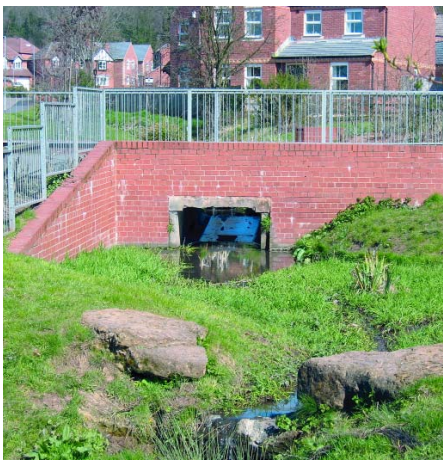
HEREFORDSHIRE COUNCIL

Herefordshire Council
Environment Directorate

Highways Design Guide for New Developments

Design Guide

Centre of Excellence
Local Transport Delivery



July 2006

HEREFORDSHIRE COUNCIL

Owen Williams
Part of Amey plc

Centre of Excellence
Local Transport Delivery

Herefordshire Council
Environment Directorate

Highways Design Guide for New Developments July 2006

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Designed by howerro 01989 750351

FOREWORD

Graham Dunhill
Director of Environment

Herefordshire Council are committed to the creation of a sustainable environment with accessible public transport for all, improving air quality, reduced congestion and a thriving economy.

With PPG3 and the companion guide 'Better Streets, Better Places', the Government has given a clear challenge to local government and developers to think more imaginatively to achieve more attractive, neighbourly and safer developments and this Design Guide gives direction to developers in achieving the right result and will compliment the Government's forthcoming Manual for Streets.

I strongly urge developers and designers to make the fullest use of this Design Guide and I look forward to the private sector working with Herefordshire Council to achieve holistic solutions and urban forms that will be held up nationally as examples of excellence.

1. DESIGN POLICIES

1.1 Introduction, Aims and Objectives

Herefordshire Council has produced this Design Guide to aid Developers, Designers and other professionals in preparing transport infrastructure related to new developments. It sets out the Council's requirements for compliance with Legislation, Health and Safety, Environmental and Public Protection and Mobility Impaired users. It explains the Design Philosophies and Criteria and the Council's Policies and sets out the procedures for application for adoption of the infrastructure.

Throughout the text, various web links will appear to direct the user to sites containing relevant information and further reading, these are shown in green, as below.

The Design Guide stems from guidance set out in Design Bulletin 32: Residential Roads and Footpaths: Layout Considerations (DB32) and its companion guide Places, Streets and Movement. It introduces the key issues of sustainability in transport (public transport, cycling and walking), and planning policies as contained in Planning Policy Guidance for Housing (PPG3) and Transport (PPG13). Also the rising importance of speed restraint, 20mph zones and the more encompassing Home Zone strategies, as detailed in the Home Zones; Design Guidelines by IHIE are touched upon as is crime prevention and the findings of the Government's 'Better Streets, Better Places' report are addressed.

www.odpm.gov.uk
www.ihie.org.uk

Herefordshire Council as Highway Authority has powers and duties to ensure that the highway network is maintained and improved in a safe state. The Council sets out its transportation policies in the Herefordshire Local Transport Plan 2006/7-10/11. In its role as Planning Authority the Council has a duty to issue a Unitary Development Plan, which sets out its policies with regard to local and strategic development.

Compliance and consistency with the Unitary Development Plan (UDP) and Local Transport Plan (LTP) is integral in the Design Guide and the approved Highways-related Development Policy Statements are to be found within the UDP and this document.

www.herefordshire.gov.uk/transport
www.herefordshire.gov.uk/udp

The aim is to achieve better development, better transport and improve the environment for all.

The Government's 'Better Streets, Better Places' report is leading to the production of the National 'Manual for Streets'. The particular aim is to improve Local Authority, and hence developer's, understanding of the use of PPG's 3 and 13, but also to bring up to date the design criteria which have appeared since DB32 in 1992.

www.manualforstreets.org.uk

1.2 Unitary Development Plan (UDP)

The Unitary Development Plan (UDP) is the policy framework guiding development in the County, covering issues ranging from the provision of new houses, jobs and facilities and rural regeneration whilst also ensuring the enhancement and conservation of the Towns and countryside. New development must be considered against, and satisfy, the relevant policies and overall aims of the UDP.

The UDP places the emphasis on:

- Fair and thriving communities;
- Protecting the Environment; and
- Providing a strong, competitive and innovative economy.

The UDP has been developed and revised by Herefordshire Council following extensive and wide-ranging consultation with groups, individuals, businesses and communities.

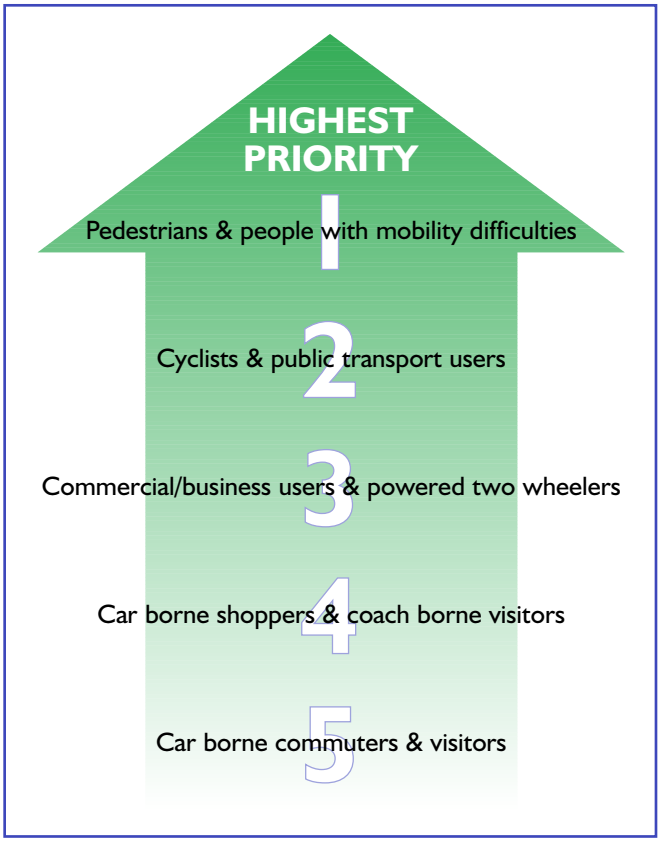
www.herefordshire.gov.uk/udp

Throughout this document, UDP Policies relevant to that section will be highlighted as shown below:

UDP Reference
S6 Transport

1.3 Hierarchy of Transport Modes

The Council's LTP sets out the following hierarchy to guide the implementation of transport policy, and demonstrate its commitment to sustainable transport:



The above hierarchy is not an order or precedence for actual provision, but simply an order of consideration that seeks to ensure that decisions regarding development design are consistent with delivering the objectives of the strategy.

UDP Reference
S6 Transport

1.4 Highway Hierarchy (Existing Road Network)

The Councils Highway Maintenance Plan defines the following hierarchy of existing roads in the County:

Hierarchy Description	Type of Road General Description	Detailed Description
Strategic Route	Principal 'A' roads between Primary Destination.	Routes for fast moving long distance traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.
Main Distributor	Major Urban Network and Inter-Primary Links. Short - medium distance traffic (A and B Class).	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety.
Secondary Distributor	Classified road (B and C class) and unclassified urban bus routes carrying local traffic with frontage access and frequent junctions.	In rural areas these roads link the larger villages and HGV generators to the Strategic and Main Distributor Network. In built up areas these roads have 30mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On street parking is generally unrestricted except for safety reasons.
Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions.	In rural areas these roads link the smaller villages to the distributor roads. They are capable of varying width and not always capable of carrying two-way traffic. In urban areas they are residential or industrial interconnecting roads with 30mph speed limits, random pedestrian movements and uncontrolled parking.
Local Access Road	Roads serving limited numbers of properties carrying only access traffic.	In rural areas these roads serve small settlements and provide access to individual properties and land. They are often unsuitable for HGV. In urban areas they are often residential loop roads or cul de sac.
Rural Access Lanes	Partially unmetalled roads serving occasional rural properties and providing access to the countryside carrying only access traffic.	

UDP Reference
T8 Road Hierarchy

1.5 Development and the Existing Road Network

Access to existing road network

The County policy on access to the existing highway network is to take account of the function of the roads within the hierarchy. It is not normal to allow access to the two highest categories of road in the hierarchy (Strategic roads and Main Distributors).

Accesses to the lower categories of road will be considered in relation to the function of the road, the less the road functions as a traffic route, the less stringent will be the access and design requirements.

Many existing roads within urban areas serve multiple uses and there are many cases where direct access from private residences is obtained to Strategic Routes or other high categories of road. Any development that proposes new private accesses to a Secondary Distributor or higher category of road will only be considered where an improvement to an existing unsatisfactory situation is achieved.

Accesses that will have a significant effect upon the existing highway network will normally trigger the need for upgrading under a Section 278 Agreement, whilst minor works attached to the development may form part of the works covered by a Section 38 Agreement.

The requirements of HA TD 42/95 will be taken into account when deciding the most appropriate form of junction with the existing highway network. It may be more appropriate in certain circumstances to consider the provision of a roundabout, which would have the effect of reducing the speeds of through traffic.

For new accesses to single dwellings onto existing rural roads, a visibility splay set back (x distance) of 2.4m will be required.

Through traffic

The design and layout of the development should be such as to discourage the through movement of traffic unconnected with the site, except in circumstances where the site is seen as an opportunity to achieve an improvement to an existing substandard road or junction.

Development in Rural Areas

Development proposals in rural areas are often for single dwellings or a small number of dwellings, such as barn conversions. In cases where these abut two or more existing roads, then direct access to the higher category of road will be resisted and access will be required from a lower category of road. However, sympathetic consideration will be given in the case of listed or unused buildings for which re-use is considered appropriate, or industrial developments generating Heavy Goods Vehicle movements for which a better access direct from a higher category of road can be achieved, rather than on an unsuitable side road.

