

COPECAT

CONCISE CYCLE & PEDESTRIAN AUDIT

At A Glance Quick Reference Guidance

PLANNING APPLICATIONS

ISSUE	GUIDANCE
Funding	<ul style="list-style-type: none"> Developer contributions for additional cycle facilities PPG 13 states that where clearly justified and in accordance with the usual statutory and policy tests (as set out in circular 11/95) conditions may legitimately be used to require on-site transport measures and facilities as part of development, for example the provision of secure cycle parking and changing facilities and safe cycle routes.
Networks	<ul style="list-style-type: none"> Road User Hierarchy This suggests that the needs of users are considered in the following order: <ul style="list-style-type: none"> Pedestrians and disabled people Cyclists Public transport Commercial access General off-peak traffic General peak time traffic
Cycle Parking	<ul style="list-style-type: none"> Amount of Cycle Parking Refer to the minimum cycle parking standards for different use classes, contained within the Greater Manchester Parking Standards. Type of Cycle Parking The Greater Manchester Cycle Parking Guidelines recommends cycle lockers or secure compound for long stay parking (over 2 hours), and Sheffield style racks, or wall mounted bars for short stay parking (up to 2 hours). Wheel slots and butterfly racks are not suitable. Location <ul style="list-style-type: none"> The GM Cycle Parking Guidelines states that all parking should be; overlooked by public or staff, well lit and under surveillance of CCTV cameras; easily reached by access routes; should avoid conflict with pedestrians especially partially sighted people. Under cover Short stay parking needs to be <ul style="list-style-type: none"> close to building entrance, otherwise cyclists will use other more convenient types of parking, such as street furniture. If there is more than one entrance to the building, consideration should be given to having smaller groups of racks at each entrance. Long stay parking needs to be: <ul style="list-style-type: none"> close to the building entrance, but security is more important than proximity. For further guidance on cycle parking, please refer to the Traffic Advisory Leaflet 5/02 – Key Elements of Cycle Parking Provision.
Signals	<ul style="list-style-type: none"> Advanced Stop Lines Please refer to the 'New Signal Junction' section under 'Highway Schemes'.

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ROUTE PLANNING

ISSUE	GUIDANCE
Route location	<p>Reasonable Gradients</p> <ul style="list-style-type: none">Steep gradients can be hazardous, especially where the surface carriageway is poor or where lanes are narrow and traffic is heavy. Cyclists will generally avoid routes with steep gradients, although they may prefer them to routes with significant detours.A gradient of less than 3% is preferred, 5% maximum for a length of up to 100m, 7% up to 30m, and 10% up to 25m.An uphill cycle lane can be beneficial where cyclists can be expected to travel much slower than other traffic.
Selection of techniques to cater for cyclists	<p>The following techniques should be considered for use in order of preference:</p> <ul style="list-style-type: none">A reduction in traffic flow, speed and volume of heavy goods vehiclesProvision of on-road cycle lanes and similar facilitiesProvision of off-carriageway facilities where other options are inappropriate

PUBLIC TRANSPORT SCHEMES

ISSUE	GUIDANCE
Interchanges	<p>Cycle parking</p> <ul style="list-style-type: none">Please refer to the 'Cycle Parking' section under 'Planning Applications'. <p>Cycle parking operation</p> <ul style="list-style-type: none">Where long term cycle storage facilities are provided, ensure that the body which provides day-to-day operation is fully aware of their role and responsibilities relating to the use of the lockers by the public. This may typically include routine checks on security, light maintenance such as graffiti removal, registering users and taking a deposit where required.

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STRUCTURES SCHEMES

ISSUE	GUIDANCE
Bridges / Steps	<p>Step size and design</p> <ul style="list-style-type: none"> • Evenly dimensioned risers between 100mm and 170mm, treads between 250mm and 300mm, with rounded 6mm radius edge without a lip. • Each step nose to be differentiated with 55mm wide colour contrasting strip. • Not more than 12 steps in each flight without landing or resting place. <p>Ramps</p> <ul style="list-style-type: none"> • Gradient of 1 in 20 preferred, 1 in 10 maximum over distances less than 1 metre, otherwise 1 in 12 maximum. • Minimum width for pedestrians 1.2 metres, where two-way flows, 1.8m minimum. • Raised solid kerb 100mm high to be provided at edges. <p>Handrails</p> <ul style="list-style-type: none"> • Smooth, colour contrasting handrails between 40 and 50mm diameter should be provided on both sides of steps or handrails, provided this leaves at least a 1m gap between them. Steps or ramps wider than 1.8m should have a central handrail also • Handrails should be between 900mm and 1000mm above the ramp / step surface, stand 50mm-60mm clear from walls, and extend for at least 300mm beyond the end of the ramp or stairs. <p>Deck widths</p> <ul style="list-style-type: none"> • Pedestrian bridges should be minimum 2.3m wide, preferably 5m. Shared use bridges should be minimum 2.4m wide where users are unsegregated, and 5m where segregated. <p>Parapet heights</p> <ul style="list-style-type: none"> • Parapets on pedestrian bridges should be minimum 1.0m high (1.15m over railways). Cycleway bridge parapets should be minimum 1.4m high, and on bridleways 1.8m.
Subways	See above Bridges / Steps sections for guidance on ramps and widths

