## Introduction

This section covers design principles for the street types previously identified.

A range of approaches are included, which identify the need for variety in street design for different uses and within different contexts. Applicants are expected to demonstrate how they have incorporated the information in this section and achieved appropriate design character.

### Primary roads

Potsford Dam Link (see p34 for location)

This strategic route **must** be classified as a category 3A primary road, designed to accommodate higher volumes of mixed traffic at faster speeds. Primary roads typically link strategic routes with urban centres and have limited frontage access.

- **PS.01** The design of Category 3A roads **must** adhere to the Design Manual for Roads and Bridges (DMRB) and Warwickshire County Council (WCC) general design guidance as outlined in the Movement section.
- **PS.02** Primary roads **should** have the character of a tree-lined avenue, incorporating generous landscaped verges with a rhythmic arrangement of street trees.
- **PS.03** Footways and cycleways **must** be set back from the main carriageway to mitigate the impact of high traffic volumes, including heavy goods vehicles (HGVs).
- **PS.04** Development frontage can provide a setting for the primary road, as illustrated in the section below. However, direct access must be avoided. Instead, a parallel tertiary or private drive **should** be provided for frontage access, though these should not link directly to the Potsford Dam Link.



Figure 23: Potsford Dam Link section

Also refer to:

Movement Nature Built form

RBC local plan policy: DS8, DS9, HS1, D1 + South West Rugby Masterplan SPD (2021, updated 2024)

Warwickshire Design Guide

## Secondary streets

<u>Role</u> Provide high-capacity links to urban centres and the wider strategic road network.

Refer to Movement section (page 29) for characteristics of street types.







alade Lane Cambridge - Frontage to main street



French perpendicular parking



Dollman Road, Houlton



Eddington Cambridge - Separated cycleway



Tornigrain Inverness - Corner shop on main street

Also refer to:

Movement Nature Built form

RBC local plan policy: DS8, DS9, HS1, D1 + South West Rugby Masterplan SPD (2021, updated 2024)

Warwickshire Design Guide

## Secondary streets

#### <u>3b: Secondary Distributor Road/Secondary Streets – Urban residential/mixed</u> <u>use</u>

Sample layout A (see page 31 showing illustrative street network for location).

- **PS.05** Secondary streets in urban residential areas **must** meet the following design criteria:
- Carriageway width must be between 6.1 m (minimum) and 6.7 m (maximum) with inset parking bays or on-carriageway parking.
- Design speed must be 20mph maximum but should be 30mph if designated as a bus route.
- Bus stopping facilities must be integrated, and pedestrian crossings must be prioritised for placemaking.
- Priority pedestrian crossings must be included at key desire lines, with informal crossings provided at least every 100m.
- Cycle tracks (segregated) must be provided as per LTN 1/20. The desirable minimum width is 3m.
- Minimum 2.0m footways must be provided on both sides and could be wider in urban residential areas.
- Tertiary side street junctions must be designed as T-junctions, incorporating inline pedestrian and cycle priority crossings.
- Junction visibility must comply with MfS standards.
- No direct frontage access is permitted.

**PS.06** Secondary streets in urban residential areas **could** meet the following design criteria:

• Highway verges could be provided, offering flexibility for street trees, inset parking bays, or footway construction supporting crossings and bus stops.





Figure 24: Secondary street in an urban residential/mixed use context.

#### Secondary streets

<u>3b: Secondary Distributor Road/Secondary Streets – Suburban residential</u> Sample layout B (see page 31 showing illustrative street network for location).

- **PS.07** Secondary streets in suburban residential areas **must** meet the following design criteria:
- Carriageway width must be 6.1 m where there is no on-street parking and 6.7 m where there is on-street parking.
- Design speed must be 20mph or should be 30mph if a bus route.
- Highway verges must be provided to support a mix of grass verges, street trees, SuDS features, inset parking bays, or footway construction.
- Bus stop facilities must be provided along with nearby pedestrian crossings.
- Speed control measures must align with the principles in Section 2.5.
- Priority crossings must be provided at key pedestrian desire lines, with informal crossings required every 100m.
- Cycle tracks (segregated) must be provided as per LTN 1/20. The desirable minimum width is 3m.
- Minimum 2.0m footways must be provided on both sides.
- Tertiary side street junctions must be designed as T-junctions with inline pedestrian and cycle priority crossings.

Car parking

Bus stop

Priority crossing

Private drive

Highway boundary

- Junction visibility must comply with MfS standards.
- No direct frontage access is permitted.



Figure 25: Secondary street in a suburban residential context.

