



6C's Design Guide

Highways, transportation and development

Changes log

2008 to 2010

Summary of changes made up to October 2008 version of 'Highways, transportation and development'

(Note: ~~green double strikethrough~~ = deletion red = addition)

Opening title page
Document title amended: <i>"Highways, transportation and development the Leicestershire guide"</i> Changes to text to include Leicester City Council details
Amendments to reflect adoption by Derbyshire County Council October 2008
Updated commuted sum rates October 2008
Foreword
Document title amended Updating of LCC foreword, to reflect approval of latest version Foreword added by Ross Willmott, Leader Leicester City Council
Part 1
Paragraph 1.1 amended to reflect approval date of latest version
Paragraph 1.2 and Figure IN1 amended to reflect adoption of document by City Council New note added below paragraph 1.2, clarifying respective areas of responsibility
Paragraph 1.4, second solid bullet point updated to reflect the Leicestershire Local Transport Plan and Central Leicestershire Local Transport Plan 2006 – 2011
Deletion of number to original paragraph 1.5 (<i>"Our Department of Highways, Transportation and Waste Management..."</i>); addition of bullet points referring to commuted sums and travel plans; and amendments to include reference to working with the City Council
New heading and new paragraph 1.5 added
Paragraph 1.6 amended to remove reference to PPG3 and 'Places Streets and Movement', and references to PPS3, Manual for Streets and new national Guidance on Transport Assessments added
New note added after paragraph 1.13, Figure IN2
Reference to a definition of a road (street) added to paragraph 1.14
Paragraph 1.26 amended: <i>"Whole-life maintenance costs..."</i>
Part 2
Paragraph 2.3 amended to include reference to Manual for Streets
Table PDP1 replaced with new version, covering wider range of developments Paragraph 2.8 amended to reflect changes to appendix C, <i>'Assessing the transport impacts of development proposals'</i>

Paragraph 2.12, 12th bullet point amended to include reference to the Manual for Streets

Paragraph 2.22, 3rd bullet point amended with the addition of a further two sentences, referring to the design of shared surface roads in respect of those who are blind or partially, and the need to consult with relevant representative groups and access officers when preparing development proposals

New fourth bullet point added to paragraph 2.22, referring to basic junction forms

Part 3

Main contents list and heading to section DG19 amended: “*Section DG19: Employment and commercial developments served by private drives and areas*”

Paragraph 3.8 amended to include reference to appendix L and to add reference to roads with direct frontage access

Paragraph 3.9 amended to include reference to appendix L and to add reference to roads with direct frontage access

Table DG1, 1st column, 8th: Note on carriageway and lane widths added

Table DG1, design speed for residential access road amended from 25mph to 20mph

Table DG1, 8th row amended:

Widths for two-way traffic	Carriageway width ^{(d) (f)} 4.8m up to 50 dwellings 5.5m 50 to 400 dwellings	Overall corridor width ^{(e) (f)} 7.5m
Except on a bus route where the carriageway should be a minimum of 6m wide (subject to tracking assessment [link to para' 3.18]) or on a road serving a school where the carriageway should be 6.75m wide in all cases.		

Note (c) to Table DG1 amended to include new first sentence referring to the Manual for Streets and shared surfaces length, and a new second paragraph inserted referring to the needs of those with visual impairments

Note (d) to Table DG1 amended with a new second sentence referring to carriageway and lane widths

Table DG2, title amended “*Table DG2: General geometry of ~~industrial~~ employment and commercial roads* ^(a)” and 7th row amended:

Widths for two-way traffic	Carriageway width: 7.3m	Carriageway width: 6m for offices 6.75m for other B1 uses
Except on a bus route where the carriageway should be 6.75m wide in all cases.		

New note (e) added to Table DG3 referring to 20mph design speed

Paragraph 3.6 amended: *For employment and commercial developments, we will normally expect road layouts serving developments of more than one building and with more than one occupier to meet our adoptable design guidance and be offered for adoption. (See [Section DG19](#) for ~~industrial~~ employment and commercial developments served by private drives and areas)”*

Paragraph 3.14 amended: “Table DG2 gives the general geometry for internal **industrial employment** and commercial roads. In general terms, both major industrial access roads and the minor industrial roads are conventional cross-section roads with separated provision for vehicles and pedestrians, but their designs vary depending on likely levels of heavy-goods vehicles (HGVs)”

Paragraph 3.18 amended with deletion of reference to ‘Places Streets and Movement’ and replacement with reference to Manual for Streets

Table DG4 amended:

Assessed likely vehicle speed (mph)	85th %ile vehicle speed (mph)	Measured 85th % ile vehicle speed (mph)	Visibility distance at junctions, bends and vertical crests (m) ^(a)
15		11 to 15	23 17 ^(c)
20		16 to 20	33 25 ^(c)
25 Speeds on new residential development roads should normally be controlled to 20mph or less ^(b)		21 to 25	45 33 ^(c)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)		26 to 30	70 43 ^(c)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)		31 to 37	90 59 ^(c)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)		38 to 44	120 ^(d)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)		45 to 53	160 ^(d)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)		54 to 62	215 ^(d)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)		63 to 75	295 ^(d)

(a) See Figure DG2 below for guidance on constructing splays.

(b) Where speed is assessed to be over ~~30~~ 20mph, splay provision will normally be based on the appropriate ‘measured 85th %ile vehicle speed’ distance.

(c) Based on Manual for Streets ([link to the new glossary entry](#)), ‘adjusted for bonnet length’ distances.

(d) Based on Design Manual for Roads and Bridges ([link to glossary entry](#)).

Table below Figure DG2a amended:

	Side road	Main road	Road (street) as defined at appendix L	Residential access road	Residential access way	Major industrial access road	Minor industrial access road
Residential access road up to 25 dwellings			2.4m	2.4m	2.4m		
Residential access road more than 25 dwellings				4.5m	4.5m	—	—
Residential access way			2.4m	2.4m	2.4m		
Major industrial road			4.5m			4.5m	4.5m
Minor industrial road			4.5m - 2.4m*			4.5m - 2.4m*	4.5m - 2.4m*

* Set back will depend on scale and nature of proposed development

Note to Figure DG2b amended to delete reference to ‘Places Streets and Movement’ and replacement with reference to Manual for Streets. New sentence added to end referring to appendix L.

Figure DG2b amended:

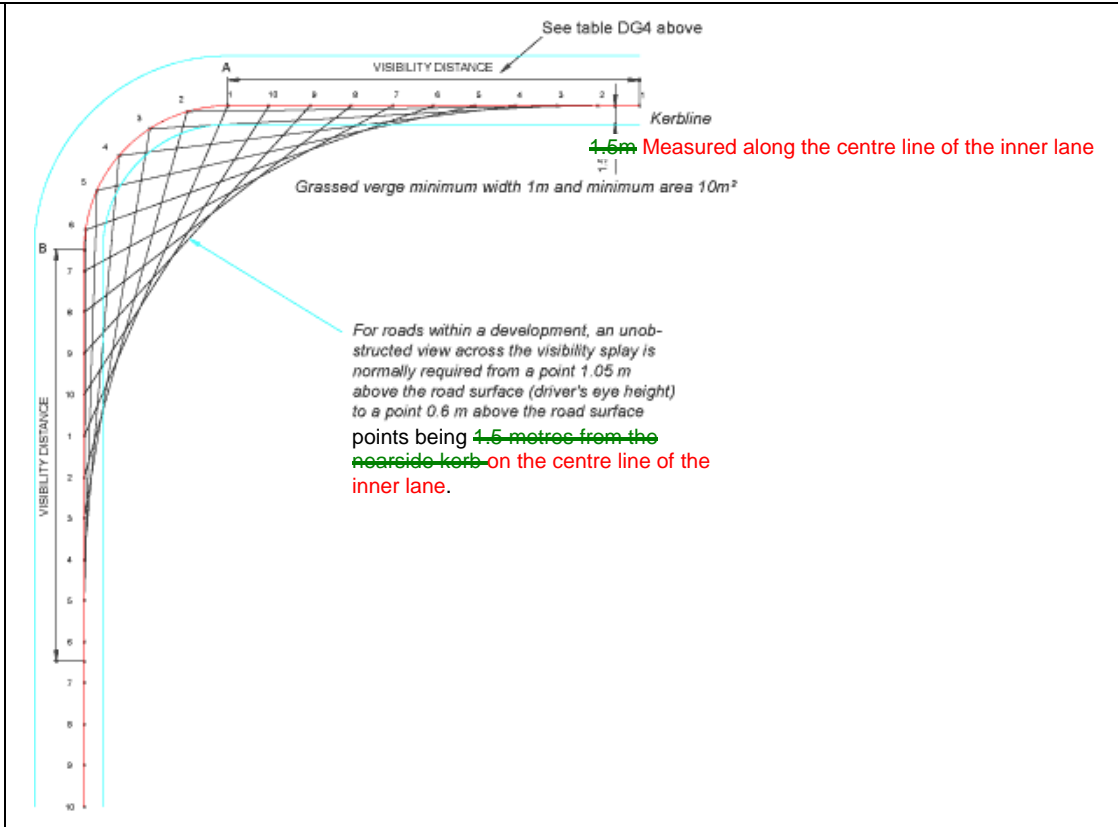
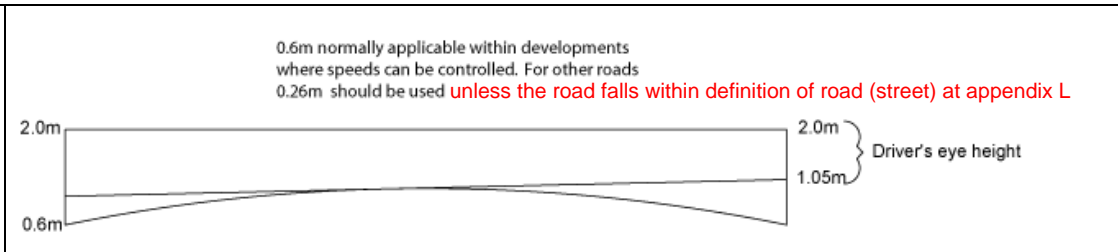


