopted highways through the process set out in Section 38 of the Highways Act 1980.

MfS is clear that uncoordinated decision-making can result in disconnected, bland places that fail to make a contribution to the creation of thriving communities. It recommends that development teams are established to negotiate issues in the round and retain a focus on the creation of locally distinct, high-quality places.

Designers and other stakeholders are encouraged to work together with Homes England strategically from an early stage. Homes England will be involved throughout the process.

	Pre-planning		Planning Application		Post-permission	
	Concept	Outline Design	Outline Application	Full / Reserved Matters Application	Detailed Design	Highway Adoption
Homes England / Client						
House Builder						
Planning Authority						
• Planners						
• Urban Designers						
Highway Authority						
• Highways Development Management Team						
• Highways Agreements Team						
Other Stakeholders						
• Lead local flood authority, Highways England, Historic England etc as necessary						

Lead

Always involved

Involved as necessary

Achieving Healthy Streets

Homes England has adopted 'Building for a Healthy Life' to help improve the design of new and growing neighbourhoods. This document is intended to act as a companion to 'Building for a Healthy Life', to help our design teams achieve better quality streets which play a critical role in the quality of new developments.

Good connectivity is key to reducing reliance on cars, especially for short trips. A good quality movement network will improve health and wellbeing and by providing well designed pedestrian and cycling routes throughout.

In line with the design process structure set out in 'Building for a Healthy Life' this document lists and illustrates examples of good practice highlighted by a green light / green text. Poor practice is highlighted with a red light / red text.

Further guidance on what constitutes good and bad practice is described in the documents shown alongside – Manual for Streets 1 and 2, Building for a Healthy Life and the recent Government policy and guidance on cycling – Gear Change, LTN 1/20 Cycle Infrastructure Design and Healthy Streets.

Where an element of design is considered to fall between a green and a red traffic light, an amber light can be assigned to a particular consideration. An amber light does not mean that the design scores 'half a point'. Instead it cautions that an aspect of a scheme is not fully resolved. In many cases it is possible to rethink and redesign an aspect of a scheme to achieve a better outcome.

Understanding the scoring:

- The more green lights a proposed development secures, the better it will be.
- The objective is to minimise the number of amber lights and avoid red lights.
- A red light suggests that one or more aspects of a scheme need to be reconsidered.

Designers should refer to these important design guidance documents.

Table 1 shows the different functions of streets taken from *Manual for Streets* cross referenced against the indicators identified in *Building for a Healthy Life*.

The colours shown are used consistently throughout the document to analyse the street.

Table 1: Functions of Streets

Manual For Streets	Building For A Healthy Life
Place	• Facilities and services • Distinctive Places • A memorable character • Well defined streets and spaces • Easy to find your way round • Healthy streets • Green and blue infrastructure • Back of pavement front of home
Movement	• Natural connections • Walking, cycling and public transport • Easy to find your way round • Healthy Streets
Access	• Natural connections • Walking, cycling and public transport • Healthy Streets • Back of pavement front of home
Parking	• Cycle and car parking
Drainage, utilities & street lighting	• Healthy Streets • Green and blue infrastructure

02. Street Typologies

The purpose of this guide is not to define rigid street typologies which are based on traffic flows and / or the number of buildings served.

Manual for Streets recommends that designers develop street character types based on a location-specific basis with reference to the relevant functions of each street.

Summary

Street character types are built up from individual street elements (e.g. carriageway, footway, cycle route, SuDS) and considering their relationship with the buildings and spaces that frame the street, and details of these elements are given in Part 2 of this document.

Creating places that are well integrated into the site and their wider natural and built surroundings. New streets and connections should be designed to connect with the existing network to make places that are easy to move through and around. Filtered permeability should be considered a useful technique that designs out 'rat running' and creates a pleasant low traffic environment around people's homes whilst still allowing pedestrian and cycle movement.

In order to illustrate how these streets at different places within the place and movement hierarchy could be designed, we have selected a series of case studies for the following common street typologies:

- Principal / Main Streets
- Secondary Streets
- Tertiary Streets
- Edge Lanes / Private Driveways

Typical Street Features

Table 2 illustrates the typical features of the street typologies which are commonly used in new residential development, and the movement and place elements from which they are composed.

The table illustrates the main differences between the common street typologies. Not all new developments will feature all street types, and their use should be based upon local context, and street and land use functions.

Street elements are classified by the likelihood of the element being present, however this is a guide and should not be regarded as a definitive schedule.

Marmalade Lane, Cambridge (photo courtesy of Jim Stephenson)

Table 2: Typical Street Features

Street Typology	Features									
	Place		Movement				Access	Parking	Drainage, utilities & street lighting	
	Mixed Use	Street Trees / Landscape	Footways	Protected Space For Cycling	Public Transport	Shared Surface	Direct Car Access	Car Parking Bays	SuDS	Street Lighting
Principal / Main Street										
Secondary Street										
Tertiary Street										
Edge Lane / Private Driveway										

Always

Typically

Sometimes

Rarely

Street trees planted in Measham help to define the main street and add to the overall streetscene.

Main Street: Measham, Leicestershire (photo courtesy of Stefan Kruczkowski)

Principal / Main Streets

Description and Application

- Principal / main streets are the strategic vehicular and cycle routes through larger development. Principal streets should be designed to accommodate buses, including bus stops, even if no bus service is planned in the short term.
- Not all developments will have a principal street.
- They link the site to the wider highway network and are often important public transport corridors.
- These streets have a clear distinction between vehicular, cycle and pedestrian space and vary in their design according to their specific context and function. They can often provide access to a range of land uses. Protected space for cycling should be provided in line with table 4.1 in LTN 1/20.
- The street may vary in character along its length according to the adjacent land uses.

Good Practice Principles

- Whilst principal / main streets are the strategic routes for vehicular traffic through the development, they must create a positive pedestrian / cycle environment. Designers must apply a user hierarchy with pedestrians at the top in line with Manual for Streets.
- Due to their importance in the place and movement hierarchy principal / main streets should recognise the importance of the community function of streets as spaces for social interaction.
- Principal / main streets should provide an inclusive environment that meets the needs of people of all ages and abilities in line with the Equality Act 2010.
- Streets trees and SuDS are an important feature of principal streets, not only providing a landscape and drainage function but also contributing to the overall street scene and reducing the dominance of the larger space between buildings required for movement. Street trees and SuDS can also make a significant contribution to a sustainable, integrated infrastructure approach, promoting value and economic development, climate change adaptation and human health and well-being.
- Defined car parking bays are typically used on one or both sides of the carriageway, particularly in areas of mixed land use.
- Street lighting will always be present.