Where a development is remote from higher categories of road, and is served by number of substandard width rural roads, consideration must be given to the improvement of the existing roads, such as the provision of passing bays. Consideration should also be given to setting back the front boundary of the development to provide a local passing bay.

Access from Private Streets

Where the development of multiple properties is proposed to take access from an existing Private Street, the existing street must be made up to an adoptable standard, in accordance with the requirements of this guide. This will necessitate the use of the Private Street Works Code. Further advice on this procedure can be obtained from the Director of Environment

1.6 Sustainable Development

The latest Government guidance places sustainability in development, transport and drainage at the core of design practice. Provision for the car shall take second place compared to peoples' and communities' needs for a pleasant and safe living environment.

Permeability is the key to sustainable development

Herefordshire Council through its Local Transport Plan is committed to developing an integrated, sustainable transport system for Herefordshire, as a means to reduce traffic congestion, pollution and promote healthier forms of travel.

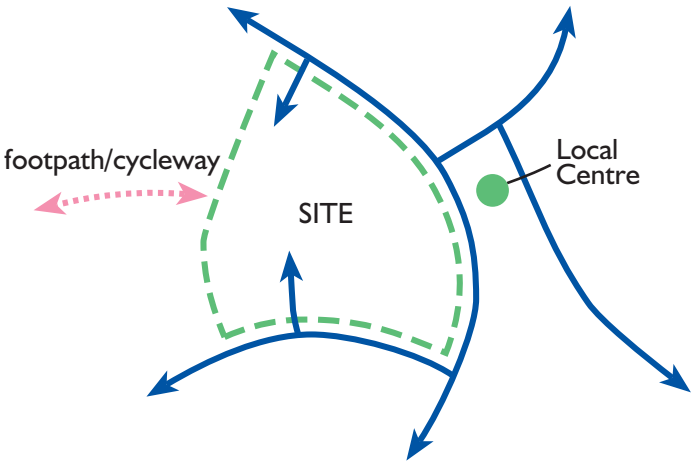
www.herefordshire.gov.uk/transport
www.odpm.gov.uk

UDP Reference
S1 Sustainable Development
DR2 Land Use And Activity
DR3 Movement

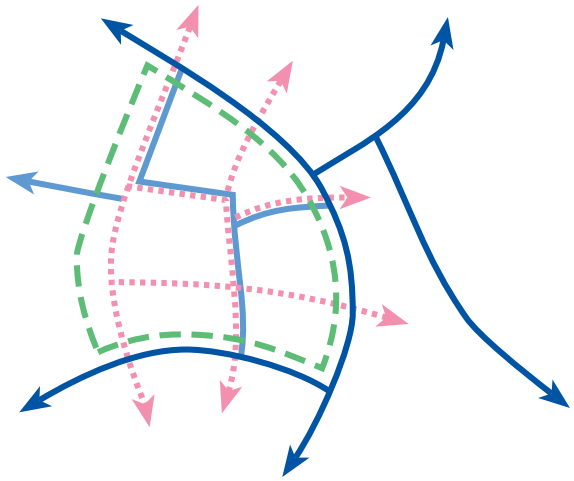
1. DESIGN POLICIES

Schematic of New Residential Development site with connections to existing roads

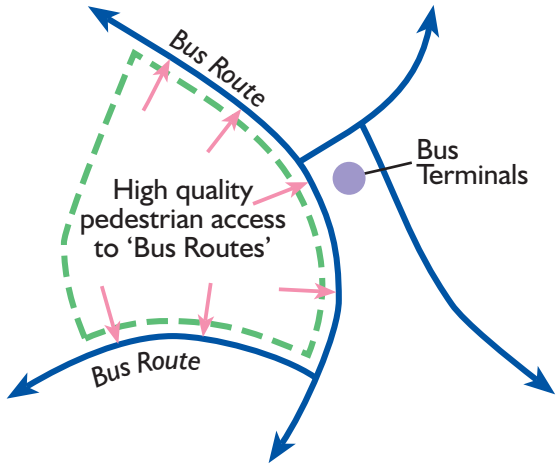
Using this example, the following diagrams illustrate the principles of sustainable and permeable development.



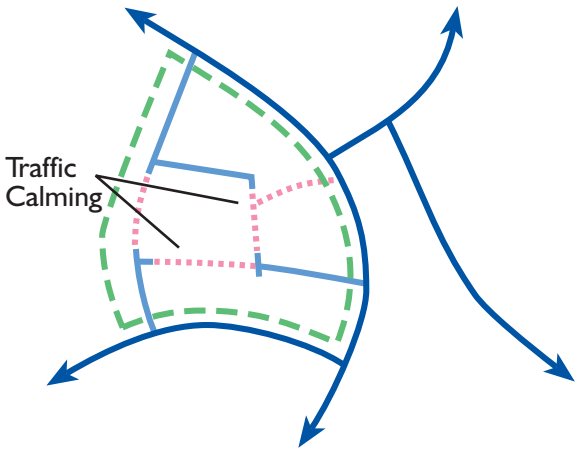
1. Footpath/Cycleway Network



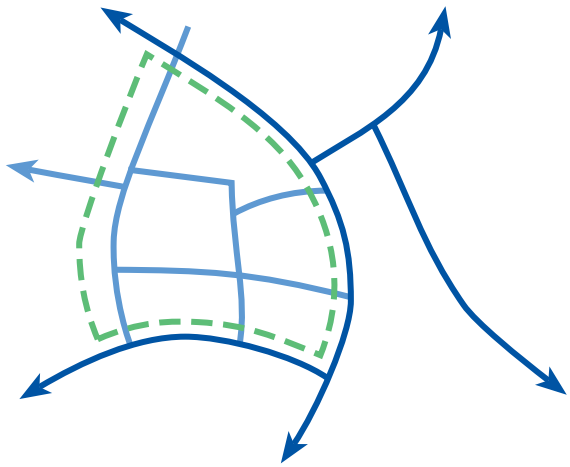
2.Public Transport Network



3. Road Network



4.Complete Movement Network



An overall approach is required which ties together the needs of people for a pleasant and durable setting, ease of mobility for all types of user, exclusion of crime and vandalism and encouragement to walk, cycle and use public transport. Permeability is the key to successful sustainable transport and essentially means the ease with which pedestrians and cyclists can move through the built environment and take the shortest and most pleasant routes to their destination.

UDP Reference
T6 Walking
T7 Cycling
T13 Traffic Management

It must be ensured that adjacent roads have similar levels of access for all users with safe footways and cycleways, crossing points, low traffic speeds and easily reached quality bus stops allowing permeability for non-motorised traffic through the development. In designing cycle facilities initial consideration should be given to making links with the strategic network of routes defined by the Council. It is considered appropriate for cyclists to share a network of streets where the 85%ile speed of vehicles does not exceed 20mph and/or where there will be less than 100 dwelling units.

Public Transport should adequately support all developments and where none exists, contributions may be sought from developers for its provision.

Most development proposals will trigger the need for extra facilities for the needs of the development (e.g. public transport links, pedestrian crossings etc) or to mitigate the impact of development upon existing community facilities. These facilities, either developer funded and/or provided shall be secured by agreement under Section 106 of the Town and Country Planning Act 1990.

Good cycle infrastructure is a key element of sustainable development

Speed restraint through design is desirable

1.7 Speed Restraint and Traffic Calming

Speed restraint and traffic calming should be based around the concept of safety by design and the layout should be such that high speeds are impossible to achieve.

All speed restraint shall be incorporated in the initial stages of road construction to ensure potential residents are fully aware of the nature and scope of the measures. Furthermore the features should be shown on any of the plans, illustrations or models used in the marketing of the development to reinforce the approach. Traffic calming, as a blanket approach, should be unnecessary if the roads have been designed correctly.

UDP Reference
T13 Traffic Management Schemes

Consideration for cyclists

Traffic calming can benefit cyclists by reducing the speed of traffic, however it must be of a cycle friendly design. Wherever possible, the introduction of pinch points that 'squeeze' cyclists, e.g. providing central refuges should be avoided. At 30mph the minimum width beside a refuge that allows safe overtaking without intimidation is 4.5m (CTC Report). Only below 20mph should narrower widths be considered. The Transport Research laboratory has identified optimum widths for pinch points and the Developer should consult this research prior to undertaking any detailed design.

UDP Reference
T7 Cycling

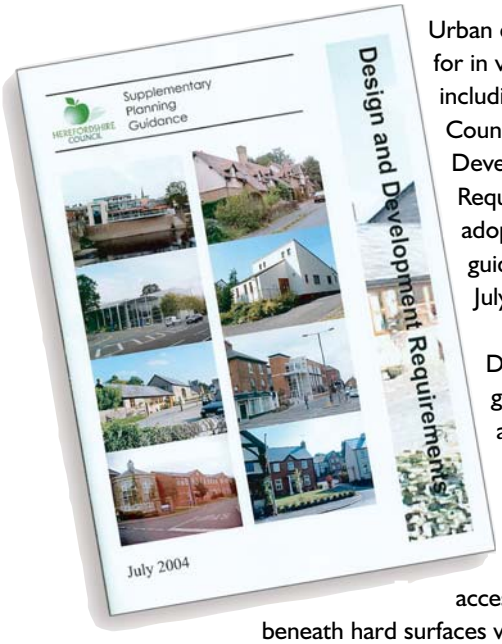
www.sustrans.co.uk
www.trl.co.uk

Home zones are residential streets in which the road space is a surface shared between vehicles and other road users and the wider needs of residents, promoting neighbourliness and quality of life. It is National and Council policy to promote Home Zones where appropriate, particularly with regard to new developments.

Designers should refer to 'Home Zones; Design Guidelines' published by IHIE and DETR Traffic Advisory Leaflet 10/01 for Design guidance.