Figure DG2c amended:



Paragraph 3.25 amended: *“Basic junction forms should be determined at the concept layout (masterplanning) stage (link to para 2.10) with the more detailed proposals developed as the development proposal evolves. ~~Within developments, corner junction radii should normally be provided as in Table DG5 and the accompanying illustrations highlight broad junction types and the corner radii that should normally be provided within developments.~~”*

Table DG5 renamed *“Broad junction types and corner radii within developments”* and new diagram added to support it (based on Manual for Streets Fig 7.9)

Paragraph 3.44 amended: *“Home Zones are a relatively new idea in the UK, and some of the legal ~~framework needed to support them has only recently been put into place. Further regulations, from central government, are still required the~~ regulations to introduce them have only recently been put in place.”*

Paragraph 3.46 amended: *“The Secretary of State has ~~not yet~~ recently made the necessary regulations under the Transport Act setting out the procedures for designating Home Zones and making use orders and speed orders, ~~although draft regulations have been published for consultation. When these regulations are in place, a~~ A use order will allow activities other than moving vehicles (such as children’s play), to take place legally on streets. A speed order will allow the traffic authority to define an appropriate design speed for the Home Zone.”*

Paragraph 3.47 amended: ~~“Until the regulations for making these orders are established, formal Home Zones cannot be created. We will consider proposals for Home Zones on a site by site basis.”~~

References to British Standards and Building Regulations in paragraph 3.51 updated

Heading to Figure DG6a amended with addition of note referring to Part 4

Heading to Figure DG6d amended with addition of note referring to Part 4

Heading to Figure DG6e amended with addition of note referring to Part 4

Note below Figure DG6f referring to standard drawings deleted

Paragraph 3.103 amended: *“Walking and cycling offer real alternatives to journeys by car particularly over shorter distances. In the interests of sustainability new developments must make appropriate, high quality provision for pedestrians and cyclists and where it is necessary to break a road link in order to discourage through traffic, it is recommended that links for pedestrians and cyclists are maintained. In respect...”*

New sentence referring to trip hazards added to end of paragraph 3.104

Tables DG9 and DG10 amended:

Table DG9: Pedestrian-only routes

Location	Minimum width	Minimum width past an obstacle ^(a)	Longitudinal gradient	Crossfall
Normal residential, commercial and industrial sites	2m	1.2m Maximum length of an obstacle: 6m	Minimum:1:100 Maximum:1:20 ^{(b)(c)}	1:35
Shopping areas	4m	1.2m Maximum length of an obstacle: 6m	Minimum:1:100 Maximum:1:20 ^{(b)(c)}	1:35
Bus stops	3m	1.2m Maximum length of an obstacle: 6m	Minimum:1:100 Maximum:1:20 ^{(b)(c)}	1:35
Outside schools ^{(e) (d)}	3m	1.2m Maximum length of an obstacle: 6m	Minimum:1:100 Maximum:1:20 ^{(b)(c)}	1:35

(a) Includes utility equipment (for example gas, water, cable TV). You should liaise with utility providers to achieve this for equipment installed while the development is being built. The clearance should be increased to 2m where pedestrian flows may be heavy, in the region of 500 an hour. Please see [Section DG11](#) for more guidance on locating utility equipment.

(b) Taking into account the needs of people with impaired mobility, we may be prepared to consider a relaxation to 1:12 on sites with particularly difficult topography.

(c) *Crossovers to private drives and parking should be carefully designed so as not to create inconvenient cross-falls for pedestrians.*

^(e) (d) Includes [higher and further education facilities](#).

Table DG10:

Forward visibility	Crossfall ^(d)	Longitudinal gradient
20m	1 in 40 (no adverse camber)	Min: 1 in 100 Max: 1 in 20

(d) *Crossovers to private drives and parking areas should be carefully designed so as not to create inconvenient cross-falls for pedestrians.*

Start of note (a) to Table DG9, amended to include reference to bollards, sign posts, guard railing and lamp columns

Table DG10, 6th column: 1:40 amended to 1:35 and new note (e) added

Paragraph 3.93 amended: *“Where a development is likely to be accessed using public transport, any roads which buses are likely to run along should normally be at least ~~6.75m~~ 6m wide (subject to tracking assessment [link to para’ 3.18]) and should be reasonably straight. A more generous swept path (link to existing glossary entry) is also likely to be required to take account of where vehicles might park on-street, for example. It will not...”*

Two new sentences added at the beginning of paragraph 3.106, referring to porches, etc. and buildings projecting over the highway

Paragraph 3.107 amended: *“Routes that run separately from a road are not normally encouraged; for example, the Manual for Streets (link to new the new glossary entry) sets out that cyclists should generally be accommodated on the carriageway in residential areas. But where ~~such~~ a separate route can be justified, for example, where it is necessary to break a road link to discourage through traffic or to give...”*

Paragraph 3.128 amended to delete City Council reference in first line

Paragraph 3.142 amended: *“We normally require a suitable system of street lighting on all adoptable roads, which we will normally design for you in areas to be adopted. This is important for both road safety and to help promote personal safety and minimise crime opportunities. It is also important that you plan the lighting at the same time as you design the street layout. Also, to encourage pedestrians to use a route and to feel safe, it is important that lighting levels are maintained at the same standard along a route, whether a route is adopted or not. There are also wider design issues. When you prepare development proposals, you should consider the purpose of the lighting, its scale and the proposed width of the street and height of the building.”*

Paragraph 3.144 amended: *“Note: Our standard conditions applying to highway works for new development (link) provide more advice on dealing with utility equipment during construction of your works.*

Early in your planning process you should consider the location and installation of utility equipment both above and below ground, particularly where surface areas are shared. *Normally, private equipment should not be located in the highway* but utility company’s equipment should be.* Where a shared-surface layout is proposed without a separate service margin or where a development layout is not explicitly covered by this guidance, you should hold early discussions with utility providers and supply us with details of proposed locations for utility equipment. This will enable us to consider the layout, for example, in terms of safety and accessibility.

**This can be difficult to achieve with layouts where houses are located very close to the highway boundary. However, if you do not deal with this matter, it may lead to problems in future with us adopting (glossary link) your road.”*

New note added immediately below paragraph 3.166 referring to Leicester City Council separate standards

Original paragraphs 3.168 to 3.171 (and accompanying note) deleted and replaced with new paragraphs referring to a revised approach to residential parking provision

Additional sentence included at the end of paragraph 3.172 referring to circumstances where a dwelling has no separate parking for cycles

Table DG13 amended:

B1 ±	Research and development	One lorry space for every 500m ²
B2	Research and development	One lorry space for every 500m²
	Light industry	One lorry space for every 400m ²

Bulleted list in paragraph 3.179 amended:

- *“be located near to the main entrances to the properties that it serves, with as short and direct a walking route as is possible between the parking court and the property; be secure, including enjoying good natural observation from neighbouring buildings and not be surrounded by blank walls or close-boarded fences and so on;...”*

Paragraph 3.185 amended:

“impair road safety. ~~Around 5% of all accidents in Leicestershire involve a parked vehicle; (between 2002 and 2006 around 12% of accidents that occurred in ‘built-up areas’ (speed limit up to 40mph) within Leicestershire -excluding the City - involved parked vehicles)”~~

Paragraph 3.186 amended: *“So, in the interests of the safety of all road users, including pedestrians and cyclists, and of maintaining efficient flow of traffic, we will look for developments that include well-designed parking layouts (on-street and off-street) that minimise the likelihood of on-street parking problems. For parallel parking to a road, each vehicle will normally need an area of about 2m wide x 6m long. For echelon (wedge shaped) parking and perpendicular (end on to the road) parking, individual bays should normally be indicated or marked. Bays should normally be about 2.4m wide and a minimum 4.8m long and they should be arranged so that drivers are encouraged to reverse into them. Figure DG18a shows some suggested on-street parking arrangements, and also sets- out how to calculate the necessary width needed to access echelon parking.”*

New Figure DG18a added after existing DG18, (based on Manual for Streets Figures 8.18 and 8.19) along with a note, which is a copy of MfS para’ 8.3.51

Start of paragraph 3.196 amended to include reference to Manual for Streets

Table DG14 amended: (including addition of new notes (b) and (c))

Use class	Description of land use	Provision
A1 and A3	Shops and restaurants, pubs and clubs	One space per 500m ² up to 4000m ² gross floor area (GFA) for staff and operational use. Parking to be secure and under cover. One space for every 1000m ² GFA for customer use to be in the form as shown in Figure DG19 . Parking to be located in a prominent and convenient location. Stores between 3000m ² to 5000m ² One goods bay space for every 750m ²
A2 and B1	Financial and professional services, and research and development and offices	One space per 400m ² GFA for staff and operational use. Parking to be secure and under cover. Customer parking to be assessed on a site-by-site basis.
B2 to B8	General industry and storage and distribution	One space per 400m ² GFA. Parking to be secure and under cover.
C3	Dwelling houses ^{(b)(c)}	For developments with common facilities, such as flats, one space for every five dwellings. Parking to be under cover and secure. <i>Where spaces are allocated, there should be one space for each dwelling.</i>
D1 and D2	Non-residential institutions, assembly and leisure	Staff parking to be assessed on a site-by-site basis. Sufficient cycle racks to accommodate five percent of the maximum number of visitors expected to use the facility at any one time. Racks to be in the form as shown in Figure DG19 and to be located in a prominent and convenient location.