Common Pitfalls

- Historically principal / main streets have not provided good cycle infrastructure. Local Transport Note 1/20 sets out the requirements for cycle infrastructure on busier streets.
- Building for a Healthy now recommends that 20mph (or lower) design speeds should be introduced. This should also apply to principal streets where they pass through residential and mixed use areas.
- Principal / main streets will tend to have straighter alignments, and therefore designers should use features to help encourage slower traffic speeds. This could include features such as the introduction of a 20mph limit, direct frontage access, use of landscape and street trees, visual narrowing, avoiding over-wide traffic lanes, providing on street car parking, pedestrian crossings and creating a strong relationship between the buildings and the street.

Principal / Main Street (public transport route):

Whitmore Drive, former Severalls Hospital, Colchester

Whitmore Drive is located within the grounds of the former of Severalls Hospital, on the northern edge of Colchester.

The application site is approximately 42 hectares and is being developed for up to 1,500 homes (including conversion of some retained hospital buildings), mixed uses including community and education facilities, retail, public open space.

Main Street: Whitmore Drive, Colchester (photo courtesy of Design for Homes)

Location	Former Severalls Hospital, Colchester
Project size	Mixed used development comprising up to 1,500 dwellings (including conversion of some retained hospital buildings).
Project description	Urban edge of medium sized town/brownfield.
Developer	Sale of semi-serviced plots to developers. Currently under construction by Taylor Wimpey and Bloor Homes.
Adoption status	Adopted
Car parking	Mixture of parking typologies, with some unallocated parking on Whitmore Drive.

Analysis of Street

Whitmore Drive is the principal street through the development, connecting Boxted Road to the west with the A1341 Via Urbis Romanae to the east. The overall site layout has been designed to maximise pedestrian and cycle permeability.

Whitmore Drive has been designed to accommodate a bus route as required by the Council's adopted SPG.

Main Street: Whitmore Drive, Colchester (photo courtesy of Design for Homes)

Place	Whitmore Drive is well defined by a mixture of 2 - 3 storey dwellings. Plots are clearly defined with boundary walls. Street trees are incorporated in a wide verge, spaced to accommodate street lighting.
Movement	Whitmore Drive has been designed to accommodate a bus route as required by the Council's adopted SPG.
Access	The street is well defined and overlooked by buildings, with direct pedestrian access. Plots are clearly defined with boundary walls to the street.
Parking	Car parking is provided on plot with direct access from the principal street.
Drainage, utilities & street lighting	Utilities are located in the verge.

Whitmore Drive has been designed to accommodate a bus route as required by the Council's adopted SPG.

Main Street: Whitmore Drive, Colchester (photo courtesy of Design for Homes)

Severalls Hospital - Overall Planning Layout
(Image courtesy of Cooper Bailey)

The principal street includes a balance of on plot car parking supplemented with some rear parking courts helping to create an attractive and balanced streetscene.

Principal / Main Street (mixed use):

The Chase, Newhall, Harlow

The Chase provides access to approximately 2,500 residential dwellings and a range of mixed uses at Newhall in Harlow. It incorporates unallocated on street car parking, street trees and a shared use footway / cycleway.

Although there is no bus service at present it has been designed to accommodate on in the future.

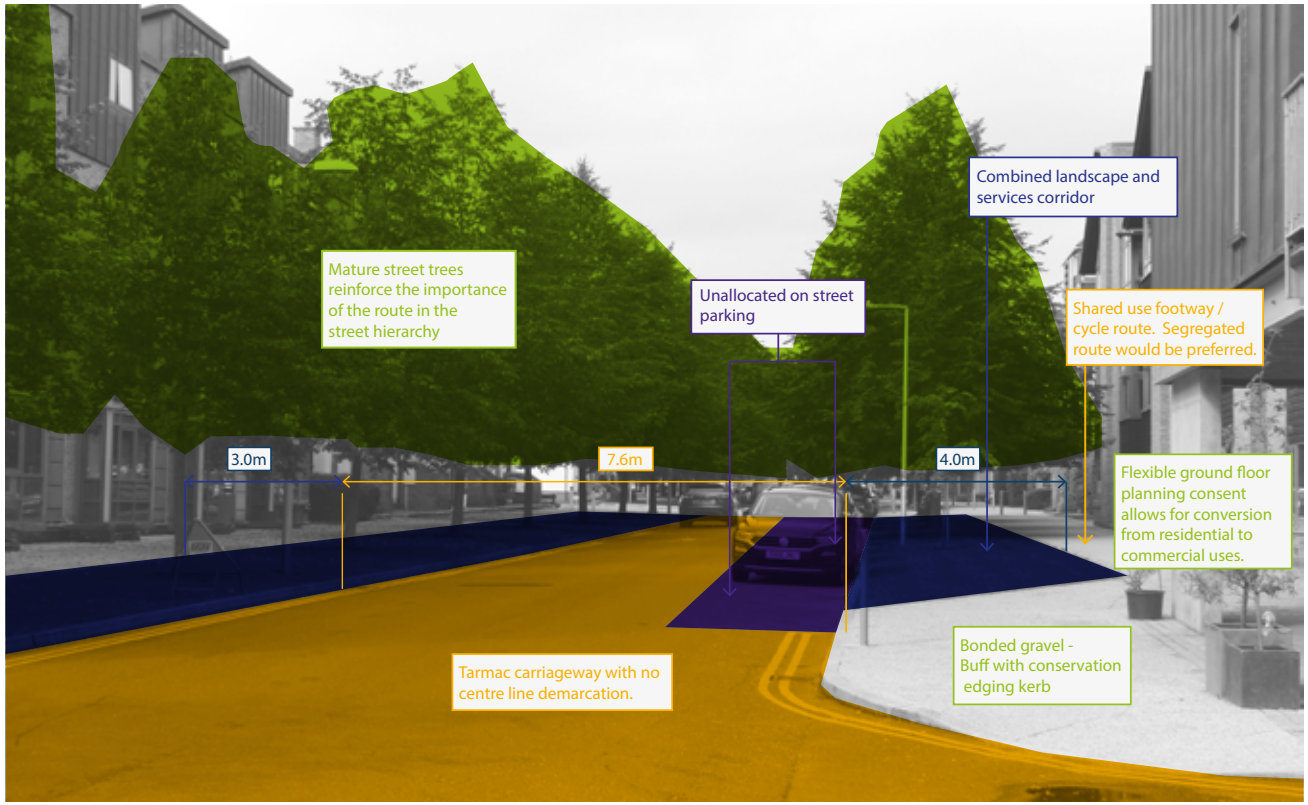
Main Street: Newhall Harlow (photo courtesy of Design for Homes)

Location	Newhall, Harlow
Project size	Mixed used development comprising 2,500 residential dwellings.
Project description	Urban edge of medium sized town/greenfield.
Developer	Sale of semi-serviced plots to developers within constraints of an overall masterplan and a series of design codes.
Adoption status	The Chase is adopted.
Car parking	Mixture of parking typologies, with some unallocated parking on The Chase.

