

Street Design Matrix

Adoption standards for new residential streets



	Type 1 – Primary Street: High Street/Boulevard	Type 2 – Secondary Street: Main Residential Street/Avenue <i>(refer also to 3.1.2 Grade Separated Streets)</i>	Type 3 –Tertiary Street: Living Street (Grade-separated) <i>(refer also to 3.1.2 Grade Separated Streets)</i>	Type 4 – Tertiary Street: Mews Lane or Mews Close (shared surface) <i>(refer also to 3.1.3 Shared Surface Streets)</i>
For further information see 3.1.2 <i>Grade Separated Streets</i> and 3.1.3 <i>Shared Surface Streets</i>				
Function	Mixed use High Street/Boulevard. Designed to take through traffic and public transport. Acts as a focus for retail and other services.	Mixed residential street with scope for elements of non-residential use such as community facilities, could also include local public transport routes. These streets mainly carry local traffic and provide access into neighbourhoods; they are often the location of schools and community facilities and may also be residential streets in themselves.	Residential streets with managed traffic flows to prioritise active travel. They provide access to homes and support active travel, social interaction and health and wellbeing.	Residential streets with managed traffic flows to prioritise active travel. They provide access to homes and support active travel, social interaction and health and wellbeing.

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Number of dwellings	Not restricted	Typically up to 300 dwellings from single point of access Multiple access points – not restricted	Typically up to 100 dwellings	Typically up to 50 dwellings
Design speed	20mph / 30mph	20mph	20mph	5mph – walking speed
Essential adopted highway corridor requirements	Clear running lane + clear footways (both sides) + unallocated on-street parking bays / loading bays	Clear running lane + clear footway (both sides) + unallocated on-street parking bays / loading bays	Clear running lane + clear footway on side(s) of active frontages + unallocated on-street parking bays	Clear running lane / service strip + unallocated on-street parking bays (NB Defensible space for front door access will be required outside of the adopted envelope – whilst this will not be adopted, it will be essential to provide this) Street lighting columns and buffers
Additional highway corridor spatial considerations (where required) Further information: Street furniture, including electrical infrastructure – 3.8.1 Highway Features / 3.8.2 Street Lighting / 3.8.3 Bollards For further information on planting and landscaping, refer to 3.10 Green Infrastructure, Trees and Soft landscaping	+ Street furniture, Electrical Vehicle Charging Points (EVCPs), seating + Street trees and tree pits, planting + buffer between edge of carriageway and feature / tree trunk + Bus lane + segregated cycleway provision + SUDS	+ Street furniture, Electrical Vehicle Charging Points (EVCPs), seating + Street trees and tree pits, planting + buffer between edge of carriageway and feature / tree trunk + segregated cycleway provision + SUDS	+ buffer adjacent to structures (where no footway) + Street furniture and Electrical Vehicle Charging Points + Street trees and tree pits, planting + buffer between edge of carriageway and feature / tree trunk + SUDS	+ buffer adjacent to structures + Street furniture and Electrical Vehicle Charging Points (EVCPs) + Street trees and tree pits, planting + buffer between edge of trafficked area and feature / tree trunk + parking bays, where provided on-street + SUDS

Footway and carriageway spatial requirements

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Footway width See 3.3.2 <i>Designing for Walking</i>	2.6m minimum on each side of street Wider in areas of identifiably higher levels of pedestrian activity (e.g. adjacent to schools, shops, bus stops, railway stations etc).	2.0m – 2.5m Dependent upon level and type of pedestrian usage.	2.0m minimum	n/a

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<p>Clear running lane width</p> <p>Appropriate width is dependent upon type and volume of traffic, percentage of large vehicles, plus other layout and design considerations.</p> <p>Localised widening will be necessary where swept paths require.</p>	<p>Minimum 6.0m</p> <p>20mph or lower: 6.2m for non-segregated bus routes, with localised widening where swept paths require</p> <p>More than 20mph: 6.5m for non-segregated bus routes</p>	<p>5.0m where no public transport</p> <p>6.0m is required where perpendicular parking arrangements / garages are adjacent to carriageway edge</p> <p>6.2m for non-segregated bus routes, with localised widening where swept paths require</p>	<p>Two-way</p> <p>5.0m</p> <p>6.0m is required where perpendicular parking arrangements / garages are adjacent to carriageway edge</p> <p>Localised narrowings where appropriate</p>	<p>Two-way</p> <p><i>Option 1</i></p> <p>5.0m + service strip</p> <p>Localised narrowings where appropriate</p> <p><i>Option 2:</i></p> <p>Where this is not possible 6.2m incorporating service strip, which allows for works to utilities and shuttle working</p> <p>Localised narrowings where appropriate</p> <p><i>Option 3:</i></p> <p>5.0m incorporating service strip</p> <p>This constrained width is only suitable where there</p> <ul style="list-style-type: none"> • are very low traffic / pedestrian volumes and low potential for conflict between users • is no perpendicular parking present • are alternative vehicular routes available for access, and parking displacement will not cause issues when road closed for maintenance or utility works. <p>Localised narrowings where appropriate.</p>

