

THE POUNDBURY SERIES: THREE

Removing The Road Blocks

14 November 2007

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Introduction

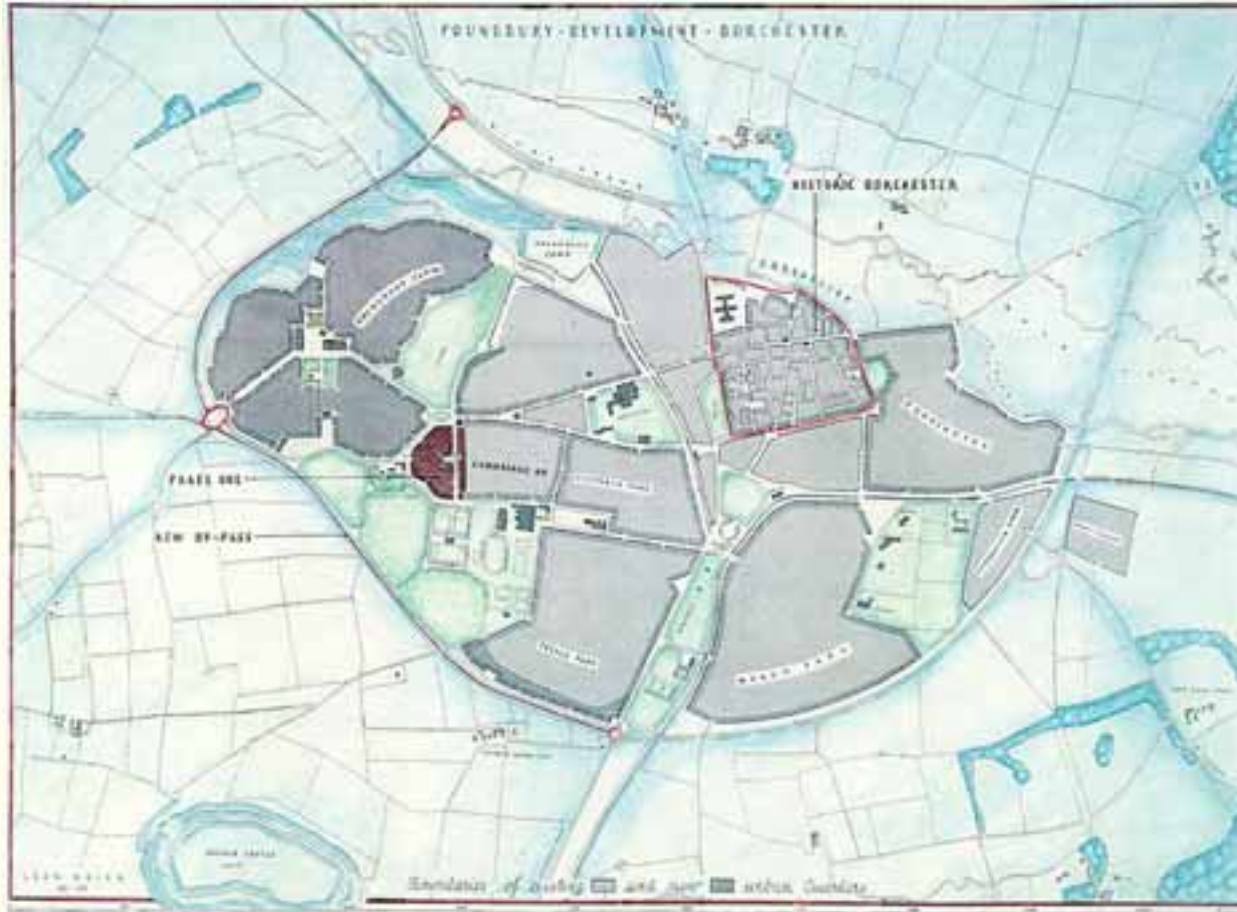
David Paddon

Senior Associate

Removing the Road Blocks

How the key engineering aspects that influence urban design were resolved so that the principles of good Tradition Urbanism are paramount in the Masterplan

Background



Ambition to deliver
an exemplar
development

Inspiration

Corfe Castle



Kings Cross



Inspiration



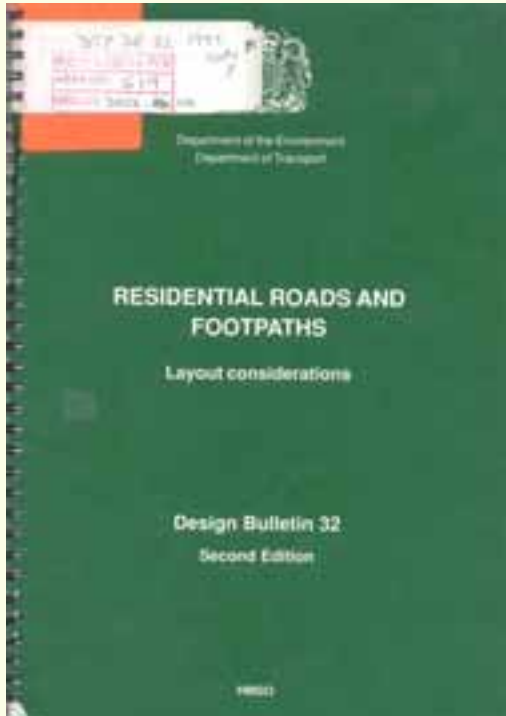
Deal:
Silver Street
Princes Pub
Junction