Analysis of Street

The Chase forms part of a wider network of streets, squares, parkland and incidental spaces. The overall masterplan incorporates high levels of permeability through a consistent use of block structure, making the street pattern legible with the use of level surfaces away from the main route further enhancing the permeability.

Across the site a total 42% is designated as green infrastructure including species-rich grassland and woodlands.



Main Street: Newhall Harlow (photo courtesy of Design for Homes)

Place	The ratio between building heights and street width clearly define this as the most important street in the neighbourhood. Buildings are typically four storeys, and included flexible ground floor planning consent allowing for conversion from residential to commercial use (Class E).
Movement	A 7.6m clear path has been provided for shared use by all modes. Junctions with side roads are tabled with cobbled ramps.
Access	The street is well defined and overlooked by buildings, with direct pedestrian access. Additional pedestrian and cycle connections link the main street to residential areas behind.
Parking	The provision of a wider principal street allows for unallocated on street parking. 2 and 3 car parking spaces/dwelling (according to bedspaces) plus visitor parking. Cycle parking should be included.
Drainage, utilities & street lighting	Street trees are incorporated in a wide verge, spaced to accommodate street lighting.

Flexible ground floor planning consent allows change of use over time adding to the overall streetscene.

The Chase, Newhall (photo courtesy of Roger Evans, Studio Real)

Note from the designer

"The Chase is one of five planned access points along the western edge of the new neighbourhood and leads to a local centre and primary school.

Getting agreement to this level of connectedness and hence internal permeability was seen as vital.

The informal on-street parking does not form part of the formal residential or visitor allocation. It is there to bring some activity into the street.

On later phases an extension to The Chase has defined parking spaces between street trees".

Courtesy of Roger Evans, Studio Real

Newhall Masterplan - Phase 1 photomotage
(Image courtesy of Roger Evans, Studio Real)

What does ‘green’ look like?

Upton, Northamptonshire - High Street

- Number 15 bus route runs along High Street connecting Upton with Northampton town centre.
- High Street is well overlooked by front doors, windows and balconies and the height of the buildings emphasises the importance of this principal street.
- Unallocated parking bays integrated into the street that guard against displaced / anti-social car parking.
- No centre line markings, occasional rumble strips, car parking bays and the architectural detailing helps to keep traffic speeds low.
- Lack of any protected space for cycling.

High Street: Upton, Northamptonshire (photo courtesy of Andrew Cameron)

Trumpington Meadows, Cambridge

- Integrated SuDS corridor, with street tree planting.
- Unallocated on street car parking within a Controlled Parking Zone (CPZ).
- Street is well defined on both sides by residential development.
- Change in surface material at junctions, car parking bays and pedestrian crossing points break up the linearity of the route.
- Lack of any protected space for cycling.

Principal street: Trumpington Meadows, Cambridge (photo courtesy of Annabel Keegan)

Mulberry Park, Coombe Down, Bath - Main Street

- Street is well defined on both sides by residential development.
- Direct frontage access from the main street
- Principal elevations to the street
- Consistent building line and cohesion between building typologies.
- Tree planting between the parked cars and the pavement (also serves to guard against pavement parking).
- Lack of any protected space for cycling.

Main Street: Mulberry Park, Coobe Down, Bath (photo courtesy of Design for Homes)

Dunbar Way, Ashby de la Zouch - Main Street

- Street tree planting.
- Unallocated on street car parking, in addition to on plot provision.
- Street is well defined on both sides by residential development.
- Change in surface material at junctions, car parking bays and pedestrian crossing points break up the linearity of the route.
- No control over verge car parking.
- Hedges are in private ownership and are increasingly being removed by residents.

Main street: Dunbar Way, Ashby de La Zouch (photo courtesy of Stefan Kruczkowski)

What does ‘red’ look like?

- Distributor roads with little or no frontage access.
- Design of road encourages drivers to drive at higher speeds.
- Road markings and illuminated bollards add to visual clutter and detract from sense of place.
- No direct access function for residential properties.
- Lacks any sense of local distinctiveness.

Over engineered principal route with little or no frontage access:
(photo courtesy of Stefan Kruczkowski)

- Backs or sides of properties on to street creating a deadening effect to the street.
- Lacks any sense of local distinctiveness.
- Lack of any landscape features.
- Grass strip between the back of pavement and wall is neglected, serving no practical public or private function.

Lack of frontage on principal street: (photo courtesy of Stefan Kruczkowski)

- Well served by public transport
- Mature landscape contributes to overall quality of place.
- Over-wide carriageway and dedicated right turn lanes encourage higher speeds which requires enforcement of 30mph limit by safety cameras.
- Road markings and illuminated bollards add to visual clutter and detract from sense of place.
- No cycle or formal pedestrian crossing facilities.
- No direct access function for residential properties.
- Lacks any sense of local distinctiveness.

Over engineered principal route: (photo courtesy of Annabel Keegan)

- Overly engineered, excessively wide street encourages higher vehicle speeds.
- Doubling up of infrastructure. Private driveways in addition to principal street.
- Lacks any sense of local distinctiveness.

No direct access to on plot parking from the street means a service lane is required on each side: (photo courtesy of Amy Burbidge)

On street parking is located on both sides of the street. Parking bays are marked by a change in surface material.

Secondary Street: Derwenthorpe, York (photo courtesy of Andrew Cameron)

Secondary Streets

Description and Application

- Secondary streets are quieter residential streets, although some non residential uses may be present.
- These streets typically have a clear distinction between vehicular and pedestrian space, with a defined kerb and footways although some level surface sections could be incorporated.
- Where traffic volumes and speeds are low (see table 4.1 in LTN 1/20) cycling on the carriageway will normally be acceptable.
- Secondary streets are not usually bus routes.
- They could vary in width and character according to the adjacent land uses.