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Clear running lane width <i>(continued)</i>			<p>One-way (typically up to 100m)</p> <p>3.9m</p> <p>This constrained width is only suitable where there:</p> <ul style="list-style-type: none"> • are very low traffic/pedestrian volumes and low potential for conflict between users • is no perpendicular parking present • are alternative vehicular routes available for access, and parking displacement will not cause issues when road closed for maintenance or utility works. <p>6.0m is required where perpendicular parking arrangements / garages are adjacent to carriageway edge</p> <p>Localised narrowings where appropriate.</p>	<p>One-way</p> <p>(typically up to 100m)</p> <p>3.9m incorporating service strip</p> <p>This constrained width is only suitable where there</p> <ul style="list-style-type: none"> • are very low traffic / pedestrian volumes and low potential for conflict between users • is no perpendicular parking present • are alternative vehicular routes available for access, and parking displacement will not cause issues when road closed for maintenance or utility works.

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Localised narrowings Corridor widths can be narrowed where sites allow, for example: <ul style="list-style-type: none"> • where traffic volumes are likely to be low • where the road can be closed or partially closed for maintenance (alternative vehicular routes available for access) and where any parking displacement will not cause issues when the road is closed • where intervisibility between the ends of the narrowings is adequate • where suitable passing places are available 	n/a	n/a	Two-way Minimum carriageway width 3.9m (where likely contraflow cycling) Where very low traffic flows and speeds, 3.0m over short length (where no requirement for cycling contraflow) Maximum length of narrowing dependent upon intervisibility and layout One-way Where very low traffic flows and speeds, 3.0m over short length (where no requirement for cycling contraflow) Maximum length of narrowing dependent upon intervisibility and layout	Two-way Minimum carriageway width 3.9m Maximum length of narrowing dependent upon intervisibility and layout One-way n/a

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Statutory services requirements (service strip / corridor) For further information: 3.6.2 <i>Underground Utilities</i>	2.0m minimum width combined service corridor beneath footway on both sides of street.	2.0m minimum width combined service corridor beneath footway on both sides of street.	2.0m minimum width combined service corridor beneath footway(s)	2.0m minimum width delineated combined service strip on one side of the street Can be separate from running lane, or incorporated into operational carriageway subject to clear running lane criteria above Service strips must be free from obstruction to allow for access by utilities companies However, they can accommodate unallocated on-street parking (if this is not the sole parking provision) and / or street furniture such as EV charging points, lighting columns, parking meters Service strip does not have to run adjacent to carriageway but should be within adopted envelope If to be soft landscaped this shall be with grass only.
Buffer Strips <i>NB</i> Whilst buffer strips are essential, these do not have to be adopted. If to be adopted and soft landscaped this shall be with grass only.	450mm offset from edge of carriageway for street furniture/ tree trunk etc	450mm offset from edge of carriageway for street furniture/ tree trunk etc	500mm kerbed buffer strip adjacent to hard boundary e.g. wall or fence 450mm offset from edge of carriageway for street furniture/ tree trunk etc	500mm kerbed buffer strip adjacent to hard boundary e.g. wall or fence 450mm offset from edge of carriageway for street furniture/ tree trunk etc
Turning head <i>See 3.2.5 Turning and Swept Paths</i>	n/a	n/a	Required where no through route	Required where no through route

Public transport *(See 3.4.1 Designing for buses)*

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Bus provision	Where segregated bus lanes proposed, bus lane width 3.0m absolute minimum. Where bus lanes are shared with cyclists minimum width of 4.5m	No segregation required	n/a	n/a
Bus stops	Either accommodated within layby or in carriageway	In carriageway	n/a	n/a

Cycling *(See 3.3.1 Designing for cycling)*

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Cycle provision	Segregated facilities may be required; requirement and widths will depend on number of vehicles and predicted number of cyclists One-way 2.0m – 2.5m Two-way 3.0m minimum + segregation measures + cycle lane buffers (as defined in LTN 1/20)	Segregated facilities may be required; requirement and widths will depend on number of vehicles and predicted number of cyclists One-way 2.0 – 2.5m Two-way 3.0m minimum + segregation measures + cycle lane buffers (as defined in LTN 1/20)	Generally provision will be on carriageway with general traffic Additional segregated facilities may be required if part of separate strategic cycle route.	Generally provision will be on carriageway with general traffic Additional segregated facilities may be required if part of separate strategic cycle route.