1. DESIGN POLICIES

1.8 Enhancing the Living Environment



Urban design is well catered for in various publications including Herefordshire Councils SPG 'Design and Development Requirements' which was adopted as interim guidance to the UDP in July 2004.

Durability and on-going maintenance are important for the choice of materials and design. Planning for minimising utility company needs to access their plant buried beneath hard surfaces will reduce whole life costs for maintenance, reduce disruption to residents and preserve the look of the development. The Council is willing to look at radical solutions to providing utility access and expects early liaison to take place between developers and utility companies. One particular problem that affects hard surface reinstatement is the later availability of matching materials, particularly paving slabs and blocks. Although the block paving of recent years is regarded as easily 'unzipped and zipped' it is frequently the case that utility companies discard the old blocks and substitute other replacements, which rarely match: immediately the design integrity is lost.

It is clear that any material has some drawbacks but it is true that ordinary bitumen surfacing reinstates and ages reasonably well and that high quality, high cost natural materials are less likely to be discarded by utility companies.

UDP Reference
DR1 Design
DR4 Environment
P1 UDP Strategy

1.9 Designing for Security and Crime Reduction

Natural surveillance of public areas is considered to be one of the best ways of increasing security. The concept is simply that people can overlook their surrounding areas and strangers will feel uncomfortably conspicuous. Further guidance can be found on the Secured by Design website and through the Crime Reduction Officer at West Mercia Police.

www.securedbydesign.com

As part of the Government's and Herefordshire Council's commitment to reducing crime it is important that places are designed to be secure and safe, and also feel safe.

'Secured by Design' is the initiative by the Association of Chief Police Officers to get the design of places right, from the concept right through to completion and operation. They have design guides which the Developer should refer to; they are available on the Secured by Design website; as detailed above. Locally the Crime Risk Manager will advise on and approve designs especially if a Secured by Design award is being sought.

Many of the design concepts, which apply to Home Zones, speed reduction and highway safety, are applicable and beneficial to designing out crime. The idea of a communal feel to the environment and use of highway and other spaces for multiple purposes go hand in hand with natural surveillance. Home Zones also emphasise the communal living space by eliminating the general need for boundaries or buffers between the highway and dwellings. Off highway cycle tracks and footways (apart from links to public transport and other amenities) are not usually needed because of low speeds and shared use. This helps to eliminate the security problems associated with these facilities where they run across open space, which is not overlooked or well used.

A well lit, safe footpath link

The design should endeavour to create small clusters of dwellings that encourage neighbourliness and natural surveillance of communal and, to a certain extent, private areas. Side or rear gardens, which adjoin land with unrestricted access, should be strongly fenced or walled. The planting of thorned species can prevent access to the boundaries for vandalism and loitering along with eliminating opportunities for climbing the boundary via strong-limbed plants.

UDP Reference
DR3 Movement
DR14 Lighting
T6 Walking
T7 Cycling

Footpath links should be short, direct and well lit with no opportunities for hiding places. Gateway design that provides for significant narrowing of the highway, gate pillars or walls and a change of surface will be self explanatory to both vehicles and strangers.

Car parking should be open to natural surveillance at all times and laid out to ensure that the cars do not obstruct sight lines for surveillance. Communal parking ('on street') should be denoted by a change of surface and de-lineated into bays to promote an 'ownership' culture. Remote car parking, which is not secured in some way, leaves vehicles and owners at risk and will not get used once crime problems develop. To prevent these vehicles migrating to unregulated on-street parking it is vital that remote car and cycle parking is secure with owner only access via secure gated accesses and private access direct to the dwellings.

Car parking should be well lit whether in communal areas or secured private areas. Any planting should be kept to low maturing species and it may be helpful to look at guidance in Secured Car Parks standards for the design of private areas.

UDP Reference
DR14 Lighting
T11 Parking Provision

Cycle parking should benefit from natural surveillance or if this cannot be done enclosed cycle lockers may be a solution. In either case, to promote use, the parking should give protection against the elements, and be conveniently close to the entrance of the building that it serves.

UDP Reference
T7 Cycling

Areas that comply with these design points may make access difficult for service, and particularly refuse vehicles. It may be important to consider communal refuse areas to make the operation of the site easier and prevent unnecessary clutter from numerous loose rubbish bags. This should be decided in consultation with the Council and its waste management teams.

Structures and features generally should be designed to avoid encouraging or supporting crime and anti-social behaviour. Underpasses, bridges, areas of landscaping associated with road development, drainage chambers and manholes, and water management features such as culverts are all liable to misuse and should be robustly and securely detailed. Careful design can eliminate many of the chances for vandalism, graffiti and for untoward danger to younger people through misadventure while also minimising future maintenance costs. For further information please contact:

Crime Risk Manager/Architectural Liaison Officer
West Mercia Police
Tel: 01432 347330

1.10 Parking Policy

Planning Policy Guidance Note 13 (PPG13) encourages a reduction in the number and length of motorised journeys and a move away from reliance on private cars towards more sustainable modes of travel such as walking, cycling and public transport. Herefordshire Council fully endorses the principals of PPG13.

Within PPG13 and Planning Policy Guidance Note 6 (PPG6) there are specific references to small developments, town centre developments and rural areas that are likely to affect developments within Herefordshire.

PPG13 states that the parking standards set out do not apply to small developments, which are below the relevant threshold levels. Local Authorities are recommended to use their discretion in setting parking standards for small developments to reflect local circumstances and the guidance indicates that this locally based approach will cover most development in rural areas.

PPG 13 also warns Authorities to be cautious when setting lower standards for Town Centre developments to ensure that they do not adversely affect the viability of the town centre or the proposed development, PPG 6 makes clear that good quality secure parking is important to maintain the vitality and viability of town centres.

Planning Policy Guidance Note 3 (PPG3) states that the parking requirements of developments should not make unreasonable demands on land usage. The Developer will therefore be required to design schemes that make effective use of land and seek layouts that provide greater intensities of development particularly where there is access to good public transport such as city, town, district and local centres or around major nodes along good quality public transport corridors. The Developer should therefore not be required to provide more car parking than they or potential occupiers

1. DESIGN POLICIES

occupiers might want, particularly in urban areas where access to public transport is available or where there is a demand for car free housing. Parking design should therefore be considered with a range of factors including but not limited to income, age, household type and the type of housing and its location.

The provision of parking or the perceived lack of it is always an emotive issue and whilst it is both Government and Council Policy to discourage the unnecessary use of private cars and encourage an increased use of public transport, cycling and walking, it is very important to achieve a satisfactory provision for car parking on developments. There should always be a good balance of both private and communal parking sited in such a way that it is not intrusive but also encourages sensible parking and thus avoids possible neighbour disputes. Communal parking should always be integrated with the road system and can often be laid out to form part of the traffic calming measures.

Parking Standards are set in the Design Criteria Section 2.20 Parking Criteria.

UDP Reference
H16 Car Parking
T11 Parking Provision

Communal Parking

2. DESIGN CRITERIA

New Development Highway Types

Design criteria for the following categories of new roads are specifically dealt with in this section of the guide.

The following hierarchy applies;

- **Footways** (adoptable)
- **Cycle Tracks** (adoptable)
- **Single Private Drives** (not adoptable)
- **Shared Private Drives** (not adoptable)
- **Shared Surfaces** (adoptable)
- **Home Zones** (adoptable)
- **Minor Access Roads** (adoptable)
- **Major Access Roads** (adoptable)
- **Local Distributor Roads** (adoptable)
- **Industrial and Commercial Access Roads** (may be considered for adoption)

2.1 Footways

The layout and design of footways should aim to provide safe, reasonably direct, secure and visually attractive routes for pedestrians. The provision of convenient and easy to use car parking facilities will be a significant factor in discouraging indiscriminate parking on pedestrian routes.

Whenever footways interconnect with carriageways at pedestrian crossing points, dropped crossing kerbs should be installed to assist wheelchair users and those with prams or pushchairs. The gradient should be no more than 1:13 and the kerb should be flush with the carriageway (refer to Specification for allowable tolerances). Tactile paving should be provided at dropped kerbs to assist blind and partially sighted people.

www.dft.gov.uk

Footways should be designed to take account of:

1) The type and function of adjacent carriageways
2) The location of apparatus for statutory and other services
3) The number of pedestrian movements
4) In the vicinity of schools, shops or other community buildings there may be a need for variations in design compared to those adjacent to dwellings.
5) Requirements of pedestrians where the nature of the development includes a high portion of the very young or people with disabilities.
6) The space occupied by street furniture such as street lighting columns, traffic signs etc
7) The provision of access to dwellings for the emergency services
8) Methods for reducing the damage to footways resulting from over running or parking of vehicles, particularly at junctions.

