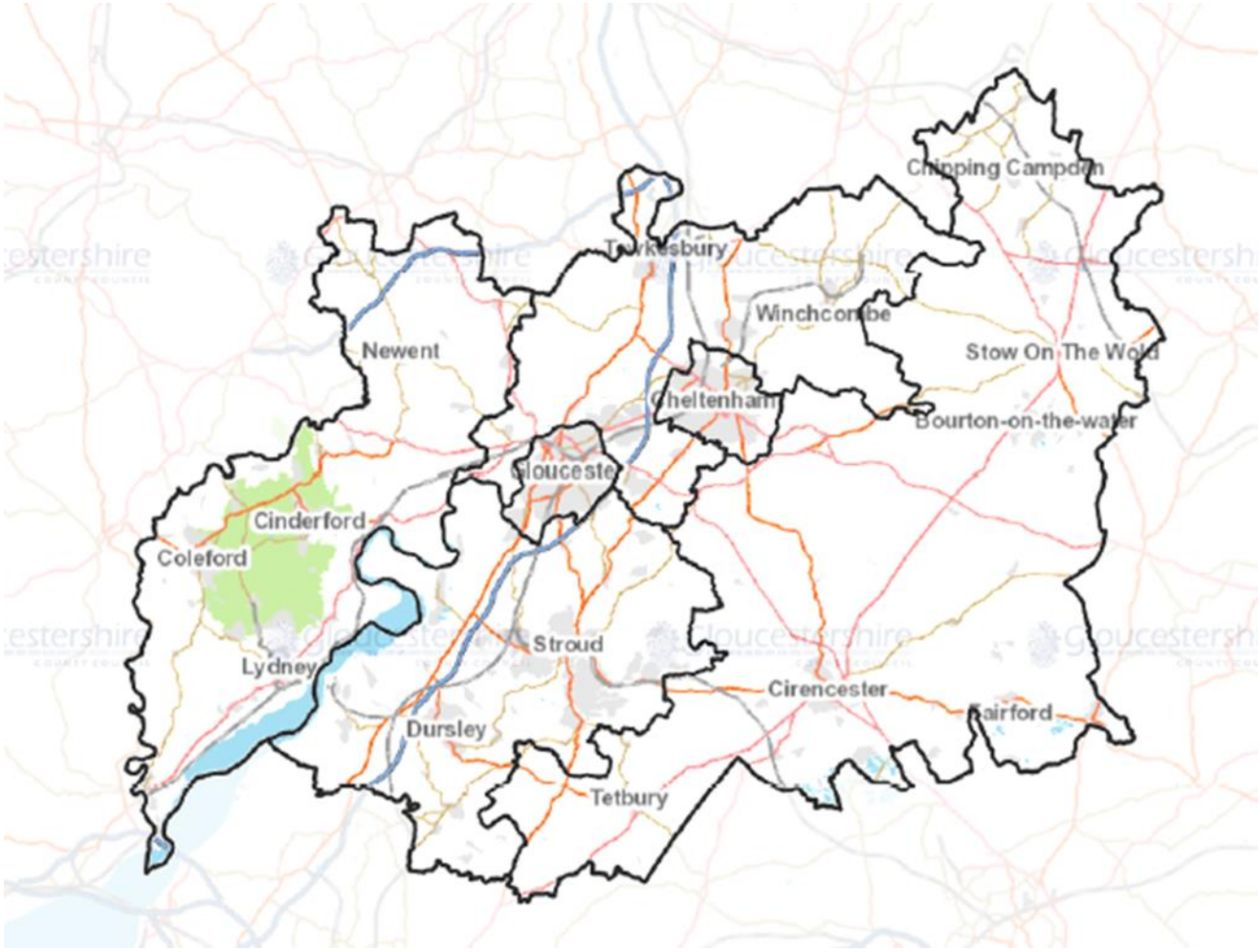
Manual for Gloucestershire Streets

July 2020



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Introduction

Aims of the Manual

Manual for Gloucestershire Streets (MfGS) provides guidance to developers, their consultants and design engineers, Local Planning Authorities, Parish and Town Councils, and the public on how new development within Gloucestershire can contribute towards the provision of a safe and sustainable transport network within the County.

MfGS seeks to reflect the advice given in national design guidance, such as Manual for Streets, Manual for Streets 2, and the Design Manual for Roads as well as a wide range of best practice documents covering different aspects of the transport system. MfGS also seeks to strike the right balance between allowing the designer the flexibility needed to create distinctive high quality developments, whilst also ensuring that layouts stand the test of time and are cost-effective to maintain.

This document supersedes all previous revisions of Manual for Gloucestershire Streets and ancillary standing advice. Manual for Gloucestershire Streets will be reviewed annually to ensure that it remains current to changes in national and local policy and to reflect on emerging evidence. The document may be reviewed sooner should a more fundamental change be needed.

Using this Manual

MfGS is a web-based document, and no hard copies will be published. This format will make it easier for sections of MfGS to be updated as and when a local or national policy change, or new best practice guidance, is published.

Users of MfGS are therefore advised not to print out their own hard copies, but to always refer to the Council's website to ensure that they are using the most up to date version of the document.

Promoting Joint Working

Manual for Streets reinforces the message that the route to successful development is through a coordinated design process. The Council advocates this approach and supports the establishment of development teams to promote joint working whereby all necessary stakeholders can be involved at an early stage. Therefore, the Council encourages developers, designers and the other local authorities in Gloucestershire to involve the Council at the earliest opportunity in discussions about any new development proposal.

Statutory Function

Within Gloucestershire, Gloucestershire County Council is the Local Highway Authority (LHA) charged with fulfilling the statutory duties as set out in the Highways Act 1980, Traffic Management Act 2004 and other relevant legislation.

The Highways Development Management (HDM) Team is responsible for co-ordinating the Highway Authority's response to consultations received on planning applications and new development proposals in respect to highways and transport issues. The HDM Team can be contacted at devcoord@gloucestershire.gov.uk

The Highways Legal Agreements (HLA) Team reviews technical submissions for junction alterations and prospective Highways. The HLA Team can be contacted at highwaylegalagreements@gloucestershire.gov.uk

Management of the Transport Network

The Council, as Local Highway Authority (LHA), is responsible for the management of the following elements of the transport network:

All public highways with the exception of the Trunk Road network, which is managed by the Highways England (see below).

- Public Rights of Way.
- On-street car parking.
- Some public off-street car parking (where associated with Council-run facilities such as Country Parks).
- Some bus services.
- Community Transport schemes.

The below table shows those elements of the transport network that the Council is not responsible for, and identifies those authorities, agencies and companies who operate or manage them.

Element of the Transport Network	Responsible Body
Trunk Road Network (M5 and M50 motorways, sections of the A40, A46, A417 and A419)	Highways England
Rail Network	Network Rail
Railway Stations and Services	Train Operating Companies (First Great Western, Arrive Trains Wales, Arriva Cross Country)
Bus services (commercial)	Bus Companies (Stagecoach, Bennett's, Marchants, and numerous others)
Bus Stations and Bus Stops	District, Parish and Town Councils, Bus Companies
National Cycle Network	Sustrans
Off-street Car Parks	District Councils

Streets in Context

Street or Road and Place and Movement

In addition to allowing people and goods to travel from one location to another, the transport network can cater for a wide range of activities. Whilst on parts of the network, such as the rail network and motorways, travel is the main activity, on other parts, notably the Local Highway Network, a range of activities can be expected and travel will involve several different modes of transport. A typical street will be used by a mixture of people on foot or cycling, and a range of vehicles from motorcycles to lorries. The street will also be the location for a range of other social and economic activities, such as markets, demonstrations, eating and drinking, and sightseeing. The mix and range of uses will, of course, vary according to the locality, with Westgate Street in Gloucester or The Promenade in Cheltenham being used for a wider range of activity than an average residential street.

When designing new street layouts, or proposing significant changes to existing streets, the likely mix of users and activities needs to be considered, and any specific priorities relating to the function of the street identified. For example, the Traffic Management Act 2004 places a duty on the LHA to manage its road network with a view to achieving a number of objectives, including securing the expeditious movement of traffic on the road network. In fulfilling this duty, the LHA will need to adopt specific policies or objectives in relation to different roads or classes of road in their local road network.

Traffic comprises all types of road user. There is nothing in the Traffic Management Act 2004 to suggest that the emphasis in performing that duty should only be on the expeditious movement of motorised traffic, but clearly there are situations where the need for motor vehicles to travel relatively easily and with as little delay as possible is important if the County is to function effectively. There may be occasions where, having considered the user hierarchy in the manner set out at Table 3.2 of Manual for Streets, it is necessary to give greater emphasis on 'movement' than would normally be the case.

Therefore, whilst the principles set out in Manual for Streets to setting road hierarchies and prioritising amongst road users will generally be applied within Gloucestershire, there will be some circumstances where other priorities relating to the duties set out in the Traffic Management Act will take precedence. Examples will include giving priority to the movement of traffic in the most efficient manner on those routes, such as the Gloucester South West Bypass, identified as part of the Principal Route Network (PRN). The map included in Appendix A of this document shows the PRN and route hierarchy for the Gloucestershire network.

A Hierarchy of Streets and Roads

The Council supports innovative and attractive development within Gloucestershire. The NPPF states that developments should establish a strong sense of place, using streetscapes to create attractive and comfortable places to live, work and visit. Whilst MfGS sets out the broad design principles, the Council will engage with developers who wish to try something different, as long as it can be demonstrated that what is proposed will result in a safe and sustainable transport system being inherited by the local community. In particular, when proposing innovative designs that are out of the scope of MfGS a Developer will need to demonstrate that they will promote the safety of all road users. If a Developer were to propose the use of enhanced materials they will need to demonstrate that such use will be

financially sustainable in the long term. It is recommended that early consultation with the Council takes place with regard to innovative layouts, and that these principles are established at pre-application stage to avoid prolonged discussion later in the planning process.

Taken together, Manual for Streets 1 and 2 (MfS1 / MfS2) and the Design Manual for Roads and Bridges (DMRB) give a framework for the design of new transport infrastructure, but it is the Council's role as LHA to determine which design guidance best fits a specific location on the highway network. This responsibility will require a judgement to be made balancing statutory requirements placed upon the Council against the guidance that is in place. MfS1 (paragraph 1.4.5) strongly recommends "that local authorities review their standards and guidance to embraces the principle of MfS".

MfS2 stresses that a street may be made up of a number of sections with different functions and character, and so the design principles will also differ depending on the character of each part of a highway. There are many variables involved and it would be inappropriate to have fixed requirements based on pre-conceived street character types. It should also be recognised that the majority of Gloucestershire's highway network is historic in nature, and the layout can differ significantly over relatively short sections of road. Therefore, the design of the road layout within a new development will need to pay due regard to the historic street pattern that the development is connecting to. It may be inappropriate for example, to have wider roads provided in a development when those roads are connecting to narrow streets, as this could send inconsistent messages to drivers or other road users. As a starting point, MfGS includes a hierarchy of roads and streets that can be used to inform the design process and this hierarchy needs to be placed in the context of the historic road environment. Further guidance on each of these can be found later in the document.

Policy Review

There are a number of key documents that can inform the design process and, if the policies and processes outlined in these are followed, their use should help to prevent modifications to a scheme being required at a later stage.

National Planning Policy Framework (NPPF)

The guidance can be obtained from the Department for Communities and Local Government www.communities.gov.uk/publications/planningandbuilding/nppf
Developers are recommended to consult this website to ensure that when preparing proposals for new development, they are using the most up to date Government guidance.

Local Plans

The Local Planning Authority (LPA) is responsible for setting out the local planning policies within a Local Plan.

Each of the LPA's will be required to adopt new Local Plans in accordance with the requirements of the NPPF. Developers should consult the relevant District Council website to obtain the latest position in relation to the Local Plan process.

Site-specific policies in the Local Plans may already set out a policy framework for the development of a specific site, including transport policies and proposals that are applicable to that site.

The LHA provides input on transport issues to the Local Plan process within each District, and therefore the transport policies contained within each Local Plan will generally be aligned with the Council's adopted transport strategy. However, Developers are advised to ensure that development proposals also accord with the Council's transport strategy, as set out in the Local Transport Plan.

Neighbourhood Plans

A Parish Council or Neighbourhood Forum may have also prepared a Neighbourhood Plan. These plans set out planning policies to determine decisions on planning applications and can grant planning permission through Neighbourhood Development Orders and Community Right to Build Orders for specific development which complies with the Order. Neighbourhood Plans must be in general conformity with the strategic policies of the Local Plan and once brought into force, the Neighbourhood Plan policies will take precedence over existing non-strategic policies in the Local Plan.

Local Transport Plan

Gloucestershire's Local Transport Plan provides the vision and policy context for local transport from April 2011 through to March 2031. The current LTP was adopted by Gloucestershire County Council at a meeting of full Council in March 2011 and therefore it should be used as material consideration in planning applications and appeals. The LTP and its supporting documents can be viewed on the Council's website. The LTP is periodically reviewed and therefore applications will be reviewed against the policies published at that time.

