

This summary compares current best practice street design guidance including Manual for Streets (Department for Transport 2007), with withdrawn old-era street design guidance and standards, that developed from the 1920s including Design and Layout of Roads in Built-up Areas (1946), Roads in Urban Areas (1966) and the initial Design Bulletin 32 Residential Roads and Footpaths, Layout Considerations published in 1977. Local authority street design and adoption standards based on the old guidance will not comply with current planning policies or statutory duties, and should not be used.

Today there are different and very serious challenges to address, such as obesity, air pollution, climate-change, and the promotion of equal opportunities. Updated planning policies, climate change targets, and new statutory duties make the use of these old standards unlawful. Statutory duties are to be balanced, one against the other. The network management duty, for example, is not a superior duty. Balanced decisions are necessary, and in Scotland, government policy (Designing Streets) specifically requires balanced decision-making.

Give greater weight to guidance that is science and evidence based, up-to-date, and has taken relevant matters properly into account, including current statutory duties, and national policies. Manual for Streets is evidence based – see TRL Report 661.

Withdrawn X

Objectives: priority for vehicles rather than people

The withdrawn guidance prioritises vehicle movement and vehicles of the largest size including bin lorries and removal lorries. They gave comprehensive information on vehicle dimensions, deceleration rates, and reaction times, but no equivalent information on children, elderly people, disabled people, or cyclists or their abilities and risks they run.

Layout – Distributor roads and environmental areas – rather than walkable, compact towns



X

primary distributors
district distributors
local distributors
access roads
environmental areas

Fig. 2-1 Urban road types

Intended to keep traffic out of residential areas, the withdrawn guidance creates areas of housing ringed and isolated by main roads. These are car-based suburbs, rather than development in the style of traditional towns. Indirect main roads increase travel distances and land-take. The lack of direct routes hinders walking and cycling.

Distributor roads – rather than traditional streets



These are roads that are designed to provide uninterrupted movement for vehicles. Buildings that front the distributor road, and frontage access are prohibited. Connections may only be made with a road at the same or adjoining level in the hierarchy. Problems include:
Inefficient use of land - Up to 75 percent of highway area may be taken up by distributor roads and their margins.
Low-density development - increases travel distances and costs (including waste collection costs)
Safety - Increased risk of fatal collisions for pedestrians, especially elderly people and children owing to the higher traffic speeds.
Poor personal security - owing to the absence of natural surveillance from overlooking buildings.

Speed controlled solely by speed limits; road geometry enabling speeds greater than limits

Drivers drive according to the environment, including the width, and curvature of the road. Greater width, gentler curves, greater visibility lead to higher speeds, high-energy collisions and increased injury risk.

Low priority for pedestrians and cyclists

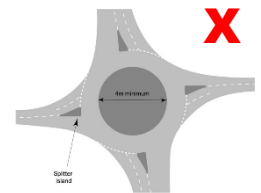
The withdrawn guidance often leads to indirect pedestrian routes, dark pedestrian tunnels, and inconvenient over-bridges. Pedestrian railings are used, not to protect pedestrians from out of control traffic, but to stop people from entering the carriageway. Little consideration is given to cycling. The needs of disabled people are not addressed.

Minimum parking standards that lead to suburban density and car dependency

Provision of 2 -3 parking spaces per house results in more space used for parking and lower housing densities of about 30 homes per hectare or less, making public transport unviable. A properly conducted sustainability assessment will condemn these standards. Today, it is recognised that parking provision should be tailored to location.

Space-wasting DMRB “normal roundabouts” within urban areas

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.



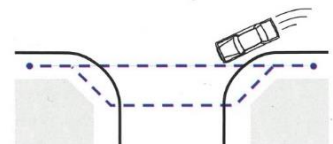
Crossroads banned outright, or accepted only in exceptional circumstances

Some highway authorities ban crossroads, and insist on staggered junctions, yet crossroads are commonplace in traditional towns and cities. They are convenient for pedestrians, minimise diversion from desire lines and make it easier to create permeable and legible street networks. Safety can be ensured by traffic calming and 20mph limits.

Junctions with large corner-radii

Large radii force pedestrians to make a longer, riskier crossing or to detour from desire line.

Vehicles also turn faster (20 mph – 30 mph)



Vehicle crossovers that interrupt the footway

This is a practice dating from the age of horse drawn carriages. Footways should be level and unbroken.

Don't use withdrawn guidance and standards

Use could be held **unreasonable and irrational** through **judicial review** owing to **failure to discharge statutory duties**, including the Public Sector Equality Duty, climate change mitigation, public health etc, and **contradiction or obstruction of government planning policy and guidance**. Some design practices may be **negligent under the common law**,

In addition, use is likely to be in **breach of professional codes of conduct**, likely to **invalidate indemnity insurance**, and may also **invalidate statutory immunity for councillors and officers**.

Current ✓

Objectives: have due regard to policies and statutory duties, and guidance

Street design standards must discharge statutory duties and take into consideration national and local high-level policies, including those addressed to the council, such as climate change, public health, air quality, the Public Sector Equality duty and so on. Failure to do so may lead to challenge by judicial review.