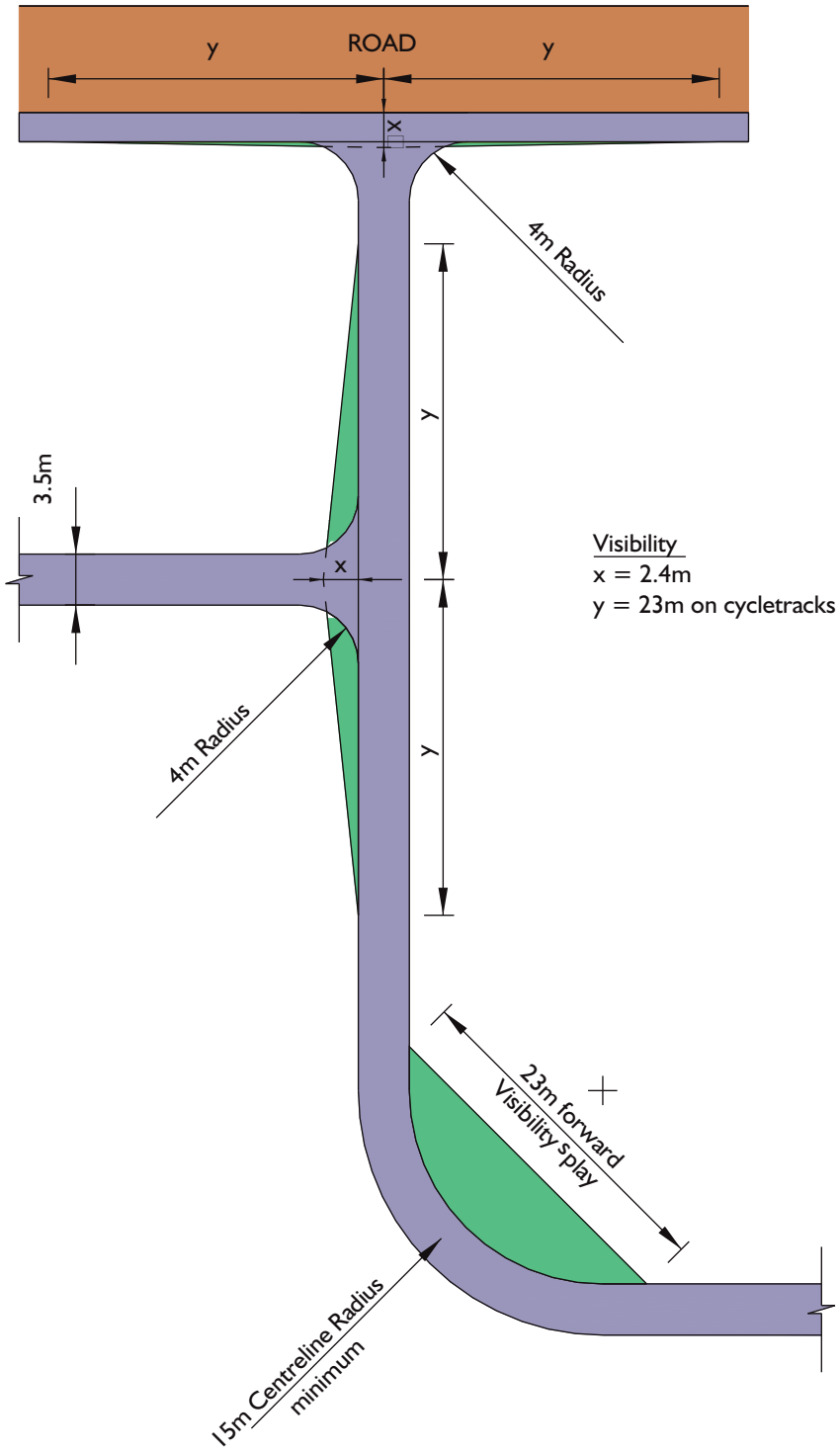
Footways should always be provided where the use of shared surfaces would not be appropriate. Footway widths should normally be 2m.

Linking footways between cul-de-sacs will need to be carefully designed so that the security of the users and adjacent dwellings is not adversely affected. The designer will also need to include design features that may reduce nuisance to the adjoining householders from inconsiderate users of this type of footway.

Typical Footway

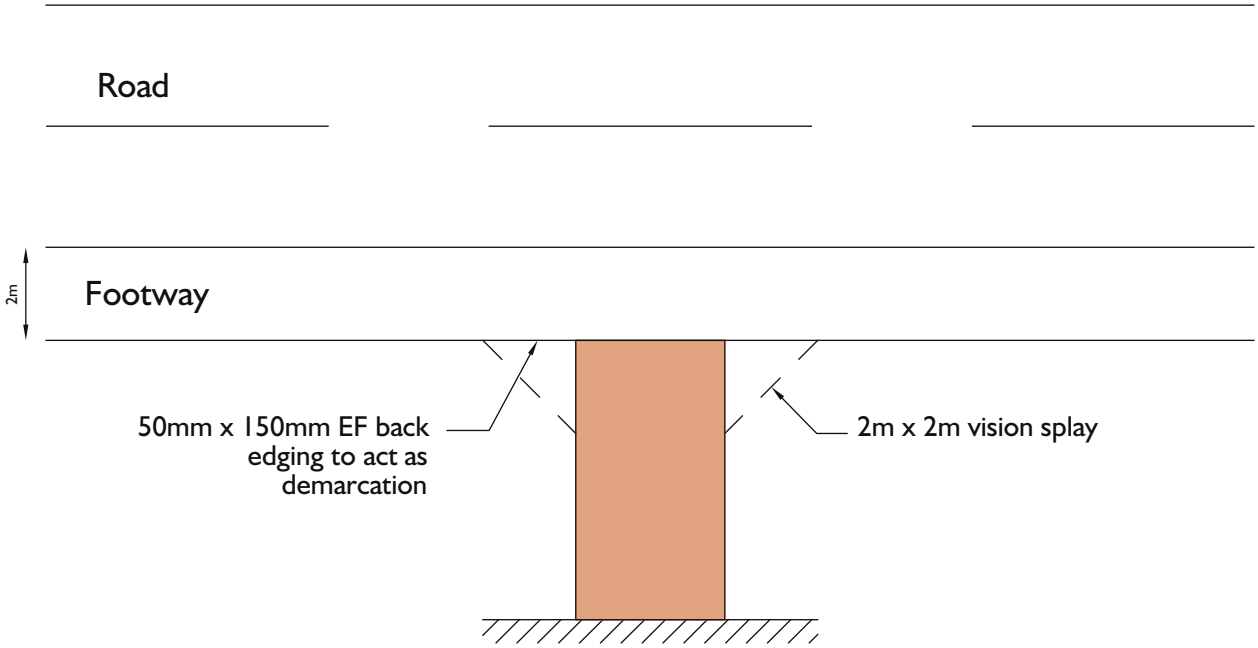
2.2 Cycletracks

- Design speed - 15mph
- 3.5m wide for shared facility with pedestrians
- 2.5m wide for segregated facility with additional 1.5m for pedestrians
- Visibility at junctions with roads - refer to section 2.12
- Signs and lines to be provided in accordance with Traffic Signs Manual
- Residential roads may form part of local cycle advisory routes and networks



2.3 Single Private Drives

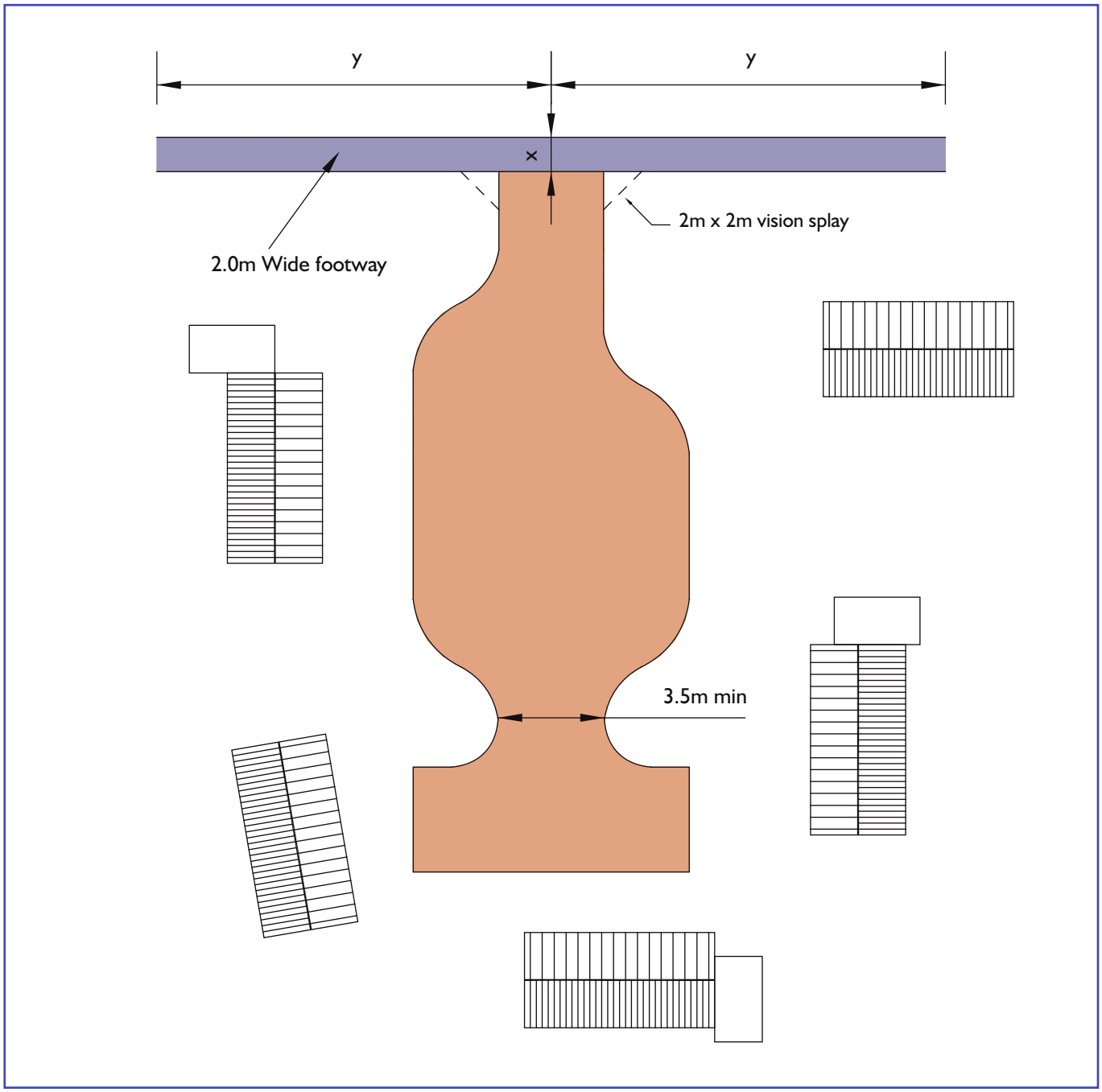
- Will not be adopted as public highway
- Water from driveways must not be allowed to discharge onto the highway
- Driveway to be surfaced with bound materials (loose material not allowed)
- The connection to the priority road shall be laid out as a dropped crossing
- To be set out at 90 degrees to road where possible
- Installed gates must be set back 5m from the highway boundary and open inwards
- Turning Area to be provided where deemed necessary by the highway authority
- Visibility splay in accordance with section 2.12