The overall LTP vision is to secure the provision of a safe and sustainable transport system. In this context, safe means a transport network that people feel safe using whatever their mode of travel, and one that is designed so that where collisions do happen the risk of casualties resulting is minimised. Sustainable means a network that is designed to contribute

towards the reduction in carbon and other vehicle emissions, whilst also being financially affordable to operate within the constraints of public sector finances.

Underlying this vision, the LTP sets out the following objectives:

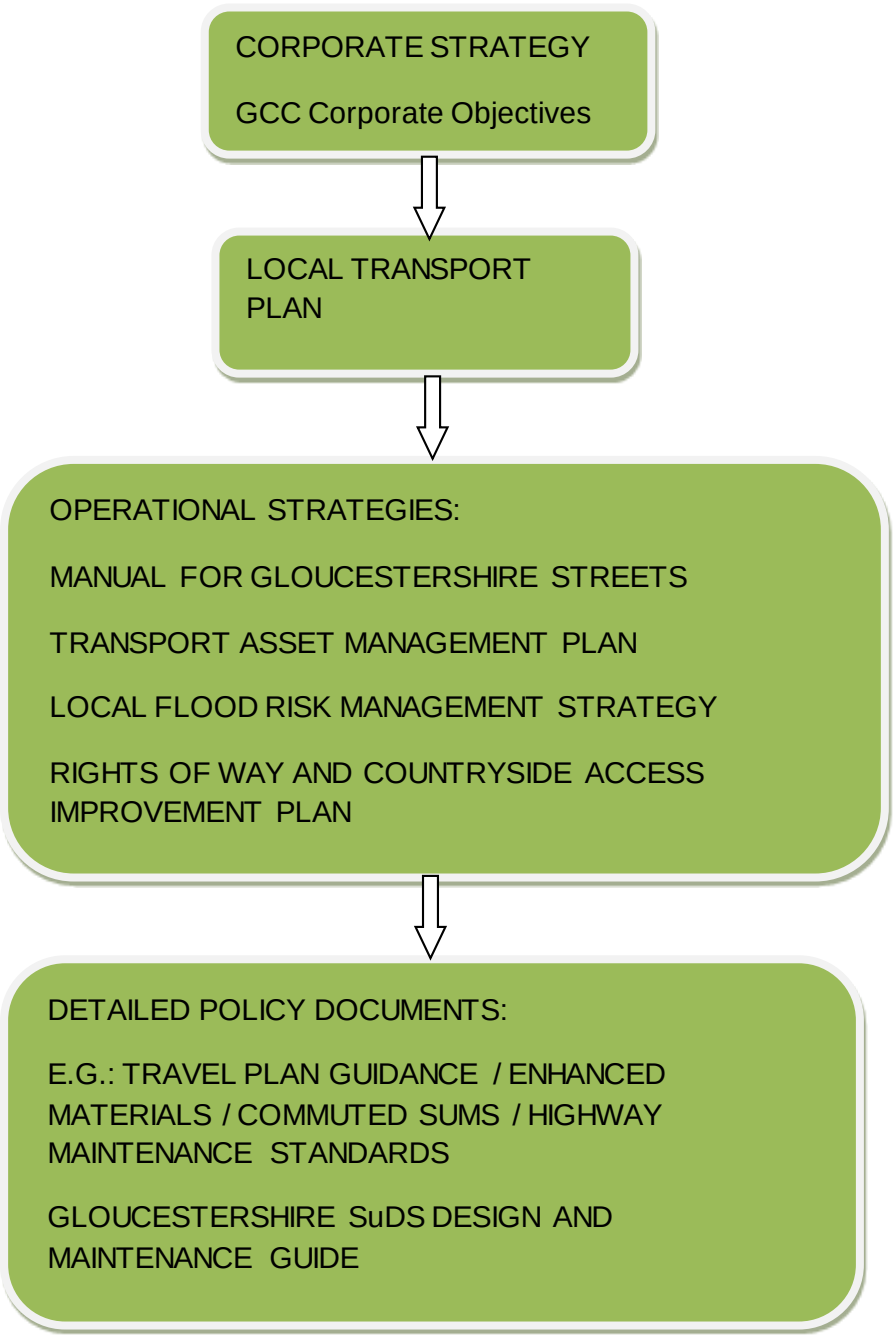
- A greener, healthier Gloucestershire
- Sustainable economic growth
- A safer, securer transport system
- Good access to services

The LTP will have identified suitable improvements to the transport network that cost effectively limit the significant impacts of new development that generate significant amounts of movement. Although the LTP assumed that significant development would occur in those locations identified as Areas of Search in the draft Regional Spatial Strategy, many of the improvements (especially in respect of sustainable transport modes) would equally apply to most developments. It is expected that contributions towards the costs of the improvements to the transport network that are required to limit the significant impacts of new development, will be secured.

MfGS forms part of the suite of documents that come under LTP, as well as being adopted in its own right. LTP will be reviewed to take account of changes to the Development Plan and national planning guidance.

Developer's should also be aware of the other supporting documents to LTP, including the Transport Asset Management Plan and the Rights of Way , the Countryside Access Improvement Plan and the Local Cycling and Walking Infrastructure Plan, as these will contain policies and processes that may be applicable to a proposed development. These documents can be found on the Council's website (www.gloucestershire.gov.uk).

Gloucestershire County Council Policy Hierarchy



Objective Setting

The Council will seek to ensure that:-

- Development is located in communities which are, or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.
- Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- Safe and suitable access to the site can be achieved for all users; and
- Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

Applications for development should:-

- Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards.
- Allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

All developments that will generate significant amounts of movement should be required to provide a Travel Plan, and the application should be supported by a Transport Statement or Transport Assessment so that the likely impacts of the proposal can be assessed.

These objectives reflect the requirements expressed in the Nations Planning Policy Framework and are applicable for developments of all scale.

Design

Context Appraisal

The NPPF and MfS place great emphasis on the benefits derived from good design and the effective context appraisal, relating a new development to the existing infrastructure. It is recommended that this process is conducted at the earliest possible opportunity, prior to developing a movement framework (explained in further detail in Section 3.6 of MfS1). Consideration should be given to connecting developments to existing links and possibly upgrading existing footpaths. Cul-de-sacs should be avoided because they tend to result in poor connectivity and do not assist with place-finding. This approach aims to improve the potential connectivity of a new development with the existing locale. Other contextual elements might include, for example, place, landscape, built environment, use and heritage.

Connectivity and Accessibility

The accessibility of a development that generates significant amounts of movement is a key contributor to whether or not it is likely to be sustainable and meet the Promoting Sustainable Transport policies of the NPPF. It is desirable that such developments are located so as to be easily accessible by other modes of travel. Journeys on foot comprise an element of almost all journeys; even the most hardened car user has to walk from the parking place to their destination. Public transport provides the most viable option for longer journeys. The emphasis in Gloucestershire tends to be on bus rather than rail services due to the limited number of rail routes and stations in the County. However, for such developments in communities with a rail station, rail can provide an attractive option for travel both within Gloucestershire and further afield. The bicycle provides another alternative to the private car and over any given time can make a development accessible to a wider area than by walking.

A fundamental principle of development that generates significant amounts of movement in planning terms is for it to be located in the right place, allowing people to easily access the services that they need for day to day life, such as employment, education and shops. To ensure inclusivity good accessibility should be possible by non-car modes. The concentration of large-scale development in existing built-up areas can result in linked trips, where people can visit several places in one journey, and it is in the larger urban areas where improvements to infrastructure that will benefit users of development in the future are likely to take place. Consideration will also be given as to whether other facilities being promoted as part of a development will improve access to services for residents of existing development.

Outline/Detailed Master Plans

Master planning is also an essential element of designing larger developments in particular and provides an opportunity to ensure that critical connections to existing development and the surrounding area are given due consideration at an early stage of the process. Table 3.2 of MfS, reproduced below, gives the user hierarchy order that should be followed in the design and assessment of all development proposals. Permeable developments and good design are directly associated with each other and when considering the location of blocks and buildings connectivity for pedestrians and cyclists, and routes for buses, service and emergency vehicles must be provided and these should be given priority over other motorised traffic. It is of course equally important, particularly on larger developments built

in separate phases, that key parts of the infrastructure are in place for all occupants and/or users of a particular phase to use without having to wait for other phases to be completed.

User Hierarchy (from Manual for Streets – Table 3.2)

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

MfS makes it clear that good connectivity between proposed development and existing services and facilities is essential if pedestrian and cycle journeys are to be encouraged. In turn, pedestrians and cyclists will bring vitality to a street and this should create a more secure environment. Developers should identify key facilities (such as shops, schools and bus stops) in the vicinity of the site and also other less regularly used facilities such as community centres, public open space, play areas and doctor's surgeries, which are likely to be frequent destinations for residents of a development or, and to a lesser extent, employees in the case of many commercial developments. Where practical to do so, opportunities priority should be given to pedestrian and cycle movements and access provided to high quality public transport facilities. The needs of people with disabilities need to be considered by all modes of transport. In respect of development that will generate significant amounts of movement, depending on the nature and location of the site, the opportunities for sustainable transport modes should be taken up, to reduce the need for major transport infrastructure improvements. The following issues may also have a bearing on the degree of permeability that can be achieved.

Meeting the Needs of People with Protected Characteristics

Gloucestershire County Council, like all public bodies, follows the requirement of the Equalities Act 2010.

Section 149 – Defines the Public Sector Equality Duty. The legislation be found http://www.legislation.gov.uk/ukpga/2010/15/section/149

Key points for the Highway Authority to note in the context of new developments are:

1 (b) **advance equality** of opportunity between persons who share a relevant protected characteristic and persons who do not share it;

3 Having **due regard** to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to—

(a) remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic;

b) take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it;

(c) encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

4 The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

7 The relevant protected characteristics are—

- age;
- disability;
- gender reassignment;
- pregnancy and maternity;
- race;
- religion or belief;
- sex;
- sexual orientation

In exercising its duties Gloucestershire County Council has regard to the entirety of the legislation. Emphasis added above for clarity.

Crime Prevention

The following passage was written in consultation with the Crime Prevention Design Advisor (CPDA), Gloucestershire Constabulary. This section provides additional information, for designers, building on Section 4.6 of MfS1.

The Crime and Disorder Act (CDA) 1998

Sections 5-7 & 17 of the CDA requires local authorities and the police, in conjunction with other agencies and the community, to work together at district level to develop and implement strategies for reducing crime and disorder in the area.

Two of the most common forms of crime are burglaries from private dwellings and vehicle crime. These types of crime can be reduced or at least discouraged if the design and layout of new developments has crime prevention incorporated into its design criteria. Good design which includes natural surveillance can also help reduce anti social behaviour.

Supporting Physical Activity

Promoting active lifestyles can help us address some of the important health challenges facing the UK today. Increasing physical activity has the potential to improve the physical and mental health of the nation, reduce all-cause mortality and improve life expectancy. It can also save money by significantly easing the burden of chronic disease on health and social care services and on the economy. Increasing cycling and walking will reduce transport costs, save money for the Government and individuals, improve air quality, contribute to meeting mandatory Climate Change targets and help the environment. More use of active travel can reduce traffic, congestion and pollution, improving the health of communities

The Gloucestershire NHS Health Community have produced an Active Planning Toolkit which offers practical advice for planners, developers, and all those concerned with public health and with the built and natural environment. It aims to be a straightforward and practical guide to help inform spatial planning and transport policy so as to promote physical activity. It is based on NICE guidelines in this area. NICE is internationally recognised for the way in which it develops recommendations, a rigorous process using the best available evidence.

The key features of new development that promote physical activity are: -

- A mixture of different types of uses, for example housing, shops, employment, leisure, within walking and cycling distance;
- A range of everyday services and facilities within walking and cycling distance. These are often ideally located close to town or local centres;
- Connected street patterns, with short trip distances between common destinations;
- Residential streets that are not heavily trafficked;
- Areas that are attractive and easy to find your way around; and
- Residential areas designed to give priority to the needs of pedestrians, cyclists and children.

Developments should provide a comprehensive network of foot and cycle paths that are:

Connected – provide a comprehensive linked network that connects with where people want to go – shops, homes, open space, public transport;

Convivial – pleasant to use, with scope for interaction with other users. Well lit and overlooked by houses, shops or places where people are around, not isolated;

Conspicuous – providing clear legible routes;

Comfortable – good quality well maintained street and landscape design, and protection from the intrusion of vehicular traffic. Provide seats and rest points for pedestrians (particularly important for elderly people). Avoid clutter;

Convenient – Priority given to providing direct routes for those on foot or bike, rather than vehicles i.e. connect the streets for walkers and cyclists and design and manage junctions to give them priority.

The Toolkit can be found at:- (https://www.gloucestershireccg.nhs.uk/wp-content/uploads/2012/12/Active-Planning-Toolkit-2.pdf

Quality Places

MfS sets out the aspects of the built form that contribute to quality places. Some of these are not directly relevant to highway design but may have implications for the layout of the street.

Building with Nature

The Building with Nature Standards (a user guide for policy makers) is a comprehensive guide (developed in Gloucestershire by Gloucestershire Wildlife Trust and the University of the West of England) to the design, delivery, implementation, and long-term management and maintenance of high-quality green infrastructure and which aims to maximise multiple benefits for end users.