MAINTENANCE SCHEMES

ISSUE	GUIDANCE
Street works	<p>Pedestrians and disabled people</p> <ul style="list-style-type: none"> • Provision of a colour contrasting, rigid, continuous barrier between 1m –1.2m high, with a tapping rail below 200mm. • Provision of at least 1.2m of clear footway around the obstruction, protected by barriers if within carriageway, with ramps where there is a change in level. <p>Cyclists</p> <ul style="list-style-type: none"> • Provision of a lane less than 3m or greater than 4m width, or alternatively a suitable diversionary route. • Allow sufficient time on temporary signals for cyclists to clear roadworks. • Ensure sufficient advance signing is available, particularly for road narrowings.

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HIGHWAYS SCHEMES

FACILITY	GUIDANCE
New Signal Junction	<p><i>Advanced Stop Lines</i></p> <ul style="list-style-type: none"> • (TAL 8/93) The ASL should be 5m deep. • A mandatory cycle lane leading up to the ASL would be preferable, if a advisory lane it is possible that there could be encroachment by motor vehicles, and if the cycle lane is blocked, the advantage for cyclists of the ASL is greatly reduced. • If there is no right turn at the junction, or within 100m, it may not be necessary to provide an ASL across the whole width of the carriageway in that direction.
Roundabouts	<p><i>Roundabout Design</i></p> <ul style="list-style-type: none"> • Tighter roundabout geometry tends to reduce dangers to cyclists. • Cycle lanes on roundabouts have generally not proved to be beneficial. • Continental design roundabouts appear to be safer for cyclists than conventional designs. Typical dimensions are – inscribed circle diameter 28m – 36m, circulatory carriageway width 4m – 6m, entry/exit widths 4m – 5m with radial approach arms. Single lane entry, exit and circulation is preferred. Central island should be bounded by a low profile over – run area which is distinct from the circulatory carriageway. Vehicle capacities of up to 2,500vph are achievable. • If a roundabout cannot be designed or adopted to the Continental geometry, signalisation or a segregated cycle track outside the junction should be considered.
Cycle Lanes	<p><i>Cycle Lane Width</i></p> <ul style="list-style-type: none"> • For with flow cycle lanes a minimum of 1.5m is generally recommended with 2m preferred. In some instances, where there is limited space a width of 1.2m can be recommended. Other specific locations, such as the approach to a an advanced stop line at a traffic signal junction, a minimum width of below 1.2m may be acceptable. • For uphill cycle lanes – can cyclists be given more space by widening the uphill cycle lane, possibly by reducing widths for downhill traffic? • Where is cycle lane is provided within a bus lane a width of 1.2m will normally be adequate. • For contra-flow cycle lanes a minimum width if 1.5m is recommended with 2m preferred. <p><i>Cycle Lanes Adjacent to Parking/Loading Areas</i></p> <ul style="list-style-type: none"> • Cvclists ridinq close to motor vehicles are at risk from opening doors.