Parking and servicing *(See 3.5.3 Car parking)*

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On-street parking requirements For additional disabled parking requirements see 3.5.3 Car Parking	Parallel adjacent to footpath and carriageway 2.0m wide On bus routes – 2.5m wide 6.0m length, 5.5m length at ends of bays where 45° tapers Perpendicular Perpendicular may be appropriate where space, traffic flows and character of the street permit. Not suitable on bus routes. Perpendicular bays 2.4m wide and 4.8m length + add 450mm additional footway space to ensure overhang does not encroach excessively onto footway Where parking adjacent to planting, additional 300mm buffer space will be necessary to allow for getting out of the vehicle.	Parallel adjacent to footpath and carriageway 2.0m wide On bus routes – 2.5m wide 6.0m length, 5.5m length at ends of bays where 45° tapers Perpendicular Not suitable on bus routes. Perpendicular bays 2.4m wide and 4.8m length + add 450mm additional footway space to ensure overhang does not encroach excessively onto footway Where parking adjacent to planting, additional 300mm buffer space will be necessary to allow for getting out of the vehicle.	Parallel adjacent to footpath and carriageway 2.0m wide 6.0m length, 5.5m length at ends of bays where 45° tapers Perpendicular Perpendicular bays 2.4m wide and 4.8m length + add 450mm additional footway space to ensure overhang does not encroach excessively onto footway <i>Note for manoeuvring</i> – Perpendicular spaces require 6.0m clear width to access spaces Echelon – permitted where speeds and traffic volumes very low and traffic flow is one-way Echelon bays 2.4m wide and 4.8m length 45° angle marked bays, angled for vehicles to reverse into them <i>Note for manoeuvring</i> – Echelon spaces require 3.9m clearance behind to access spaces Where parking adjacent to planting, additional 300mm buffer space will be necessary to allow for getting out of the vehicle.	Parallel adjacent to carriageway 2.0m wide 6.0m length, 5.5m length at ends of bays where 45° tapers + add 450mm as buffer against structures / physical barriers Perpendicular Perpendicular bays 2.4m wide and 4.8m length + add 450mm as buffer against structures / physical barriers, or where encroachment onto private pathways <i>Note for manoeuvring</i> – Perpendicular spaces require 6.0m clear width to access spaces Echelon – permitted where speeds and traffic volumes very low and traffic flow is one-way Echelon bays 2.4m wide and 4.8m length 45° angle marked bays, angled for vehicles to reverse into them <i>Note for manoeuvring</i> – Echelon spaces require 3.9m clearance behind to access spaces Where parking adjacent to planting, additional 300mm buffer space will be necessary to allow for getting out of the vehicle.

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Parking Management Measures	<p>Unallocated parking on highway Managed through limited parking / loading / waiting restrictions - enforced by BCC Parking Services</p> <p>Allocated parking - off highway Managed by management company / private ownership</p>	<p>Unallocated parking on highway Managed through design and waiting restrictions where necessary or appropriate - enforced by BCC Parking Services</p> <p>Allocated parking – off highway Managed by management company / private ownership</p>	<p>Unallocated parking on highway Managed through design and waiting restrictions where necessary or appropriate – enforced by BCC Parking Services</p> <p>Scope for restricted parking measures where conditions necessitate and permit (enforceability, size of scheme)</p> <p>Allocated parking – off highway Managed by management company / private ownership</p>	<p>Unallocated parking on highway Managed through design and waiting restrictions where necessary or appropriate – enforced by BCC Parking Services</p> <p>Scope for restricted parking measures where conditions necessitate and permit (enforceability, size of scheme)</p> <p>Allocated parking – off highway Managed by management company / private ownership</p>
<p>Loading requirements (where no off-street provision possible)</p> <p>See 3.2.3 Deliveries and Servicing</p>	2.7m wide loading bay(s); length to be defined by swept path for longest likely vehicle using bay	2.7m wide loading bay(s) where required; length to be defined by swept path for longest likely vehicle using bay	Adequate provision made on-street appropriate to site	Adequate provision made on-street appropriate to site