A copy of the Guide is available from www.buildingwithnature.org.uk

Reducing Clutter

When designing new schemes it is crucial that designers carry out an audit of existing signing, road markings and street furniture to ensure that every opportunity is taken to remove any redundant items and then integrate the remaining apparatus with those required as part of the new scheme.

Planting

When considering landscape designs it is important to ensure that all planting is sustainable in the long term. The choice and selection of plant material should be in keeping with the environment in which it is to be placed, i.e. native material should dominate in rural schemes and mixed to more ornamental may be used in urban areas.

The existing landscape features on and off site should be identified and incorporated where appropriate into the scheme. During construction the protection of existing landscape features, such as trees and hedges is essential. BS 5837: Trees in Relation to Construction: 2005 provides detailed guidance on the protection of trees on development sites and in the highway.

It is essential that a suitably qualified Arboriculturalist is consulted for professional advice on all landscaping matters relating to trees in new development.

Guidance and information relating to the provision of trees in hard landscapes can be found in the Trees and Design Action Group (TDAG) document 'Trees in Hard Landscapes'.

All highway landscaping should be designed to integrate with the proposed streetscape, including the retention wherever possible of existing trees.

To increase the probability of trees growing to maturity, trench planting, irrigation pipes and urban tree soils should be strongly considered.

Correctly located landscaping can improve the street scene and reduced vehicle speeds, however incorrectly located landscaping can impact on safety. Designs should ensure that the landscaping supports the design speeds and the overall street design.

It is also important that landscape design in, or adjacent to, the highway takes into account any potential impact on the construction of carriageway, footway, structures or subterranean services (for example highway drainage).

A tree's demand for water can drastically alter the surrounding soil conditions. The effects of soil heave and shrinking can have a dramatic effect on the integrity of footways and carriageways and must be considered when designing a planting scheme.

In some instances it may be applicable for a licence to be issued under S96 or S142 of the Highways Act 1980 to allow landscaping to be maintained by a third party.

Supporting Physical Activity

Increasing levels of physical activity amongst all the population should be an explicit goal of transport planning and investment. Active travel should be prioritised and walking and cycling routes should be safe and form a continuous accessible network. Planning for active travel will provide 'triple wins' – for the economy, health and the environment. Physical activity is vital for maintaining health (both physical and mental); the Chief Medical Officer

has labelled it a 'wonder drug'. Environments promoting and supporting physical activity will achieve and sustain better health outcomes.

Developers are encouraged to use the checklist to encourage and support physical activity which can be found in the Active Planning Toolkit published by the Gloucestershire Conference. www.gloucestershireccg.nhs.uk/wp-content/uploads/2012/12/Active-Planning-Toolkit-2.pdf

The Benefits of Green Infrastructure to Support Physical Activity

In line with good practice guidance 'Building with Nature User Guide for Developers (v1.4)', green infrastructure features should be considered when designing developments that support physical activity.

Key messages to remember when considering supporting physical activity through green infrastructure are:

- Mental health and wellbeing are important drivers too, not just physical health.
- Visual and auditory access is critical to health and wellbeing
- Inclusion for marginalised and vulnerable groups can be enhanced through ensuring physical, visual and auditory access to green features close to where people live/work/learn.
- Maintenance (regular and cyclical) is essential to ensure not just the safety of features (e.g. paths), but also the usability and enjoyment of features.

Green infrastructure supports a wide range of healthy activities. Access to good quality green infrastructure can encourage more active lifestyles, and there is a clear association between psychological health, mental wellbeing, and physical activity. For example, parks and woodlands can be enjoyed for recreational activities as well as education and learning; orchards and urban farms can be utilised for food production and therapeutic benefits; and linear assets such as canals provide active travel routes and opportunities to get close to nature.

Health benefits derived from access to green infrastructure include: benefits associated with physical activity, for example improved fitness, reduced obesity, and reduced exposure to air pollution; benefits associated with restorative psychological effects, for example improved relaxation and restoration; and the social benefits associated with the opportunities for informal and formal social interaction, for example improved social capital. These benefits are particularly well evidenced when green infrastructure is situated close to where people live and work, optimising opportunities for regular use and enjoyment, for example through the provision of active travel routes at the neighbourhood level.

Connectivity or 'linkage' between features within the development, and from the development to features beyond the site boundary, is secured at each stage of delivery, and across multiple phases of development in the case of phased development.

Creating Child Friendly Communities

Playable space and play opportunities should be integrated into new development and the Council would encourage developers to engage with children in the design process. Streets should be created that children feel safe to play in and new development should positively promote sustainable travel and in particular promote walking and cycling amongst children.

Economic Benefits

The benefits to the economy of walking and cycling are well documented, these range from immediate benefits to people traveling, increased retail spend and the longer term benefits to reduced demands on health services. There is clearly a compelling case from an economic perspective as well as a social one.

Conservation Areas

Gloucestershire has a wide range of towns and villages with a variety of local characteristics in relation to building types, materials used, and general layout of streets. It is recognised that the design and layout of new development needs to reflect this variety, and that whilst in Asset Management terms it may be desirable, and more cost effective, to restrict the design and use of materials to a limited palette there will be locations where the need to fit in with the local characteristics takes priority.

This will particularly be the case in locations that lie within designated Conservation Areas, or where a development might affect the setting of buildings of historic importance. In these cases, the Council will consider the use of more specific materials that are better suited to the particular setting. The Enhanced Materials Policy, included in Appendix I, should be referred to in this respect, as this contains the approved materials for use in various parts of the County.

It should be noted that where enhanced materials are specified, the Council will require the Developer to pay a commuted sum to reflect the additional maintenance costs that will be incurred by the Council as a result of such use. The Enhanced Materials Policy includes details of the methodology for calculating the appropriate commuted sum.

The District Councils will hold details of where Conservation Areas or other locally important designations are in place, and Developers should refer to the website of the relevant District Council when considering whether the use of enhanced materials or other specific design considerations should be reviewed. Where consideration is being given to the use of enhanced materials or other specific design features, then early discussion with the Council's HDM Team is recommended.

Areas of Outstanding Natural Beauty

Gloucestershire is a rural County, and contains a wide range of different landscape types, from the rolling hills of the Cotswolds to the woodland of the Forest of Dean. Again, it is recognised that within rural areas that have a specific landscape value, whether as part of one of Gloucestershire's designated Areas of Outstanding Natural Beauty (AONB), or as a landscape area of more local significance, then the use of enhanced materials or other design features might be appropriate. Once more, early discussion with the Council's HDM Team is recommended if the Developer considers that enhanced materials or other specific design features may apply due to the local characteristics of a site.

There are three AONB within Gloucestershire, these being:

Cotswolds – the largest AONB by area, covering the majority of the Cotswold District and areas within Stroud and Tewkesbury Districts as well as adjoining Counties. Cotswold AONB has developed a range of guidance on specific issues, including transport and highways maintenance. Whilst such guidance has no formal status, Developers are recommended to review the appropriate guidance if their site lies within the AONB boundary.

Malvern Hills – predominantly within Worcestershire, a small part of Northern Gloucestershire lies within the AONB. The Malvern Hills AONB has again produced guidance on a range of issues includes transport, and Developers are recommended to refer to this if their development lies within the AONB boundary.

Wye Valley – this AONB straddles the boundary between the Forest of Dean and Monmouthshire. Once more, it is recommended that Developers review any local guidance published by the AONB Board if their site lies within the AONB.

Pre-application Engagement and Appraisal Requirements

Early engagement has the significant potential to improve the efficiency and effectiveness of the planning application system for all parties. Prior to submission of a planning application a Developer is encouraged to take up the pre-application service we offer, a charge may be applied for this service. It is easier if both the LPA and the LHA are involved in pre-application discussions. The Developer should have regard to the need to encourage joint working, and may wish to involve the LPA as well as other stakeholders such as the Parish and Town Council.

Further guidance on the pre application process can be provided from the HDM team where requested.

The Freedom of Information Act 2000 includes a presumption in favour of disclosure of information, including pre-application discussions, unless such disclosure would cause adverse impacts (Regulation 12(5) Environment Information Regulations 2004). If you wish for details of the pre-application submission and the advice we give to be kept confidential, this request should be made prior to the pre-application discussions taking place. We retain discretion in regard to decisions on disclosure of information in any instance and decisions are reviewed on a regular basis.

When reaching a decision where a request has been made, we will balance the interests of furthering trust with the prospective applicant against the advantage of engaging the community more widely in discussions. Wherever possible we will make the decision in collaboration with the developer.

Once an application is submitted the expectation is that the pre-application advice will come into the public arena.

Transport Statement/Assessment

The NPPF states that all development that generates significant amounts of movements should be supported by a Transport Statement or Transport Assessment. During pre-application discussions, the Council will decide if a TA or TS is required taking into account the guidance set out if the Planning Practice Guidance. Where a TA is required you should agree the 'scope' with us in advance so that the focus can be on those areas that are most likely to be affected by the development.

Travel Plan

During pre-application discussions, the Council will decide if a Travel Plan is required taking into account the guidance set out if the Planning Practice Guidance – 'Travel plans, transport assessments and statements in decision making'. Where a Travel Plan is required you should agree the 'scope' with us in advance.

Thresholds are normally applied for initiating a Transport Assessment (TA). Developments below these thresholds still have an impact on the local transport network and so will normally be required to provide a Transport Statement (TS), unless exempted from this requirement, in writing, by the Development Management Team.

In some circumstances, a TA may be appropriate for a smaller development than suggested by the thresholds. In others, a TS may be appropriate for a larger development than

suggested by the thresholds. Early pre application discussions between a developer and the relevant authorities are strongly recommended. In these, it is important for highway authorities to combine the appropriate quantitative and qualitative thresholds in deciding the level of assessment that may be required.

Gloucestershire County Council may interpret the need for assessment in light of local circumstances. There are several qualitative factors that need to be taken into account and that are not captured by this document. There will also be site-specific issues that assessments will need to cover.

The following Thresholds apply:

Land use Use	description of development	Size	None	TS / TP	TA/TP
A1 Food retail	Retail sale of food goods to the public – food superstores, supermarkets, convenience food stores.	GFA	<250 sq. m	>250 <800 sq.m	>800 sq.m
A1 Non-food retail	Retail sale of non-food goods to the public; but includes sandwich bars – sandwiches or other cold food purchased and consumed off the premises, internet cafés	GFA	<800 sq. m	>800 <1500 sq.m	>1500 sq.m
A2 Financial and professional services	Financial services – banks, building societies and bureaux de change, professional services (other than health or medical services) – estate agents and employment agencies, other services – betting shops, principally where services are provided to visiting members of the public.	GFA	<1000 sq. m	>1000 <2500 sq. m>	2500 sq. m
A3 Restaurants and cafés	Restaurants and cafés – use for the sale of food for consumption on the premises, excludes internet cafés (now A1).	GFA	<300 sq. m	>300 <2500 sq.m	>2500 sq. m
A4 Drinking Establishment	Use as a public house, wine-bar or other drinking establishment.	GFA	<300 sq. m	>300 <600 sq.m	>600 sq. m
A5 Hot food Takeaway	Use for the sale of hot food for consumption on or off the premises.	GFA	<250 sq. m	>250 <500 sq.m	>500 sq. m
B1 (a, b, c) Business	(a) Offices other than in use within Class A2 (financial and professional services) (b) research and development – laboratories, studios (c) light industry	GFA	<1500 sq.m	>1500 <2500sq.m	>2500sq.m
B2 General industrial	General industry (other than classified as in B1),The former 'special industrial ' use classes, B3 – B7, are now all encompassed in the B2 use class.	GFA	<2500 sq.m	>2500 <4000 sq.m	>4000 sq. m

B8 Storage or Distribution	Storage or distribution centres – wholesale warehouses, distribution centres and repositories.	GFA	<3000 sq.m	>3000 <5000 sq.m	>5000 sq. m
C1 Hotels	Hotels, boarding houses and guest houses, development falls within this class if 'no significant element of care is provided'.	Bedroom	<75	>75 <100	>100
C2 Residential institutions - hospitals, nursing homes	Used for the provision of residential accommodation and care to people in need of care.	Beds	<30	>30 <50	>50
C2 Residential institutions – residential education	Boarding schools and training centres.	Student	<50	>50 <150	>150
C2 Residential institutions – institutional hostels	Homeless shelters, accommodation for people with learning difficulties and people on probation.	Resident	<250	>250 <400	>400
C3 Dwelling houses	Dwellings for individuals, families or not more than six people living together as a single household. Not more than six people living together includes – students or young people sharing a dwelling and small group homes for disabled or handicapped people living together in the community.	Dwelling / unit	<50	>50 <80	>80
D1 Nonresidential Institutions	Medical and health services – clinics and health centres, crêches, day nurseries, day centres and consulting rooms (not attached to the consultant's or doctor's house), museums, public libraries, art galleries, exhibition halls, non residential education and training centres, places of worship, religious instruction and church halls.	GFA	<500 sq. m	>500 <1000 sq. m	>1000 sq. m
D2 Assembly and leisure	Cinemas, dance and concert halls, sports halls, swimming baths, skating rinks, gymnasiums, bingo halls and casinos. other indoor and outdoor sports and leisure uses not involving motorised vehicles or firearms.	GFA	<500 sq. m	>500<1500 sq. m	>1500 sq. m
Others	stadium, retail warehouse clubs, amusement arcades, launderettes, petrol filling stations, taxi businesses,	TBD	Discuss with highway authority		

	car/vehicle hire businesses and the selling and displaying of motor vehicles, nightclubs, theatres, hostels, builders' yards, garden centres, POs, travel and ticket agencies, hairdressers, funeral directors, hire shops, dry cleaners.		

