

Part 8: Glossary

%ile design speed: This is the speed which a certain percentage of drivers do not exceed. So if the 85%ile design speed of a road is 20mph, 85% of vehicles will travel at 20mph or less.

1 in 30 year return period design storm: A storm of an intensity (in terms of volume and duration of rainfall) that statistically can be anticipated to occur once every 30 years. This does not mean, however, that storms of this intensity will only occur once every 30 years. Such storms can occur more or less frequently.

Adopted road, adoption, to adopt and so on: A road built by a developer will be a 'private road' maintained by the frontagers unless we take it over to be maintained at public expense. When we take over of the road, we 'adopt' it and the road is then referred to as being 'adopted'.

Advance payments code (APC): A provision of the Highways Act 1980. The advance payments code provides for us to secure money from you to cover the cost of works in private streets next to new buildings, for example to cover the costs of building the roads in a new development. Before any work begins on the development, you must deposit a sum of money with us to make sure that we can complete the roads within the development to a suitable standard if you fail to complete them. You have one month to appeal against the amount set out in an official notice and you are liable to a fine if you start work on the development before you have paid or secured the money. See Part 5, Section ANR2 for more information.

Air quality management areas (AQMA): These are areas identified by local authorities where legal national air quality standards are not being met or are not expected to be met by the end of 2005. There are several of these areas in Leicestershire, and these are shown in appendix H.

B1, B2 and B8 developments: Developments are given different classifications. B1 is the classification for a business which can be carried out in a residential area, for example, some types of offices and research work, without affecting the area by noise, vibration, smell, fumes, smoke, soot, ash, dust or grit. Other classifications include B2 (general industrial) and B8 (storage and distribution).

Base traffic: This can include:

- existing traffic plus any adjustments for land use which is removed from the site because of the proposed development;
- general traffic growth; and
- any traffic which results from committed development (for example development included in a development plan or has planning permission).

Leicestershire Highway Design Guide

Bend radius: This is the measurement of a bend in a road measured along its centre line. The smaller the radius, the tighter the bend.

Better Places to Live: A companion to PPG3 this is a guide to better practice in the design of residential developments. It aims to promote greater attention to the principle of good design in order to raise the quality of housing layout and design.

Better Streets, Better Places: Research report resulting from the Office of Deputy Prime Minister's project on PPG3 and Highway Adoption Procedures. The report sets out the findings of the project, describing the key problems that have been identified and setting out recommendations for action.

Binder course: This is part of the road-surface construction. Formerly known as the 'base course', it is the second layer of construction, immediately below the running surface (known as 'surface course').

Block surfacing: This consists of concrete or clay blocks laid in a pattern on a bed of sand, and which, in appropriate circumstances, can be used as alternative to a 'tarmac' surfacing.

Bond: A bond is a form of financial guarantee which will cover our costs if you do not complete the development for any reason and we need to take over and complete the works instead.

Boxed culvert: This is a square or rectangular cross-section structure which runs under a road and carries a watercourse, for example a stream.

Brownfield site: This is land that has previously been used or developed and is not currently fully in use, although it may be partly used. Or it may be vacant, derelict or contaminated.

Building Plans: Under the Building Regulations – which exist to ensure the health and safety of people in and around all types of buildings (that is domestic, commercial and industrial) – anyone who is proposing to erect or extend a building must submit a plan(s) of their proposals to the relevant local authority (usually a district or city council) for approval. The passing of these plans is the trigger for the Advance Payments Code procedure.

Bunding: In this document this refers to an earth mound, sometimes planted, that forms either a visual or noise screen (or both). For example, bunding may be used to screen a new road from adjacent houses.

Commission for Architecture and Built Environment (CABE): A public body, funded by the government, CABE state they believe that well designed homes, streets, parks, workplaces, schools and hospitals are the fundamental right of everyone. It further states that it will use its skills and resources to work for higher quality of life for people and communities across England.

Capping (layer): If the ground is structurally weak or likely to be subjected to exceptional loads, a capping layer might be required. This is simply selected fill

Leicestershire Highway Design Guide

material, often crushed rock, laid in layers and thoroughly compacted up to the sub-base layer.