Good Practice Principles

- Whilst secondary streets are quieter residential streets, they must create a positive pedestrian / cycle environment. Designers must apply a user hierarchy to the design process with pedestrians at the top in line with Manual for Streets.
- Secondary streets should recognise the importance of the community function of streets as spaces for social interaction.
- Secondary streets should provide an inclusive environment that meets the needs of people of all ages and abilities in line with the Equality Act 2010.
- Streets trees and SuDS are an important feature of secondary streets, not only providing a landscape and drainage function but also contributing to the overall street scene.
- Where curtilage parking is provided at the front of dwellings secondary streets will have frequent driveway access. Level footways should be maintain across these access points.
- Defined car parking bays may be used on one or both sides of the carriageway, particularly in areas of mixed land use, however their use may be limited by the presence of private driveway accesses.
- Street lighting will always be present.

Common Pitfalls

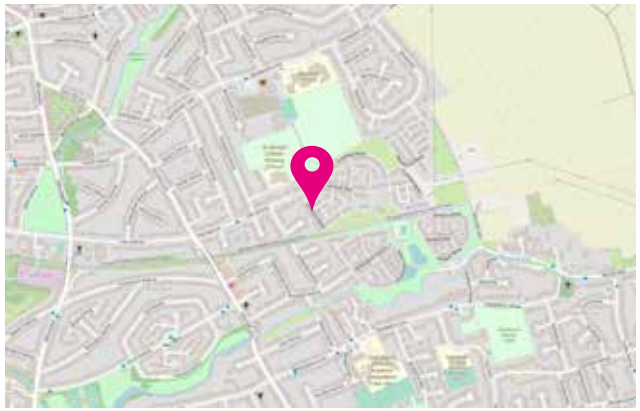
- Where multiple driveway access are provided footways often undulate resulting in a poorer pedestrian environment. Footway parking will often be a problem where the carriageway is narrow and dedicated on street parking is not provided.
- Manual for Streets and Building for a Healthy Life recommend tight corner radii of 3m and less to make crossing the street easy for pedestrians. There are design solutions such as localised widening of the carriageway, allowing occasional large vehicles to take up the whole road - see Part 2 for further information.

Secondary Street (public transport route):

Derwent Way, Derwenthorpe, York

Derwent Way provides access to the new settlement of Derwenthorpe connecting with Fifth Avenue.

The street includes a number of well designed on street parking bays, incorporating street trees. Derwenthorpe demonstrates the value of green landscaping, including sustainable urban drainage, to new developments.



Secondary Street: Derwenthorpe, York (photo courtesy of Andrew Cameron)

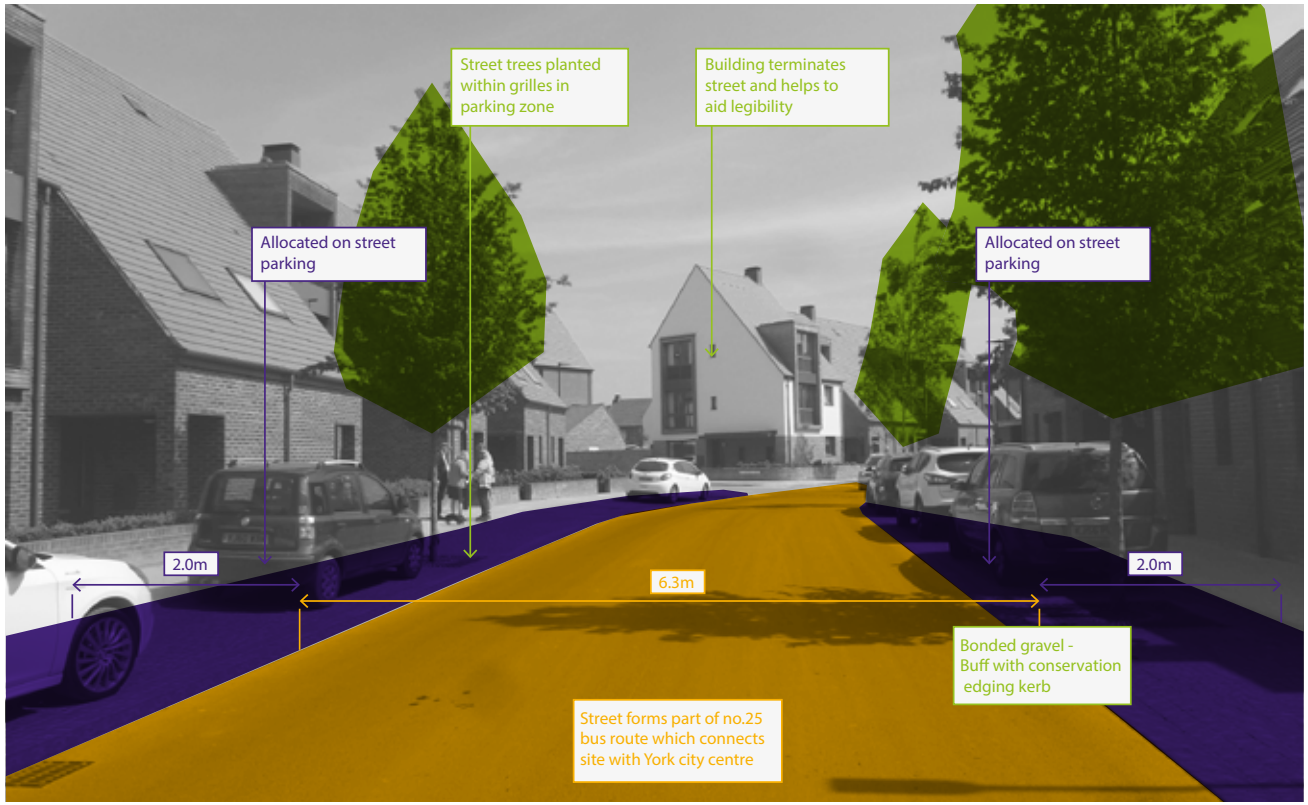
Location	Derwenthorpe, York
Project size	21.7 ha site west of Metcalfe Lane, Osbaldwick, 2 miles east of the city centre. 540 new homes with 40% affordable.
Project description	The scheme has won awards for both design and build, including a Civic Trust Award (2014 for Phase 1), Housing Design Award ('Completed' category 2013), What House? Awards (Silver in 'Best Development' 2013)
Developer	David Wilson Homes with Joseph Rowntree Foundation
Adoption status	Designed to be adopted.
Car parking	One space per household

Analysis of Street

Derwent Way is 6.3m wide with 2m parallel parking bays on either side of the street.

Street trees are located in the parking zone, breaking up the impact of parked cars on the street scene.

The street accommodates the number 25 bus service which links the site with York city centre to the west and then on to Fulford to the south.