Key

Pedestrian space

Cycle track

Soft landscape

Carriageway

SuDS

## Tertiary streets

<u>Role</u> Provides local access to residential properties.

Refer to Movement section (page 29) for characteristics of street types.



Goldsmith Street, Norwich - use of inset parking, trees and informal crossings





Derwenthorpe, York - street trees in footway

Houlton, Rugby - tertiary street

Also refer to:

Movement Nature Built form

RBC local plan policy: DS8, DS9, HS1, D1 + South West Rugby Masterplan SPD (2021, updated 2024)

Warwickshire Design Guide



#### Tertiary streets

<u>Type 4a: Link Road/Tertiary Street (type 1)</u> Sample layout C (see page 31 showing illustrative street network for location).

- **PS.08** Tertiary streets T1 in suburban residential areas **must** meet the following criteria:
- Carriageway width must be 5.5m, excluding any additional parking.
- Design speed must be 20mph maximum.
- Informal pedestrian crossings must be placed every 100m.
- Minimum 2.0m footways must be provided on both sides.
- Side street junctions must be T-junctions with inline pedestrian priority crossings.
- Junction visibility must comply with MfS standards.
- **PS.09** Tertiary streets T1 in suburban residential areas **should** meet the following criteria:
- Highway verges should include street trees subject to achieving appropriate visibility.
- Safe cycling should be accomodated on carriageway except where connecting to a school, community facility or providing a short link between cycle tracks. In these cases cycle tracks should be provided.
- Changes in carriageway material or colour at nodal points should be used for traffic calming (refer to material palettes on p65-66).
- **PS.10** Tertiary streets T1 in suburban residential areas **could** meet the following criteria:
- On-street parking could be provided as inset bays. On-street parking cannot be allocated parking.
- Frontage access could support on-plot parking.

#### Key







### Tertiary streets

<u>4a: Link Road/Tertiary Street (type 1)</u> Sample layout D (see page 31 showing illustrative street network for location)

This example follows the same principles as T1 Design Example C but illustrates different parking arrangements, including on-street and on-plot parking variations.



#### Key





#### Tertiary streets

<u>4b: Local Access Road/Tertiary Street (Type 2)</u> Sample layout E (see page 31 showing illustrative street network for location)

- **PS.11** Tertiary streets T2 in suburban residential areas **must** meet the following criteria:
- Design speed must be 20mph maximum.
- Informal pedestrian crossings must be placed every 100m.
- Safe cycling must be accommodated on-carriageway.
- Minimum 2.0m footways must be provided on both sides.
- Side street junctions must be T-junctions with inline pedestrian priority crossings.
- Junction visibility must comply with MfS standards.
- **PS.12** Tertiary streets T2 in suburban residential areas **should** meet the following criteria:
- Carriageway width should be 5.0m when serving up to 50 dwellings.
- Carriageway material changes should be used for visual differentiation.
- **PS.13** Tertiary streets T2 in suburban residential areas **could** meet the following criteria:
- On-street parking could be provided as inset bays or informal oncarriageway parking.
- Frontage access could support on-plot parking.
- Highway verges could include street trees.
- Speed reduction measures may include kerb buildouts and other techniques outlined in the Movement section.

Raised table

Private drive

Highway boundary



Figure 28: Tertiary street type 2.

Key

Pedestrian space

Carriageway

Car parking

Soft landscape/SuDS

#### Street codes

#### Private drives

- PS.14 Private drives must not serve more than six dwellings and remain unadopted.
- **PS.15** They **should** be 5.0m wide for a minimum of 7m from the back of the public highway after which they may reduce to 4.5m.
- **PS.16** They **must** be accessible by emergency vehicles and require a turning head if over 20m.
- **PS.17** Refuse and emergency service access **must** be incorporated per the WCC Design Guidance.



Houlton, Rugby - private drive with frontage onto active travel route

#### Car-free streets

- **PS.18** If provided, they **must** create safe, sociable spaces and **should** connect to quiet/low-car streets that form part of the active travel network.
- **PS.19** Should be approximately 8m wide between buildings and could widen for play and social spaces.
- PS.20 Must be level-surfaced with connectivity for pedestrians and cyclists at both ends.
- **PS.21** Emergency vehicle access **must** be maintained.

Marmalade Lane, Cambridge - Car-free street and community space



Marmalade Lane Cambridge - Community car park facilitating car-free streets

Active-only routes Refer to proposed active travel network on p35.

PS.22 Must provide safe dedicated spaces for cycling, walking and wheeling, which are suitable all year round and well lit.

to context.

PS.24 Must ensure safe and overlooked active travel, considering tree placement and height.