Catch pits: These are maintenance access chambers on a drainage system which include a sump to collect materials that might otherwise block a drain, ditch or watercourse.

CBR: This refers to the California Bearing Ratio – a test to measure the strength (softness or hardness) of the subgrade of a road.

CCTV: Closed circuit television.

Centre-line radius: This is the radius of an imaginary circle which has a bend in the road as part of its circumference. The centre-line radius has to be increased on bends to accommodate larger vehicles, for example buses or lorries.

Committed sum: Provided for under the Highways Act 1980, this is a sum of money paid to us by a developer to cover the future maintenance costs of certain areas or items that we are going to adopt and maintain at public expense. Please see Part 4, Section MC18 for further details.

Concept proposal: This is an outline of a proposal to be submitted for planning permission. Its purpose is to bring together all highways and transportation, planning and any other relevant matters to demonstrate how you propose to deliver a safe and accessible high-quality development that can be satisfactorily maintained.

It should normally consist of one or more plans along with any supporting information. It should fit together clearly, consistently and logically with any transport assessment and draft travel plan. When you are preparing it, you should refer to the relevant design guidance set out in this document and also take account of 'designing out crime' issues. The specific content of the concept proposal will depend on:

- whether your development proposals are explicitly covered by this design guidance; and
- whether you are intending to submit an outline or detailed planning application for your development. Please see Part 2, Section PDP4 for further details.

Construction (design and management) regulations 1994: These regulations state what must be done and what cannot be done when designing and managing construction works. (The Regulations define construction work as any building, civil engineering or engineering construction work.) The CDM regulations define the roles and responsibilities of everyone involved with construction work, including those who commission the works, those who design them and those who construct them. The Health and Safety Executive enforces the regulations (and all other health and safety laws in Great Britain). Anyone breaking the law could face criminal prosecution.

Leicestershire Highway Design Guide

Crossfall: This is the camber - the slope from one side of the road to the other.

Development plan: This document is prepared by a planning authority and sets out policies on land use and development, including highways and transport, over a particular period. Examples include structure plans (prepared by county councils) and local plans (prepared by district councils). Structure plans and local plans are to be replaced by local development documents as a result of recent changes in planning legislation.

DfT: The Department for Transport.

Easement: This refers to the right (secured by a legal agreement) to use or cross someone else's land for a specified purpose, for example to carry out work on underground pipes.

Emergency accesses: These are closed to general motor vehicles and are for use by the emergency services only, for example the police and fire brigade. Gates or removable bollards are usually placed at each end. They are not encouraged, as development layouts should be designed to allow easy access for emergency vehicles, so that emergency access should be necessary only in exceptional circumstances.

Entry ramp: An upward sloping ramp used at road junctions. Located at the start of the side road, the ramp controls the speed of a vehicle that has turned from the main road into the side road.



Figure GL1 Example of an entry ramp

Exempted developments: Under Section 219 (4) of the Highways Act certain buildings shall be exempt for various reasons from payments under the Advanced Payment. The Act details the exemptions.

Final certificate: We issue this certificate either under a Section 38 or Section 278 agreement once you have completed and maintained (usually for at least

Leicestershire Highway Design Guide

12 months) road or highway works to our satisfaction. Once we have issued the certificate, we become responsible for maintaining the works at public expense and the bond can be cancelled. See also provisional certificate.

Footpath: This is a pedestrian route that is open to the public (a public right of way), often running across open fields but sometimes providing links within urban areas.

Footway: This is a pedestrian route that runs alongside a carriageway as part of a road.

Formation level: This is the level of the ground the various layers of a road's construction are founded on.

Frontager: This refers to someone whose residence or business fronts onto a road. The frontager can be a private householder in a residential area for example, or a company.

Further and higher education: Further education is education up to 'A' level standard, or equivalent, for people over compulsory school age (16 in England). Courses may be taught in a sixth-form college, a further-education college or, in some cases, a higher-education institute. Higher-education courses are normally above 'A' level standard (degrees for example) and the courses are normally taught in universities and higher-education colleges.

GENERATE: This is a computerised database which holds traffic data on different development types. See also TRICS.

Gravity model: A gravity model is a simple computer model used to estimate journeys (trips) between a fixed starting point, for example a proposed new housing development, and particular destinations.