Inspiration



France:
Cognac
Brittany

Framework



DB32

Guide For Residential Streets

DMRB

Design Manual for Roads and Bridges

Generally for Trunk Roads

PLANNING

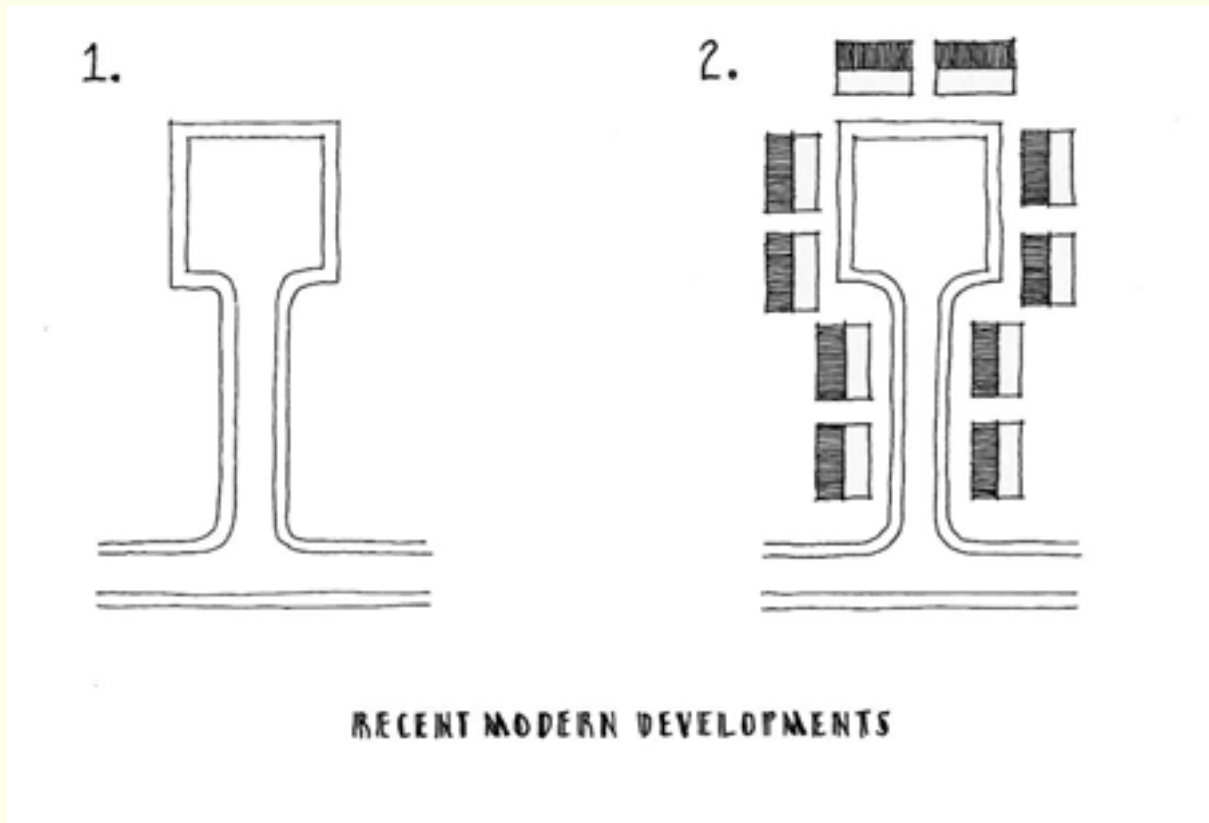
Planners approaching the issues separately
from highway offices

Compartmentalised approach

Key Engineering Issues that Effect Layout

- Permeability
- Hierarchy and Function
- Speed
- Forward Visibility
- Junctions
- Services