Secondary Street: Derwenthorpe, York (photo courtesy of Andrew Cameron)

Place	Provision of a central community space has enabled a sense of community to develop across phases. Derwenthorpe demonstrates the value that green landscaping, including sustainable urban drainage brings to new developments.
Movement	The City of York Council worked with JRHT to develop the bus service, with a contribution made by JRHT as part of the S106 planning agreement. The site is well connected the Derwent Valley and Foss Islands (66) cycle track which runs through the central public open space. There is also a car club scheme on site.
Access	Front doors access directly onto Derwent Way.
Parking	Residents are encouraged to have only one car per household.
Drainage, utilities & street lighting	Conventional drainage system. Street lighting columns located at back of pavement.

Secondary Street (public transport route):

Chetcombe Street, Poundbury, Dorset

Chetcombe Street is located to south of the Bridport Road, which links the new settlement of Poundbury with Dorchester to the east. It is fronted by two storey residential properties on both sides of the street, and is terminated with a view towards a landmark building on Widcombe Street.

The street includes a number of on street parking bays, incorporating street trees.

Secondary Street: Chetcombe Street, Poundbury (photo courtesy of Annabel Keegan)

Location	Poundbury, Dorset
Project size	2,200 homes by 2025 161.8 hectares
Project description	Mixed use urban extension Density: 40 homes per hectare
Developer	Duchy of Cornwall
Adoption status	Mixed - Over time the DoC prepare some parts of the Estate for formal transfer and ownership by Dorset Council (DC), typically roads, footways and associated infrastructure (e.g. Street lighting)
Car parking	Parking ratio: 230%

Analysis of Street

Chetcombe Street is varied in width along its length ranging between 6 - 8m wide. The width of the street varies in response to the building line.

Unallocated on street parking bays are located at key points along the street, interspersed with street trees planted within the parking zone.

Secondary Street: Chetcombe Street, Poundbury (photo courtesy of Annabel Keegan)

Place	Predominately residential, with some elements of mixed use. The strong sense of place is created by the quality of the architecture, set against a relatively simple street cross section and material palette.
Movement	Even though the street is relatively wide speeds are controlled by short lengths between junctions, absence of road markings, presence of on street car parking and richness of the architecture.
Access	Low key and direct access to plots helps to create a uncluttered street scene. Front doors and windows face on to the street to ensure surveillance. Vehicular access is taken across a level footway crossover.
Parking	Some well defined, unallocated on street car parking. Trees are planted within the parking bays, not on individual build outs.
Drainage, utilities & street lighting	Street lighting columns are located at the back of footway. Heritage style.

What does ‘green’ look like?

Castleward Boulevard, Derby

- Contraflow cycling on one way street.
- Integration of street trees helps to define the route and define unallocated parking bays.
- Street is well defined on both sides by residential development.
- Creation a level pedestrian crossing using contrasting materials on a key desire line.

One way street with contraflow cycling: Castleward Boulevard, Derby (photo courtesy of Stefan Kruczkowski)

Measham, Leicestershire

- Landscape verge to one side of the street allows space for tree planting and adds interest to the streetscene.
- Landscape areas also serve to guard against pavement parking.
- Direct frontage access off secondary street.
- Principal elevations to the street
- Consistent building line and cohesion between building typologies.

Secondary Street: Measham, Leicestershire (photo courtesy of Stefan Kruczkowski)

Moira, Leicestershire

- Integration of street trees helps to define the route.
- Street is well defined on both sides by residential development.
- Principal elevations to the street
- Consistent building line and cohesion between building typologies.

Secondary Street: Moira, Leicestershire (photo courtesy of Stefan Kruczkowski)

Queniborough, Leicestershire

- Landscape lozenges allows for the planting of street trees and adds interest to the streetscene.
- Landscape areas also serve to guard against pavement parking, with bollards guarding against verge parking.
- Direct frontage access off secondary street.
- Principal elevations to the street
- Consistent building line and cohesion between building typologies.

Secondary Street: Queniborough, Leicestershire (photo courtesy of Stefan Kruczkowski)

What does ‘red’ look like?

- Front doors face the street.
- Frontage access for all homes.
- Heavy reliance on tandem parking spaces has resulted in displaced parking. Narrow street width results in pavement parking.
- Lack of a cohesive building line and blank gable ends projecting into the street.
- Lacks any sense of local distinctiveness.
- Up / down kerbs.
- Weak threshold spaces (the space between the back of pavement and the face of the buildings.

Secondary street with displaced / footway parking: (photo courtesy of Stefan Kruczkowski)

- Front doors face the street.
- Frontage access for all homes.
- Adoptable street with minimal adoption extents
- Displaced parking due to reliance on large number of tandem parking spaces.
- Lack of an structural landscaping.
- Dropped kerbs (up/down for pedestrians)
- Overly large corner radii
- Lacks any sense of local distinctiveness.

Secondary street with lack of any structural landscape: (photo courtesy of Stefan Kruczkowski)

- Avoid the use of un-necessarily curved streets as these result in small left over green spaces for forward visibility
- Lack of a cohesive building line and blank gable end on to the street.
- Lacks any sense of local distinctiveness.

Curved streets often create unsatisfactory street scenes and waste land: (photo courtesy of Stefan Kruczkowski)

- Heritage light columns create a more human scale to the street and reinforce character.
- Space for trees.
- Over-wide carriageway with un-necessary bends resulting in large areas of space dedicated for forward visibility.
- White hatching to vehicle over run area encourages and allows drivers to adopt faster speeds.
- Lacks any sense of local distinctiveness.

Curved streets resulting in forward visibility splays: (photo courtesy of Stefan Kruczkowski)

The design carefully integrates space for vehicle turning manoeuvres and the absence of road markings and use of visual narrowing using setts encourages slow vehicle speeds.

Belvedere, Cornwall (photo courtesy of Andrew Cameron)

Tertiary Streets

Description and Application

- Tertiary Streets are quieter residential streets including mews and streets designed to homezone principles.
- They are low trafficked connected streets and often have a level surface.
- They are residential in character are well enclosed, with buildings usually situated on both sides of the street.
- Where traffic volumes and speeds are low (see table 4.1 in LTN 1/20) cycling on the carriageway will normally be acceptable.
- Tertiary streets are not usually bus routes.