Objectives: Duty of Care owed to all highway users

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.

Objectives: User Hierarchy – People first

Consider first ↓ Consider last	Pedestrians
	Cyclists
	Public transport users
	Specialist service vehicles (e.g. emergency services, waste, etc.)
	Other motor traffic

The Public Sector Equality Duty under the Equality Act 2010, places elderly and disabled people at the top of the list, and requires their needs to be given “due regard” which under the Common Law, means a vigorous and open-minded inquiry before settling upon a course of action. The user hierarchy is paralleled in the National Planning Policy Framework and National Design Guidance.

Objectives: Create Quality Places



Buildings and Street Design should complement one another. Street width and building height can be adjusted to provide a sense of enclosure; streets can be aligned on landmarks; feature buildings can be located at junctions etc.

Objectives: cater for all the functions of a street

Manual for Streets lists five functions: place; movement; access; parking; and drainage, utilities, and street lighting. The functions must be balanced so no one function overrules the other.

Trees and Lighting should be designed together. Lighting is important for personal security; trees are important for climate change mitigation and adaption and better mental wellbeing. Highway authorities have powers to plant trees within highways and carriageways. See Trees and Design Action Group guidance.

Sustainable Drainage Systems – see SuDS Manual (CIRIA) - SuDS can be incorporated within the highway or immediately next to it. Planning authorities are under a de facto statutory duty to have development plans that require SuDS in new development

Utilities – traditional utilities including electricity, gas, water, sewerage, telephone and cable, and new utilities: district heating and cooling pipes, recycled water, underground waste management systems.

Layout – connected, permeable, traffic calmed, and inclusive

Create externally connected, permeable street networks with direct routes to key destinations. Control vehicle traffic using traffic calming and features (eg road narrows or gates) that restrict traffic speeds to 20mph limits. Consider low traffic neighbourhoods.



Traditional Main Streets – not distributor roads

Main streets in the style of the main streets and high streets of traditional towns provide direct routes and make efficient use of land. The buildings that face on to the main street, create a more interesting and attractive environment, with much better surveillance and personal security. Frontage access can also be provided: research undertaken for Manual for Streets found that very few accidents occurred at driveways, even on heavily-trafficked roads. Tree-lined boulevards can be an effective and attractive option for busy but civilised urban streets.

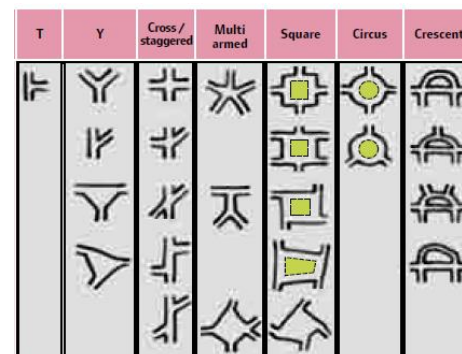
Speed – set a design speed of 20mph or below

Younger children cannot judge oncoming traffic travelling at more than 20mph. TRL Report 661 shows that drivers adjust their speed according to the environment. Speed can be controlled by reducing forward visibility; physical and optical narrowing including narrower carriageways; different surfacing materials, and on-street car parking.

Parking standards – tailor to location

The planning system has been updated since the publication of Manual for Streets. More recent research and publications such as “Space to Park”, advise tailoring parking provision to the location of the development and the availability of alternatives to car use. Housing built in or close to town centres may need little or no car parking spaces.

Junctions: use a broader range within a 20mph environment

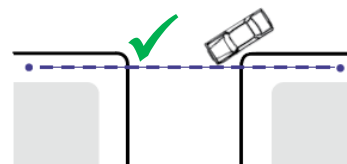


Locate buildings and footways to define junctions. Vehicle movement geometry and tracking, should come second.

Don't ban crossroads.



Junctions with small corner radii



- Pedestrian desire line (---) is maintained.
- Vehicles turn slowly (10 mph – 15 mph).

Help blind and elderly pedestrians by enabling crossing between parallel kerbs. For added convenience and safety, raise the carriageway to footway level across the mouths of side streets, or a full raised speed-table at 'T' junctions and crossroads.

Vehicle crossovers – keep the footway level

Vehicle access to private property must not interrupt the footway. Ensure at least a minimum 900mm width is at normal footway crossfall (2.5% max). The cheapest and most satisfactory solution may be to form the crossovers with ramped kerbs that allow the footway to continue uninterrupted.

Provide for cyclists from 8 to 80 years of age

Use the latest guidance: Local Transport Note 1/20 Cycle Infrastructure Design. Standard 7.36 metre (24ft) carriageways should not be used.

Use Current Guidance and Standards

Don't use withdrawn standards

If you feel you must or are asked to, take legal advice and advice from professional engineers, or similarly competent professionals, who have confirmed that they are fully competent in current street design practices and are working in compliance with their code of professional conduct.