Impermeable Streets

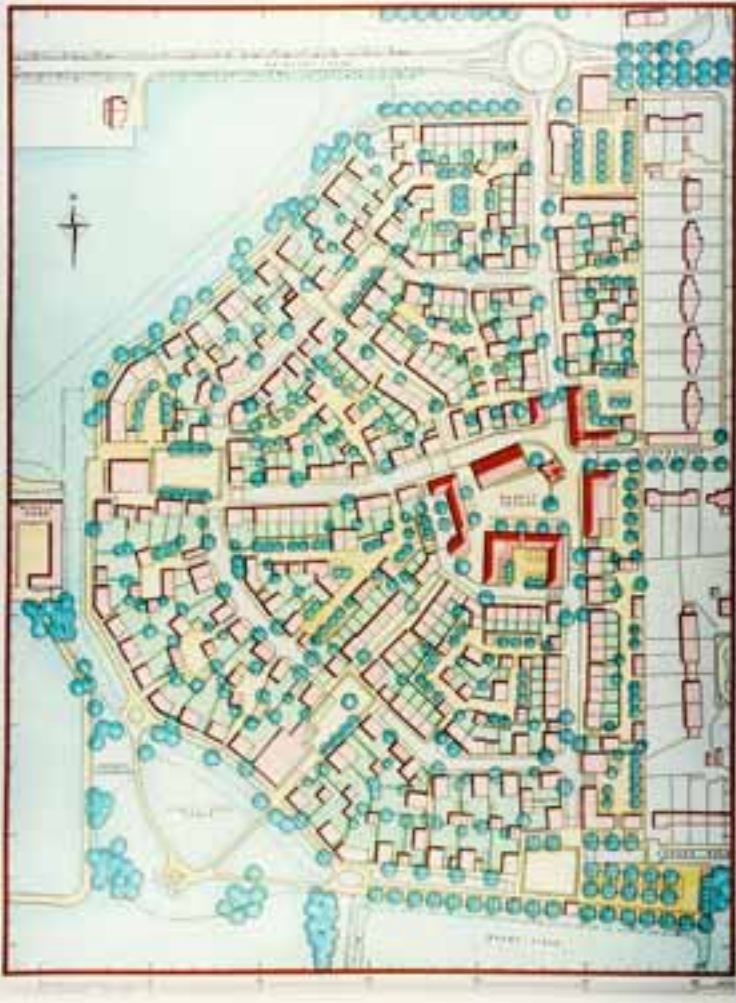


DB32

Designed the layout of streets first, then arranged dwellings

Promoted cul-de-sacs

Well Connected Permeable Streets

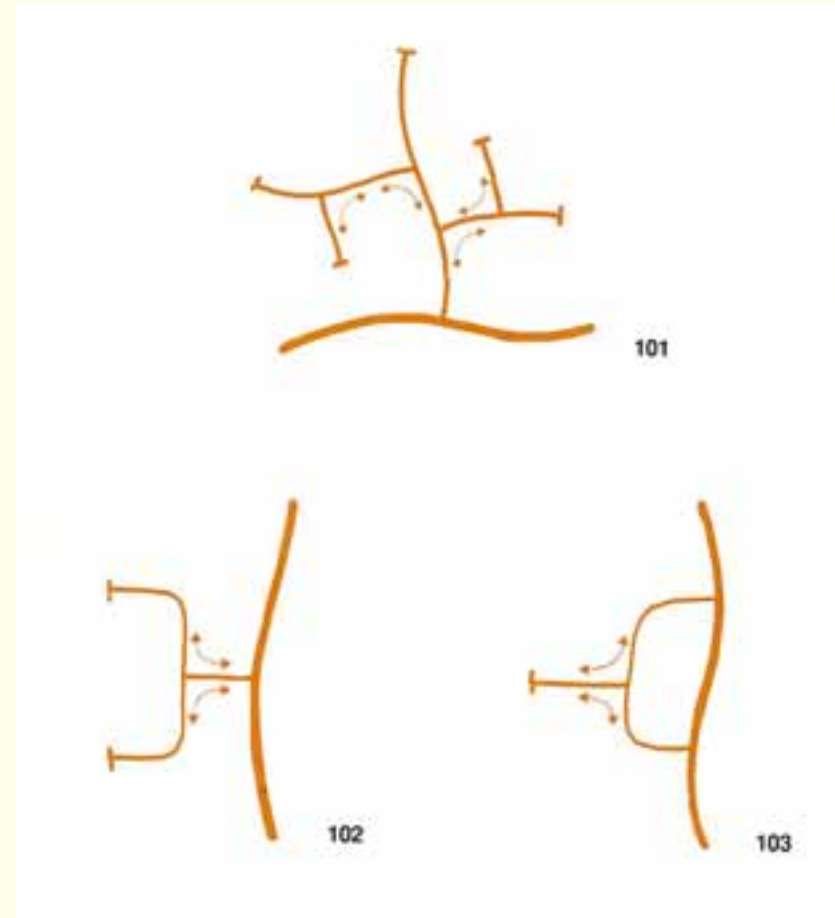
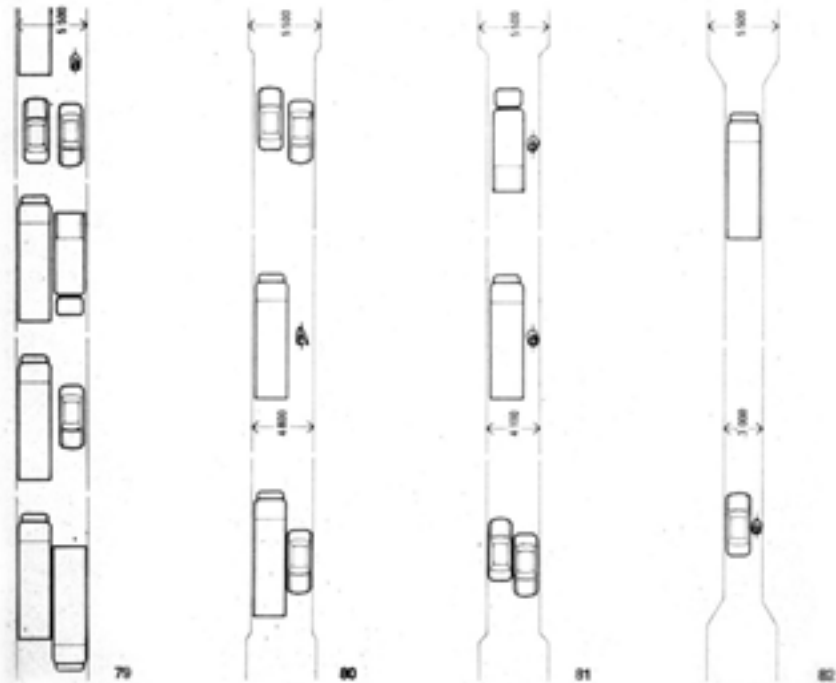