Good Practice Principles

- Tertiary streets must create a positive pedestrian / cycle environment and should (where appropriate) integrate opportunities for play and community interaction.
- They must integrate car parking, so that it does not dominate the public realm, and prevent anti-social parking.
- Tertiary streets should recognise the importance of the community function of streets as spaces for social interaction.
- Tertiary streets should provide an inclusive environment that meets the needs of people of all ages and abilities.
- Must integrate landscape and tree planting.
- Must be designed to reduce the speed of cars.
- Should minimise the use of culs-de-sac. Where culs-de-sac are used connectivity for pedestrians and cycles must be ensured.
- Where mews and / or shared surface areas are unadopted, the streets must remain publicly accessible and maintained by an appropriate management company.

Common Pitfalls

- Where multiple driveway access are provided footways often undulate resulting in a poorer pedestrian environment. Footway parking will often be a problem where the carriageway is narrow and dedicated on street parking is not provided.
- Manual for Streets and Building for a Healthy recommends tight corner radii of 3m and less, however is will be important to ensure that refuse vehicle access can be maintained. This may require slightly wider road widths in preference to generous corner radii.

Mews Street:

Mews Street, Trent Basin, Nottingham

Trent Basin represents an early phase of approximately 30 residential units which forms part of a major waterside renaissance project in Nottingham. The overall site extends to 6.9 hectares, with a long waterside frontage to both the River Trent and an inland harbour.

The overall development will comprise a mixture of residential and ancillary leisure and commercial uses.

Mews Street: Trent Basin (photo courtesy of Blueprint)

Location	Trent Basin, Nottingham
Project size	Overall site size – 6.9 hectares Total number of units – 306
Project description	Mix of units / land uses – New residential neighbourhood in Nottingham Waterside with ancillary leisure and commercial users.
Developer	Blueprint
Adoption status	Streets are adopted, mews, courtyards and parking courts are unadopted.
Car parking	Total number of spaces – 390 (1.3 spaces per home) Type of parking provided – A mixture of off street, on plot and on street.

Analysis of Street

The mews street shown in the photograph below provides access to a small number of residential properties which all have covered off street parking spaces.

The mews street is narrow to create a sense of enclosure, reduce vehicle speed and discourage antisocial car parking. The layout incorporates filtered permeability at the end of the mews which allows pedestrian and cycle connectivity to the riverside footpath which runs along the edge of the River Trent.

Mews Street: Trent Basin (photo courtesy of Blueprint)

Place	A variable depth landscape space is provided to the front of all properties ranging in depth between 1 - 1.5m. Retained landscape creates a mature edge to the site, and provides sense of enclosure.
Movement	A 5.0m clear path has been provided for shared use by all modes. Filtered permeability at the end of the private driveway connects the street to the wider network for pedestrians and cyclists.
Access	Low key and direct access to plots helps to create a uncluttered street scene. Front doors face on to the street to ensure surveillance on this one sided street.
Parking	A mixture of off street, on plot and on street is provided at Trent Basin. Parking is provided at a ratio of 1.3 spaces per home.
Drainage, utilities & street lighting	Low level street lighting is provided within the landscape to the front of the properties. Other services are located within the shared surface corridor.

What does ‘green’ look like?

Upton, Northamptonshire - Parkside

- Street trees have been used to break up the linearity of the street and help to define on street parking bays.
- Well integrated on street car parking.
- Clear definition between the public and private realm.

Tertiary Street: Upton, Northamptonshire (photo courtesy of Andrew Cameron)

Chapelton, Aberdeenshire

- Well defined level surface with block work across the street to break up the linearity.
- Clear definition between the public and private realm.
- Locally distinctive architecture.

Tertiary Street: Chapelton. Aberdeenshire (photo courtesy of Andrew Cameron)

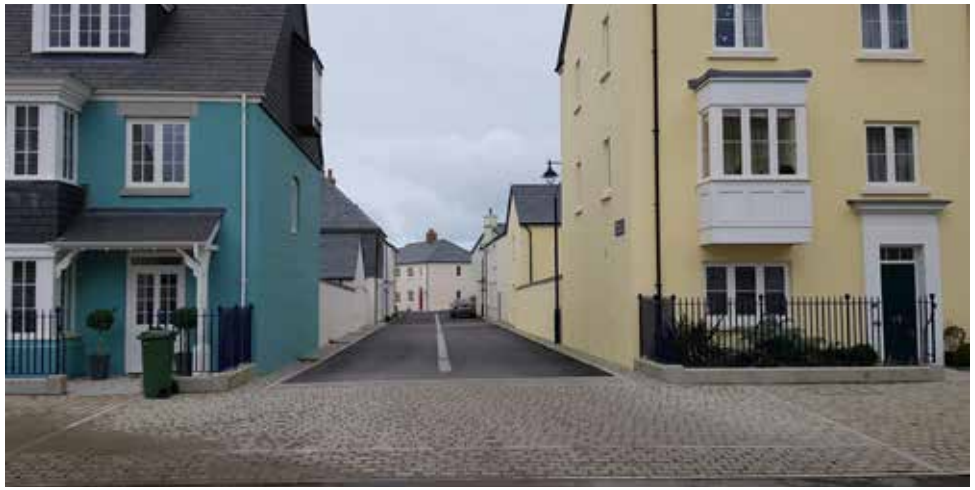
Knockroon, East Ayrshire

- Varying road width and stepped building line adds character and helps reduce traffic speeds.
- Simple material palette.
- Good use of shared surface.
- Straight street with building terminating the view along the street.
- Single sided street is not typically recommended, however strong edge is created by the boundary wall.

Tertiary Street: Knockroon, East Ayrshire (photo courtesy of Andrew Cameron)

Nasledan, Cornwall

- Level footway crossing over side road prioritises pedestrian movement.
- Central drainage channel indicates its place in the traffic hierarchy and helps to reduce traffic speeds.
- Straight street with building terminating the view along the street.
- Reliance on courtyard parking not typically recommended.



Tertiary Street: Nasledan, Cornwall (photo courtesy of Andrew Cameron)

Newhall, Harlow

- Well defined level surface with block work clearly defining the private and public realm.
- Space for trees and landscape.
- Well integrated car parking.

Mews Street: Newhall, Harlow (photo courtesy of Design for Homes)

Tregunnell Hill, Newquay

- Use of central drainage feature alongside simple surface materials helps to emphasise the site's natural topography.
- Paved edge strips help to create a small semi-private boundary to the properties.
- Direct access to on plot parking.
- Variable building line adds interest and character to the street and helps to reduce traffic speeds.

Mews Street: Tregunnel Hill, Newquay (photo courtesy of Andrew Cameron)

What does ‘red’ look like?

Lack of space to park resulting in pavement parking with pavements often completely blocked by parked cars.