Paragraph 3.198 amended: “All cycle parking must be secure **and normally** with weather protection ~~provided at least for employee parking~~”

Paragraph 3.211 amended to include a new second sentence referring to specific approval of the construction details

Figures DG20 and DG21, headings and tables amended

Figure DG20 Unadopted shared drive serving up to ~~five~~ 25 dwellings

	Single dwelling = 2.75m Two to five dwellings = 4.25m for a minimum distance of 5m behind the highway boundary. Six to 25 dwellings = 4.8m for a minimum distance of 5m behind the highway boundary(a) (link to a new note). (In either all cases add 0.5m if bounded by a wall, fence, hedge, line of trees or other similar obstruction on one side, 1m if bounded on both sides. See also paragraph 3.215 about access for refuse collection and 3.216 about access for emergency vehicles.)
Minimum effective width (w)	
Minimum control radii	Single dwelling = 2m Two to five dwellings = 4m and six to 25 dwellings = 6m on a classified road ('A', 'B' or other classification), otherwise 2m
Vehicle visibility splays	As in Table DG4, measured from a set back of 2.4m or 2m where the speed limit (or measured vehicle speeds) is 30mph or less.
Pedestrian visibility splays	2m by 2m both sides (no planting permitted)
Gradient	Preferably not greater than 1:20 for first 5m, and should never exceed 1:12m
Surfacing	Bound material, for example, bituminous or concrete, or block paving for at least the first 5m

(a) If the driveway length is more than 25m, its minimum width should be 5m (plus any widening where bounded by walls) to enable access by refuse vehicles

Figure DG21 Unadopted shared drive serving more than ~~five~~ 25 dwellings

	Access serving between five and 25 dwellings	Access serving more than 25 dwellings
Minimum effective width (w)	4.8m	5.5m
	Add 0.5m if bounded by a wall on one side, 1m if bounded on both sides. See also paragraph 3.215 about access for refuse collection and 3.216 about access for emergency vehicles	Add 0.5m if bounded by a wall on one side, 1m if bounded on both sides. See also paragraph 3.215 about access for refuse collection and 3.216 about access for emergency vehicles
Minimum kerbed radii @	6m	6m
Vehicle visibility splays	As in Table DG4, measured from a set back of 2.4m	As in Table DG4 , measured from a set back of 2.4m
Pedestrian visibility splays	2m by 2m both sides	2m by 2m both sides
Gradient	Preferably not greater than 1:20 for the first 5m, and should never exceed 1:12	Preferably not greater than 1:20 for the first 5m, and should never exceed 1:12
Surfacing	Bound material, for example, bituminous or concrete, or block paving for at least the first 5m	Bound material, for example, bituminous or concrete, or block paving for at least the first 5m

Paragraph 3.216 amended: “Where a development is situated more than 45m from the highway, you must cater for emergency vehicles by constructing the drive and any turning areas so they can cater for a commercial or service vehicle. **The minimum width for access should be at least 3.7m (between kerbs) and fire vehicles should not have to reverse more than 20m.** Your development must be in line with [British Standard BS5906, 19802005](#) and [Building Regulations Approved Document B, Fire Safety 20002006](#). You should also take into account the comments about parking in [paragraph 3.215](#).”

Paragraph 3.220 amended: “In the interests of urban design, garages should not dominate the street scene. Where an integral garage is proposed (that is, it is part of the house), you should hold early discussions with the planning authority on the design of the garage, the house and elevation of the property. **The Manual for Streets (link to the new glossary entry) suggests that keeping garages and parking areas level with the main building line can be beneficial to the townscape, but, a planning authority...**”

New, unnumbered paragraph added after Table DG16 referring to gates

Paragraph 3.221 amended: “Garages should preferably have the following minimum internal dimensions.

- Standard single = ~~5.5~~ 6m x ~~2.5~~ 3m, with minimum door width of 2.3m
- Use by disabled = ~~5.5~~ 6m x 3.3m with minimum door width of 2.8m
- Double = ~~5.5~~ 6m x ~~5~~ 6m, with minimum door width of 4.2m.

If a dwelling has no separate parking for cycles (link to para’ 3.196), it may affect whether we consider that the garage should be counted towards parking provision.”

Paragraph 3.226 amended to include reference to appendix L

Paragraph 3.227 amended: “Office developments (use class B1) up to ~~one hectare~~ 3000m² gross floor area (GFA) may be served by a dropped-kerb access arrangement as shown in Figure DG23. However, if you choose this option, you should note that we will recommend imposing planning conditions that restrict any change of use to general employment (use class B2 to B8). *Depending on the scale of the development, you will need to obtain our specific approval for the construction details of the access.*

Figure DG23 Unadopted access serving up to 3000m² GFA ~~one hectare~~ of offices”

Paragraph 3.228 amended: “Regardless of the access type, you should provide separate footways *or pedestrian routes within the site* to minimise the safety risks of pedestrians coming into contact with HGVs. *This could be in the form of footways or routes marked on the ground and segregated by bollards or railings.*

3.229 *Where any gates are to be provided, they should open inwards and be set back a distance appropriate to the type of vehicle likely to require access to the development.”*

Subsequent paragraphs renumbered

Paragraph 3.231 (originally 3.230) amended to include updated references to British Standards and Building Regulations

Part 4

End of paragraph 4.4 amended with addition of new sentence referring to the Manual for Streets

New bullet point added in paragraph 4.5 referring to ‘safe for purpose’

New sentence added to end of paragraph 4.48 referring to SUDS (sustainable urban drainage systems)

Paragraph 4.53 amended: “All gullies should be trapped *and the maximum length of gully connection should not be more than 15m. It will not normally be acceptable to connect one gully connection directly into another.* Gully spacing should be calculated from Table MC1 and the accompanying notes:”

Paragraph 4.71 and Table MC5 amended: “Table MC5 gives the:

- required minimum design thicknesses; and
- options you have for the flexible **and modular (block)** materials you should normally use for different development road types.”*

Table MC5: Road **carriageway** construction depths

	Residential access roads		Residential access ways		Major industrial access roads	Minor industrial access roads
	Bituminous	Block	Bituminous	Block		
Surface course (wearing course)	40mm HSCA or CGM	80mm	30mm CGM or 40mm HSCA	80mm	50mm HRA	50mm HRA
Binder course (base course)	60mm DBM	25 to 30mm sand	60mm DBM (50mm if HSCA surface course)	30mm sand	60mm DBM	60mm DBM
Base (roadbase)	150mm DBM	150mm DBM	110mm DBM	110mm DBM	190mm DBM	190mm DBM

Note: We will not usually accept the use of block-paving for industrial roads.

Amended headings list at start of Section MC11

~~“Strengthening footways at junctions and speed control bends to accommodate heavy-vehicle parking or over-running”~~

New sentence added at start of paragraph 4.93 referring to Table MC7

New table (headed ‘Residential Footways’) added after paragraph 4.93; table numbered Table MC7 and existing table MC7 renumber as MC7a

Paragraph 4.94 amended: *“Where we agree that it is appropriate, you may lay concrete-block paving to footways and other paved areas. ~~This should be laid instead of the surface course on the standard thickness and materials for the binder course (base course) and sub-base.~~ The concrete block paving must comply with and be laid in accordance line with the requirements of Appendix 11/1 of our [Specification](#) for concrete-block paving in footways.”*

Paragraph 4.97 amended:

“Strengthening footways ~~at junctions and speed control bends to~~ accommodate heavy-vehicle parking or over-running

~~4.97 You must strengthen footways where:~~

- ~~• the corner radii at junctions are less than 7.5m; and~~
- ~~• where they are on the inside of speed control bends.~~

~~The construction should be in accordance with the Table MC7.~~

4.97 You must strengthen residential footways where heavy vehicles such as delivery (service) and maintenance vehicles, refuse lorries and buses are likely to be park on them or overrun them. See Table MC7a ([link](#)) for details.”

4.98 The construction should be in accordance line with Table MC8. Where a footway crossing is to be used to access an employment or commercial development (as allowed for in Part 3, Section DG19 [[link to para’ 3.227](#)]), the footway crossing must be constructed in line with industrial access road requirements given in Table MC5 ([link](#)).

LC

Paragraph 4.174 amended: ~~“The County Council~~ **We** may allow you to enter into a sponsorship agreement for maintaining of certain landscaped areas either direct with the ~~County Council~~ **us** or with a town, parish, borough or district council where a maintenance agreement with that council exists.”

Part 5

Paragraph 5.19, first bullet point amended to include minimum fee of £1000

Paragraph 5.26 amended to include a new sentence referring to our standard conditions applying to highway works for new development

Part 6

End of paragraph 6.1 amended to include reference to constructing works under Section 184 of the Highways Act. Link provided to new guidance document.

Paragraph 6.17 amended to include a new sentence referring to our standard conditions applying to highway works for new development

Part 7, appendices

Appendix A: City contact details added; changes to County Council highway development control officers' contact details; and new contact details added for East Midlands Ambulance Service and Leicestershire Fire and Rescue Service.

Appendix C: Title of changed to "Assessing the transport impacts of development proposals" and the appendix restructured and rewritten completely to reflect the new 'Guidance on Transport Assessments'.

Appendix H: Reference to City AQM areas added

Glossary

Amended to delete references to Design Bulletin 32, 'Places, Streets and Movement' and PPG3, and to include references to the 'Manual for Streets', PPS3 and new 'Guidance on Transport Assessments.'

Standard Conditions

Condition 14, list in item (g) amend to include requirement for a showing extent and layout of the proposed works

Summary of changes made up to October 2008 version of 'Highways, transportation and development'

(Note: ~~green double strikethrough~~ = deletion **red** = addition)

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Table DG1, 1st column, 8th: Note on carriageway and lane widths added

Table DG1, design speed for residential access road amended from 25mph to 20mph

Table DG1, 8th row amended:

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Except on a bus route where the carriageway should be a minimum of 6m wide (subject to tracking assessment [link to para' 3.18]) or on a road serving a school where the carriageway should be 6.75m wide in all cases.		