Headwall: A headwall is a retaining wall at the end of a culvert or drain that supports the banks of rivers or streams and ensures that they are not eroded by discharged water.

Health and Safety Commission (HSC): Appointed by the Government, the HSC's main concern is the health, safety and welfare of people at work, and the public. Its activities include proposing new laws and standards, conducting research and providing information and advice. The HSC is helped to carry out its functions by the Health and Safety Executive.

Health and Safety Executive (HSE): A public body, funded by the Government, the HSE's job is to help the Health and Safety Commission to make sure that risks to people's health and safety from work activities are properly controlled. It is also responsible for enforcing health and safety law in Great Britain and has powers to prosecute if the law is broken.

Highways Act 1980: In broad terms this Act governs the construction, maintenance, operation, use and control of the public highway.

Leicestershire Highway Design Guide

Home zone: A home zone is a street or group of streets where people and vehicles share the road space safely and equally and where quality of life takes precedence over making traffic movement easy.

Invert: This is the lower inner surface of a drain.

Jointing chamber: This is a chamber (covered hole) in the ground which allows easy access to cables if they need repairing.

Latitudinal gradient: This is the camber - the slope from one side of the road to the other.

Local transport plan (LTP): LTPs set out a local authority's priorities over a five-year period. (current document runs from 2006 to 2011.) It includes transport strategies, aims and objectives.

Each year, authorities produce 'Annual progress reports' (APR) as part of the LTP process. APRs set out how money has been spent on highway and transport improvements and how this has contributed to achieving LTP aims and objectives.

The Government gives money to local authorities for improving highways and transport based on the LTP process.

Longitudinal gradient: This measures the amount a road rises and falls along its length.

Manhole: A covered chamber without a sump which gives access to underground pipes and equipment, for example, drains and telephone cables.

Minor traffic assessment (MinTA): This assesses the impact of a relatively small development on the existing highways and transport network. It should normally be a very simple document (perhaps just one page). Please see Part 7, appendix C for further information on transport assessments.

Major transport assessment (MajTA): More comprehensive than a minor transport assessment, this assesses the impact of a larger development on the existing transport network over a wide area. It should also assess provision for walking, cycling and public transport and also look at the car-parking demand and provision. A draft travel plan should normally form part of a MajTA.

Modal split: This is a breakdown of types of transport used to travel to and from a development, for example, the percentage of people who walk, cycle, use a bus or travel by car.

NJUG7: The National Joint Utilities Group (NJUG) is an organisation that looks after the interests of utility providers (for example, gas, water, cable TV). NJUG7 is a document produced by this organisation which recommends where utility equipment should be positioned.

Non-standard drainage systems: For the purposes of this document, this covers any system which includes features other than normal pipes, manholes,

Leicestershire Highway Design Guide

catchpits, culverts or headwalls. This will generally include SUDS and pollution control devices which result in higher maintenance costs.

Paving the Way: Published following a study commissioned by the 'Commission for Architecture and Built Environment', this report focuses on the process of decision making that has produced the kinds of streets we see in towns and cities. It seeks to understand how and why streets are created and cared for, and in doing to identify what the impediments are to the creation of good streetscapes.

Perched water table: A perched water table can occur where the ground contains isolated layers of less permeable soil (such as clays). If water collects above these isolated layers, perched water tables may develop which can affect pore water pressure (the pressure exerted by the water within the pores or voids in a porous material). See also water table.