Pavement parking: (photo courtesy of Stefan Kruczkowski)

Lack of space to park resulting in pavement parking.

Pavement parking: (photo courtesy of Stefan Kruczkowski)

Wooden bollards allow for filtered permeability for pedestrians and cyclists, whilst managing vehicle movements.

Edge Lane: Elsmbrook, Bicester (photo courtesy of Phil Jones)

Edge Lane / Private Driveway

Description and Application

- These are very low trafficked streets, typically located on the edges of a development.
- They are often single sided streets and usually have a shared surface.
- Where such streets serve five or fewer dwellings they are often un-adopted private driveways.
- They are often not through routes for motor vehicles.

Good Practice Principles

- Designers and developers should work with local authorities to ensure edge lanes are connected for pedestrians and cyclists and adopted by the highway authority wherever possible. This will help to ensure permeability for people and future connectivity.
- Early liaise and negotiation with the local highway authority regarding adoption is recommended.
- Edge lanes can vary in width to create a more informal edge to the site, and incorporating landscape features.
- If possible services should be laid within the street. However, if a service strip is required this should be level with the carriageway to avoid giving the impression of a narrow footway.

Common Pitfalls

- Particularly where routes are un-adpoted there is often reluctance to make the street part of a connected network for walking and cycling.
- Absence of street lighting on un-adopted streets.
- Lack of overlooking.
- Providing connectivity for walking and cycling using a parallel adopted route can create a narrow landscape strip, often incorporating a knee rail to separate it from the private driveway creating a maintenance liability.
- Use of private wholly around the edges of a site prevents connectivity to adjacent land.
- Excessive use of asphalt materials and over generous widths can create a perception of vehicle dominance, particularly if a raised service strip is used.

Edge Lane:

Old Mills Road, Trumpington Meadows, Cambridge

Old Mills Road is a street located on the northern edge of Trumpington Meadows and faces onto the grounds of Ansty Hall. It provides a continuous route for walking and cycling along the edge of the site, connecting to the A1309 Hauxton Road, nearby supermarket and then on to Cambridge city centre.

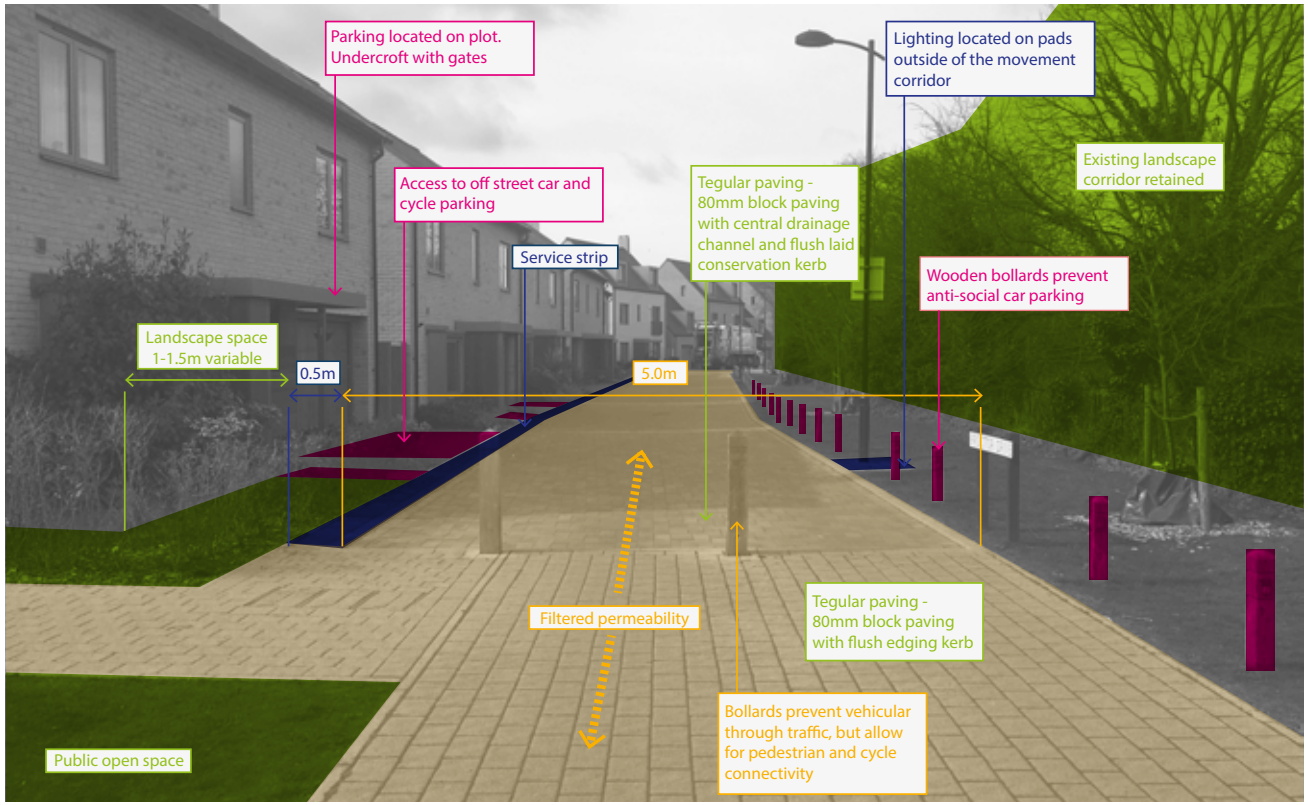
Edge Lane: Trumpington Meadows, Cambridge (photo courtesy of Annabel Keegan)

Location	Trumpington Meadows, Cambridge
Project size	1,200 homes 62.7 ha (including country park)
Project description	Sustainable urban extension on the northern fringe of Cambridge
Developer	Barratt Homes
Adoption status	Adopted by Cambridgeshire County Council
Car parking	A CPZ is used across the entire development site, with a variety of parking solutions employed including, on plot parking, garages and parking courts.

Analysis of Street

Old Mills Road offers filtered permeability for pedestrians and cyclists. A useful technique that designs out 'rat running' and creates a pleasant low traffic environment around people's homes whilst still allowing pedestrian and cycle movement.

Retained landscape creates a mature edge to the site, and provides sense of enclosure.