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Note (d) to Table DG1 amended with a new second sentence referring to carriageway and lane widths

Table DG2, title amended “*Table DG2: General geometry of ~~industrial~~ employment and commercial roads* ^(a)” and 7th row amended:

Widths for two-way traffic	Carriageway width: 7.3m	Carriageway width: 6m for offices 6.75m for other B1 uses
Except on a bus route where the carriageway should be 6.75m wide in all cases.		

New note (e) added to Table DG3 referring to 20mph design speed

Paragraph 3.6 amended: *For employment and commercial developments, we will normally expect road layouts serving developments of more than one building and with more than one occupier to meet our adoptable design guidance and be offered for adoption. (See [Section DG19](#) for ~~industrial~~ employment and commercial developments served by private drives and areas)”*

Paragraph 3.14 amended: “Table DG2 gives the general geometry for internal **industrial employment** and commercial roads. In general terms, both major industrial access roads and the minor industrial roads are conventional cross-section roads with separated provision for vehicles and pedestrians, but their designs vary depending on likely levels of heavy-goods vehicles (HGVs)”

Paragraph 3.18 amended with deletion of reference to ‘Places Streets and Movement’ and replacement with reference to Manual for Streets

Table DG4 amended:

Assessed likely vehicle speed (mph)	85th %ile vehicle speed (mph)	Measured 85th % ile vehicle speed (mph)	Visibility distance at junctions, bends and vertical crests (m) ^(a)
15	11 to 15		23 17 ^(c)
20	16 to 20		33 25 ^(c)
25 Speeds on new residential development roads should normally be controlled to 20mph or less ^(b)	21 to 25		45 33 ^(c)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)	26 to 30		70 43 ^(c)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)	31 to 37		90 59 ^(c)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)	38 to 44		120 ^(d)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)	45 to 53		160 ^(d)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)	54 to 62		215 ^(d)
Speeds on new residential development roads should normally be controlled to 25 20mph or less ^(b)	63 to 75		295 ^(d)

(a) See Figure DG2 below for guidance on constructing splays.

(b) Where speed is assessed to be over ~~30~~ 20mph, splay provision will normally be based on the appropriate ‘measured 85th %ile vehicle speed’ distance.

(c) Based on Manual for Streets ([link to the new glossary entry](#)), ‘adjusted for bonnet length’ distances.

(d) Based on Design Manual for Roads and Bridges ([link to glossary entry](#)).

Table below Figure DG2a amended:

	Side road	Main road	Road (street) as defined at appendix L	Residential access road	Residential access way	Major industrial access road	Minor industrial access road
Residential access road up to 25 dwellings			2.4m	2.4m	2.4m		
Residential access road more than 25 dwellings				4.5m	4.5m	—	—
Residential access way			2.4m	2.4m	2.4m		
Major industrial road			4.5m			4.5m	4.5m
Minor industrial road			4.5m - 2.4m*			4.5m - 2.4m*	4.5m - 2.4m*

* Set back will depend on scale and nature of proposed development

Note to Figure DG2b amended to delete reference to ‘Places Streets and Movement’ and replacement with reference to Manual for Streets. New sentence added to end referring to appendix L.

Figure DG2b amended:

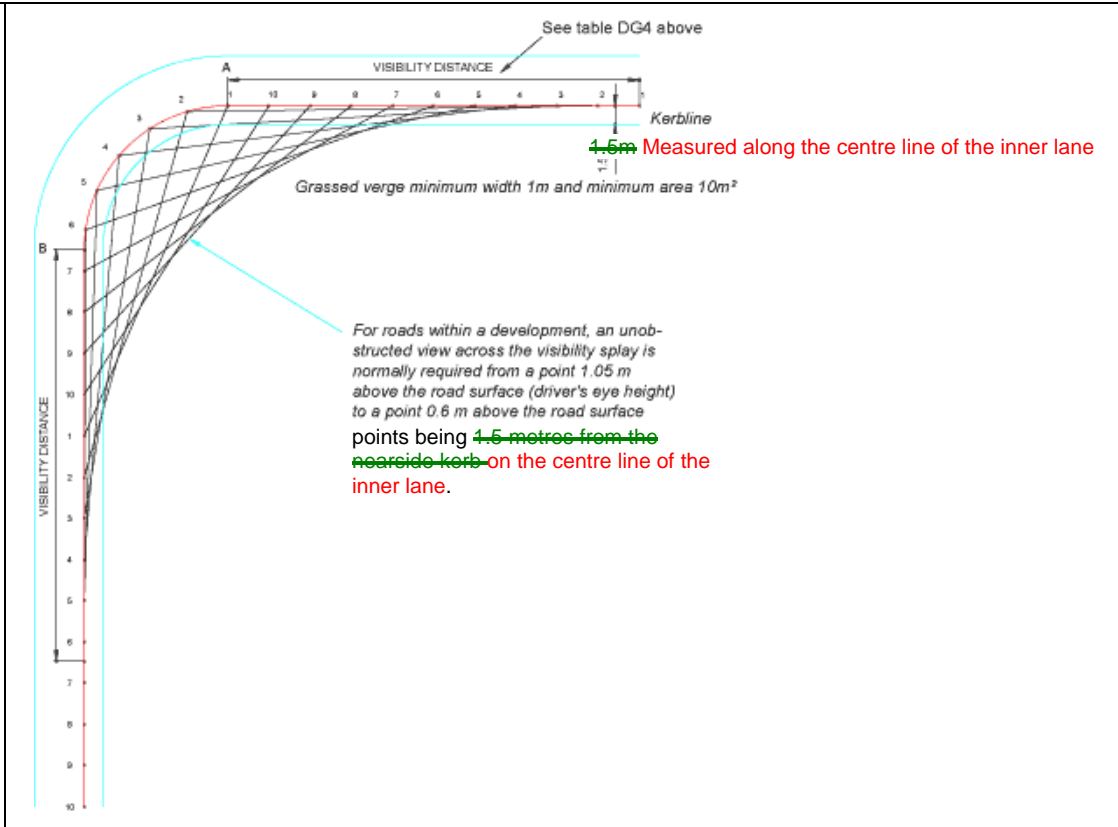
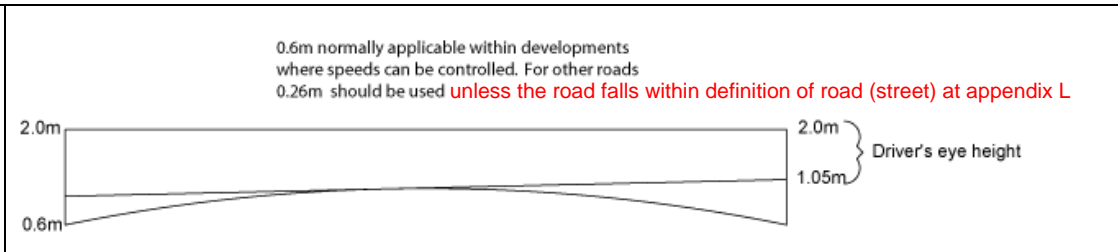


Figure DG2c amended:



Paragraph 3.25 amended: *“Basic junction forms should be determined at the concept layout (masterplanning) stage (link to para 2.10) with the more detailed proposals developed as the development proposal evolves. ~~Within developments, corner junction radii should normally be provided as in Table DG5 and the accompanying illustrations highlight broad junction types and the corner radii that should normally be provided within developments.~~”*

Table DG5 renamed *“Broad junction types and corner radii within developments”* and new diagram added to support it (based on Manual for Streets Fig 7.9)

Paragraph 3.44 amended: *“Home Zones are a relatively new idea in the UK, and some of the legal ~~framework needed to support them has only recently been put into place. Further regulations, from central government, are still required the~~ regulations to introduce them have only recently been put in place.”*

Paragraph 3.46 amended: *“The Secretary of State has ~~not yet~~ recently made the necessary regulations under the Transport Act setting out the procedures for designating Home Zones and making use orders and speed orders, ~~although draft regulations have been published for consultation. When these regulations are in place, a~~ A use order will allow activities other than moving vehicles (such as children’s play), to take place legally on streets. A speed order will allow the traffic authority to define an appropriate design speed for the Home Zone.”*

Paragraph 3.47 amended: ~~“Until the regulations for making these orders are established, formal Home Zones cannot be created. We will consider proposals for Home Zones on a site by site basis.”~~

References to British Standards and Building Regulations in paragraph 3.51 updated

Heading to Figure DG6a amended with addition of note referring to Part 4

Heading to Figure DG6d amended with addition of note referring to Part 4

Heading to Figure DG6e amended with addition of note referring to Part 4

Note below Figure DG6f referring to standard drawings deleted

Paragraph 3.103 amended: *“Walking and cycling offer real alternatives to journeys by car particularly over shorter distances. In the interests of sustainability new developments must make appropriate, high quality provision for pedestrians and cyclists and where it is necessary to break a road link in order to discourage through traffic, it is recommended that links for pedestrians and cyclists are maintained. In respect...”*

New sentence referring to trip hazards added to end of paragraph 3.104

Tables DG9 and DG10 amended:

Table DG9: Pedestrian-only routes

Location	Minimum width	Minimum width past an obstacle ^(a)	Longitudinal gradient	Crossfall
Normal residential, commercial and industrial sites	2m	1.2m Maximum length of an obstacle: 6m	Minimum:1:100 Maximum:1:20 ^{(b)(c)}	1:35
Shopping areas	4m	1.2m Maximum length of an obstacle: 6m	Minimum:1:100 Maximum:1:20 ^{(b)(c)}	1:35
Bus stops	3m	1.2m Maximum length of an obstacle: 6m	Minimum:1:100 Maximum:1:20 ^{(b)(c)}	1:35
Outside schools ^{(e) (d)}	3m	1.2m Maximum length of an obstacle: 6m	Minimum:1:100 Maximum:1:20 ^{(b)(c)}	1:35

(a) Includes utility equipment (for example gas, water, cable TV). You should liaise with utility providers to achieve this for equipment installed while the development is being built. The clearance should be increased to 2m where pedestrian flows may be heavy, in the region of 500 an hour. Please see [Section DG11](#) for more guidance on locating utility equipment.