Houlton, Rugby - Active travel route

Also refer to:

Movement Nature Built form

RBC local plan policy: DS8, DS9, HS1, D1 + South West Rugby Masterplan SPD (2021, updated 2024)

Warwickshire Design Guide

PS.23 Should include a two-way cycleway and one or two footways, adapting

The Avenue, Saffron Waldron - Use of existing landscape to create functional, active-travel only route

## Street landscape general principles

#### Preservation

Preservation of existing landscape features applies to streets, refer to NA.XX for requirements.

#### Application of landscape features - General

- **PS.25** General best practice for the implementation of landscape **must** be followed at all times. This **should** include, but not be limited to the use of tree anchors, double or single staking, irrigation tubes, protection guards including rabbit proof guards and temporary plant protection until establishment. This applies to all situations.
- PS.26 Mown grass verges must be maintained up to 600mm comprising of grass species and flowering forbs with specimen tree planting, which should not obstruct visibility.
- PS.27 All soft landscaping should not adversely affect visibility and should be suitable for adoption within the highway.

	ation of landscape features - Secondary streets SUDs <b>should</b> be incorporated into the verges.
PS.29	Verges of 3m+ widths <b>must</b> be managed with diverse height structures, which should not obstruct visibility.
PS.30	Medium trees <b>should</b> be specified.
PS.31	In visibility splays, mown grass <b>should</b> be maintained up to 600mm, single stem trees with slender girth at maturity must be specified.

Application of landscape features - Tertiary streets **PS.32** In visibility splays, mown grass **should** be maintained up to 600mm, single stem trees with slender girth at maturity must be specified.

highways.

Application of landscape features - Minor streets **PS.35** Small trees **should** be specified.

**should** be prioritised.

PS.37 Minor roads terminating at the edges of open spaces must 'borrow' this landscape feature to emulate the open views of the landscape character.



Figure 29: Landscaping principles to secondary streets.

Figure 30: Landscaping principles to tertiary streets.

**PS.33** Small to medium trees **should** be specified.

PS.34 Root barrier systems must be utilised where open spaces interface with

PS.36 Permeable, landscaped boundary treatments to potential GI corridors (for example at the eastern boundary of the site to the rear of Alwyn Road)



#### Street types for other uses

#### Streets to employment development

Streets to employment estates will generally be similar in design to category 3B secondary streets but with wider carriageways to suit, primarily serving industrial areas where HGV traffic is more prevalent.

- **PS.38** These streets **must** provide efficient access and circulation within industrial zones, linking directly to other secondary streets or primary roads.
- **PS.39** To maintain an avenue character, industrial streets **must** incorporate generous verges and street trees. Footways and cycleways should generally be set back from the carriageway to enhance safety and comfort for pedestrians and cyclists.

#### **PS.40** Development frontage **could** be:

- Set back within a landscaped area to create a buffer between industrial activities and the street, or
- Positioned at the back of the footway where appropriate for urban integration.



Figure 31: Streets to employment development.

# Also refer to: Movement Nature Built form RBC local plan policy: DS8, DS9, HS1, D1 + South West Rugby Masterplan SPD (2021, updated 2024)

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#### Access to schools

**PS.41** School entrances should be located on low traffic tertiary streets, away from the primary and secondary street network, and must have direct access to the active travel network.

- **PS.42** Streets near schools **must** prioritise vulnerable and active travel users, incorporating enhanced safety and comfort measures such as:
- Traffic management
- Parking controls
- Protected off-carriageway space for cycling
- Secure on street visitor cycle parking (see page 37 for requirements)
- **PS.43** The street providing school access should not provide a through route for vehicular traffic and must be suitable for 'school street' classification. Measures could include:
- Pedestrian and cycle zone classification
- No vehicular access at drop-off and collection periods except to residents
- **PS.44** Where parental drop-off and collection is deemed necessary, a dedicated facility should be provided. This could be on street or within the school boundary.
- **PS.45** Designers must ensure that school street designs can integrate the required safety and comfort features and that the character of these streets are clearly distinguished from other road types.
- **PS.46** Opportunities for dedicated park and stride facilities should be located within a maximum 5-10min walk from the school

#### School streets

"A School Street is a road outside a school with a temporary restriction on motorised traffic at school drop-off and pick-up times. The restriction applies to school traffic and through traffic. The result is a safer, healthier and pleasant environment for everyone." From School Streets Initiative

<u>How they work</u> Streets around the school become a Pedestrian & Cycle Zone for agreed times (of between 30 minutes and 1 hour) at the start and end of the school day. Signs at the entrance to the zone will inform people of these restrictions. Motor vehicles cannot drive in this zone between these times unless they have a permit.