Hierarchy & Function

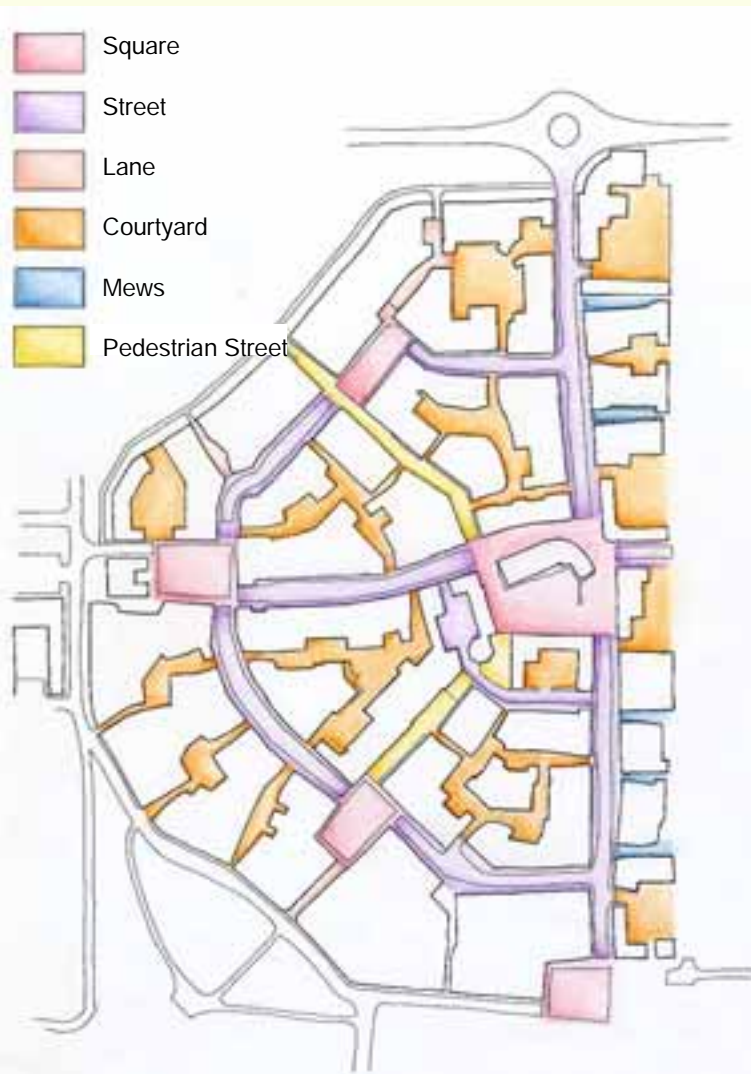
Street Layout - DB32

3.07 Verges should be designed to take into account any requirements for services underground, clearances for vehicles to overhang or provision for trees and shrubs to be planted.

3.08 The layout and dimensions of on-street parking spaces, parking bays and forecourts in grouped parking areas and parking spaces within dwelling curtilages should ensure they are convenient to use. Grouped parking bays should be demarcated to help avoid the waste of space and obstructions that can be caused by indiscriminate parking.



Hierarchy of Spaces



Determine function first:

Squares: Promote social interaction

Street: Provide access for all users

Lanes: Provide access for residents

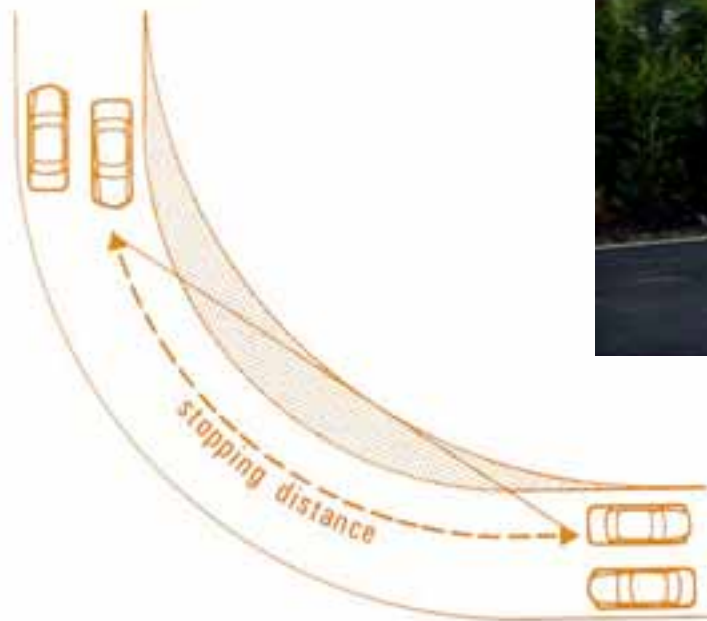
Courtyards: Provide parking for residents

Mews: Access for residents

Pedestrian Streets: Provide access for pedestrians and emergency vehicles only

Then determine required street widths

DB32: Forward Visibility



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Stopping Sight Distance

Determined by speed

Figure 109

Using Built Environment to Restrain Speed



Speed Restraining
Bend

Forward visibility
limited to that provided
by 2m Footway

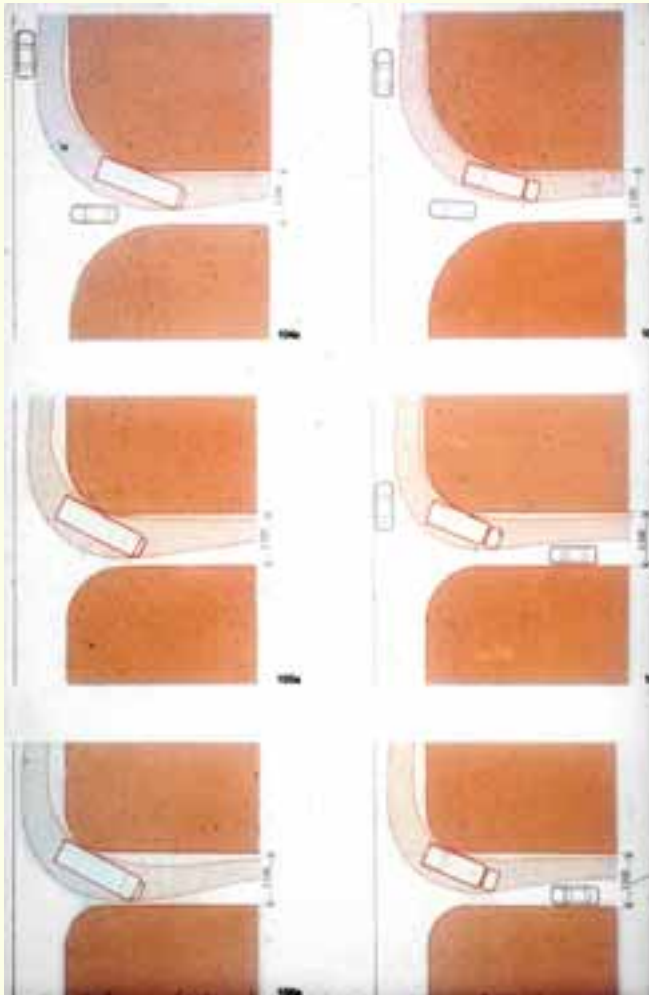
Achieve SSD = 16m



Using Built Environment to Restrain Speed



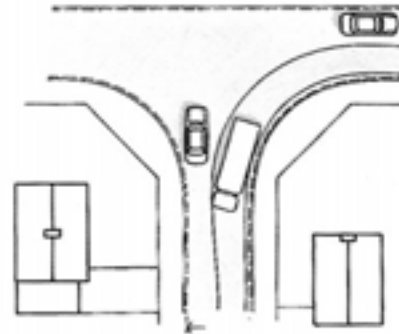
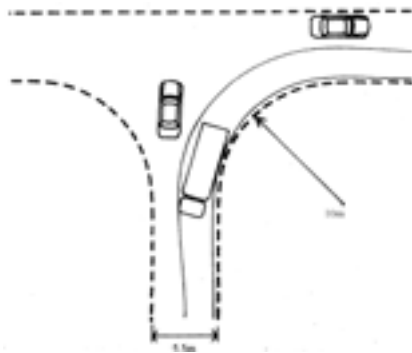
Junctions – DB32