Other considerations	TA / TP
Any development that is not in conformity with the adopted development plan	Yes
Any development generating 30 or more two-way vehicle movements in any hour	Yes
Any development generating 100 or more two-way vehicle movements per day	Yes
Any development proposing 100 or more parking spaces	Yes
Any development that is likely to increase incidents or conflicts among motorised users and non-motorised users, particularly vulnerable road users such as children, disabled and elderly people	Yes
Any development generating significant freight or HGV movements per day, or significant abnormal loads per year	Yes
Any development proposed in a location where the local transport infrastructure is inadequate. – for example, substandard roads, poor pedestrian/cyclist facilities and inadequate public transport provisions	Yes
Any development proposed in a location within or adjacent to an Air Quality Management Area (AQMA)	Yes

All TS's and TA's should be prepared in accordance with guidance in the National Planning Practice Guidance (NPPG), however the NPPG presents a framework rather than detailed guidance. It is therefore recommended that the form of the assessment is scoped and agreed with Gloucestershire County Council (GCC) before any assessment is prepared.

Every Transport Assessment or Statement must be accompanied by a Travel Plan, which is compliant with Gloucestershire County Council's guidelines. Travel Plans are typically a package of practical measures to encourage residents, employees and visitors to consider their travel options or reduce the need to travel. Typical examples of measures include: personalised travel plans and welcome packs for residential use, and for commercial use, the provision of showers, lockers and changing facilities, car sharing schemes, flexible working schemes etc. Travel Plans should be bespoke to the development and applicants should not replicate generic targets. Travel plans can be a valuable tool in mitigating traffic impact and can look at the wider environment rather than just traditional traffic compensation measures.

The following matters are already covered in national guidance and legislation, however they are not always included to the level of detail expected which can result in delay in determining applications. GCC therefore considers it is important to make clear what is expected to ensure responses to the Local Planning Authorities are made promptly. The extent of any assessment should be proportionate to the scale of the development and the

local environment, and the nature of the planning application but it is expected that matters are address in advance to prevent the need to include conditions requiring further submissions.

Accessibility

All new developments must ensure they comply with the environment of sustainable development and to this end development must ensure they are not car reliant and provide genuine transport choice, to achieve this it is essential that development is located where there are sufficient local services to support it. It is common practice to provide an accessibility assessment using distance to local amenities with a 2km and 5km threshold based on isochrones. This approach distorts the actual relationship between origin and destination. It is therefore expected that any analysis looks at a door to door approach based on actual routes and uses. A range of distances are suggested in "Providing for Journeys on Foot" but these should not be read as absolutes ad the approach should recognise the road user hierarchy. Additionally the assessment should review the quality of the route to ensure it is suitable for the needs of the development.

The TA and TS should provide a Walking, Cycling and Horse-Riding Assessment following the guidance in GG 142.

The TA should us use the propensity to cycle tool www.pct.bike to consider cycling potential.

Sites which have a poor relationship to amenities, services, education and employment by active travel modes are unlikely to receive a positive recommendation.

Transport Statements and Assessment for residential development must include an accessibility score for the site based on the guidance and checklist provide in “Transport for New Homes”, it may be appropriate to undertake a “with” and “without” score to understand any off site benefits the proposal delivers.

Equality Impact

The LHA takes its responsibilities to equality very seriously and is obliged through the public section equality duty to have due regards to the needs of all persons. Applications should ensure they have considered the needs of all users having had regards to the protected characteristic of the area. This applies to development of all scales. This approach should be clearly demonstrated within the TA or TS accompanying the application in the form of an Equality Impact Assessment and gap analysis.

Depending on the nature of the development not all matters can be assessed. For example an outline application may only need to cover the point of access and the surrounding highway network whereas within a reserved matters application only the internal design will be considered. With a full application all elements will be covered. This assessment will assist the LHA in their considerations and does not remove any obligations from the Local Authority.

Equality Impact Assessments need to be prepared alongside the TA/TS and any health impact assessment.

Construction Environmental Management Plans (CEMP)

It is accepted that there will always be some disruption during construction, however this needs to be minimised to protect the local community and the highway network.
It is unlikely that a principle contractor will have been appointed at the point of a planning application but it is still possible to provide a framework plan based on the applicants industry experience, this can then be finalised post permission through the discharge of

conditions. The TA or TS should include a chapter setting out potential impact and mitigation. Local site conditions will dictate the range of matters but a non-exhaustive list is provided below:

- Duration of build
- Hours of operation
- Number and size of delivery vehicles (average day)
- Location of site compound for storage and parking
- Condition survey of surrounding roads
- Wheel washing facilities
- Strategy to inform local community of activities including provision of complaints procedures
- Any temporary access arrangements
- Likely temporary traffic management arrangements
- Routing arrangements

Contractors should be registered with the Considerate Constructors scheme and comply with the code of conduct in full.

Quality Audits

A Quality Audit should be seen as being integral to the design process, from initial conceptual designs when the vision for a scheme is developed through to maintenance and monitoring. The process enables a multi disciplined team of built environment professionals to apply their expertise to contribute to the successful outcome of a project.

The starting point is to establish the vision and/or objectives for the scheme, which could be expected to address the following:

- Seeking an appropriate balance between Place and Movement
- Enabling accessibility for all user groups
- Recognising the context and presence of wider strategic modal routes and the impact the scheme may have
- Making sure that the quality of existing public realm is maintained or improved and that new places are of high quality
- Meeting community needs
- Road safety and personal security
- Specifying appropriate materials and layout in terms of appearance, durability and maintenance requirements

Further guidance on Quality Audits can be found in Traffic Advisory Leaflet 5/11.

Planning Application Process

The LHA is defined as a statutory consultee and as such is consulted by the Local Planning Authority. The LPA seeks the Council's advice on the highway safety and transportation matters specific to those applications and this includes where necessary an assessment of 'accessibility'. The LHA view is made in the context of local and national policy and working in the spirit of promoting sustainable development, however there will be occasions where proposals are considered to contrary to that position and these will result in an objection to the proposal. The LPA is not obliged to follow the recommendation of the LHA in determining the application, in those instances the LHA will seek to agree what items it can as common ground and ensure that a clear statement is provide regarding the implications of any non compliance. The views of the LHA are a combination of reflection on Evidence, Policy, Guidance and expert opinion from suitably qualified Transport Professions.

Monitoring

Where a Travel Plan is required as part of the development, it is expected that this will include surveys of residents or other occupiers of the development concerned to enable feedback on the good and bad points of a development to be identified, informing future reviews of MfGS by providing a robust evidence base.

For some new developments, the installation of Automatic Traffic Count (ATC) sites might be required as part of the Monitoring Strategy for the Site Travel Plan. Where required, an ATC site should be installed to the specification set by the Council, and it is recommended that early contact is made with the Council's Transport Monitoring Team prior to the construction of new or improved roads to ensure that issues such as the location of the ATC, associated power supply and phone connections for the passage of collected data, the location of ancillary equipment such as cabinets, and the provision of safe parking for maintenance vehicles are all taken into account during the design process.

Payment of Contribution Secured in a Planning Obligation

As a County Council we get many payments every day for all sorts of services and information requests, as well as payments to satisfy planning obligations. A significant number of these payments (which can involve large amounts of money) are paid to the County Council without any reference to the development, the developer or what the payment is actually for and this can cause financial management and audit challenges. In order to make our service more efficient, we require a minimum amount of information to be supplied with any payment. We would ask you to supply this information otherwise there is a danger that your payment may not be accepted, delaying your development and possibly putting you in breach of your planning obligation.

All payments should be by BACS Transfer. GCC's bank details can be obtained by contacting the HDM team.

The following information relating to the contribution must be emailed to devcoord@gloucestershire.gov.uk.

Also, please state that a transfer is about to arrive:-

- Legal reference for which the payment is made;
- Planning application reference for which the payment is made;

- Date of the Agreement that the payment is made for;
- Parties to the Agreement;
- Description of Development;
- Reason for payment i.e. does this payment relate to a specific obligation;

If the payment relates to more than one obligation then state all obligations that this relates to;

- State whether the payment includes any indexation;
- State if the payment includes any interest.

Bonding of Planning Obligations

Guidance can be found in the Council's Local Developer Guide: Infrastructure and services with new development www.gloucestershire.gov.uk/planning-and-environment/planning-policy/gloucestershire-local-developer-guide-infrastructure-and-services-with-new-development/

Further local guidance on infrastructure and services with new development can be found in the Council's Local Developer Guide at: www.gloucestershire.gov.uk/media/14820/gcc-local-developer-guide-update-dec-2016.pdf

Detailed Design Matters

Traditional Junction Design

The developer must demonstrate that the junction arrangement proposed represents the best use of available capacity whilst ensuring the safety for all highway users. This will need to be demonstrated through capacity analysis of the various junction types, with the junction form which minimises delays and is subject to safety considerations being progressed. For example, traffic signals will not be supported when a priority junction provides adequate capacity for vehicles wishing to enter and exit the development. CD 123, Geometric Design of Major/Minor junctions.

When proposals provide for a new footway crossover or priority junction, guidance on its design should be sought from Manual for Streets 1 and 2. However, where more complex junctions are required, which could involve signal control, roundabouts and/or right turning lanes, DMRB is considered to be the appropriate design standard, again, the applicant should make reference to CD 123, although this should always be discussed and agreed with the HDM team. In some cases, it may be appropriate to deviate from these standards. Again, this should be agreed in writing early in the design process with the HDM team.

Contemporary Junction Design

Innovation in junction and street design is welcomed and it can be appropriate to extend these principles on to the existing highway network, either as part of a specific access to a site or as wider mitigation. Where innovative schemes are to be promoted, early discussions are essential and some specific issues will need to be explicitly considered. A non-exhaustive list follows.

- The design should reflect the needs of the surrounding environment;
- There should be high levels of pedestrian movements;
- The needs of visually or physically impaired users should be considered and local user groups involved from an early stage;
- Design speeds should be low (under 20mph);
- Proposed construction materials should be readily available;
- Consideration must be given to junction efficiency, minimising delay to all road users.

The developer will need to demonstrate than any highway design to be offered for adoption by the LHA or to take place on the existing highway network enables Gloucestershire County Council to discharge responsibilities placed upon it by Section 149 of the Equalities Act, 2010. In order to achieve this, early involvement with local and national disability access groups should be undertaken and the needs of these groups incorporated into the design. Section 149 of the Equalities Act, 2010 requires Local Authorities to have 'due regard' when making any decisions to the needs to eliminate discrimination, which includes the duty to make reasonable adjustments for disabled people and the "need to promote equality of opportunity between disabled persons and other persons", which includes "the need to take steps to take account of disabled person's disabilities" even where that involves "treating disabled persons more favourably than other persons".

The application of contemporary junctions should not be considered to be an easy solution or a fall-back position, where traditional junction types are difficult to achieve.

Vertical Alignment

The Developer must consider the following when designing vertical curves on new developments. Generally, the maximum and minimum gradients allowable on new developments will be as detailed within the table below:

Category	Maximum Gradient	Minimum Gradient
All Streets	1:20 (5%), but consideration give to 1:12	1:100
Active Travel Corridors	1:20 (5%)	1:100

Where a 1 in 12 gradient is proposed no length shall exceed 30m.

For clarity the gradient tolerances apply to private driveways and proposed streets.

Additionally, the Developer must consider the curvature of the new highway. The design curve length will be a function of the algebraic change of gradient, expressed as a percentage, multiplied by the 'K' value. 'K' values are provided in the table below:

Category	Minimum "K" Value
Enhanced Streets	6
Informal Streets / Pedestrian Prioritised Streets	2
Active Travel Corridors	2

The Developer should note that side road gradients into junctions should be set at a maximum of 1:20 (5%) for the first 10m. Additionally, the minimum vertical curve length of any section of road should be not less than 20m.

Example
The 'K' Value is given by:
Design curve length / Algebraic change of gradient
= 20m /10
= 2

Therefore the above example falls within the design criteria and would be acceptable. The developer should note that where gradients exceed 5% there may be a requirement for a grit bin. In such instances, the developer will need to ensure the design provides an adequate location and that a suitable grit bin is provided.