From <u>Warwickshire County Council</u>



# Hard landscape materials palette

**PS.44** The table below indicates a guide for hard materials palette that **could** be selected. Materials specified on adoptable routes are to be agreed with the S38 Team.

Route			
Secondary	Designation	Material	Guidance
Roads	To adopted standards	Asphalt	WCC Design Guide
Footways	To adopted standards	Asphalt	WCC Design Guide
	To adopted standards	Block or Sett Paving Colour consistency to be demonstrated	WCC Design Guide Note: Modular paving will, in many cases have a higher maintenance cost and so commuted sums will be required as part of the overall justification.
Cycleways	To adopted standards	Asphalt	WCC Design Guide
Junctions + crossings	To adopted standards	Block paving* Colour consistency to be demonstrated	WCC Design Guide Modular paving will, in many cases have a higher maintenance cost and so commuted sums will be required as part of the overall justification.
Tertiary			
Roads	To adopted standards	Asphalt	WCC Design Guide
		Tegula block paved strip with conservation kerbs either side (1-2 metre length for speed control)	WCC Design Guide
Footways	To adopted standards	Asphalt	WCC Design Guide
	To adopted standards	Block or sett paving Colour consistency to be demonstrated	WCC Design Guide Modular paving will, in many cases have a higher maintenance cost and so commuted sums will be required as part of the overall justification.
Junctions + crossings	To adopted standards	Block paving* Colour consistency to be demonstrated	WCC Design Guide Modular paving will, in many cases have a higher maintenance cost and so commuted sums will be required as part of the overall justification.
Minor			
Footways	To adopted standards	Asphalt (hot rolled asphalt with exposed aggregates- incorporating colour consistency with block and sett paving)	WCC Design Guide Resin based surface treatments can be coloured and may be used both as a HFS and to introduce a colour. HFS often uses calcined bauxite as its aggregate, which is not an environmentally friendly product, so should be avoided if at all possible.
	To adopted standards	Block or sett paving Colour consistency to be demonstrated	WCC Design Guide Modular paving will, in many cases have a higher maintenance cost and so commuted sums will be required as part of the overall justification.
Junctions + crossings	To adopted standards	Block paving* Colour consistency to be demonstrated	WCC Design Guide Modular paving will, in many cases have a higher maintenance cost and so commuted sums will be required as part of the overall justification.
Private roads	Non adoptable	Block or sett paving Permeable paving Colour consistency to be demonstrated	

\* Block paving currently interdicted for junctions by the highway authority.

South West Rugby Design Code\_Draft 10.02.25 Introduction Analysis Vision Code | Movement | Nature | Public spaces | Built form | Homes + buildings | Identity |



/hole Junction





Block sett paving to junction: Tertiary



Setts with Asphalt



# Hard landscape materials palette

Other routes				
Public Rights of Way Interfaces with movement routes	Throughout	Permeable and non permeable solutions Asphalt, hoggin, blinding, resin bound, self binding gravel options.	Warwickshire Rights of Way officer must be consulted See HFS notes for adopted routes.	
Public Rights of Way Interfaces with movement routes	To woodland no dig areas	Reinforced grass over tree cell system Permeable surfacing over tree cell system or loose laid Breedon gravel or similar Self binding gravel materials	Warwickshire Rights of Way officer must be consulted`	Greenway Entrance to POS
Bridleway Interfaces with movement routes	Throughout	Soft: Grass, reinforced grass. Hard: Asphalt, hoggin, blinding, bound rubber grit, self-binding gravel	Ontherighttrack On the right track: surface requirements for shared use routes (excluding mechanically propelled vehicles) Good Practice Guide Access and bridleways advice   The British Horse Society See HFS notes for adopted routes. PRoW team to be consulted.	- Woodland Path
Non designated recreational routes		Reinforced grass over tree cell system Permeable surfacing over tree cell system or loose laid Breedon gravel. Self-binding gravel, hoggin. Rumble strips: Block or sett paving Colour consistency to be demonstrated	Active Travel team to be consulted.	Cell Web over veteran tree Calke Abbey
Greenway links interfaces with movement routes	Throughout	To Sustrans guidance Typically: Hard: Asphalt, hoggin, blinding, bound rubber grit, self-binding gravel Rumble strips: Block or sett paving Colour consistency to be demonstrated	<u>Sustrans traffic-free routes and greenways design guide - Sustrans.org.uk</u> See HFS notes for adopted routes. Active Travel team to be consulted.	Greenway Route





Woodland Walk





Greenway Alongside Road



Cell Web and Resin Bound Gravel





**Reinforced** Grass