Edge Lane: Trumpington Meadows, Cambridge (photo courtesy of Annabel Keegan)

Place	A variable depth landscape space is provided to the front of all properties ranging in depth between 1 - 1.5m.
Movement	A 5.5m clear path has been provided for shared use by all modes. Filtered permeability at the end of the private driveway connects the street to the wider network for pedestrians and cyclists.
Access	Low key and direct access to plots helps to create a uncluttered street scene. Front doors face on to the street to ensure surveillance on this one sided street.
Parking	A CPZ is used across the entire development site, with a variety of parking solutions employed including, on plot parking, garages and parking courts.
Drainage, utilities & street lighting	A 0.5m low key service strip has been provided using the same materials as the movement corridor and does not read as a narrow footway. Street lighting located on concrete pads to avoid widening the movement corridor.

What does ‘green’ look like?

Derwentorpe, York

- Use of granite strips on edge of level surface helps to visually narrow the street and calm vehicle speeds.
- High quality planting helps to create a defensible boundary to private frontages.
- Services integrated into street avoids the need for a service strip.
- Direct access to on plot parking.
- Variable carriageway width adds interest and character to the street and helps to reduce traffic speeds.
- Welcoming to pedestrians and cyclists.

Edge Lane: Derwentorpe, York (photo courtesy of Andrew Cameron)

Bletchingdon, Oxfordshire

- Service strip is level with Level surface and functions as a defined space for pedestrians, and links with frontage access.
- Materials on Level surface street are better quality and complement the built form.
- Level surface street is narrow.
- No direct frontage access for vehicles relies on rear parking courts.

Edge Lane: Bletchingdon, Oxfordshire (photo courtesy of Andrew Cameron)

Measham, Leicestershire

- Use of granite strips on edge of Level surface helps to visually narrow the street.
- High quality planting helps to create a defensible boundary to private frontages.
- Services integrated into street avoids the need for a service strip.
- Variable carriageway width adds interest and character to the street and helps to reduce traffic speeds.
- Adopted allowing kerb side waste collections and connected street network.
- High quality landscaping helps to integrate parked cars.

Edge Lane: Measham, Leicestershire (photo courtesy of Stefan Kruczkowski)

Barton Seagrave, Northamptonshire

- Service strip is level with level surface and functions as a defined space for Materials on level surface street are better quality and complement the built form.
- Level surface street is narrow.
- Variable street width.
- Direct access to on plot parking.
- Kerb side waste collections.

Edge Lane: Barton Seagrave, Northamptonshire (photo courtesy of Stefan Kruczkowski)

What does ‘red’ look like?

- Tree in carriage is a positive feature, however will take a long time to reach maturity before having an impact on streetscene.
- Raised service strip reads like a narrow footway. Preference would be to avoid use of a service strip altogether, or use a flush service strip.
- Use of asphalt on Level surface street does not invite pedestrians / cyclists to share the movement corridor with vehicles.
- Level surface street appears excessively wide due to lack of differentiation between Level surface and on street parking bays.
- Narrow planting strip is unattractive and will be difficult to maintain.

Narrow service strip: (photo courtesy of Laura Alvarez)

- No connection for pedestrians or cyclists from end of private driveway. Worn path shows this is a desire line.
- If a connected street was provided, the use of knee rails to stop cars driving over grass, would be unnecessary.
- Knee rails are unattractive, are a hazard for pedestrians and cyclists and a future maintenance liability.

Unconnected private driveways: (photo courtesy of Phil Jones)

- Lack of connections across the central open space results in an internally dis-connected layout.
- Lack of bin storage means that wheelie bins are left on street by residents.

Lack of internal connectivity across central open space: (photo courtesy of Stefan Kruczkowski)

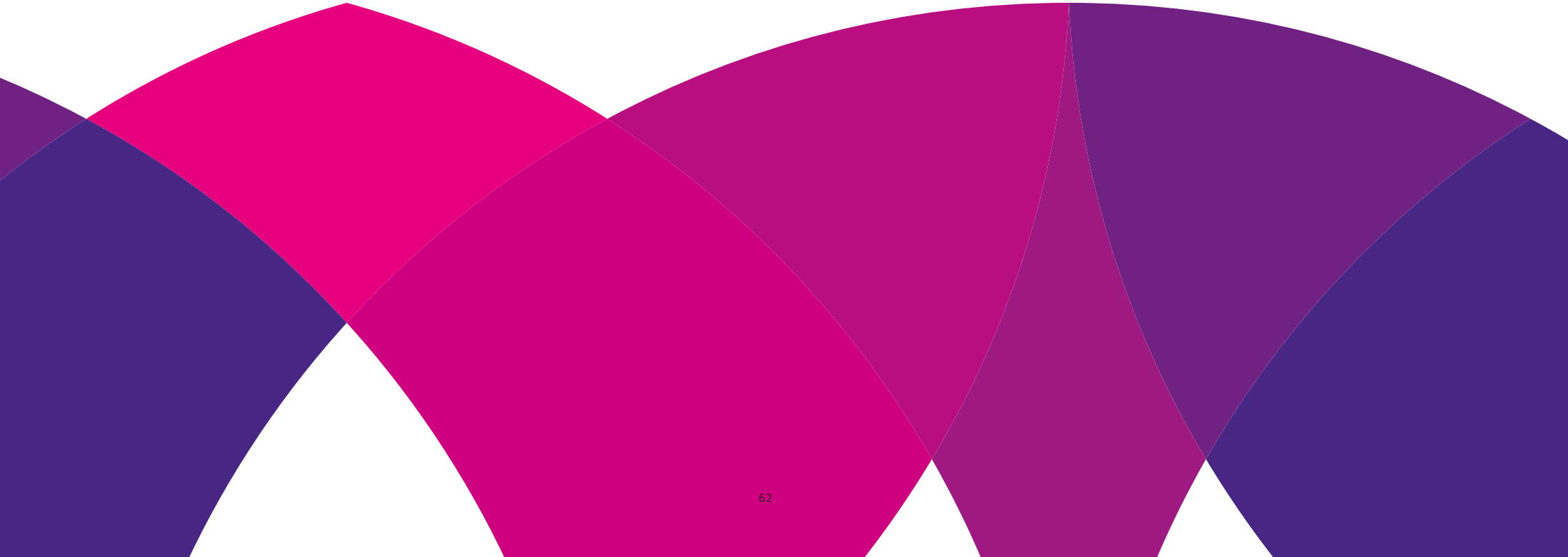
- Two private driveways abut.
- Knee rail and private conveyance blocks connectivity for pedestrians or cyclists from end of private driveway.

Two disconnected private drives frustrate pedestrian, cycle and vehicle movement:
(photo courtesy of Stefan Kruczkowski)

03. Street Design Elements

This section will set out detail street design elements.

This section will be prepared following the Beta document release and testing.

Contact us

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