Driveway width	3.2m Desirable	2.6m With Separate Pathway
Driveway length	6.0m min	
Longitudinal fall to driveway	Max 1:8	

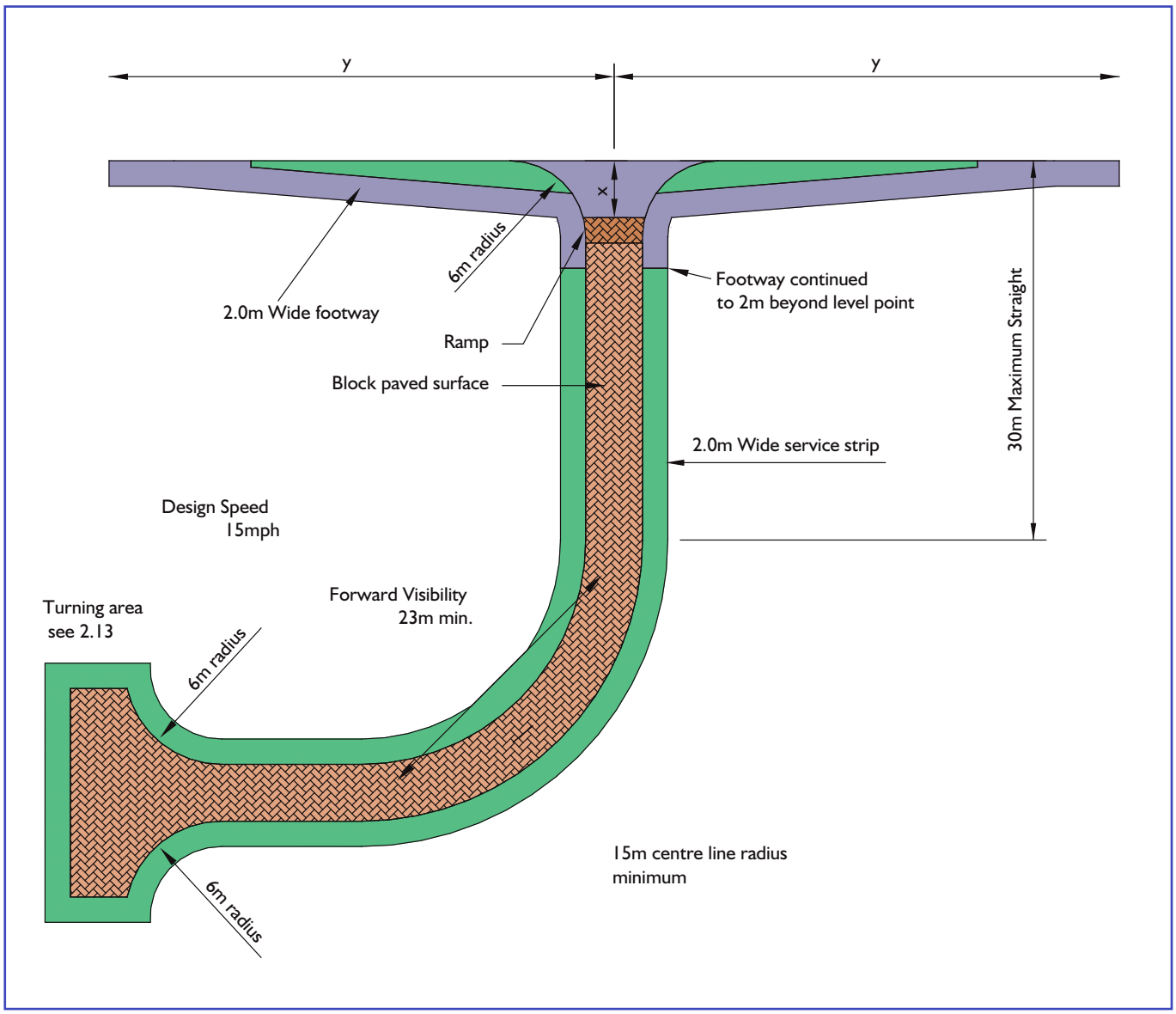
2.4 Shared Private Drives

- A shared surface which forms a cul-de-sac or courtyard serving a maximum of 5 houses
- Will not be adopted as public highway
- Design speed 10mph
- Turning area to be provided for cars where length is less than 25m
- Where length exceeds 25m a turning area for refuse vehicles and passing bays should be provided
- 2m x 2m vision splays to be provided at the rear of the footway
- Minimum width of 3.5m
- The connection to the priority road is to be laid out as a dropped crossing
- Junction spacing to be 30m on the same side where shared drive is on a major access road
- To be set out at 90 degrees to the road where possible
- Refer to visibility section 2.12 for junction visibility requirements
- Maximum gradient 1:8



2.5 Shared Surfaces

- Serving up to 25 dwellings (max 50 dwellings with two access points to higher category roads)
- Design speed 15mph
- Minimum carriageway width 4.5m
- Footways not required beyond entrance ramp
- Turning areas in accordance with section 2.13
- Visibility splays in accordance with section 2.12
- A single hard surface for use by pedestrians and vehicles without segregation
- Service strip 2m wide where provided
- Surface to be block paved



Entry Radii

Minor access road	4.5m
Major access road	6m

Junction Spacing

Same side	Not restricted
Opposite side	Not restricted

2.6 Home Zones

A Home Zone is essentially a shared surface road but with the main difference being that it is laid out in a manner where pedestrians and other users have equal priority with vehicle users. In essence, the Home Zone should make motorists feel they are guests in a pedestrian environment, and should drive accordingly. Although the introduction of a Home Zone can contribute to road safety, the main benefit to local people is a change in how the street can be used.

Home zones may consist of shared surfaces, indirect traffic routes, areas of planting, and features to encourage the use of the street, such as seating. 'Gateways' and signing will be needed to mark the limits of the area. The key benefit of a Home Zone is that it turns a residential street into valued public space, and not just a place for movement.

A speed retarder ramp and/or pinch point will be required to define the zone limits together with relevant signage and design features to create a sense of identity.

Home Zones must be designed to meet the needs of all members of the community. Disabled people will have particular requirements, which must be taken into account.

Vehicle speeds shall be kept to substantially less than 10mph by means of street furniture, landscaping features, vehicle parking bays and changes in direction of the traffic route. The minimum forward visibility splay shall be 12m

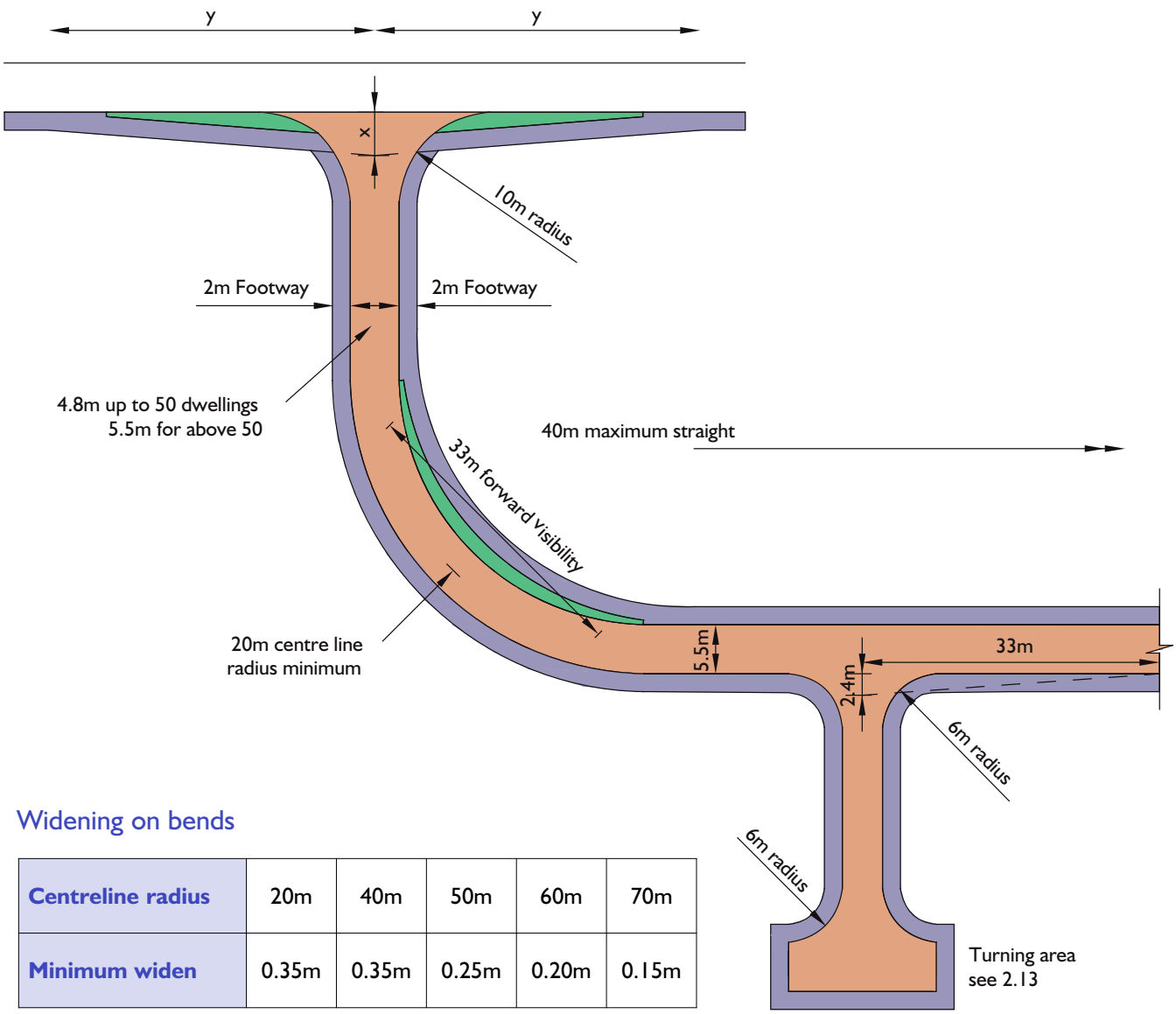
(For more detailed information please see Home Zone Design Guidelines published by IHIE - 2002 & DETR TAL 10/01)

www.ihie.org.uk

Home Zone Entry Point

2.7 Minor Access Roads

- Serving up to 100 dwellings
- Design speed 20mph
- Standard carriageway width 5.5m, may be reduced to 4.8m where less than 50 houses are served
- 2m wide footways to be provided on each side where dwellings have direct access
- Turning areas in accordance with section 2.13
- Visibilty splays in accordance with section 2.12