Headroom

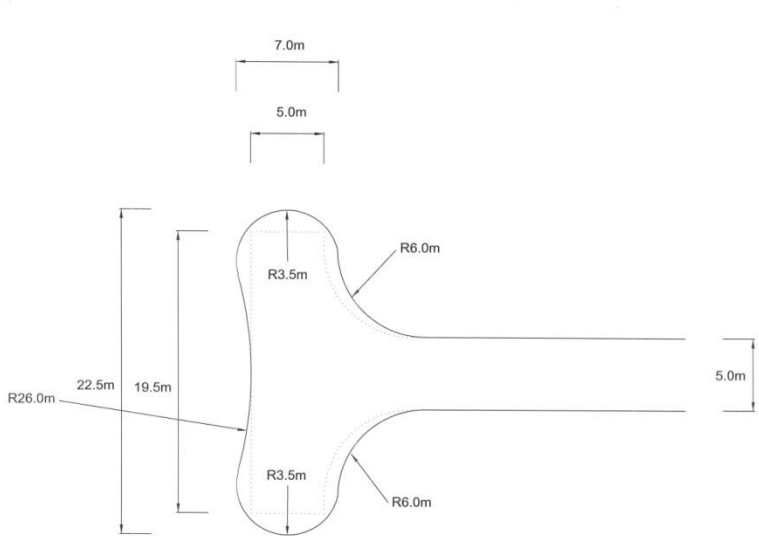
Additionally, the Developer must also consider in the design that the minimum allowable headroom for all new highways intended for adoption shall be as follows:

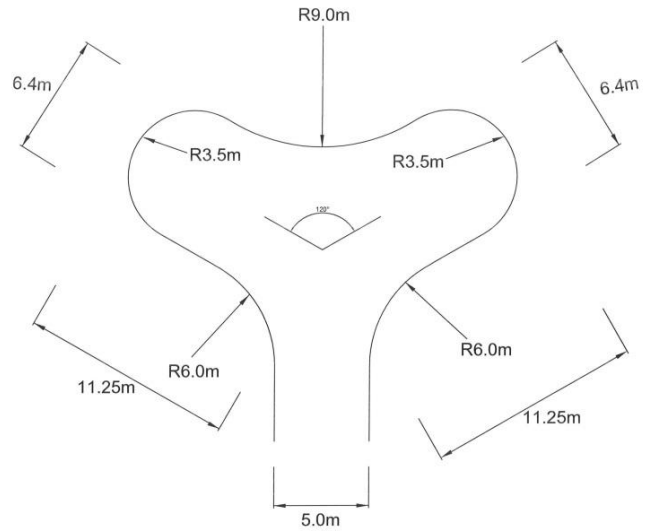
Category Minimum Headroom

- All Roads 5.3m
- Cycleway 2.7m
- Footway 2.7m

Turning Heads

The carriageway widths, radii and footway widths should comply with the design specification for the road which they serve.





Variation from these dimensions are acceptable subject to tracking by the District Council refuse collection vehicle. The refuse vehicle must stay within the kerblines but isolated vehicle (body) overhang of the footway may be accepted if the streets on which they occur have low volumes of pedestrians and the driver would have opportunity to observe pedestrians. This is not a constraint where a verge is provided.

Visibility Splays

A pedestrian visibility splay should be provided on any new or widened private driveway, or streets providing a vehicle crossover in lieu of a bellmouth. This should take the form of a 2m x 2m triangle measured from the edge of the driveway and back of the footway or carriageway if no footway is provided. Nothing should exceed 600mm in height within this space and the design should maintain this position.

Vehicle visibility splays (Y distances and Sight Stopping Distances) should be provided as defined as per Manual for Streets or DMRB depending on the nature of the access proposed. X distances should be measured from a 2.4m distance to ensure the vehicle bonnet does not protrude into the Highway. Proposals for new accesses with less than a 2.4m X distance will be resisted.

Landscaping

The retention of existing landscape features of value must be taken into account and therefore the preliminary design of residential access roads, cycleways and footpaths to serve the development should as far as possible be sympathetic to the Authority's wishes. So, for example, if a tree of value was situated within the visibility splay, all attempts should be made to reposition the access if this can be done safely.

In residential areas the LHA will normally only adopt the paved surfaces and verges which are critical to the functioning of the highway.

Small areas of grass should only be permitted where adequate maintenance arrangements can be guaranteed for the foreseeable future.

Appropriate root protection systems will be provided for all trees and they must not be planted near structures or services.

Existing trees, which will become maintainable at public expense, shall be the subject of a condition survey to ascertain their health and may be subject to commuted sum payments to cover their future maintenance costs. Highway trees should be of slender girth and modest canopy. The trunk should be maintained free of side shoots and branches to a height of 2.1m. The developer may be required to pay commuted sums for the future maintenance of highway trees. The Highway Authority will work closely with the local Arboricultural officer to agree the most suitable species and ensure it is compatible with the site wide approach to green infrastructure.

Highway landscape features should be maintained by the developer for a period of 5 years.

Thorny species shall not be accepted immediately adjacent to footways and cycle tracks. It is expected that non highway hedges adjacent to the prospective highway will be transferred to frontagers or the site wide management company to ensure future maintenance is addressed. .

Any new carriageway should be outside the canopy (or reduced canopy if reduction is deemed suitable) of any existing tree to prevent damage to the new construction by the tree roots. Any work under the canopy of deciduous trees or within a radius of half of the height of coniferous species shall comply with BS 5837: 2012.

Street Lighting

The aim of the Gloucestershire Street Lighting service is to create a safer and more secure night time environment, by providing an energy efficient and cost effective system of street lighting and illuminated signs.

The objectives for new developments are to:

• Reduce crime and the fear of crime;

• Minimise environmental impact;
• Implement Best Practice in systems and operations

All highway lighting, illuminated sign and illuminated bollards must be designed, specified and installed to local requirements. There are two methods for developers to achieve the above requirements, however, developers need to also take account of local attitudes relating to the provision of street lighting, so that they might be relieved of the duty of providing such where it is not needed.

There is no legal requirement to light new streets, however the provision of lighting should be scoped and agreed based on the local environment, ecology, footfall, Section 17 issues, promotion of active travel, Parish Council engagement, protected characteristics as defined in the Equalities Act.

New streets should be designed to reduce the need to include street lighting through natural surveillance and slow design speeds.

Please refer to Appendix J for Gloucestershire's Street Lighting specification and Drawings.

Street Character Types

A number of street character types have been defined based primarily on those listed at paragraph 4.7.2 of MfS1. However, whereas the main focus of MfS is on the creation of new residential streets, the purpose of MfGS is to cover all transport and highway issues that might relate to new development and so all highways that are maintainable at public expense need to be considered.

In Gloucestershire there are motorways and Trunk Roads that fall within the jurisdiction of the Highways England, other highways where the 'movement' of traffic is the primary function, and highways that are restricted to specific types of users (for example, public footpaths and bridleways). There are also highways that have to cater for larger vehicles, such as buses and goods vehicles, and highways that although not intended to be adopted and maintained at public expense can have implications for the public highway and certainly need to be assessed in design terms.

The design of new streets should take into account the intended link and place functions of the street, as well as the type, density and character of the development. Developing a streetscape environment should also, where appropriate, be accessible, comfortable and safe for pedestrians. Furthermore integration of the surrounding landscape and ecological context of the site must be integral to any design development.

Carriageway widths should be appropriate for the particular context and use of the street.

Key factors to take into account include:

• The volume of vehicular traffic and pedestrian activity;
• The traffic composition;
• The requirements for clear demarcation between carriageway and footways;
• If on street parking is to be provided, its distribution, arrangement, the frequency of occupation and any need for enforcement;
• Design speeds;
• Curvature of the street, including increased width for bends to accommodate swept paths of larger vehicles; any intention to include single lane working in two way streets.

The following street definitions provide a design character for a typical street. Variation from these definitions is encouraged, although these should be supported with clear justification of how these variations will continue to meet the requirements set out in relevant statutory legislation and non-statutory guidance.

Innovative Street Design

Gloucestershire County Council welcomes innovative design proposals. Where innovative designs are proposed, the following guidelines should be followed:

- Design should be bespoke to the street and the development;
- Designers should provide a clear statement of the vision for the design and the assumptions applied including how the road user hierarchy has been addressed;
- Design speeds should be a maximum of 10 mph on all prospective highways and street furniture and landscaping should be used to achieve this;

- The designer must ensure that an Equality Impact Assessment, as established by Section 149 of the Equality Act, 2010 is undertaken;
- Materials should help legibility and create a sense of place where the car is a guest, they also should be readily sourced ;
- Green Infrastructure should be provided in accordance with the County Councils GI Strategy;
- Drainage is a key consideration in Innovative design and should be considered at an early stage;
- Provision is made for future access to Statutory Undertakes Apparatus.

Clarification on the use of Level Surfaces

Recent national campaigns have challenged this concept resulting in the withdrawal of LTN 1/11 and ministerial directions. The most recent clarification issued by The Ministry of Housing, Communities and Local Government and The Department for Transport on 28th September 2018 advises:

"The pause does not apply to streets within new residential areas, or the redesign of existing residential streets with very low levels of traffic, such as appropriately designed mews and cul-de-sacs, which take into account the relevant aspects of the National Planning Policy Framework and associated guidance."

Therefore GCC will consider the use of level surfaces in the context of an innovated street design as detailed above. Such schemes should also be limited to no more than 100 vehicles per hour in the peak period.

For the purposes of MfGS, the streets and other highways can be summarised as set out below:-

	Street Type
Street	Enhanced Street
	Informal Street
	Pedestrian Prioritised Street
	Private Drives
	Industrial Road
	Private Streets
Non motorised vehicle category	Cycle Tracks – See Cycle Facilities Guidelines, appendix F

Further details of the criteria that the LHA would expect to be followed in terms of proposals incorporating any of those street character types is set out on the following pages. It should be noted that these criteria are intended for guidance only, and the Council would be willing to consider proposals that depart from them as long as the Developer can produce reasoned justification for such departure.

Common Design Requirements

The below table details features that apply to all proposed new streets. Where innovative designs are promoted it may be appropriate to deviate from the below give the unique character of the design.

X Distance	2.4m
Y Distance	Based on Design Speed
Pedestrian Splay	2m x 2m (45 degrees) from edge of drive
Junction Separation (same side)	No shorter than Y distance
Driveway to Junction Separation	No shorter than Y distance
Straight Lengths without speed maintaining feature	Based on Design Speed. 20 mph: 80m (max), 100m when into a turning head 15 mph: 40m (max)
Gradient	1 in 20 1 in 12 can be permitted, 30m (max)
Active Frontage	Permitted
Turning Head Requirement	On all new streets (adoptable or not) and and private drives exceeding collection distance. Tracked as per Local refuse Authority vehicle, wheels to be retained in kerblines. Footway oversailing permitted for isolated areas in low pedestrian areas.
Tracking	Must be provided for all new streets.

Enhanced Street

Streets where the public realm has been improved and restrictions on pedestrian movement (e.g., guardrail) have been removed but conventional traffic controls largely remain. This is applicable on all streets which also serve as a bus route.

Should be applied for central spine roads where there is a function more than simply being a residential access road.


Maximum Design Speed	20mph achieved through measures such as junction treatment, surface changes, visual narrowing, sensitive parking provision and green infrastructure.
Maximum No. Of Dwellings	No limit but subject to modelling
Frontage Access	Restricted 20m from junctions
Carriageway Width	6.2m subject to swept path analysis
Lane Widths (Boulevard)	3.5m minimum (4m if a bus route) Subject to swept path analysis
Active Travel Corridor	Minimum 3.5m wide both sides. Where necessary street furniture are accommodated in the footway (such as street lighting columns, cycle parking stands, planters, bins and benches) then a wider footway should be specified. Must create a level crossing over side roads and provide priority to allow users to not be delayed by turning vehicles. Vertical deflection will be considered for this treatment.
Landscaping	2m verge separating carriageway and active travel corridor, and/or central corridor depending on design. Landscaping Permitted.
On street parking (visitors)	1.8m wide on either or both sides. To be Provided in addition to carriageway and amount to be determined subject to local requirements

Informal Street

Streets where formal traffic controls (signs, markings and signals) are absent or reduced. There is a footway and carriageway, but the differentiation between them is typically less than in a conventional street.

Maximum Design Speed	20mph achieved through measures such as Junction Treatment, surface changes, visual narrowing, central reservations, sensitive parking provision and green infrastructure.
Maximum No. Of Dwellings	No limit but subject to modelling
Frontage Access	Restricted 20m from Junctions
Carriageway Width	4.5m to 5.5m (6.2m if a bus route)
Footways	2m wide both sides. Where necessary street furniture are accommodated in the footway (such as street lighting columns, cycle parking stands, planters, bins and benches) then a wider footway should be specified.
Cycleways	On Street
On street parking	Visitor Provision on Street
Landscaping	Optional 2m verge separating carriageway Landscaping Permitted.
Verge	Can be used instead of footway where no Pedestrian desire line is identified. Can be reduced to 1m where no services or

	Pedestrian demands exist.
On street parking (visitors)	1.8m wide on either or both sides. To be Provided in addition to carriageway and amount to be determined subject to local requirements
Carriageway materials	Predominantly macadam
Footway Materials	Predominantly macadam, the use of pavers or fine textured pre-cast flags in small appropriate locations may be considered. Alternative surfacing materials must be suitable to withstand accidental mounting by all types of vehicle.