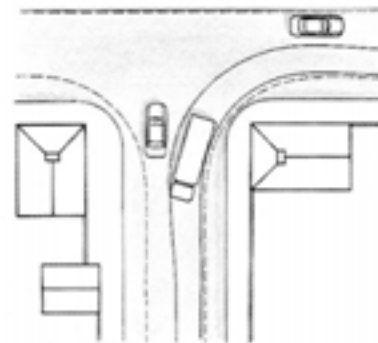
Junction layout dictated by vehicle tracking.

Ease of movement prioritised

Junctions



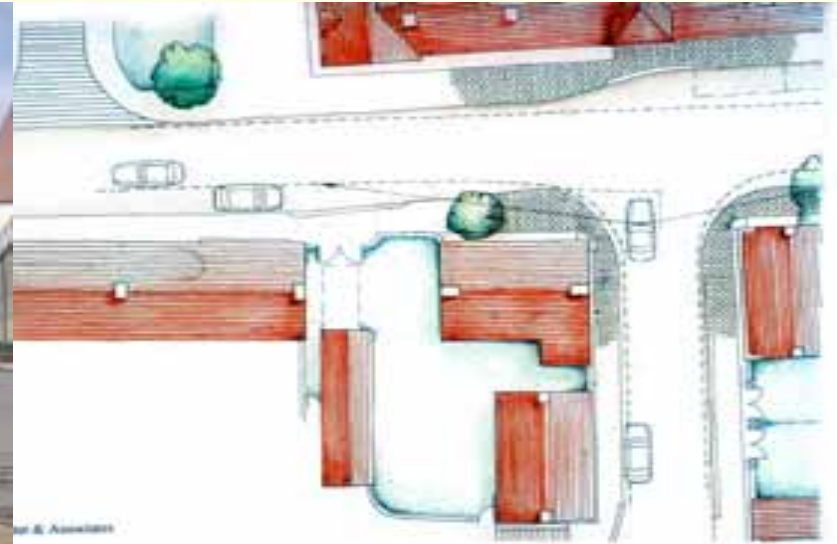
Footway edge follows wide swept path of refuse vehicles. This leads to a tendency for vehicles and vehicle speeds to dominate the space.



Tighter kerb radii can be used with a wider carriageway. The refuse vehicle turning requirement is still contained within the space, yet vehicles do not dominate.

By using the same concept of tracking, wider carriageways can be set out to generate tighter junctions. These have much better calming effect on traffic speed.

Junctions



Visibility Splays:

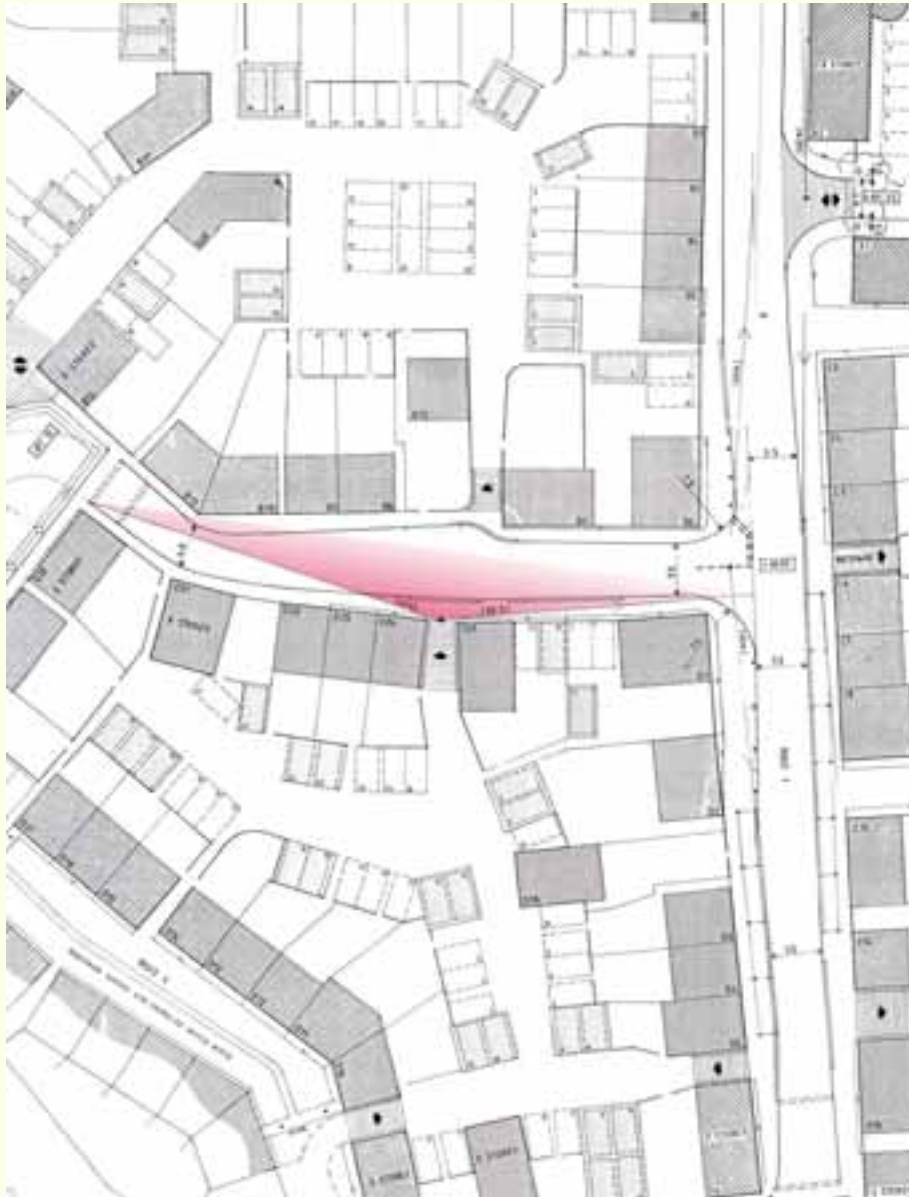
$X = 2.4 \text{ m}$

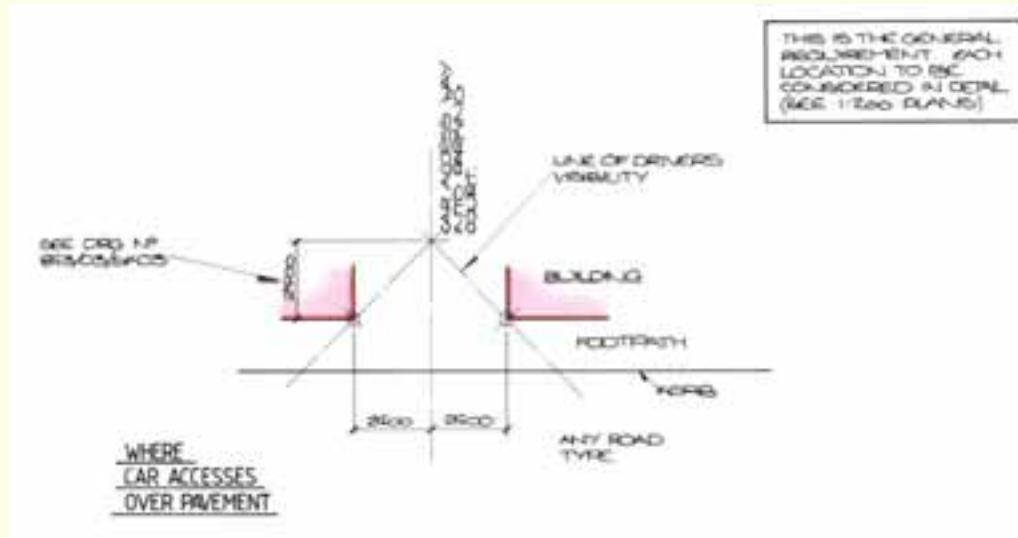
$Y = 60\text{m (R)}$ for access streets

$Y = 40\text{m (R)}$ for streets

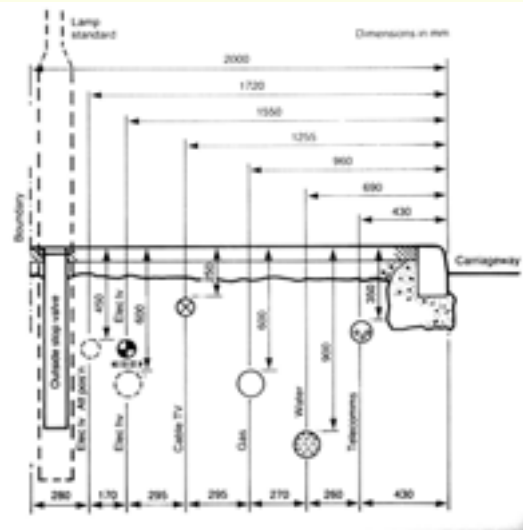
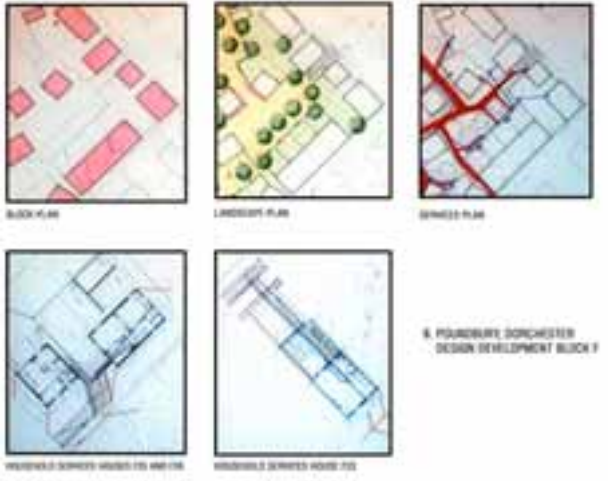
Table A & B