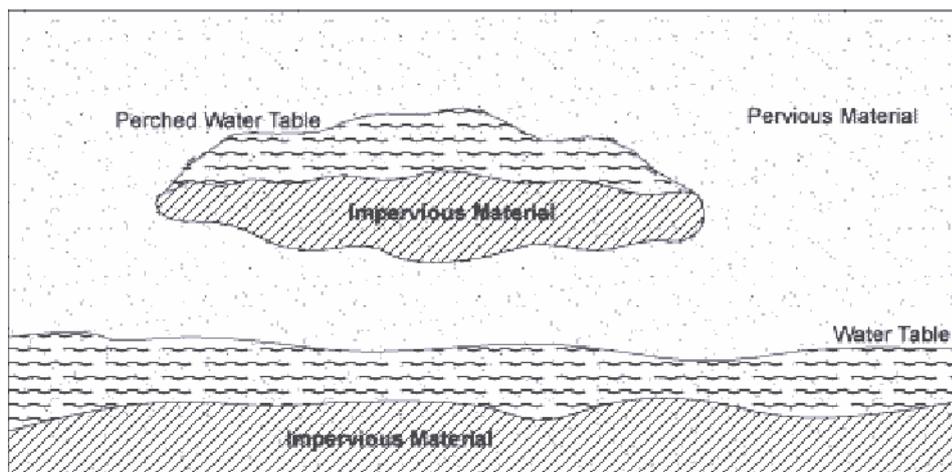


Figure GL2 Perched water table

Personal injury accidents (PIAs): These are road accidents which result in a person either being taken to hospital for treatment or being killed. PIAs are recorded by both the police and LCC. Central government has set targets to reduce PIAs. (Accidents where no one requires hospital treatment and no one is killed are generally referred to as 'damage only'.)

Private road (or street or access or area): This is a road (or so on) that is not adopted ([glossary link](#)) and is maintained by the frontagers rather than by us. It may or may not be a road to which the public has a right to unrestricted access.

Provisional certificate: We issue this certificate either under a Section 38 or Section 278 agreement once road or highway works have been completed to our satisfaction. Issuing the certificate marks the beginning of a period (usually a minimum of 12 months) where you are responsible for maintaining the works. The bond can also be reduced, normally to 10% of its original value. See also final certificate.

Leicestershire Highway Design Guide

Priority junction: This describes a 'T' junction, cross roads or any other junction layout that has 'Give Way' (or Stop) markings and traffic is not controlled by any other means (for example by traffic signals or roundabout).

Residential access road: This is a road with separate provision and surfaces for vehicles and pedestrians, that is it has a carriageway and separate footways.

Residential access way: This is an area with one common surface for all users, that is, there is no separate carriageway or footways.

RPG8: This is the abbreviation for the current Regional Planning Guidance for the East Midlands issued by the Secretary of State in January 2002. It provides a framework to use when deciding the best form and location of a development to meet the economic, environmental and social needs of the region. Local planning authorities must take it into account when they prepare their development plans.

Sags and crests: These are dips and peaks in the road.

Scoping report: This is a report prepared before a major transport assessment to identify its requirements. Its purpose is to establish key factors that will influence later stages of work. This should avoid the possibility of you carrying out work which later has to be stopped because it was based on incorrect assumptions.

Section 38: Section 38 of the Highways Act 1980 provides for a highway authority to adopt *by agreement* a road built by a third party. A road adopted under Section 38 will be maintained at public expense.

Among other things, Section 38 entitles us to seek expenses for maintenance and we intend to do this through commuted sums.

Please see Part 5 for details on our Section 38 procedures.

Section 104: Section 104 of the Water Industries Act 1991 provides for a 'sewerage

undertaker' (water company) to take over, *by agreement*, ownership and maintenance of any 'sewer or sewer disposal works'.

Section 106: Section 106 of the Town and Country Planning Act 1990 provides for agreements to control the development or use of land. A local planning authority (district council) may enter into a Section 106 agreement with a landowner which, for example, prevents a certain activity being carried out on a site, or which prevents the development proceeding until a particular time. Section 106 agreements can also be used to secure financial contributions from the developer, for example to fund improvements to the highway or public transport or to fund education facilities. We are often a party to Section 106 agreements too.

Leicestershire Highway Design Guide

Section 219: Section 219 of the Highways Act 1980 forms part of the advance payment code. It is the part of the code that provides for us to secure payment from you to cover the costs of constructing the roads within a new development. We would use the money to complete the roads if you failed to do so.

Section 220: Section 220 of the Highways Act 1980 is another part of the advance payment code and sets out the timetable for serving notices on developers for the payment of the money. We must serve the notice within six weeks of the development receiving building regulations approval.

Section 278: Section 278 of the Highways Act provides for works funded by developers to be carried out on the existing public highway with our agreement. For example, this might include constructing a new roundabout to provide access to a development or improving an existing junction to accommodate extra traffic generated by the development.