(b) Taking into account the needs of people with impaired mobility, we may be prepared to consider a relaxation to 1:12 on sites with particularly difficult topography.

(c) *Crossovers to private drives and parking should be carefully designed so as not to create inconvenient cross-falls for pedestrians.*

^(e) (d) Includes [higher and further education facilities](#).

Table DG10:

Forward visibility	Crossfall ^(d)	Longitudinal gradient
20m	1 in 40 (no adverse camber)	Min: 1 in 100 Max: 1 in 20

(d) *Crossovers to private drives and parking areas should be carefully designed so as not to create inconvenient cross-falls for pedestrians.*

Start of note (a) to Table DG9, amended to include reference to bollards, sign posts, guard railing and lamp columns

Table DG10, 6th column: 1:40 amended to 1:35 and new note (e) added

Paragraph 3.93 amended: *“Where a development is likely to be accessed using public transport, any roads which buses are likely to run along should normally be at least ~~6.75m~~ 6m wide (subject to tracking assessment [link to para’ 3.18]) and should be reasonably straight. A more generous swept path (link to existing glossary entry) is also likely to be required to take account of where vehicles might park on-street, for example. It will not...”*

Two new sentences added at the beginning of paragraph 3.106, referring to porches, etc. and buildings projecting over the highway

Paragraph 3.107 amended: *“Routes that run separately from a road are not normally encouraged; for example, the Manual for Streets (link to new the new glossary entry) sets out that cyclists should generally be accommodated on the carriageway in residential areas. But where ~~such~~ a separate route can be justified, for example, where it is necessary to break a road link to discourage through traffic or to give...”*

Paragraph 3.128 amended to delete City Council reference in first line

Paragraph 3.142 amended: *“We normally require a suitable system of street lighting on all adoptable roads, which we will normally design for you in areas to be adopted. This is important for both road safety and to help promote personal safety and minimise crime opportunities. It is also important that you plan the lighting at the same time as you design the street layout. Also, to encourage pedestrians to use a route and to feel safe, it is important that lighting levels are maintained at the same standard along a route, whether a route is adopted or not. There are also wider design issues. When you prepare development proposals, you should consider the purpose of the lighting, its scale and the proposed width of the street and height of the building.”*

Paragraph 3.144 amended: *“Note: Our standard conditions applying to highway works for new development (link) provide more advice on dealing with utility equipment during construction of your works.*

Early in your planning process you should consider the location and installation of utility equipment both above and below ground, particularly where surface areas are shared. *Normally, private equipment should not be located in the highway* but utility company’s equipment should be.* Where a shared-surface layout is proposed without a separate service margin or where a development layout is not explicitly covered by this guidance, you should hold early discussions with utility providers and supply us with details of proposed locations for utility equipment. This will enable us to consider the layout, for example, in terms of safety and accessibility.

**This can be difficult to achieve with layouts where houses are located very close to the highway boundary. However, if you do not deal with this matter, it may lead to problems in future with us adopting (glossary link) your road.”*

New note added immediately below paragraph 3.166 referring to Leicester City Council separate standards

Original paragraphs 3.168 to 3.171 (and accompanying note) deleted and replaced with new paragraphs referring to a revised approach to residential parking provision

Additional sentence included at the end of paragraph 3.172 referring to circumstances where a dwelling has no separate parking for cycles

Table DG13 amended:

B1 ±	Research and development	One lorry space for every 500m ²
B2	Research and development	One lorry space for every 500m²
	Light industry	One lorry space for every 400m ²

Bulleted list in paragraph 3.179 amended:

- *“be located near to the main entrances to the properties that it serves, with as short and direct a walking route as is possible between the parking court and the property; be secure, including enjoying good natural observation from neighbouring buildings and not be surrounded by blank walls or close-boarded fences and so on;...”*

Paragraph 3.185 amended:

“impair road safety. ~~Around 5% of all accidents in Leicestershire involve a parked vehicle; (between 2002 and 2006 around 12% of accidents that occurred in ‘built-up areas’ (speed limit up to 40mph) within Leicestershire -excluding the City - involved parked vehicles)”~~

Paragraph 3.186 amended: *“So, in the interests of the safety of all road users, including pedestrians and cyclists, and of maintaining efficient flow of traffic, we will look for developments that include well-designed parking layouts (on-street and off-street) that minimise the likelihood of on-street parking problems. For parallel parking to a road, each vehicle will normally need an area of about 2m wide x 6m long. For echelon (wedge shaped) parking and perpendicular (end on to the road) parking, individual bays should normally be indicated or marked. Bays should normally be about 2.4m wide and a minimum 4.8m long and they should be arranged so that drivers are encouraged to reverse into them. Figure DG18a shows some suggested on-street parking arrangements, and also sets- out how to calculate the necessary width needed to access echelon parking.”*

New Figure DG18a added after existing DG18, (based on Manual for Streets Figures 8.18 and 8.19) along with a note, which is a copy of MfS para’ 8.3.51

Start of paragraph 3.196 amended to include reference to Manual for Streets

Table DG14 amended: (including addition of new notes (b) and (c))

Use class	Description of land use	Provision
A1 and A3	Shops and restaurants, pubs and clubs	One space per 500m ² up to 4000m ² gross floor area (GFA) for staff and operational use. Parking to be secure and under cover. One space for every 1000m ² GFA for customer use to be in the form as shown in Figure DG19 . Parking to be located in a prominent and convenient location. Stores between 3000m ² to 5000m ² One goods bay space for every 750m ²
A2 and B1	Financial and professional services, and research and development and offices	One space per 400m ² GFA for staff and operational use. Parking to be secure and under cover. Customer parking to be assessed on a site-by-site basis.
B2 to B8	General industry and storage and distribution	One space per 400m ² GFA. Parking to be secure and under cover.
C3	Dwelling houses ^{(b)(c)}	For developments with common facilities, such as flats, one space for every five dwellings. Parking to be under cover and secure. <i>Where spaces are allocated, there should be one space for each dwelling.</i>
D1 and D2	Non-residential institutions, assembly and leisure	Staff parking to be assessed on a site-by-site basis. Sufficient cycle racks to accommodate five percent of the maximum number of visitors expected to use the facility at any one time. Racks to be in the form as shown in Figure DG19 and to be located in a prominent and convenient location.

Paragraph 3.198 amended: “All cycle parking must be secure **and normally** with weather protection ~~provided at least for employee parking~~”

Paragraph 3.211 amended to include a new second sentence referring to specific approval of the construction details

Figures DG20 and DG21, headings and tables amended

Figure DG20 Unadopted shared drive serving up to ~~five~~ 25 dwellings

Minimum effective width (w)	Single dwelling = 2.75m Two to five dwellings = 4.25m for a minimum distance of 5m behind the highway boundary. Six to 25 dwellings = 4.8m for a minimum distance of 5m behind the highway boundary(a) (link to a new note). (In either all cases add 0.5m if bounded by a wall, fence, hedge, line of trees or other similar obstruction on one side, 1m if bounded on both sides. See also paragraph 3.215 about access for refuse collection and 3.216 about access for emergency vehicles.)
Minimum control radii	Single dwelling = 2m Two to five dwellings = 4m and six to 25 dwellings = 6m on a classified road ('A', 'B' or other classification), otherwise 2m
Vehicle visibility splays	As in Table DG4, measured from a set back of 2.4m or 2m where the speed limit (or measured vehicle speeds) is 30mph or less.
Pedestrian visibility splays	2m by 2m both sides (no planting permitted)
Gradient	Preferably not greater than 1:20 for first 5m, and should never exceed 1:12m
Surfacing	Bound material, for example, bituminous or concrete, or block paving for at least the first 5m

(a) If the driveway length is more than 25m, its minimum width should be 5m (plus any widening where bounded by walls) to enable access by refuse vehicles

Figure DG21 Unadopted shared drive serving more than ~~five~~ 25 dwellings

	Access serving between five and 25 dwellings	Access serving more than 25 dwellings
Minimum effective width (w)	4.8m	5.5m
	Add 0.5m if bounded by a wall on one side, 1m if bounded on both sides. See also paragraph 3.215 about access for refuse collection and 3.216 about access for emergency vehicles	Add 0.5m if bounded by a wall on one side, 1m if bounded on both sides. See also paragraph 3.215 about access for refuse collection and 3.216 about access for emergency vehicles
Minimum kerbed radii @	6m	6m
Vehicle visibility splays	As in Table DG4, measured from a set back of 2.4m	As in Table DG4 , measured from a set back of 2.4m
Pedestrian visibility splays	2m by 2m both sides	2m by 2m both sides
Gradient	Preferably not greater than 1:20 for the first 5m, and should never exceed 1:12	Preferably not greater than 1:20 for the first 5m, and should never exceed 1:12
Surfacing	Bound material, for example, bituminous or concrete, or block paving for at least the first 5m	Bound material, for example, bituminous or concrete, or block paving for at least the first 5m

Paragraph 3.216 amended: “Where a development is situated more than 45m from the highway, you must cater for emergency vehicles by constructing the drive and any turning areas so they can cater for a commercial or service vehicle. **The minimum width for access should be at least 3.7m (between kerbs) and fire vehicles should not have to reverse more than 20m.** Your development must be in line with [British Standard BS5906, 19802005](#) and [Building Regulations Approved Document B, Fire Safety 20002006](#). You should also take into account the comments about parking in [paragraph 3.215](#).”