Pedestrian Prioritised Streets

Streets where pedestrians feel that they can move freely anywhere and where drivers feel they are a guest. Pedestrian Prioritised Streets should not have vehicle movements exceeding 100 vehicles per hour.

This street type should be the default design standard for all new residential developments

Maximum Design Speed	15mph achieved through junction treatment, variations in carriageway width, horizontal alignment of the carriageway and provision of on-street parking facilities.
Maximum No. Of Dwellings	100vph peak usage (Circa 160 dwellings)
Frontage Access	Restricted 15m from Junctions
Carriageway Width	4.1m to 6.2m. (6.2m if a bus route leading to a Bus Gate) Local throttle of 3.7m can be permitted
Footways/Service Margin	2m wide both sides, 1m where no frontage access
Cycleways	On Street
On street parking	Informal on Street through localised carriageway Widening.

Junction Radii	Typically 6.0m. Smaller radii will be encouraged and/or vehicular footway crossings where appropriate. A vehicular footway crossing should be used on smaller side streets or small cul-de-sacs.
Carriageway Materials	A combination of concrete block paving with macadam would be considered suitable. Parking areas, junctions, slow points and traffic management features will need to be highlighted, using different materials.
Footway Material	Similar to carriageway
Kerbing	Low rise kerbs should be provided of a typical height of 60mm. Kerb sett or concrete edge strip to demark the boundary should be provided between adopted highway and private property.

Private Shared Drives and Courtyard Parking Areas

A private driveway can serve one or more properties, up to a maximum of 6, after which the traffic generated and number of turning movements associated with the driveway is considered sufficient for the access to be considered for adoption by the Local Highway Authority and therefore must accord with the design characteristics of a Pedestrian Prioritised Street, Informal Streets, or an Enhanced Street.

Communal private parking areas can be considered an exception due to the need generated by the type and layout of the development. Private driveways are also appropriate for small scale commercial development.

These areas are generally not considered of sufficient public utility to warrant adoption by the Highway Authority.

Design Speed	Not Applicable
Carriageway	When serving two or more properties can be of varying width, but must be a minimum of 4.1 metres for the first 15 metres behind the back of the carriageway to allow two vehicles to enter and leave simultaneously. Refuse collection points should be provided within 25 metres of the highway.
Access	The connection to the priority road shall be laid out as per a footway crossing, in accordance with Section 184 of the Highways Act, 1980, where applicable. Vehicles to enter and exit at 90º to the kerb line.
Footway	Part of the driveway
Parking	All car parking should be provided off-street. Provision must be made to enter and exit in a forward gear on roads with high levels of vehicle flow. In/out drive arrangements are only permitted where space allows for manoeuvring within the site and does not rely on the use of both accesses, full visibility is required at both accesses. Car parking spaces must be delineated to maximize occupancy and courteous behaviour, which may not otherwise be achieved through errant parking.
Gates	Set back 5m from the Edge of Carriageway, shall open inwards or be sliding
Materials	Bound material for first 5m.
Drainage	No water discharges over the highway

Industrial Access Road

Adoption may not be required for small pockets of Offices / light industrial units and/or nursery units served by an enclosed courtyard type layout.

Maximum Design Speed	30mph
Carriageway Width	6.7m - 7.3m, 6.2m when serves B1(a) or retail uses only
Junction Radii	7.5m – 15m depending on tracking
Active Travel Corridor	3.5m on both sides
Landscaping	1.5m minimum, located between carriageway and active travel corridor
Horizontal Curve Radius	60m minimum
Vertical Curve Lengths	30m minimum
Carriageway Widening on Bends	Subject to tracking requiring it
Gates	15m set back

Private Streets

Private streets should conform to the relevant design criteria

A Private Street Agreement will be required to allow for an exemption to be given to the application of the Advanced Payment Code and ensure that the residents are unlikely to require the County Council to adopt the street in the future.

Other Street User's Needs

Public Rights of Way (PROW)

It is important that the implications that any development may have for the existing PROW network are fully considered. Not only will some PROW need improvements to be properly incorporated into a development, but others may require stopping up or diversion. Developers should take into account the existing function and character of a PROW and should not assume that it will be acceptable to divert it along a new road.

PROW are recorded on the Definitive Map and Statement for Gloucestershire. The Map and Statement are the legal record of all recorded public rights of way in the County and are managed by the Council. Both are available for viewing at Main Reception, Shire Hall, Westgate Street, Gloucester.

PROW are highways established in law, albeit usually with more limited public rights than streets and roads, and are protected from being obstructed or diverted without proper authority. The Council will not encourage vehicular use of any PROW. The Council should be consulted before any work is carried out that may affect the route or surface of a PROW.

The grant of planning permission does not entitle a developer to obstruct a PROW. If a PROW needs to be diverted or stopped up there are processes under the Town and Country Planning Act 1990 (usually dealt with by the LPA), or under the Highways Act 1980 (dealt with by the LHA) in the case of development granted planning permission retrospectively, which will need to be followed. There is no guarantee that a legal Order will be confirmed simply because planning permission has been granted.

Until such time as an Order has been made and subsequently confirmed, the legal line of the PROW remains unaltered. Even where a development does not directly affect a PROW it may be that ancillary works such as the storage of materials and plant, or vehicle access routes, may do so. Where the route of a PROW may be temporarily affected by your development, it is possible to apply to the Council for a temporary closure. When work is complete the path should be fully reinstated to the appropriate condition so that it is fit for public use.

Any development works or building materials on the line of the PROW could render a developer or contractor liable to prosecution if no legal order has been confirmed for a permanent diversion, or no temporary closure order has been agreed.

To avoid delays it is recommended that a developer considers the following: -

Investigate the presence of PROW at the pre-application stage;

Incorporate PROW along a dedicated route rather than along new estate roads within a proposed development whenever possible;

Allow sufficient time for the formal processing of Orders for the closure or diversion of a PROW, which can take up to six months if unopposed and eighteen months to two years if the Order is opposed;

Do not start building work until the Order is confirmed;

Consult the Council's Public Rights of Way Team before erecting any new stiles, gates etc., across any PROW, as any such new structures must be properly authorised.

Consultation with the Council's Public Rights of Way Team before undertaking any works on site that affect a PROW.

The Developer will be required to meet all costs for providing and erecting signposts as well as any costs related to legal fees associated with any diversions or temporary orders. The Council may be able to provide sign-arms, which accord with legal specifications, at a relatively small cost.

Public Transport

Where practical, the Council expects the majority of new development to have access to high quality public transport facilities to ensure that the opportunities for the use of sustainable transport modes are protected and exploited. All developments that generate significant amounts of movements should take up the opportunities for sustainable transport modes, depending on the nature and location of the site. Such developments will generally be located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. Where appropriate bus or rail services do not exist, contributions may be sought from the developer to secure their provision or to enhance an inadequate existing provision, this includes scholars transport and community transport initiatives. Contributions may also be sought for public transport infrastructure, including railway lines, stations and bus facilities.

Bus Routes

In respect of developments that generate significant amounts of movement, the proposed roads likely to be used by buses should be identified at the outset of the design stage and should be sufficiently extensive to ensure that the entrance to each dwelling is within a reasonable walking distance of a bus stop (when measured along the most appropriate walking route rather than the direct 'crow flies' distance).

Large phased developments should make provision for the earliest phases to be served by buses. The provision and phasing will require detailed consideration at the planning application stage and will need to be incorporated into any legal agreement tied to the planning consent.

The Council does not operate commercial bus services and cannot specify the routing of commercial bus services. Therefore, developers should ensure that identified bus routes within a development allow for buses to travel in both directions. It should always be possible to pass two buses along the majority of the proposed route except in agreed localised narrowing.

Bus Stops

The provision and location of bus stops and bus cages should be planned at an early stage and made the subject of a safety auditing process to ensure stops are not placed in hazardous areas on the network or locations which conflict with access points. The cage must be suitably sized and clearly marked on all plans well in advance of any house building operations and brought to the attention of potential house buyers to avoid any problems when a service starts at a later date to the occupation taking place.

Stops should be located to give the best penetration into the development site by means of associated footpaths and they need to serve the greatest catchment area possible in terms of convenience. Pedestrian crossing facilities may need to be considered on busier roads to provide safe and convenient access to and from bus stops.

Bus stops provided on, or adjacent to existing highway networks should be placed as close as possible to footpaths and footways providing access into the development. The design specification for new bus stops is included within Appendix E.

Real Time Passenger Information

Certain bus routes within the County make use of Real Time Passenger Information systems (RTPI) and where applicable the Developer will need to ensure that bus shelters on the proposed route have the necessary ability to either have the shelter fitted with the RPTI equipment from the outset or at a later date. RTPI is a system which provides waiting passengers with details of when the next bus is due. The Council's HDM Team will be able to advise on whether routes serving a proposed development need to be RTPI compliant. A commuted sum will be required in such instances for the continued maintenance of the system.

As part of a Development Travel Plan, consideration should be given to the installation of RTPI systems within houses or buildings being constructed as part of the development. Such systems would provide information on bus services to residents, employees or visitors to a development enabling them to time their journey to the nearest bus stop based on the available information.

Bus Priority Measures

Opportunities to provide bus priority measures to improve bus service reliability for existing and enhanced bus services serving the development should be identified as part of the Development Travel Plan. Measures could include bus lanes, bus priority equipment at signal controlled junctions and bus only routes connecting the development to the local highway network. The potential for such measures should be discussed with the Council at the earliest possible opportunity.

Where a Bus Gate is provided, this should be designed so as to deter use by other vehicles. The Council favours camera enforcement for Bus Gates, and has introduced such systems at existing Bus Gates within Gloucestershire. The Council favours a camera system developed by S.E.A. (www.sea.co.uk) using the ROAD*flow* Flexi equipment. The Council would expect any networks requiring bus only gates to have this equipment fitted or the payment to the Council of a sum (current at the time of the agreement) for fitting at a later date. Further information should be sought from the Council prior to firming up any such proposals.

Rail

Where a development is adjacent to a railway line or other rail infrastructure (stations, sidings, freight facilities), then the Developer should consult, at an early stage, with Network Rail. Contact details and procedures for such consultation can be obtained from the Network Rail website (www.networkrail.co.uk).

The Council's policies for rail are included in the Local Transport Plan and where a development might lead to additional demand for rail travel, and schemes are identified

within the LTP for rail improvements, then financial contributions may be sought towards the delivery of those schemes.

Where a development is adjacent to a railway station, consultation should also take place with the Train Operating Company responsible for managing that station (typically under a lease arrangement with Network Rail). Within Gloucestershire, all rail stations are managed by First Great Western, with the exception of Lydney Station which is managed by Arriva Trains Wales.

Proposals should seek to maximise the opportunities to access stations by active travel wherever possible.

Community Transport

A number of Community Transport schemes operate throughout Gloucestershire, providing a service to those people without a car and who have limited or no access to public transport services. In some circumstances, where residential development is proposed in parts of the County without public transport services, a financial contribution may be sought towards the support of community transport schemes to ensure that people living in the development have some access to services regardless of the availability of a car within the household.

Emergency Vehicles

When designing any highway scheme, it is important that consideration is given to the impact it may have on the ability of the emergency services to respond to incidents and perform their duties. For this reason, it is essential that a developer consults with the following persons during the design and planning stages:

- Chief Constable of Gloucestershire Constabulary
- Chief Fire Officer of Gloucestershire Fire and Rescue
- Chief Executive of the South Western Ambulance Service

In general, developments should be designed to enable access to all parts of the development by emergency service vehicles, and the use of cul-de-sac layouts should be kept to a minimum to facilitate such access.

Provision for Parking

This chapter provides guidance on how Gloucestershire County Council reviews parking proposals. Paragraphs 105 and 106 of the National Planning Policy Framework, provides further detail on the application of parking standards. This document seeks to provide an approach as to how car parking in Gloucestershire should be provided to support new and expanding business and residential development in a manner which embraces the NPPF. Applicants should also review any guidance published within the Locals Plans of the Planning Authorities.

It is considered that if the applicant is the end user that they are well placed to assess operational demands but all sites must be considered against a planning use class to ensure they equally address the needs of future users. Therefore applications should provide a suitable evidence base to ensure vehicles are not displaced onto the Highway to ensure highway safety is not compromised and maintain the free flow of traffic to the benefit of the local economy.

Development must provide for exemplar on-street space, designed and allocated for pedestrians, cyclists, mobility users, deliveries, bus stops and bus priority measures before parking of private vehicles.

This document only reflects a small part of managing vehicle demands and therefore should be read alongside the LTP which contains policies to promote sustainable travel through the provision of physical infrastructure and travel planning initiatives.

Where development chooses to not comply with this guidance then a justification should be provided ideally supported by local evidence.

Houses and Apartments

There is no direct relationship between car parking provision and choice of transport mode, so a minimum provision for residential need should be made to ensure suitable in curtilage storage as per the following:

The below recommendations are provide based on analysis of need across the District areas, this should be cross referenced against more locally available evidence from local wards.