Widening on bends

Centreline radius	20m	40m	50m	60m	70m
Minimum widen	0.35m	0.35m	0.25m	0.20m	0.15m

Entry Radii

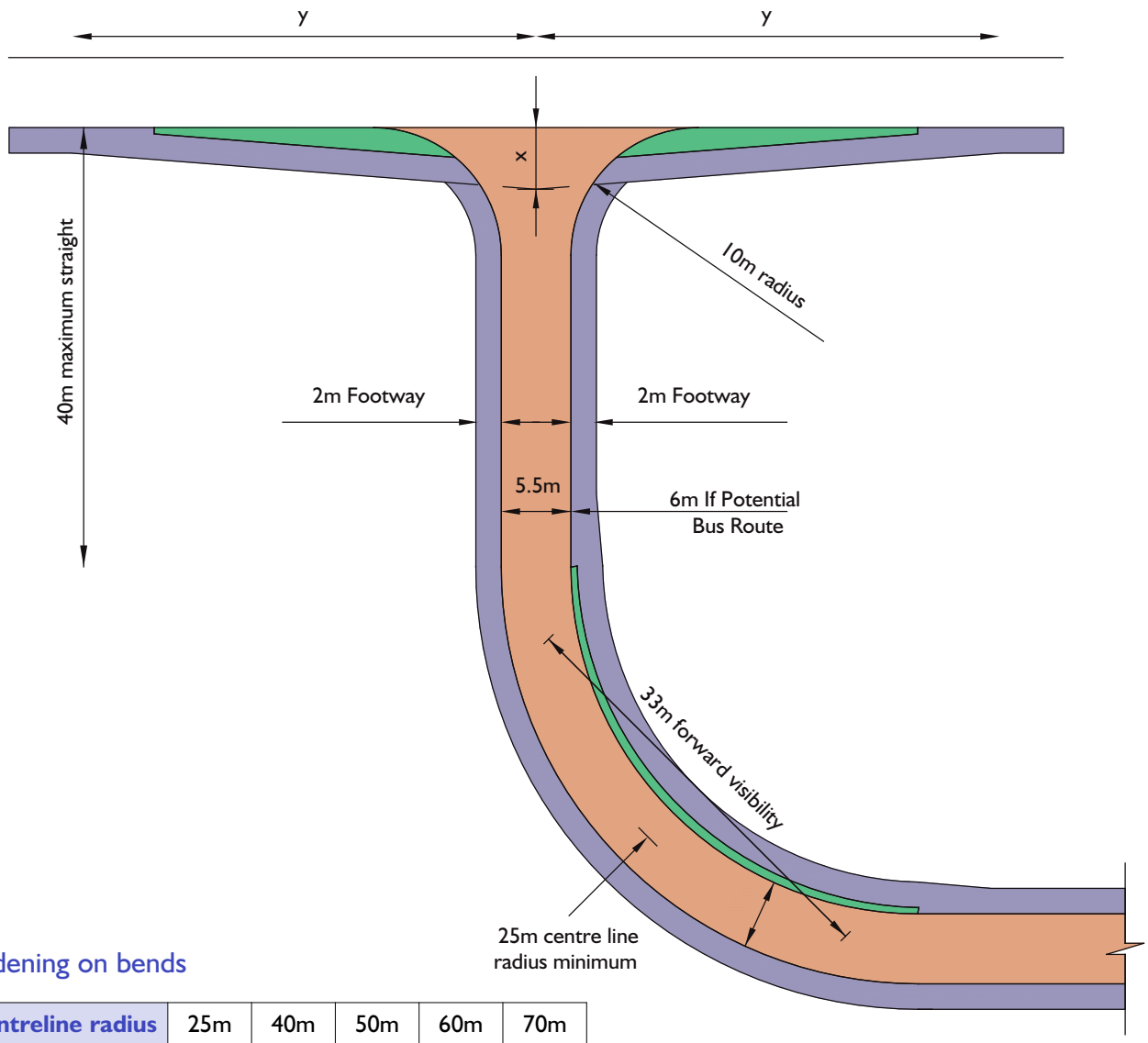
With major access road	6m minimum
With higher category of road	10m minimum

Junction Spacing

Same side	Not restricted
Opposite side	Not restricted

2.8 Major Access Roads

- Serving between 100 and 300 dwellings
- If a cul-de-sac then max 200 dwellings + emergency link required
- Design speed 20mph
- 5.5m wide carriageway, 6m if possible bus route
- 2m wide footways on both sides
- Turning areas in accordance with section 2.13
- Visibilty splays in accordance with section 2.12



Widening on bends

Centreline radius	25m	40m	50m	60m	70m
Minimum widen	0.35m	0.35m	0.25m	0.20m	0.15m

Entry Radii

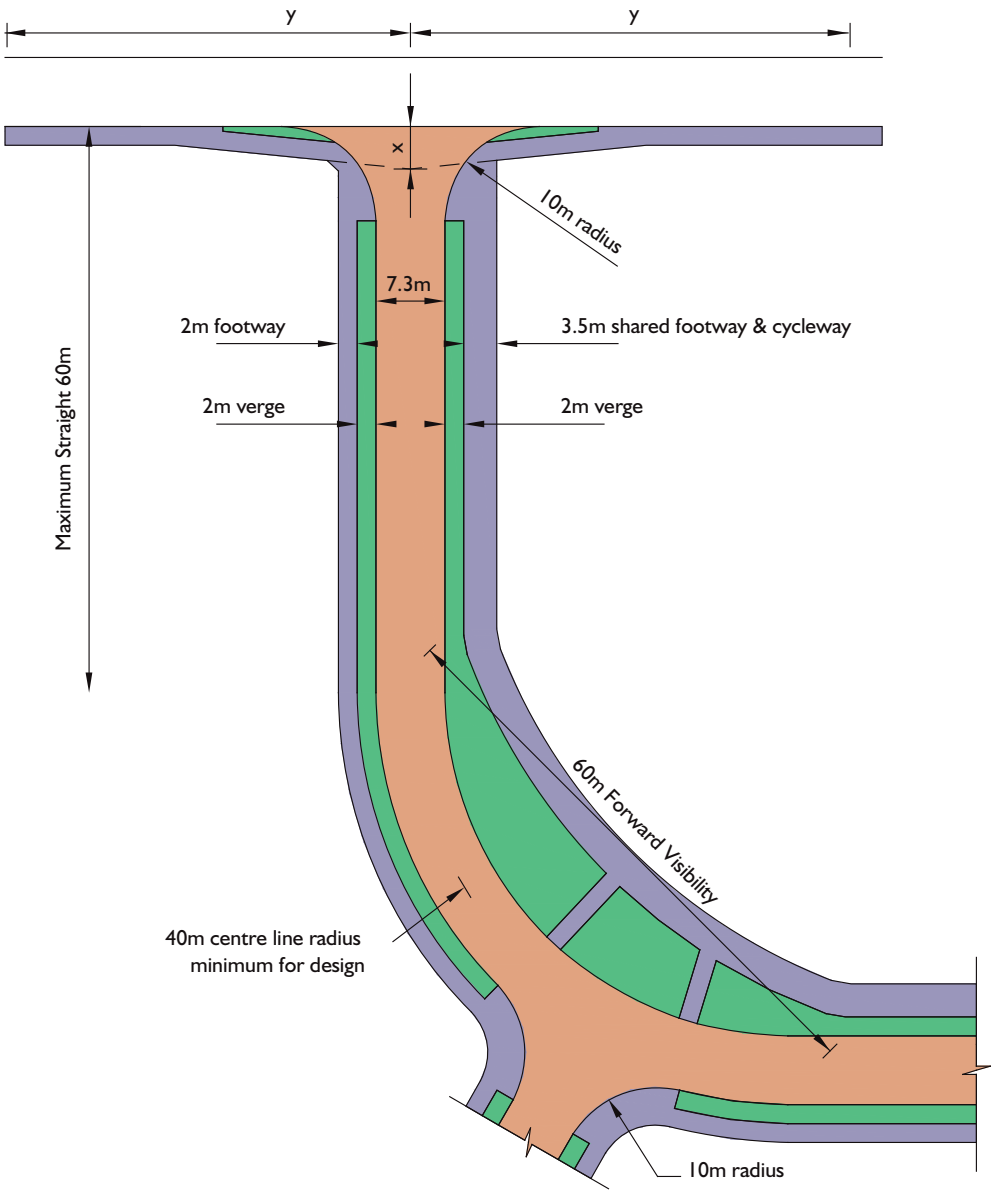
With higher category of road	10m minimum

Junction Spacing

Same side	30m
Opposite side	15m

2.9 Local Distributor Roads

- Design speed 30mph
- Road Width 7.3m
- Minimum centre line radius 40m
- Forward visibilty 60m
- Individual Private access only in exceptional circumstances
- Minimum of two access to existing highway network
- Visibility in accordance with section 2.12