Paragraph 3.220 amended: “In the interests of urban design, garages should not dominate the street scene. Where an integral garage is proposed (that is, it is part of the house), you should hold early discussions with the planning authority on the design of the garage, the house and elevation of the property. **The Manual for Streets (link to the new glossary entry) suggests that keeping garages and parking areas level with the main building line can be beneficial to the townscape, but, a planning authority...**”

New, unnumbered paragraph added after Table DG16 referring to gates

Paragraph 3.221 amended: “Garages should preferably have the following minimum internal dimensions.

- Standard single = ~~5.5~~ 6m x ~~2.5~~ 3m, with minimum door width of 2.3m
- Use by disabled = ~~5.5~~ 6m x 3.3m with minimum door width of 2.8m
- Double = ~~5.5~~ 6m x ~~5~~ 6m, with minimum door width of 4.2m.

If a dwelling has no separate parking for cycles (link to para’ 3.196), it may affect whether we consider that the garage should be counted towards parking provision.”

Paragraph 3.226 amended to include reference to appendix L

Paragraph 3.227 amended: “Office developments (use class B1) up to ~~one hectare~~ 3000m² gross floor area (GFA) may be served by a dropped-kerb access arrangement as shown in Figure DG23. However, if you choose this option, you should note that we will recommend imposing planning conditions that restrict any change of use to general employment (use class B2 to B8). *Depending on the scale of the development, you will need to obtain our specific approval for the construction details of the access.*

Figure DG23 Unadopted access serving up to 3000m² GFA ~~one hectare~~ of offices”

Paragraph 3.228 amended: “Regardless of the access type, you should provide separate footways *or pedestrian routes within the site* to minimise the safety risks of pedestrians coming into contact with HGVs. *This could be in the form of footways or routes marked on the ground and segregated by bollards or railings.*

3.229 *Where any gates are to be provided, they should open inwards and be set back a distance appropriate to the type of vehicle likely to require access to the development.”*

Subsequent paragraphs renumbered

Paragraph 3.231 (originally 3.230) amended to include updated references to British Standards and Building Regulations

Part 4

End of paragraph 4.4 amended with addition of new sentence referring to the Manual for Streets

New bullet point added in paragraph 4.5 referring to ‘safe for purpose’

New sentence added to end of paragraph 4.48 referring to SUDS (sustainable urban drainage systems)

Paragraph 4.53 amended: “All gullies should be trapped *and the maximum length of gully connection should not be more than 15m. It will not normally be acceptable to connect one gully connection directly into another.* Gully spacing should be calculated from Table MC1 and the accompanying notes:”

Paragraph 4.71 and Table MC5 amended: “Table MC5 gives the:

- required minimum design thicknesses; and
- options you have for the flexible **and modular (block)** materials you should normally use for different development road types.”*

Table MC5: Road **carriageway** construction depths

	Residential access roads		Residential access ways		Major industrial access roads	Minor industrial access roads
	Bituminous	Block	Bituminous	Block		
Surface course (wearing course)	40mm HSCA or CGM	Block 80mm	30mm CGM or 40mm HSCA	80mm	50mm HRA	50mm HRA
Binder course (base course)	60mm DBM	25 to 30mm sand	60mm DBM (50mm if HSCA surface course)	30mm sand	60mm DBM	60mm DBM
Base (roadbase)	150mm DBM	150mm DBM	110mm DBM	110mm DBM	190mm DBM	190mm DBM

Note: We will not usually accept the use of block-paving for industrial roads.

Amended headings list at start of Section MC11

~~“Strengthening footways at junctions and speed control bends to accommodate heavy-vehicle parking or over-running”~~

New sentence added at start of paragraph 4.93 referring to Table MC7

New table (headed ‘Residential Footways’) added after paragraph 4.93; table numbered Table MC7 and existing table MC7 renumber as MC7a

Paragraph 4.94 amended: *“Where we agree that it is appropriate, you may lay concrete-block paving to footways and other paved areas. ~~This should be laid instead of the surface course on the standard thickness and materials for the binder course (base course) and sub-base.~~ The concrete block paving must comply with and be laid in accordance line with the requirements of Appendix 11/1 of our [Specification](#) for concrete-block paving in footways.”*

Paragraph 4.97 amended:

“Strengthening footways ~~at junctions and speed control bends to~~ accommodate heavy-vehicle parking or over-running

~~4.97 You must strengthen footways where:~~

- ~~• the corner radii at junctions are less than 7.5m; and~~
- ~~• where they are on the inside of speed control bends.~~

~~The construction should be in accordance with the Table MC7.~~

4.97 You must strengthen residential footways where heavy vehicles such as delivery (service) and maintenance vehicles, refuse lorries and buses are likely to be park on them or overrun them. See Table MC7a ([link](#)) for details.”

4.98 The construction should be in accordance line with Table MC8. Where a footway crossing is to be used to access an employment or commercial development (as allowed for in Part 3, Section DG19 [[link to para’ 3.227](#)]), the footway crossing must be constructed in line with industrial access road requirements given in Table MC5 ([link](#)).

LC

Paragraph 4.174 amended: ~~“The County Council~~ **We** may allow you to enter into a sponsorship agreement for maintaining of certain landscaped areas either direct with the ~~County Council~~ **us** or with a town, parish, borough or district council where a maintenance agreement with that council exists.”

Part 5

Paragraph 5.19, first bullet point amended to include minimum fee of £1000

Paragraph 5.26 amended to include a new sentence referring to our standard conditions applying to highway works for new development

Part 6

End of paragraph 6.1 amended to include reference to constructing works under Section 184 of the Highways Act. Link provided to new guidance document.

Paragraph 6.17 amended to include a new sentence referring to our standard conditions applying to highway works for new development

Part 7, appendices

Appendix A: City contact details added; changes to County Council highway development control officers' contact details; and new contact details added for East Midlands Ambulance Service and Leicestershire Fire and Rescue Service.

Appendix C: Title of changed to "Assessing the transport impacts of development proposals" and the appendix restructured and rewritten completely to reflect the new 'Guidance on Transport Assessments'.

Appendix H: Reference to City AQM areas added

Glossary

Amended to delete references to Design Bulletin 32, 'Places, Streets and Movement' and PPG3, and to include references to the 'Manual for Streets', PPS3 and new 'Guidance on Transport Assessments.'

Standard Conditions

Condition 14, list in item (g) amend to include requirement for a showing extent and layout of the proposed works

Summary of changes made April 2009 version of 'Highways, transportation and development'

Opening title page
Changes to text to include Leicester City Council, Derbyshire and Nottinghamshire County Council details.
Part 1
Paragraph 1.1 and 1.2 amended to reflect adoption by Nottinghamshire County Council
Figure IN1 amended to include Nottinghamshire
Paragraph 1.5 Nottinghamshire County Council details added
Paragraph 1.6 amended to reflect adoption by Nottinghamshire County Council
Paragraph 1.7 amended to reflect latest consultations
Paragraph 1.9 amended to reflect adoption by Nottinghamshire County Council
Figure IN2 note amended to clarify the process does not apply to Nottinghamshire and Derbyshire
Paragraph 1.22 and 1.23 note added to clarify responsibility for document maintenance
Part 2
Table DP1 note I note added regarding Leicester City and Nottinghamshire County Council Cycle Parking standards
Paragraph 2.26 amended to include references to policies and objectives to relevant highway authority
Part 3
Paragraph 3.3 note amended regarding adopted highways
Paragraph 3.6 new sentence added regarding discussions over adoption matters
Paragraph 3.71 note on star trak amended
Paragraph 3.105 link added to Nottinghamshire County Council Cycle Best Practice document
Paragraph 3.113 link added to Nottinghamshire County Council Cycle Best Practice document
Off street parking standards, paragraph 3.166 to 3.171 amended to clarify the parking standards apply in Leicestershire only and to include links to standards of the other authorities.
Paragraph 3.196 link to Nottinghamshire Cycle Parking Standards added

Part 4

Paragraph 4.1 amended to reflect adoption by Derbyshire and Nottinghamshire County Councils

Paragraph 4.14 amended to include links to Derbyshire and Nottinghamshire County Councils standard drawings

Table MC3 heading amended to reflect adoption by Derbyshire and Nottinghamshire County Councils

Paragraphs 4.126 and 4.127 amended to clarify procedures for street lighting design