Among other things, Section 278 entitles us to seek expenses for maintenance and we intend to do this through commuted sums. Please see Part 6 for details on our Section 278 procedures.

Shuttle-working: This is where the road has only one lane and traffic in one direction has to wait for traffic travelling in the opposite direction to pass before it can proceed. It is often used at road works where it is controlled by temporary traffic signals. But shuttle working can also be used to help control vehicle speeds as part of a traffic-calming scheme, as shown in the example below.



Figure GL3 Example of a shuttle-working speed control feature

Speed order: This regulation allows a local authority to set a speed limit in a 'Home Zone'.

Leicestershire Highway Design Guide

Sub-base: This is the bottom layer of a road's construction. Made up of crushed, well-compacted stone, it is formed either directly on the subgrade or, where ground conditions are poor, on a capping layer.

Subgrade: This is the layer of naturally occurring material the road is built on, or it can refer to material that has been used to create an embankment to build the pavement on.

SuDs: This is the acronym for sustainable drainage systems. In general terms, it is an approach to managing rainfall that imitates natural drainage. Water run-off (from house roofs or yards, roads and so on) is collected and stored to allow natural cleaning to occur before it drains into the surrounding earth or it is released into watercourses (streams, rivers and so on).

Surface course: Formerly known as the 'wearing' course, this is the uppermost surface of a road which vehicles run on.

Sustrans: Sustrans describes itself as a transport charity that works on practical projects to reduce motor traffic and its adverse effects by encouraging people to walk, cycle and use public transport.

Swept path: This is the width needed to accommodate the movement of vehicles as they manoeuvre. Larger vehicles, such as HGVs and 15m-long rigid buses, have a large swept path in comparison with the space that a car requires to manoeuvre. The swept path varies as vehicles move from a straight section of highway to a curved section.

Technical approval: You must submit to us design details for all road or highway works that are to be carried out either under a Section 38 or Section 278 agreement. Once we are satisfied with the design, we give it technical approval. You must not start the works until we have issued this approval.

TEMPRO: TEMPRO is the acronym for the Department for Transport's **Trip End Model Presentation Program**. It is based on development information provided by local authorities and is used to analyse data about trip ends (destinations), journey mileage, car ownership and the population and workforce. TEMPRO is also often used to estimate how much traffic might grow by over a particular time and area.

Topography: This refers to the natural land features of a region.

Tracking: Tracking is providing the required width for vehicle movement within the overall width of the road. It can also be used to establish an appropriate bend radius. 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 'Places, Streets and Movement', published by the Department for Transport).



Figure GL4 Example of tracking. (Reproduced with kind permission of Jelson Ltd and Boreham Consulting Engineers.)

Travel plan: This refers to a package of measures tailored to the needs of individual sites and aimed at reducing reliance on the car, for example by encouraging more use of public transport, walking and cycling. It involves developing a set of mechanisms, initiatives and targets (as appropriate) that together can enable an organisation to reduce the impact of travel and transport on the environment. It is a process that will grow and develop with time and reflect the changing circumstances of an organisation and its environment.

TRICS: This computerised database holds traffic survey data, such as the amount of traffic a surveyed development generates, as well as information about its size and other descriptions relevant to the development and its location. See also GENERATE.

Turning head: This is the space at the closed end of a cul-de-sac (or similar) which allows vehicles to turn round without having to reverse over long distances or cause damage to verges or footways.

Unilateral undertaking: Under the terms of a contract or an agreement, one party can act without the permission or approval of the other parties.

Unitary authority: A unitary authority is an administrative division of an area and is in place of a two-tier system (that is, there is no separate county or district councils). A unitary authority is responsible for all local government functions in the area.

Use class: Under the planning system, development types are grouped together into use classes. For example, shops are grouped together in use class A1; restaurants, bars and takeaways in A3; storage and distribution warehousing in B8.

Leicestershire Highway Design Guide

Use order: This regulation allows a local authority to designate how roads in a Home Zone are to be used.

Visibility splays: These are the sight lines, for example at junctions and on bends, required to make roads safe for motoring - it must be possible to see and be seen.

Water table: This is the level below which the soil is permanently saturated. See also perched water table.