Entry Radii

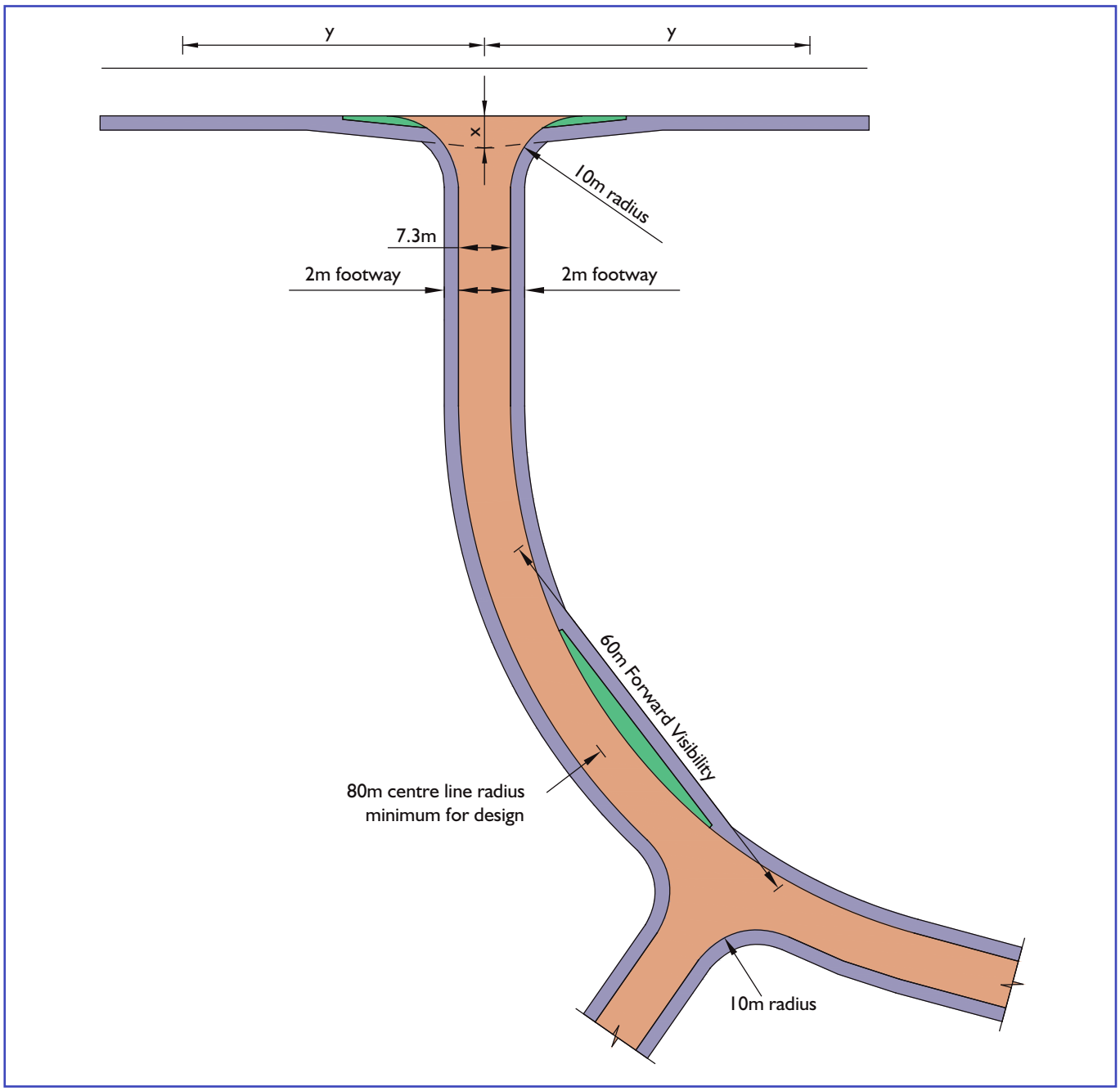
With higher category of road	Designed in accordance with HA TD 42/95 but not less than 10m

Junction Spacing

Same side	100m
Opposite side	50m

2.10 Industrial and Commercial Access Roads

- Design speed 30mph
- Carriageway width 6.7m, increased to 7.3m if large no. of HGV's served
- 2m wide footways on both sides
- Turning areas in accordance with Section 2.13
- Visibility splays in accordance with Section 2.12



Entry Radii

With higher category of road	Designed in accordance with HA TD 42/95 but not less than 10m

Junction Spacing

Within the industrial estate	30m on the same side
	15m on opposite side
With higher category of road	100m on the same side

2.11 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:

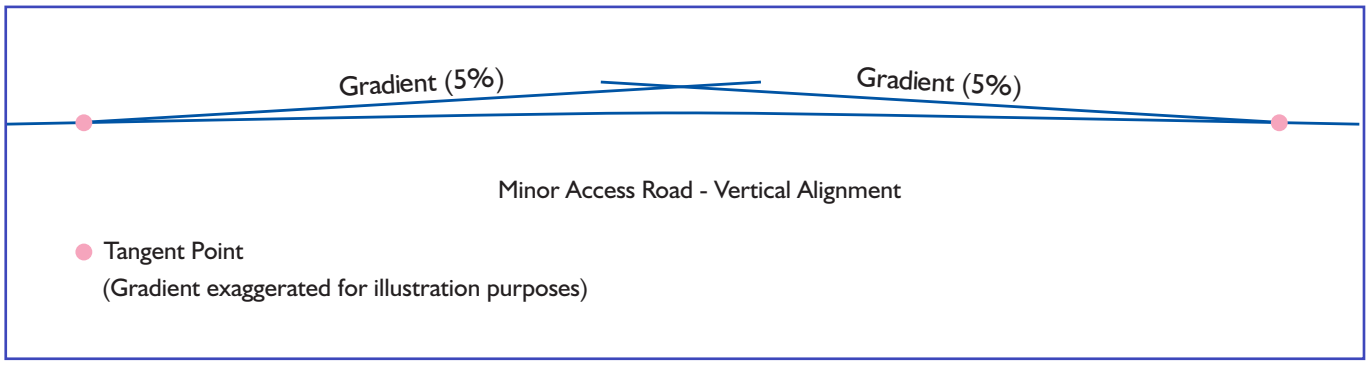
Category	Maximum Gradient	Minimum gradient
All road categories	1:20 (5%) desirable but consideration may be given to gradients up to 1:10 (10%)	1:150 (0.67%)
Cycletracks and Footways	1:20 (5%)	1:150 (0.67%)

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
Major access and above	6
Minor access and below	2
Cycletrack	2

Example, Minor Access Road - Vertical Alignment:

The following example has been included to assist Developers in designing vertical curves.



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.

In the above example, assuming it is a Minor Access Road, and the curve length will be 20m

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.

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
Cycletrack	2.7m
Footway	2.7m

2.12 Visibility

Sightlines

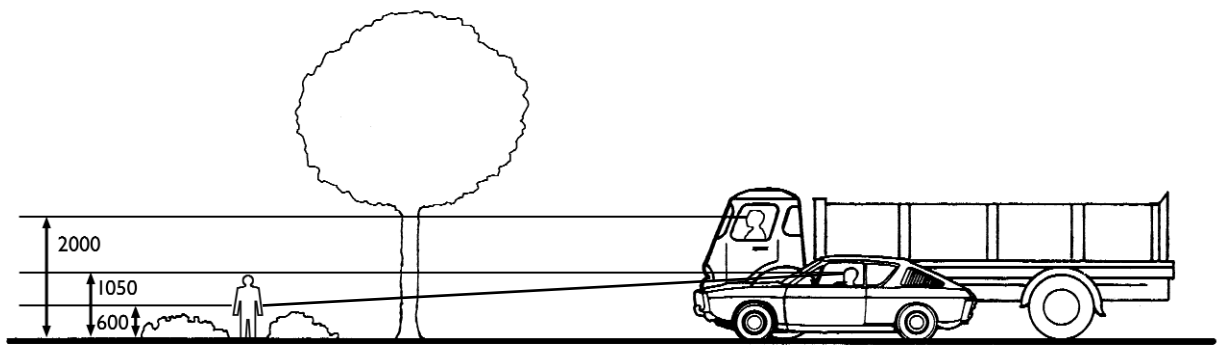
These are required to enable drivers to see a potential hazard in time to slow down or stop comfortably before reaching it. It is necessary to consider the driver's line of vision, in both vertical and horizontal planes, and the stopping distance of the vehicle.

The design of sightlines is discussed in detail in both DB32 and its companion guide Places, Streets and Movements. This section draws together the advice in those two documents. The guidance given here needs to be assessed in the circumstances of each case. Sightlines should never be reduced to a dangerous level.

The diagrams and commentary given here describe the most salient points involved.

Vertical Visibility Envelope

The required vertical visibility envelope is defined below:



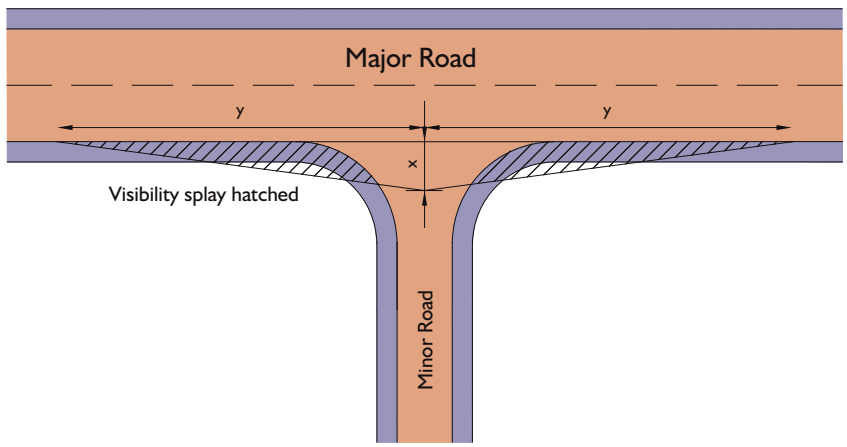
To enable drivers to see a potential hazard in time to slow down or stop comfortably before reaching it, it is necessary to consider the driver's line of vision, in both the vertical and horizontal planes, and the stopping distance of the vehicle.