Table MC10 note d amended to reflect adoption by other authorities

Part 7

Appendix A amended to add details of Nottinghamshire County Council

Highways, transportation and development

Change Log August 2010

PART 3

Topic / Paragraph	Proposed Content / Submissions																																	
<p>Introduction – Section DG1 Existing Para 3.3</p>	<p>3.3 Where development proposals do not align with either the principles or guidance set out in this document it is likely that we will seek to resist those proposals in the interest of the users of the highway network and its primary role in providing safe and effective transport for all. However if the proposals are significantly out of line with the principles and guidance the Council may recommend a refusal.</p>																																	
<p>Vertical Alignment -Existing Para 3.13 Table DG 1 and DG2 and subsection f)</p> <p>Specification of Visibility Distance Existing Para - 3.13 Table DG1 and 3.14 Table DG2</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Table DG1: General geometry of residential roads (internal)</th> </tr> <tr> <td></td> <th colspan="2" style="text-align: center;">Type of internal development road</th> </tr> <tr> <td></td> <th style="text-align: center;">Residential access road</th> <th style="text-align: center;">Residential access way</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Type of use</td> <td>Mainly vehicles</td> <td>Mainly pedestrians and cyclists. Not normally acceptable for use on a bus route</td> </tr> <tr> <td style="text-align: center;">Normal dwelling limits</td> <td>400 Normally no more than 150 from a single point of access^(a)</td> <td>50 Normally no more than 25 from a single point of access^(a)</td> </tr> <tr> <td style="text-align: center;">Access to schools^(b)</td> <td>Yes, but not as a cul-de-sac</td> <td>No</td> </tr> <tr> <td style="text-align: center;">85th %ile design speed</td> <td>20 mph</td> <td>15mph</td> </tr> <tr> <td style="text-align: center;">Shared surface</td> <td>No</td> <td>Yes^(c)</td> </tr> <tr> <td style="text-align: center;">Widths for two-way traffic. Note: Where a road is to be narrowed, to help control vehicle speeds, for example, the minimum <i>carriageway</i> width (kerb to kerb) = 3.7m. Minimum <i>lane</i> width at a restriction, such as pedestrian refuge in the middle of the road = 3.2m.</td> <td>Carriageway width^{(d)(f)} 4.8m up to 50 dwellings 5.5m 50 to 400 dwellings Except on a bus route where the carriageway should be a minimum of 6m wide (subject to tracking assessment) or on a road serving a school where the carriageway should be 6.75m wide in all cases.</td> <td>Overall corridor width^{(e)(f)} 7.5m</td> </tr> <tr> <td style="text-align: center;">Centre-line radius</td> <td colspan="2">Defined by tracking^(g)</td> </tr> <tr> <td style="text-align: center;">Crossfall</td> <td colspan="2">1:40</td> </tr> </tbody> </table>	Table DG1: General geometry of residential roads (internal)				Type of internal development road			Residential access road	Residential access way	Type of use	Mainly vehicles	Mainly pedestrians and cyclists. Not normally acceptable for use on a bus route	Normal dwelling limits	400 Normally no more than 150 from a single point of access ^(a)	50 Normally no more than 25 from a single point of access ^(a)	Access to schools ^(b)	Yes, but not as a cul-de-sac	No	85 th %ile design speed	20 mph	15mph	Shared surface	No	Yes ^(c)	Widths for two-way traffic. Note: Where a road is to be narrowed, to help control vehicle speeds, for example, the minimum <i>carriageway</i> width (kerb to kerb) = 3.7m. Minimum <i>lane</i> width at a restriction, such as pedestrian refuge in the middle of the road = 3.2m.	Carriageway width ^{(d)(f)} 4.8m up to 50 dwellings 5.5m 50 to 400 dwellings Except on a bus route where the carriageway should be a minimum of 6m wide (subject to tracking assessment) or on a road serving a school where the carriageway should be 6.75m wide in all cases.	Overall corridor width ^{(e)(f)} 7.5m	Centre-line radius	Defined by tracking ^(g)		Crossfall	1:40	
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Normal dwelling limits	400 Normally no more than 150 from a single point of access ^(a)	50 Normally no more than 25 from a single point of access ^(a)																																
Access to schools ^(b)	Yes, but not as a cul-de-sac	No																																
85 th %ile design speed	20 mph	15mph																																
Shared surface	No	Yes ^(c)																																
Widths for two-way traffic. Note: Where a road is to be narrowed, to help control vehicle speeds, for example, the minimum <i>carriageway</i> width (kerb to kerb) = 3.7m. Minimum <i>lane</i> width at a restriction, such as pedestrian refuge in the middle of the road = 3.2m.	Carriageway width ^{(d)(f)} 4.8m up to 50 dwellings 5.5m 50 to 400 dwellings Except on a bus route where the carriageway should be a minimum of 6m wide (subject to tracking assessment) or on a road serving a school where the carriageway should be 6.75m wide in all cases.	Overall corridor width ^{(e)(f)} 7.5m																																
Centre-line radius	Defined by tracking ^(g)																																	
Crossfall	1:40																																	

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Emergency Access - Existing Para 3.15 – 3.17			<p data-bbox="801 759 1787 799"><i>“Well-connected street networks and Emergency accesses</i></p> <p data-bbox="801 836 1917 906"><i>3.15 New residential streets should be designed to form part of a well-connected street network. Well-connected street networks have significant advantages:</i></p> <ul data-bbox="846 911 1995 1351" style="list-style-type: none"> <i>• A shorter route can be used to cover a given area;</i> <i>• reversing may be avoided altogether;</i> <i>• they also minimise land-take by avoiding the need for wasteful turning areas at the ends of cul-de-sacs;</i> <i>• encourage more people to walk and cycle to local destinations, improving their health while reducing motor traffic, energy use and pollution;</i> <i>• more people on the streets leads to improved personal security and road safety – research shows that the presence of pedestrians on streets causes drivers to travel more slowly;</i> <i>• for utility companies – service provision and alternative service routes;</i> <i>• for highway and utility maintenance operations as traffic can be routed around a point closure if it is necessary to excavate the carriageway for maintenance.</i> 															

		<p><i>3.16 As such developments will usually need at least two access points to the highway network. The number of external connections that a development provides depends on the nature of its surroundings. These access points should be to adoptable standards and available for general public use.</i></p> <p><i>3.17 However, cul-de-sacs may provide the best solution for developing awkward sites where the site is linear in nature, has difficult topography, boundary or other constraints and where through routes are not practical.</i></p> <p><i>3.18 We will not normally accept emergency accesses because of:</i></p> <ul style="list-style-type: none"><i>• enforcement problems arising from their misuse;</i><i>• difficulties encountered by the emergency services;</i><i>• maintenance issues and vandalism of access-control equipment; and</i><i>• general crime and anti-social behaviour problems.</i> <p><i>3.19 However, where there are valid reasons why this cannot be achieved, and where the development proposal is otherwise acceptable to us, we may be prepared to consider an emergency access as long as:</i></p> <ul style="list-style-type: none"><i>• highway safety is not compromised and the access is not likely be a source of crime or anti-social behaviour problems;</i><i>• there are appropriate means of controlling its use;</i><i>• you have fully consulted the emergency services and the proposals are acceptable to them (your consultations with the police should include both traffic management and the Police Architectural Liaison Officer);</i><i>• the access is designed to accommodate safely all vehicles likely to use it; and</i><i>• long-term maintenance responsibilities are clearly defined and secured.</i> <p><i>3.20 Where suitable access arrangements cannot be achieved, we may refuse to adopt the development roads.”</i></p>
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<p>Vehicle Tracking Existing Para 3.18</p>			<p>3.18 Tracking is providing the required width for vehicle movement within the overall width of the road. It can also be used to establish appropriate bend radii. Instead of taking the highway engineering requirements as the starting point for layout design, you can consider the arrangement of the buildings and the boundaries of the development first. You can lay out buildings to suit a particular form, with kerblines helping to define and emphasise spaces. The width between kerbs can vary. (You can find further information on how to use tracking in 'Manual for Streets', published by the Department for Transport (an example). Where tracking of large vehicles results in the use of the whole width of the carriageway to make manoeuvres on narrow roads it is important to ensure that forward visibility to bends is provided in accordance with Part 3 Table DG4 to enable this to be achieved safely. There should be no recourse to reducing the width of roads such that it is necessary for the drivers of the private motor car to make use of the whole width of the carriageway to make similar manoeuvres”</p>
<p>Materials and Construction Existing Para 3.36</p>			<p>3.36 Please refer to Part 4. The standard construction requirements and materials set-out in this Part are based on national standards and advice used in general for constructing and maintaining highways throughout Leicestershire, Derbyshire and Nottinghamshire. They should normally be applied to all highway works and have been chosen to make sure the highways function safely and to make sure that they can be maintained in the most cost-effective way. To achieve these ends, we have considered the principles of quality, durability, maintainability and sustainability.</p> <p>However, it is recognised that each Authority has regional variants in its palette of construction materials that should be used in such places as City Centres/ Conservation areas. Reference should always be made to the relevant Authorities website for local advice on construction materials. For example, in Nottingham City please refer to the Nottingham City Centre Streetscape Design Manual.</p>
<p>Section DG6: Public transport Bus stop location</p>			<p>3.86 Shelters will usually only be required at key access points where there are likely to be higher passenger flows, for example, near:</p> <ul style="list-style-type: none"> • high-density housing;

and design			<ul style="list-style-type: none"> • business parks; • local shops, schools, hospitals or other significant community facilities; or • in rural areas where public transport services are infrequent and people may have to wait some time for a bus.
Horse Riders - Section DG8 Existing Paras 3.129 – 3.134			<p>3.130 Horse riders are entitled to use bridleways, all-purpose roads and byways open to all traffic. You should consider them in the design and safety audit of all developments which either:</p> <ul style="list-style-type: none"> • affect an existing or future bridleway; or • affect an existing or future all-purpose road that carries horse riders. <p>3.134 Where a new junction is formed between a bridleway and a road, a Pegasus crossing facility should be provided. In addition, a bridleway sign should be erected.</p>
Section DG18: Residential developments served by private drives and areas Figure DG20 Unadopted shared drive serving up to 25 dwellings			<p>Figure DG20 Unadopted shared drive serving up to 25 dwellings</p> <p>Minimum effective width (w) Single dwelling = 2.75m Two to five dwellings = 4.25m for a minimum distance of 5m behind the highway boundary. Six to 25 dwellings = 4.8m for a minimum distance of 5m behind the highway boundary^(a). (In all cases add 0.5m if bounded by a wall, fence, hedge, line of trees or other similar obstruction on one side, 1m if bounded on both sides. See also paragraph 3.215 about access for refuse collection and 3.216 about access for emergency vehicles.)</p> <p>Minimum control radii (r) Single dwelling = 2m Two to five dwellings = 4m and six to 25 dwellings = 6m on a classified road ('A', 'B' or other classification), otherwise 2m</p> <p>Vehicle visibility splays As in Table DG4, measured from a set back of 2.4m or 2m where the speed limit (or measured vehicle speeds) is 30mph or less.</p> <p>Pedestrian visibility splays 2m by 2m both sides (no planting permitted)</p> <p>Gradient Preferably not greater than 1:20 for first 5m, and should never exceed 1:12m</p>