Urban (Rural)		Number of Bedrooms Proposed				
		1	**2**	**3**	**4**	**5**
Spaces	**Tewkesbury**	1 (1)	2 (1)	2 (2)	3 (3)	3 (3)
	Cotswold	1 (1)	2 (1)	2 (2)	3 (2)	3 (3)
	Cheltenham	1 (1)	1 (1)	2 (2)	3 (2)	3 (3)
	Stroud	1 (1)	2 (2)	2 (2)	3 (3)	3 (3)
	Forest of Dean	1 (1)	2 (2)	2 (2)	3 (3)	3 (3)
	Gloucester	1 (NA)	1 (NA)	2 (NA)	3 (NA)	3 (NA)

Note: Areas are urban if they were allocated to a 2011 built-up area with a population of 10,000 or more people (Source NOMIS)

Cycle parking must be sheltered, secure and easily accessible. A minimum of 1 space is needed per 1 bedroom units, 2 spaces there afterwards. Designers should in the first instance look to design facilities located close to the primary access points to buildings and no further away than the car parking space is to the front door. This will require careful design to present an attractive facility. If this is not possible parking in the rear garden can be accepted so long as the route is direct and as short as possible. It is not acceptable to negotiate 90 degree bends or several doors. Access through the house to the rear garden is not acceptable.

Garages are excluded from the car parking calculations due to the ability to convert them into habitable accommodation without the need for permission and their usage for personal storage rather than that of a vehicle.

Gloucestershire County Council strongly requires all properties to be equipped with Ultra Low Emission Vehicles (ULEV) charging points including provision where communal parking is provided. All new dwellings which provide car parking should be fitted with electric vehicle charging infrastructure to BS EN 62196 Mode 3 or 4 charging and BS EN 61851. This position is supported by the NPPF.

Houses of Multiple Occupancy

Houses of Multiple Occupancy (HMO's) have their own separate use class and as such require a separate parking standard from those above. Typically HMO's are located near academic establishments and are in existing residential communities, and as such are attractive to students, however this is not exclusively the case. HMOs which have 3 bedrooms or less do not require planning permission, therefore no standards are indicated for sub 4 bedrooms.

Bedrooms	Required Spaces
4	2
5	2
6	2
7	3
8	3
9	3

Cycle storage at a ratio of 1 space per bedroom should be provided where they are sheltered, secure and easily accessible.

Visitors

These are permitted to be counted within the street due to their short term duration and infrequent occurrence. Where existing on street demand or parking restriction prevents this or for communal parking areas off road provision should be made at a ratio of 1 space per 5 residential units (or HMO). Provision should also be made for cyclists where spaces should be shared and the number proportionate to the scale of the development.

Car Clubs

In areas where housing density is greater and there is a wider range of transport choices car free development will be encouraged. However residents should still be given the ability to travel by car should they choose and where there is sufficient critical mass in terms of development or existing population to support a scheme the provision of a car club can

provide a valuable service. Where these are proposed early discussions with the Highway Authority and club operators is needed to ensure long term viability and city wide take up and how they are most suitably financed. .

Controlled Parking Zones

Where development is proposed in a controlled parking zone future residents will be entitled to apply for permits. The LHA will consider the capacity of permit scheme to consider if it has the potential to cater for the development. Where no capacity exists and car free development would otherwise be acceptable the applicant will be required to fund amendments to the traffic regulation order to exclude the future dwellings.

Care Homes

These are a mix of residential and employment uses which can fall into C2 or C3 uses. Most sites are promoted by established care providers who will have experience of comparable sites. The applicant should present appropriate up to date data from similar sites on car parking demand to inform levels for their proposal rather than applying the residential C3 standards with may not be appropriate.

Commercial / Industrial (Non-Residential)

Commercial operators should have a good understanding of the needs of their business and will determine how land under their control could be managed. Car parking need is a subjective matter particularly in the mind of neighbours; the applicant should provide a minimum parking provision for each development along with an evidence base to demonstrate the appropriateness of the provision. Trip rates accumulation should either be derived from first principles or from existing data, for example; TRICS or comparison to facilities of similar size and geographic circumstance.

Adequate space for heavy goods, delivery and public service vehicles must be made within the site boundary, which should not conflict with the proposed parking arrangements.

Car Free Development / Reduced Parking Levels

For both residential and commercial developments in town and city centres the applicant may choose not to provide car parking spaces at all or to provide a reduced parking provision. Consideration must be given to the opportunity to access the site sustainably, the availability and capacity of public car parks, existing parking restrictions, the number of linked trips and the implementation of an approved Travel Plan or welcome pack. Provision for servicing and deliveries must always be made within the site, unless there is a strong fall-back position which would remove this requirement. Where some spaces are provided it must be made clear who the intended users are to be.

Educational Facilities

A maximum of 1 Space per member of staff however in urban locations staff levels should be reduced based on the availability of alternative options. Drop off areas are not accepted as they do not represent the promotion of sustainable travel. Car free development is permissible depending on the local circumstances. Sheltered facilities to provide for pupil scooter storage should be provided in an accessible location for primary schools and cycle parking for all educational facilities.

Other Users Needs In Non Residential

Development Consideration and provision must be made for disabled badge holders, motorcycles, bicycles and ULEV. The following ratios are required.

Accessible Spaces

Size of Car Park (no of spaces)	Designated Bay Provision
1-50	2 + 3% of total car park
51-200	3 + 3% of total car park
201-500	4 + 3% of total car park
501-1000	5 + 3% of total car park
1000 +	6 + 3% of total car park

Motorcycle Spaces

1 space per 10 car spaces, minimum provision 1 space

Bicycle Spaces

The number of stands should reflect the governments aspiration to double cycling by 2025, therefore no fewer than the level of cycling in the area per person as should in the latest census and then doubling it should be provided.

No fewer than 6 spaces are to be provided in any scenario for staff.

Visitor cycle provision must be made over the staff provision, no fewer than 6 spaces are to be provided adjoin the main access to the building.

ULEV Charging Spaces

Initially 5% of the total parking spaces provided and a further 5% of the total parking spaces at an agreed trigger but no later than 3 years from the first opening.

Every new non-residential building undergoing a major renovation with more than 10 car parking spaces to have one charge point and cable routes for an electric vehicle charge point for one in five spaces.

Every new residential building with an associated car parking space to have a charge point

Commercial development must be supported by a travel plan to promote sustainable travel choices irrespective of the number of car parking spaces provided and where a transport assessment is provide they should be a key factor in managing traffic generation and car parking supply.

Specifications

Car Parking Spaces

A minimum 2.4m x 4.8m. For residential dwellings circulation space around the vehicle is needed so the width should increase to 3.3m or have a 0.9m path directly alongside. Adjoining spaces in the same dwellings ownership can have overlapping circulation space. For clarity this applies to C3 Houses and Apartments, and Houses of Multiple Occupation, and applies for individual spaces and communal parking areas.

Tandem parking spaces for an individual residential dwelling is permitted, but is limited to 2 vehicles.

The maximum number of adjoining parking spaces in a row (onto back off the footway) is limited to 6 spaces.

A minimum of 6m is required in front of a garage door.

Garages can be used to provide bicycle storage as well as for other household storage needs, where this occurs garages should have an internal dimension of 6m x 3m.

Cycle stands

A minimum width of 1m must be provided between cycle stands. Stands for nonstandard cycles should be allocated at the end of a standard provision with a minimum width of 1.5m provided to allow for dismounting. Sheffield styled standard are preferred, but lockers, double racks and hanging spaces can be accepted depending on the design and local context.

ULEV charging systems

Residential 7kW charging points.

Non Residential 22kW charging points in visitor areas, 7Kw charging point in staff areas. A minimum of 1 space to be provided for visitors.

Bin Stores

Separate bin storage areas should be provided which do not conflict with any proposed parking spaces.

Construction and Adoption

Advanced Payments Code

The LHA cannot insist that an access serving a development is adopted if constructed on private land, but a developer should consider the following factors when deciding whether to offer an access for adoption or whether to retain it as a private access. Developers are encouraged to create layouts and construct the street to an adoptable standard regardless of whether the access is to be offered to us for adoption. Please note that the Council will apply the Advance Payments Code to all development comprising two or more buildings.

The cost of complying with the Advanced Payment Code

- Responsibility for future maintenance liabilities.
- Responsibility for street cleaning.
- The provision, standard and future maintenance of lighting, drainage and related infrastructure.

The LHA would have no powers or responsibilities under the Highways Act 1980 if the access remains a private road.

Poorly maintained private areas can also detract from the quality and visual appearance of a development. The maintenance of private roads is a very common cause of neighbour disputes.

Developments served by a private access should be designed to avoid use as a through route by general traffic, as such use could add to the liabilities and responsibilities of future owners and residents.

On residential and commercial developments where it is necessary to protect frontagers' interests the Council will serve a notice on the person by or on whose behalf plans were deposited with the local authority in accordance with building regulations relating to the erection of a building/s. Following an assessment of the cost of the proposed road works under the Advance Payments Code (APC) procedure a notice will be issued which will include a sum that is required to be paid/secured by the person named in the notice. More detailed information on the APC procedure can be found at Sections 219 - 225 of the Highways Act 1980.

- If a developer clearly indicates that the development roads are to remain private, the Council may also require that:
- Road signs indicating that the roads are unadopted should be erected and maintained by the developer for as long as the road remains private,
- The developer should provide evidence that they have clearly stated to potential purchasers of the dwellings what the implications for purchasing a property fronting a private road are.
- The developer should provide evidence that future maintenance of the roads and associated infrastructure has been secured, for example through an unilateral undertaking under Section 106 of the Town and Country Planning Act 1990 to set up a maintenance company,

- The developer should indemnify the Council against future petitioning by residents to adopt their road. This should normally be a legal covenant placed on the properties to prevent petitioning. The wording of the covenant must be approved by the Council.
- The boundary between the private access and the publicly maintained highway is clearly marked by a concrete edging, boundary posts or similar.

New Footway/Verge Crossings

Regardless of whether or not planning permission is required and/or obtained for a new vehicular access, the Developer will need authorisation from the Council before a private vehicular access (also known as a dropped kerb) can be constructed from the highway into a private property, or before carrying out works to an existing one, unless it is included within works being carried out under a Highway Works Agreement.

Before approval can be given for a new access, or for alterations to an existing access, the Council will need to ensure that the site does not detrimentally affect the safety of other highway users.

The construction of a dropped kerb for a vehicular access is governed by the Highways Act 1980 and the New Roads and Street Works Act 1991. Such construction is controlled, approved and licensed by the Council.

Planning permission may be required from the Local Planning Authority (the relevant District/Borough/City Council).

Checking Underground Utility Services

The Developer will need to contact each of the Public Utility Companies to determine details (position and depth) of any services that they may have in the ground at the location to be excavated (contact details will be provided in the application pack).

Choosing a Contractor

The Developer is advised to obtain at least 3 different quotes for the works. The chosen contractor will need to hold a valid accreditation under the New Roads and Street Works Accreditation Scheme to work within the public highway.

The Developer will also need to have in a place a current Public Liability Insurance Policy providing cover for up to £10m.

Funding the New Access

The Developer will need to pay fees to cover the cost of inspecting the proposed site, processing the application and inspecting the works whilst they are carried out. Full details of the current fees are provided within the application pack.

Request an Application Pack

Applications for new Footway Crossings are dealt with by Gloucestershire Highways. To request an application pack, or to obtain further information a Developer should contact 08000 514 514.

Bonding of Highway Works

The Council requires the provision of third party bonding to guarantee the delivery of highway works to an appropriate standard acceptable for adoption as part of the public highway

secured under section 106 of the Town and Country Planning Act 1990, section 278 of the Highways Act 1980, section 111 of the Local Government Act 1972, section 38 of the Highways Act 1980, section 251 of the Highways Act 1980 and section 1 of the Localism Government Act 2011.

The bondsman must agree that in the event the Developer does not fulfil its obligations as set out in the Highway Works or Dedication Agreement (due to insolvency, liquidation or refusal to pay), sufficient funds are immediately paid by the bondsman so that the Council can make the highway safe for public use.

Alternatively, the Council will accept a cash sum to perform the same function. This is returned together with interest if the highway scheme is delivered satisfactorily.

It is the Council's policy that the Bond is entered into (or the cash sum deposited with the Council) at the time the Highway Works or Dedication Agreement is completed.

No works will be permitted on the public highway until the Highway Works Agreement has been completed and the pre-commencement requirements contained within the Agreement satisfied.

For a Highway Works Agreement, the bond value will be the value of the works plus Optimism Bias calculated as set out below.

Applying Optimism Bias to Contributions to Highways Works and/or Highway Works Bonds

Transport projects are inherently risky due to the long planning horizon and complex interfaces. Often the project scope or ambition level will change significantly during project development and implementation. Changes may be due to uncertainty at the early project stages on the level of ambition, the exact corridor, the technical standards, project interfaces and geotechnical conditions, etc. Hence, a certain degree of budget uncertainty exists which will typically be reduced through the project cycle.

This complexity should not be a surprise to the experienced planner as the occurrence of a certain number of unplanned events is the norm rather than the exception in transport infrastructure projects.