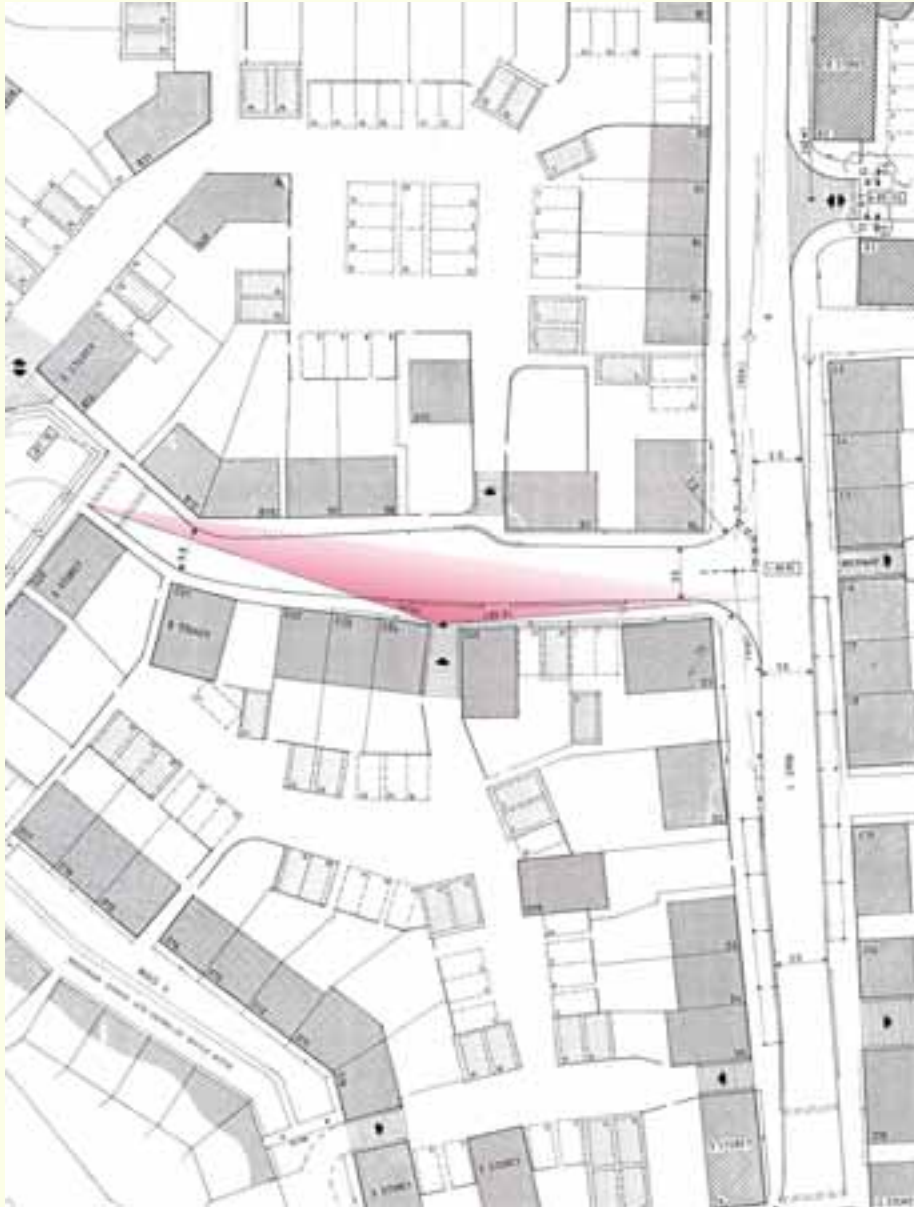




Services Infrastructure

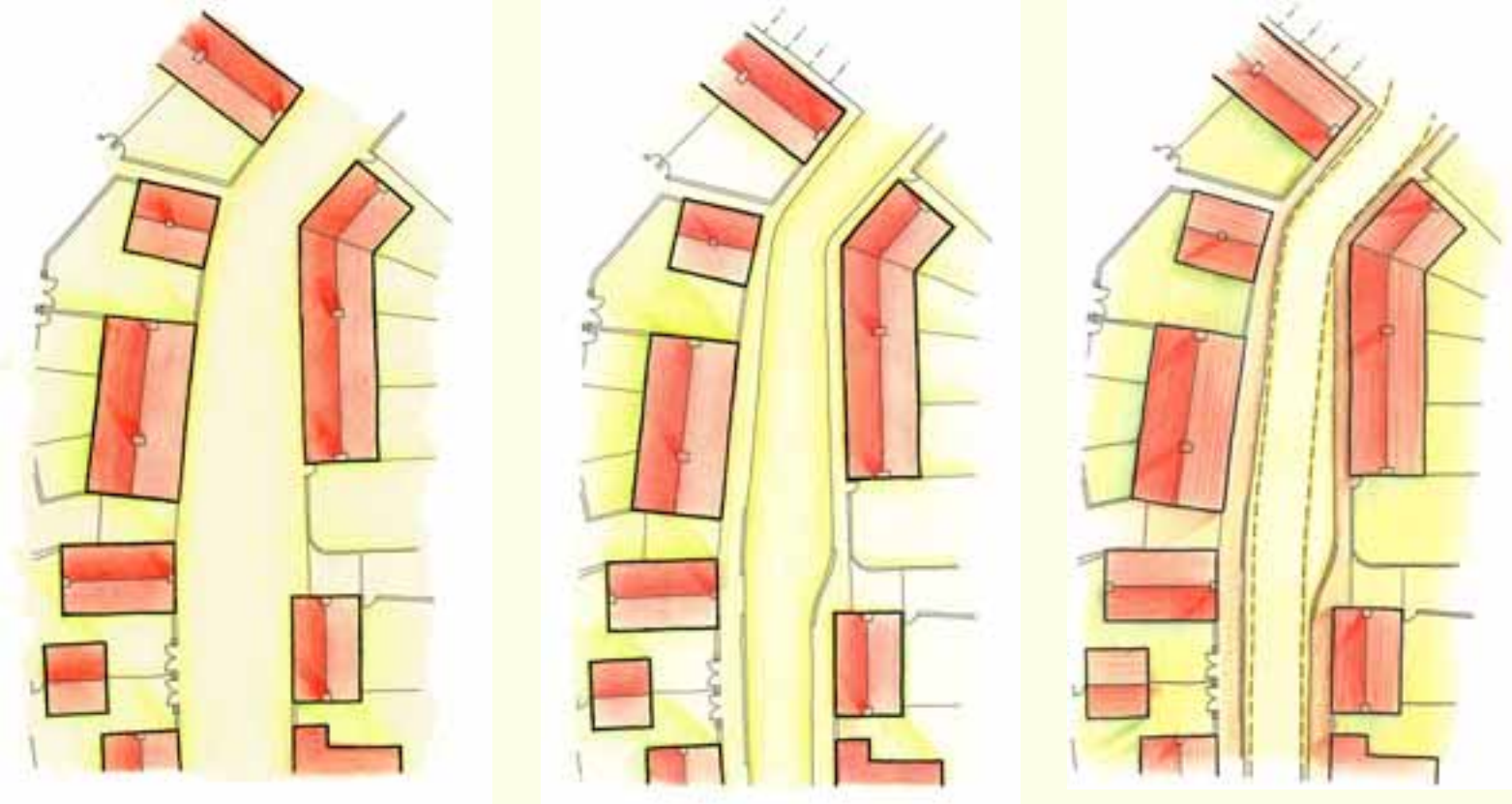


Key Principles for Good Streets



1. Permeability: well connected streets
2. Streets respond to urban design
3. Streets designed to restrain speed

Street Layout - Tracking

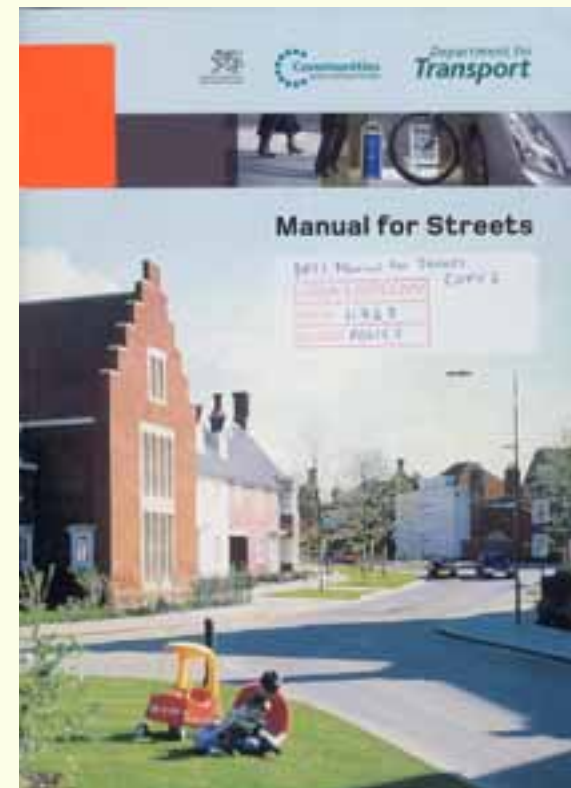
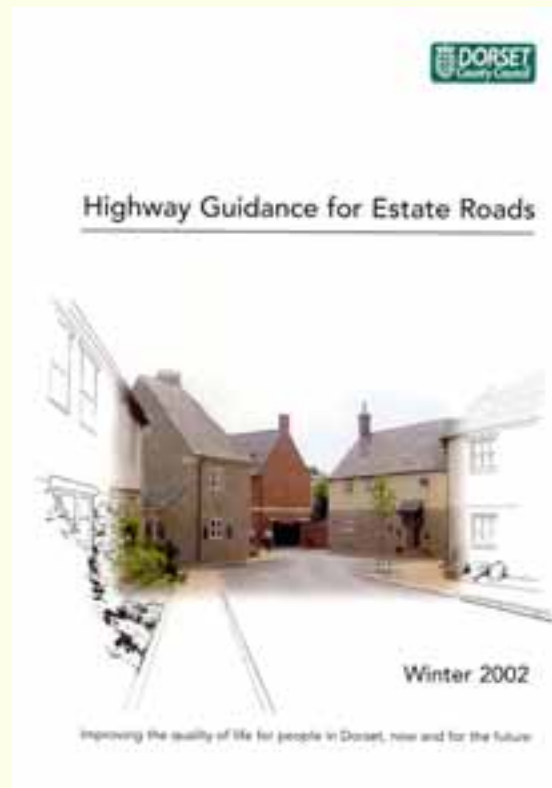


Good urban layouts can be created which meet standard road requirements

Reasons for Success