			Surfacing Bound material, for example, bituminous or concrete, or block paving for at least the first 5m										
Garages and gated accesses Table DG16: Garage set-back distances			<p>Table DG16: Garage set-back distances</p> <table border="1"> <thead> <tr> <th colspan="2">Table DG16: Garage set-back distances</th> </tr> <tr> <th>Garage door type</th> <th>Minimum distance from highway boundary</th> </tr> </thead> <tbody> <tr> <td>Roller-shutter, sliding or inward opening</td> <td>5m 5.5</td> </tr> <tr> <td>'Up-and-over'</td> <td>5.6m 6.1</td> </tr> <tr> <td>Hinged, outward opening</td> <td>6m 6.5</td> </tr> </tbody> </table>	Table DG16: Garage set-back distances		Garage door type	Minimum distance from highway boundary	Roller-shutter, sliding or inward opening	5m 5.5	'Up-and-over'	5.6m 6.1	Hinged, outward opening	6m 6.5
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Part 7 Appendix D: Additional information on safety audits			<p>Part 7 Appendix D:</p> <p>1.18 You must also comply with all aspects of the Construction (Design and Management) Regulations 1994 2007 and indemnify us (protect us from legal responsibility) against all claims, liabilities and actions if you fail to do so.</p>										

Highways, transportation and development

Change Log August 2010

PART 4

Topic / Paragraph	Initial Action	Proposed Content / Submissions
Section DG1: Introduction		<p>The standard construction requirements and materials set out in this Part are based on national standards and advice used for constructing and maintaining highways throughout Leicestershire, Derbyshire and Nottinghamshire the region. They should normally be applied to all highway works and have been chosen to make sure the highways function safely and that they can be maintained in the most cost-effective way. To achieve these ends, we have considered the principles of quality, durability, maintainability and sustainability.</p>
Using alternative materials 4.5		<p>To recognise and overcome some of the inflexibility that results from using standard materials and so on, we are prepared to allow you to use some alternative materials, landscaping treatment and features. However, if alternative materials and so on are to be used they will need to be:</p> <ul style="list-style-type: none">• to a BS/EN standard• easy to maintain and replace;• durable;• safe for purpose;• sustainable; and• appropriate to the local character.• durable and suitable for the hierarchy of the road / footway section and the anticipated traffic / pedestrian flows;• provide a sustainable solution, including the ability to replace components to maximise the life of the asset;• accord to the principles of Asset Management and provide good “Whole of Life” cost

		<p>value in terms of replacement, serviceability and maintenance regimes</p> <ul style="list-style-type: none"> • the use of recycled materials will be considered where appropriate • supported by a commuted sum to meet the additional costs in maintaining and replacing non standard assets
Using alternative materials in conservation areas 4.7		<p>A characteristic of many villages is the informal appearance of the highway edge which consists of grass verges without kerbs. In these areas standard pre-cast concrete kerbs may not be appropriate and you could use natural stone or riven or exposed aggregate kerbs to prevent overriding. We may accept an unkerbed verge where it would be out of keeping to provide kerbs and providing that a lack of kerbing would not adversely affect the safe and satisfactory operation of the highway or result in unacceptable damage to the verge. It may be desirable to upgrade verges to include kerbs to improve pedestrian safety, drainage and to discourage parking.</p>
Marking the highway boundary 4.9		<p>It is important that there is clear demarcation between public and private space. You must define the highway boundary by continuous 50mm x 150mm edging type EF to BS7263 unless we agree otherwise. <i>Alternative approaches to demarcation will be considered on a site by site basis, for example, in conservation areas</i></p>
Section MC3: Specification		<p>Section MC3: Specification</p> <p>4.12 Unless otherwise stated, all All highway works must normally be in accordance with:</p> <ul style="list-style-type: none"> • the 'Specification for Highway Works' (SHW), published by Her Majesty's Stationery Office as Volume 1 of the Highways Agency's Manual of Contract Documents for Highway Works; • must comply with the 'Notes for Guidance on the Specification for Highway Works' published by Her Majesty's Stationery Office as Volume 2 of the Highways Agency's Manual of Contract Documents for Highway Works; and • our 'Specification for Highway Works for Development'.

<p>Section MC4: Standard drawings</p>		<p>Section MC4: Standard drawings</p> <p>4.14 All works must normally comply with our standard drawings. You can find these for Leicestershire, Nottinghamshire and Derbyshire the region at www.leics.gov.uk/standard_drawings.htm. You should check that you are using current drawings.</p>
<p>Section MC6: Sampling and testing goods and materials</p>		<p>Section MC6: Sampling and testing goods and materials</p> <p>4.20 Our Engineer reserves the right to carry out any sampling and testing he or she feels is necessary to confirm that the goods and materials meet with the Specification. They can also core through any pavement construction at any stage to check the thickness of the layers and the type and standard of construction. If we find the work does not meet the Specification, you will be required to pay for the associated costs to the authority coring and testing. You can find a list of the samples of goods and materials which we may ask you to supply to check you are meeting the Specification in Appendix 1/6 of our Specification.</p>
<p>Section MC7: Fencing and Barriers</p>		<p>Section MC7 Fencing and Barriers</p> <p>4.23 4.23 Safety fences and barriers must comply with Section 2 of 'Highway Construction Details' published by Her Majesty's Stationery Office as Volume 3 of the Highways Agency's Manual of Contract Documents for Highway Works. Safety Fencing should not generally be included within residential developments as the need should be designed out to provide layouts that provide places for living. Where safety fencing is unavoidable or required to address existing situations where problems exist or circumstances have changed then reference should be made to the RRRAP (Road Restraint Risk Assessment Process) contained in TD 19/06 where flows are appropriate. In the event that flows are not sufficient to meet the thresholds in this guidance then individual risk assessment should be made in conjunction with Road Safety / Safety Audit. Care should be taken to avoid the use of safety fencing to protect road users from the dangers of other objects or hazards within the highway boundary by first determining whether the objects in question could be relocated to remove the hazard</p>

<p>Section MC8: Drainage</p>		<p>4.33 If the outfall is to an existing highway drain, you will have to prove its capacity and condition before we can approve the connection. We will need a CCTV survey of the drain and you For all works incorporating highway drainage you will need to carry out and provide a copy of a CCTV survey and report. You must carry out any improvement works found necessary, all at your expense.</p>																				
<p>Resurfacing carriageways at junctions with existing roads and widening existing roads^(a)</p>		<p>4.85 Where a new carriageway meets an existing county road or an existing adopted county road is widened and:</p> <ul style="list-style-type: none"> • the construction joint falls within the running lane of the existing adopted county road; or • involves any changes to the adopted county road carriageway, including additional areas of carriageway; <p>You must overlay or resurface the whole of the altered or widened carriageway unless we agree otherwise. At junctions, you must carry this out over the length from tangent point to tangent point of the junction radii. However, if the junction includes acceleration and deceleration splays (lanes) on the main carriageway, the full overlay or resurfacing of the whole carriageway must also include the full length of the splays, unless we agree otherwise.</p> <p>(a) This applies to any adopted <i>see glossary</i>] road, other than those maintained by the Highways Agency.</p>																				
<p>Section MC10: Road pavements</p> <p>Sub grade assessment</p>		<p>Subgrade assessment</p> <p>4.65 For design purposes, you must estimate the CBR before you begin construction. You should notify us in advance of site tests to establish the subgrade strength and give us the opportunity to be present at such tests. You should provide the highway authority with copies of all test results.</p>																				
<p>Surface and binder courses and bases 4.71</p>		<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="6" style="text-align: center;">Table MC5: Road carriageway construction depths</th> </tr> <tr> <th></th> <th colspan="2" style="text-align: center;">Residential access roads</th> <th colspan="2" style="text-align: center;">Residential access ways</th> <th style="text-align: center;">Major industrial access roads</th> <th style="text-align: center;">Minor industrial access roads</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">Bituminous</td> <td style="text-align: center;">Block</td> <td style="text-align: center;">Bituminous</td> <td style="text-align: center;">Block</td> <td></td> <td></td> </tr> </tbody> </table>	Table MC5: Road carriageway construction depths							Residential access roads		Residential access ways		Major industrial access roads	Minor industrial access roads		Bituminous	Block	Bituminous	Block		
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Sub-base	270mm Type 1 ^(a)																					
Highway Structures Section MC15		<p>4.140 At regular intervals, we will audit the supervision of a scheme to make sure that you are meeting the agreed programme of supervision. However, it is the developer's responsibility to keep us informed of the proposed programme (4.139). Before adoption, you must give us copies of approved design calculations (if not already received), inspection certificates, material-testing certificates, digital photographs on CD (*.JPG or*.BMP format), as-built drawings preferably in an electronic form, (for example Autocad file) on CD, maintenance manuals and a Construction Compliance Certificate in accordance with Annex C6 of BD 2/05 'Technical Approval of Highway Structures' (Design Manual for Roads and Bridges). This information should be submitted in advance of a request for a final certificate of completion to the highway authority (full adoption certificate). Failure to accord to the approved design and insufficient collation of the required evidence will jeopardise the ability of the highway authority to adopt structures.</p>																				

<p>Section MC18: Commuted sums</p>		<p>Time period (T)</p> <p>4.1 There is a case for using a time period equal to the expected life of the development in the case of development roads. However, for the time being, a time period of 30 60 years (maximum) will be used to calculate the commuted sums, with the exception of highway structures when a 120-year period will apply, in accordance with the standard design life requirement. The 60 year period reflects the recommendation of the CSS publication 'Commutated Sums for Maintaining Infrastructure Assets'.</p>
<p>Section MC19: Schedules of commuted sums</p>		<p>Schedule 1 and Schedule 2 to be updated (rates to account for 60 year period)</p>