The Council adopted optimism bias uplift has been based on the default uplift values in the Department for Transport TAG UNIT A1.2 Scheme Costs Guidance dated January 2014. The Optimism Bias will be applied to all contributions towards highway schemes and when calculating the value of highway works bonds

Gloucestershire County Council adopted Optimism Bias Levels

Scheme Stage	Optimism Bias Uplift
1 - Not technically approved	44%
2 - Technically approved*	3%

It should be noted that Optimism Bias does not replace a contingency allowance and a minimum 10% contingency should be added to any works valuations before Optimism Bias is added.

*Technically approved includes confirmation from all relevant effected utility companies that a scheme of protection / diversion has been agreed.

Implementation

Detailed Design, Technical Approval, Construction and Adoption

Where the Council considers that the carrying out of highway works on the existing public highway are appropriate the Council will require a Highway Works Agreement to have been entered into, Technical Approval to have been issued and its administration and inspection fees to have been paid, prior to the commencement of construction. It is unlawful to undertake works on the public highway without the permission of the Council.

Where new streets are being constructed, the Council recommends that a Dedication Agreement (Section 38) is entered into. Technical Approval will need to be issued to the proposed designs and the Council's administration and inspection fees will need to be paid prior to the commencement of the adoptable works.

If a Developer (or their contractor) starts works prior to technical approval being issued or inspections commencing, then the Council may require additional material testing and core samples to be taken, at the Developer's expense, to ensure the road has been constructed to a suitable standard. Without technical approval, the Developer risks constructing a road that is not to an adoptable standard and having to replace this infrastructure before the Council will adopt it as public highway.

Making an Application for an Agreement

To apply for an Agreement the Developer must make a submission to the Council that includes the following:

- A completed application form
- 1 copy of the **location plan**
- 1 copy of the legal **agreement plan/s coloured** in accordance with the GCC key
- Copy of the estimated cost of the highway works
- **Initial fee** – See Appendix D
- Copy of the planning permission notice

Making a Submission for Technical Approval

In order to obtain Technical Approval the Developer must make a submission to the Council that includes the following documents:

- 1 copy of the **location plan**
- 1 copy of the detailed **engineering layout** (with all dimensions annotated)
- 1 copy of the longitudinal sections
- 1 copy of the highway construction details drawings
- 1 copy of the **drainage layout** plan and manhole schedule
- 1 copy of the **drainage construction** drawing
- 1 copy of the **Stage 1 and 2 Road Safety Audit** including a Road Safety Audit Response Report and an Exception Report, if necessary (see Appendix B)
- 1 copy of the Walking, Cycling and Horse Riding Assessment Report and Review where necessary
- Copy of the planning permission notice
- Evidence that the Water Authority are prepared to enter into a Section 104 Agreement for the surface water and foul sewers
- 1 copy of the **street lighting scheme** and specification (see Appendix *J*)

If applicable the following information should also be provided:

- Details of any **Traffic Regulation Orders** that will be required
- **Highway drainage details** including calculations and drainage catchment plans
- Copies of Approval in Principle document or Design/Check Certificate for **highway structures**
- Detail plans of any **roundabouts** with contours
- Layout plan showing **traffic signs and road markings** along with traffic sign schedules and sign details

Traffic signal design and details

All information contained in the Submission for Technical Approval must be in electronic format, with all plans and drawings being in PDF format. Failure to submit documentation in this format could result in delays in the submission being reviewed by the Council. If requested paper copies of the plans and documents must also be provided.

A more comprehensive list of the Council's requirements for a submission for technical approval can be found in its document entitled Highway Agreement Submission Package for Technical Approval, details of which appear in Appendix C.

If the developer fails to provide adequate and essential information then their submission will be rejected incurring delays in the issue of technical approval.

In addition to the above information, the developer must also c pay the initial fee. This is a non-refundable deposit that will be deducted from the total administration and inspection fees, which are requested at a later date. This money is required to offset the costs to the Council of carrying out the initial assessment of the submitted information. The amount of deposit required is outlined in Appendix D.

Issuing Technical Approval

Once the Council has received a complete submission it will then be allocated to a case officer within the HLA Team. The Council's consultants will undertake a detailed design

review of the submission to ensure that submitted details are in accordance with MfGS and other relevant design guidance including MfS and/or the Design Manual for Roads and Bridges where applicable.

The Council will acknowledge receipt of a technical submission via email, and will detail any required amendments or confirm that the submission is satisfactory. If following the submission of amended plans, and subsequent design checks, further amendments are considered necessary, further fees will be sought to cover the cost of each additional check. If the Developer considers that such fees are not justified, then they should present their case to the HLA Team and a relaxation of fees will be considered. However, no works would be carried out on the technical approval work until these discussions had been completed and any additional fees paid.

When the details are satisfactory and can be approved, an e-mail will be sent to the Developer requesting final drawings for approval and payment of the Council's remaining administration and inspection fees, calculated in accordance with Appendix D. If the Developer consider that Inspection fees should be deferred (in the event that works are not due to commence on site for a number of years), then they should present their case to the HLA Team. No works subject to the agreement should commence prior to Inspection fees being paid to the Council.

Upon receipt of the fees and drawings, the drawings will then be 'approved' and a Technical Approval letter including a schedule of approved drawings will be issued to the Developer. Following this the Highways Inspector and the Council's Street Lighting Team will be instructed to commence inspections of the site.

After Obtaining Technical Approval

If the Developer wishes to revise the approved design, after technical approval has been issued, and the amendment will affect any part of the existing or potentially adoptable highway, then copies of the revised drawings should be submitted to the Council for approval.

If the details are satisfactory then a revised technical approval will be issued.

If the Developer will be placing or amending any apparatus (for example sewers) within the existing highway then a **Section 50 Licence** will need to be obtained.

Road Safety Audits

The Council will require Road Safety Audits to be undertaken in accordance with the local guidelines (see Appendix B).

- A copy of the Stage 1 and 2 Road Safety Audit MUST be provided, along with a copy of the Designer's Response and, if necessary, a copy of the Exception Report prior to this issue of technical approval.
- A Stage 3 Road Safety Audit MUST be provided, along with a copy of the Designer's Response and, if necessary, a copy of the Exception Report, and all recommendations resolved prior to issue of the completion certificate.
- A Stage 4 Road Safety Audit MAY be requested prior to issue of the Final Certificate. If a Stage 4 Audit is required it must be submitted along with a copy of the Designer's Response and, if necessary, a copy of the Exception Report, and all recommendations resolved prior to issue of the final certificate.

Traffic Management Systems

Introduction

Traffic management systems include travel signals, pedestrian crossings, and other traffic control systems such as Variable Message Signs, Closed Circuit Television (CCTV) cameras and other camera based vehicle monitoring systems. These systems are maintained and managed by the Network Management Team at the Council, and are intended to ensure sound traffic management to reduce traffic congestion and improve road safety for all road users.

Traffic Regulation Orders

It may be necessary to amend a Traffic Regulation Order (TRO) to facilitate development. Whilst this is possible caution should applied by the applicant and the LHA alike. A TRO process is a publicly object able process which is address outside planning legislation, therefore there must be an essential need to implement such order and a reasonably likely prospect of the order being delivered. In those instances a pre commencement Grampian styled condition will be applied to any permission and the costs associated with the order must be paid by the applicant either as a S106/UU obligation at the planning stage or as part of the S278 implementation process.

The agreement of an amendment to a TRO at the planning stage does not guarantee that any order can be delivered.

Traffic Signals

Early contact with the Council at the earliest possible opportunity (pre planning application submission) is recommended to discuss the implications of the proposals on the highway network.

Intelligent Transport Systems (ITS) are an important tool in the monitoring and management of the highway network. The Council is committed to the installation, where appropriate, of ITS equipment including CCTV, Automatic Number Plate Recognition (ANPR), Journey Time Management Systems (JTMS), Car Park management systems, Variable Message Signs (VMS) and communication cable ducts at or in the vicinity of any new junction onto the highway network. Alternatively, a financial contribution to a wider route/area based ITS strategy may be required.

All junctions will be either part of the Urban Traffic Control System (UTC) in place within the main urban areas, or, if a standalone junction, then MOVA will be the preferred control system. At key junctions both UTC and MOVA may be requested.

The current requirement for signal aspects is that they shall be all LED type. Signal controllers and installation cables will be Extra Low Voltage (ELV) unless otherwise agreed by the Council. Only equipment approved by the Council will be permitted for use on the highway.

Where a signal controlled pedestrian crossing is proposed, it should be noted that the Council has a policy of not installing Pelican crossings - only Puffin and Toucan crossings are accepted. Zebra Crossings will also be considered in the appropriate setting.

The Traffic Signals Developer Information Pack (available in Appendix G). The Pack is intended as an aid to developers helping them to meet the required standards. The Pack is

not a design guide in its own right and should be read in conjunction with this manual and the Design Manual for Roads and Bridges.

Variable Message Signs

Variable Message Signs (VMS) are often used to inform drivers of traffic conditions, car parking availability or other useful information that might assist them with their journey. On the local highway network, three main forms of VMS are currently in use.

Vehicle Activated Signs (VAS) are used to tackle local traffic management issues, such as speeding, by seeking to amend driver behaviour through the use of informative messages. Where such signs are proposed as part of a development, the type and location of the signs should be agreed with the HDM Team and Gloucestershire Highways, and a commuted sum based on inspecting and maintaining the equipment over 25 years will be required to offset future operational costs associated with the equipment. Early discussion with the Council's HLA Team is recommended.

Traffic Signs and Road Markings

Traffic signs play an important role in assisting road users by:

- Providing warnings of potential hazards
- Providing instructions that need to be followed
- Providing clear directions to specific destinations
- Providing clear directions on which lane drivers should use to reach specific destinations, especially on the approach to junctions.

The Developer will be expected to identify what signs are required as part of the design process, in accordance with the Traffic Signs Manual (TSM) as published by the Department for Transport (www.dft.gov.uk).

The Government and the County Council are committed to reducing sign clutter. The over-provision of traffic signs can have a detrimental impact on the environment and can dilute more important messages.

Where works are required on the existing local road network, the Council will expect the design process to include a review of existing signing, and will expect the Developer to remove, replace or upgrade road signs as appropriate to accommodate the requirements of the new development.

The Council will expect road markings to be provided on major roads, notably the A and B Road network. On minor roads and new streets it may be that certain road markings, such as centre line and giveway markings, will not be required.

Street Furniture and Other Roadside Equipment

A wide range of street furniture and roadside equipment might be required to address specific issues in relation to traffic management. These include:

- Pedestrian guardrails
- Road Restraint Systems
- Bollards

- Verge Marker Posts
- Grit Bins
- Cattle Grids

Where the need for such street furniture is identified and has been agreed by the Council, the design should be in accordance with GCCs requirements.

Grit Bins
Grit bins should be provided in accordance with the Council's Winter Maintenance Policy

Road 'Un-Adopted' Signs
Once a new road is open so that the public can access it freely, the Developer must ensure that contact signs are prominently displayed.

Street Lighting
Please refer to Appendix J for Gloucestershire's Street Lighting specification and Drawings.

Glossary

Active Frontage – A street with accesses, people and activity.
Adoption – The dedication of a Street through the Highways Act 1980
Bellmouth – A junction using radius kerbs
Carriageway – The vehicle spaces of a street
CD 123 – National Guidance for the consideration and design of junctions
Commuted sum – A financial sum paid towards future maintenance
Condition – Restrictions and Limitations on Planning conditions
Construction Environmental Management Plans – A tool to control the construction phase of developments
Crossings - Toucan, Puffin, Zebra, Pelican, dropped kerbs
DMRB – The national design standard for trunk roads and motorways. Provide good practice for Local Highway Authorities.
Footway – Pedestrian space adjacent to the carriageway
Frontagers – Properties which have access onto a street.
HDM – Highway Development Management
HLA – Highway Legal Agreements
Junction Radii – The size of the curve accessing or exiting a side road.
Level Surface – A flush space for all users to share.
LPA – Local Planning Authority
LTP – Local Transport Plan
Manual for Streets 1 & 2 – National design guidance for the design of new streets and modifications to existing roads.
Modelling – A series of tools to assess impact for a variety of modes at a local and strategic scale.
Private Road – A street that has been built to an acceptable standard which the development has chosen to keep private.
Private street – A existing street which has a public right of access over a private roads. Frontagers may be obliged to bring the street up to standards.
Public Right of Way – A Footway or Bridleway. Forms part of the definitive map.
S106 – A legal agreement used to obligation actions or contributions to mitigate development.
S278 - A form of licence to allow a private developer to work in the Public Highway to form consented works.
Transport Assessments – An appraisal of policy, impact and mitigation for a development proposal.
Travel Plans – A tool to promote sustainable transport associated with development.
TRO – Traffic Regulation Order, legislation for parking restrictions, speed limits and turning bans.
Turning head – The space provided to allow vehicles to manoeuvre.
Vertical alignment – The profile of the road
Visibility splay – The area of land needed to see and approaching vehicle or pedestrian
X distance – The distance from junction which the visibility splay is measured
Y Distance – The visibility splay distance measured parallel to the kerbline.