Street engineering details

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SUDs options <i>See 3.6.3 Drainage</i>	Stockholm tree pit system, rain gardens, median planting strip Permeable paving in adopted parking bays only where commuted sums provided for long term maintenance	Stockholm tree pit system, rain gardens Permeable paving in adopted parking bays only where commuted sums provided for long term maintenance	Stockholm tree pit system, rain gardens Permeable paving in private parking bays (unadopted, behind highway boundary) Permeable paving in adopted parking bays only where commuted sums provided for long term maintenance	Stockholm tree pit system, rain gardens Permeable paving in private parking bays (unadopted, behind highway boundary) Permeable paving in adopted parking bays only where commuted sums provided for long term maintenance
Street trees and planting <i>For further information on planting and landscaping, refer to 3.10 Green Infrastructure, Trees and Soft landscaping</i>	Between parking bays, or within landscaped strips or widened footways Larger species of tree	Between parking bays, or within landscaped strips or widened footways Broadly large to medium species of trees	Primarily between and to back/ side edges of parking bays, or within widened footways or localised narrowings Broadly medium to smaller species of trees	Primarily between and to back/ side edges of parking bays, or within localised narrowings Broadly medium to smaller species of trees
Traffic calming features <i>See 3.2.6 Traffic calming</i>	Features at max 70m intervals	Features at max 70m intervals	Features at max 70m intervals	Features at max 70m intervals Preferably 40–60m intervals Block paving used as speed reduction feature
Vehicle swept path to be accommodated <i>See 3.2.5 Turning and swept paths</i>	Turning Articulated HGV 16.5m length Where bus route, track turning for 15m coach (unless otherwise agreed)	Turning: 11.4m Refuse vehicle Removals vehicles Passing: 11.4m Refuse vehicle passing large car Two 3.5T panel vans passing each other Where bus route, track turning for a 15m coach (unless otherwise agreed)	Turning: 11.4m Refuse vehicle Passing: 11.4m Refuse vehicle passing large car Two 3.5T panel vans passing each other	Turning: 11.4m Refuse vehicle Passing: 11.4m Refuse vehicle passing large car Two 3.5T panel vans passing each other

Other streetscape design details to be considered – outside of adopted envelope

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Private access paths width (unadopted)	N/A	1.2-2.0m wide, minimum 1.65m adjacent to perpendicular parking	1.2-2.0m wide, minimum 1.65m adjacent to perpendicular parking	1.2-2.0m wide, minimum 1.65m adjacent to perpendicular parking
Private parking provision	On-plot	On-plot and frontage options	On-plot and frontage options	On-plot and frontage options
Building height (storeys)	Typically 4–6 storeys	Typically 3–5 storeys	Typically 2–4 storeys	Typically 1–3 storeys
Maximum number of parking bays between trees/soft landscape features	4 Parallel bays	4 Parallel bays 4 to 5 Perpendicular bays	4 Parallel bays 4 to 5 Perpendicular bays	4 Parallel bays 4 to 5 Perpendicular bays
Distance between building frontages to define appropriate building height to street width ratio (expressed as a metre range)	Typically 25–30m	Typically 15–25m	Typically 13–20m	Typically 11–15m
Frontage Gardens and thresholds/Plot boundary treatment	Generous 2.0m minimum depth where residential ground floor Formal front boundary treatment; permanent vertical means of enclosure; max height 600mm where on-plot parking	1.5–3.0m depth Planting and permanent vertical means of enclosure; max height 600mm where on-plot parking	1.5–2.5m depth Planting and permanent vertical means of enclosure; max height 600mm where on-plot parking	1.2–2.0m depth Planting and permanent vertical means of enclosure; max height 600mm where on-plot parking

Figures have been derived from the following documents:

Local Transport Note 1/20 – [Cycle infrastructure design \(LTN 1/20\)](#)

Buses in Urban Developments (CIHT) CIHT - [BUSES BROCHURE 2018](#)

Manual for Streets (gov.uk) [Designing and modifying residential streets](#)

[Pedestrian Comfort Guidance for London \(TfL\)](#)

[Local Transport Note 1/07 Traffic Calming](#) Traffic calming (LTN 1/07)

Bristol City Council Standard Design Details