	<p>Angle parking creates additional hazards. A parking bay width of 1.8m is preferred, and 2.5m is desirable for loading. Where a cycle lane is provided this should be separated from the parking by a visible dividing strip with a minimum width of 0.5m (1m preferred).</p> <ul style="list-style-type: none"> • A bus stop clearway should be > 3m wide. An adjacent cycle lane should have a minimum width of 1m and be at least 3m from the outside edge of a traffic lane.
<p>One-Way Street</p>	<p><i>Contraflow Cycle Lane</i></p> <ul style="list-style-type: none"> • (TAL 6/98) The preferred width is 2m, but where road widths are restricted this can be reduced to 1.5m. Segregation at the entry to and exit from a one-way street should always be provided if there is sufficient space.
<p>Shared pedestrian / cycle paths adjacent to carriageway</p>	<p><i>Shared Pedestrian/Cycle Paths -Width and Segregation</i></p> <ul style="list-style-type: none"> • Segregation between cyclists and pedestrians is preferred, using methods such as a raised white line, colour, carriageway markings or level difference. • Width of an unsegregated shared-use path should be a minimum of 3m. The width of segregated shared-use path should be 5m (optimum) or 3m (minimum). <p><i>Treatment of Cycle Track at Minor Road Junctions</i></p> <ul style="list-style-type: none"> • Cyclists on the cycle track may be given priority over vehicles on the minor road. A flat top hump across the minor road junction is helpful to both pedestrians and cyclists. If space permits a cycle route can be gradually diverted away from the carriageway by between 4m and 8m, at the crossing point of a minor road. • Dropped kerbs should be fully flush with the carriageway at crossing points.
<p>Off-highway routes</p>	<p><i>Cycle Track Width</i></p> <ul style="list-style-type: none"> • 3m width preferred where there is cycling in both directions (2m) minimum. 2m wide track (1.5m minimum) for one-way cycling, or where flows are likely to be low. These widths should be increased by at least 0.25m (0.5m preferred) where any edge of track is surrounded by a kerb, wall, guard-rail or other obstruction. The width and design must allow for possible encroachment by vegetation <p><i>Cycle Track Alignment</i></p> <ul style="list-style-type: none"> • Curvature 6m minimum, and forward visibility at least 20m at an assumed design speed of 25km/h. Visibility splay 'x' distance of 4.5m preferred, with a minimum of 2m. Visibility splay distances below 4.5m may result in safety barriers being erected. <p><i>Treatment of Cycle Track at Minor Road Junctions</i></p> <ul style="list-style-type: none"> • Refer to the 'shared pedestrian/cycle paths adjacent to carriage' section in the Highway Scheme Audit. .

Traffic Calming	<p>Vertical Traffic Calming</p> <ul style="list-style-type: none"> • The detail of the design and construction of vertical traffic calming measures is critical to the comfort and sometimes the safety of cyclist. Speed cushions are generally more cycle friendly than road humps. The preferred width of the gap between the cushion and the kerb is 1m, with 0.75m as a minimum. • Road humps should be 75mm high, with a gentle ramp (8% preferred), having no vertical face on upstands. A sinusoidal profile, or round top with gentle ramps, are preferred to flat top humps, but may need special authorisation. • A 1m wide advisory cycle lane bypass to the nearside of the hump is valuable for cyclists. This may need a kerb-build out, or refuge strip, to prevent vehicles using the cycle bypass. • Rumble strips and other traffic calming features should have a 1m (0.75m min) gap adjacent to the edge of the carriageway. <p>Horizontal Traffic Calming</p> <ul style="list-style-type: none"> • Horizontal traffic calming measures – build-outs, road narrowings, chicanes, etc. – can cause particular problems for cyclists. • Gaps between a central refuge and the kerb in the range of 3.2m to 3.9m should be avoided, to prevent cyclists being ‘squeezed’ by vehicles. A minimum gap of 4m is recommended, and 4.5m is preferred where large vehicles are frequent. A gap of 3m may be appropriate where there are few HGVs and speeds are low. • Cycle bypasses of 1.5m width (1m minimum) can be beneficial. They should be straight, and the cyclists’ right of way should be maintained. Care should be taken that these will not be obstructed by parking.
Road Closure	<ul style="list-style-type: none"> • The design of the closure should take into account the needs of emergency vehicles, pedestrians and cyclists, and well as the local environment. Cyclists should be made exempt in Traffic Regulation Orders. A desirable minimum cycle gap of 1.5m is beneficial to cyclists. Kerb build-outs may help prevent motor vehicles from blocking access / exit points. • ‘False’ one-way streets (ie. those with a cycle gate at a no-entry at one end of the road) allow cyclists to travel in both directions on lightly trafficked roads.

Note:

This annex of the GM Pedestrian & Cycle Audit Guidelines contains key points from the relevant guidance. Unless otherwise stated the guidance was taken from the IHT’s Guidelines for Cycle Audit and Cycle Review (1998). For further guidance please refer to the relevant source of guidance which is listed in the Guidance Column of the Concise Pedestrian & Cycle Audit.

- *Guidelines for Cycle Audit and Cycle Review.* Welsh Office, DETR, IHT, The Scottish Office, DoE for Northern Island, (1998).
- *Cycle-Friendly Infrastructure: Guidelines for Planning and Design,* BA, DoT, IHT, CTC (1996)
- *Traffic Signs Regulations and General Directions,* DfT, 2003
- *Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure,* DfT (2002), available on www.dft.gov.uk/stellent/groups/dft_mobility/documents/page/dft_mobility_503282.hcsp