1. Client
2. Inclusive design: early involvement of planners & highways
3. Masterplan:
 - a) Organic nature of layout
 - b) Clearly defined hierarchy

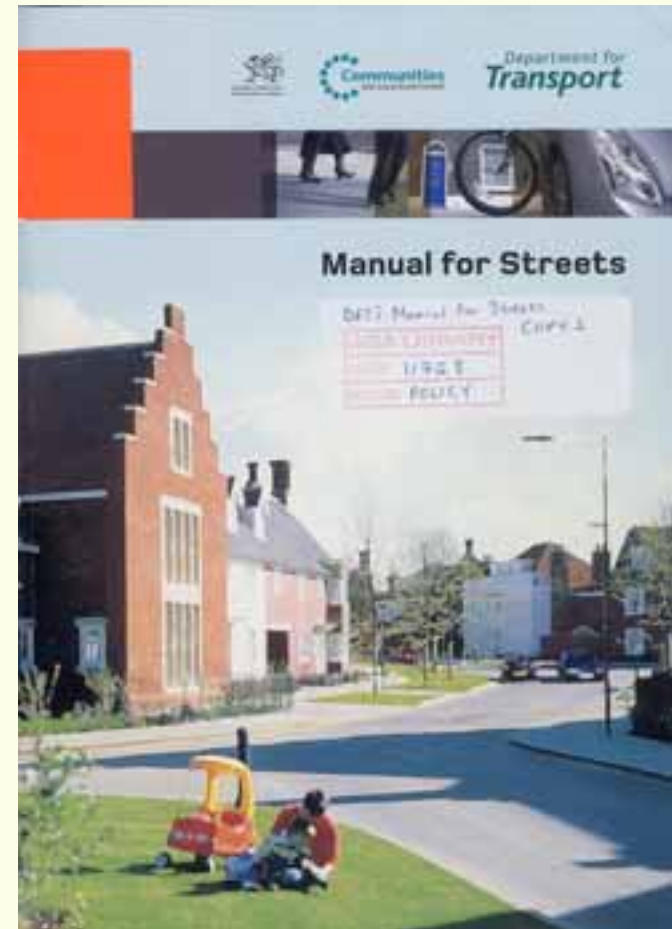
Exemplar Project



Manual For Streets

Key issues:

1. Pedestrian Crossover points
2. Smooth surfaces for footpaths
3. Footpath Widths
4. Driveway Accesses
5. Larger garage sizes
6. Cycle parking
7. Forward Visibility



Word of Caution: MfS applies only to lightly trafficked roads