As general guidance, it is suggested that a height of 600mm be taken as the point above which unobstructed visibility should be provided wherever the potential exists for conflicts between motorists and young children. This will apply along all sections of residential roads and is especially important where shared surface roads are used.

Junction Visibility

To ensure that drivers preparing to exit a minor road can see and be seen by traffic proceeding along the major road, clear visibility is required to both sides of the major road as shown below. Any junction must be constructed and maintained so that nothing is placed, installed or planted that will obstruct the visibility splay. Where possible, visibility splays should be defined with footways to the rear of the splay to clearly define the splay and to prevent misuse.

The following junction diagram and tables indicate the X and Y dimensions to be calculated for junction visibilities.



X Dimensions

To be measured along the centreline of the side road, from the channel of the priority road.

9m	Only to be used at major new junctions at the discretion of the Director of Environment
4.5m	The standard required for major new road junctions, for junctions of busy access roads, and for busy private access points
2.4m	The minimum necessary for junctions within development to enable a driver who has stopped at a junction to see down the major road without encroaching onto it. To be used on cycletrack junctions
2m	For single dwellings or small groups of up to half a dozen dwellings or thereabouts
Less than 2m	Only in exceptional circumstances will a distance of less than 2m be considered

Y Dimensions

To be measured along the channel of the priority road.

The Y dimension will depend on the speed of traffic on the priority road: the appropriate distance can be read off Table A or B. If the highest traffic speed on the road in wet weather (excluding the fastest 15% of vehicles) is known (DTp Advice Note TA 22/81) then this speed or the next highest speed which appears in the table should be used as the priority road speed in Table A to arrive at the appropriate Y distance. Where there is a speed limit and the actual speed of traffic on the priority road is not known it will normally be necessary to provide Y distances as indicated within Table B.

Table A (Known vehicle speeds)

Major road speed (kph)	120	100	85	70	60	**50**	**40**	**30**
Major road distance (m)	295	215	160	120	90	**70**	**45**	**33**

Table B (Speed limit)

Speed limit (mph)	70	60	50	40	**30**	**20**
Major road distance (m)	295	215	160	120	**90***	**45***

* Includes an allowance for motorists travelling at 10kph above the speed limit. In addition to the dimensions quoted, where it can be shown that vehicle speeds will be contained to either 30mph or 20mph the respective Y distances in Table B can be amended to 60m and 33m respectively.

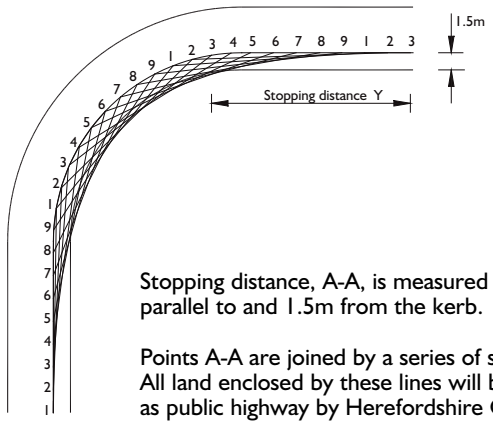
The speeds for residential areas shown in bold.

Forward Visibility

Stopping distances and forward visibility requirements:

Speed (mph)	30	25	20	15	10	5
Stopping distance Y (m)	60	45	33	23	14	6

- Required on bends as specified right;
- Note that the stopping distance Y is measured along the driven line rather than along a straight line between points; and
- The area required for forward visibility should be defined by positioning the footway to the rear of the visibility splay.



Stopping distance, A-A, is measured along a line parallel to and 1.5m from the kerb.

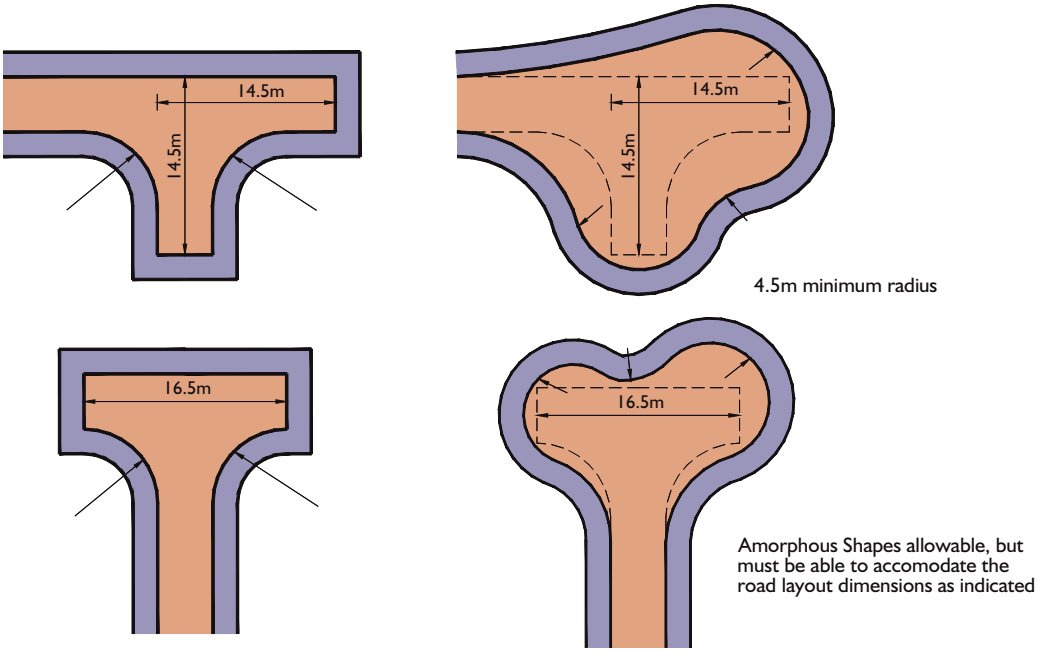
Points A-A are joined by a series of straight lines. All land enclosed by these lines will be adopted as public highway by Herefordshire Council.

2.13 Turning Heads

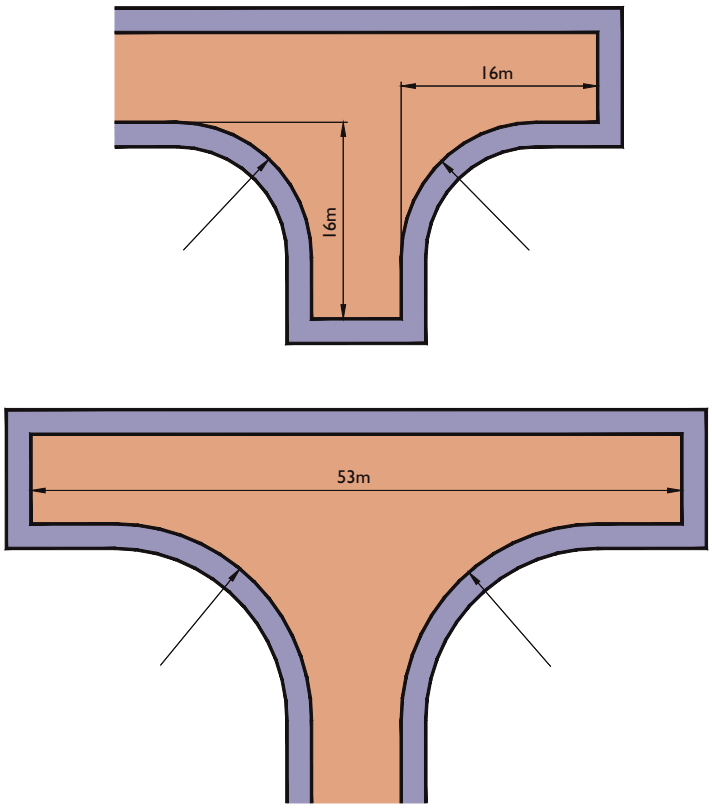
The layout of turning spaces should be designed to:

- Allow for refuse vehicles to turn when they would otherwise have to reverse more than 40m.
- Provide an area that will be easily maintained by a mechanical sweeper.

Residential Roads:



Industrial Roads:



2.14 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 Highway Authority will normally only adopt the paved surfaces and verges which are key to the functioning of the highway.

Small areas of grass should be avoided, as they are likely to produce future maintenance problems.

Trees must not be planted near structures or services.

Existing trees, which will become maintainable at public expense, shall be the subject of condition survey to ascertain their health and may be subject to commuted sum payments to cover their future maintenance costs.

New 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. Tree grids, planting details and root barriers are shown in Appendix E of the Specification. The developer may be required to pay commuted sums for the future maintenance of highway trees.

Highway trees can enhance the built environment

The Planning Authority normally requires the Developer to maintain the landscape for 5 years. Prior to adoption The Developer should submit for approval proposals for the soft landscaped and planted areas, to include such things as weeding, watering, pruning, replacement and use of chemicals.

Thorned species shall not be accepted immediately adjacent to footways and cycle tracks. If existing hedges contain thorned species, cycle tracks shall be positioned at least 3 metres from the extremities of the hedge to prevent problems with hedge-cutting debris. Existing hedges adjacent to the existing highway shall be transferred to frontagers for maintenance.

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: 1991.

UDP Reference
S2 Development Requirements
DR4 Environment
LA6 Landscaping Scheme

2.15 Street Lighting

The aim of the Herefordshire 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, including:

Working generally in accordance with:

- BS5489: Code of Practice for Street Lighting;
- County Surveyor's Society (CSS), Road Lighting Maintenance, Code of Good Practice;
- ISO 140001:Good Environmental Management;
- Institution of Lighting Engineers (ILE) Technical Report No.24, Public Lighting Policy for Local Authorities;
- Audit Commission, Management of Highway Maintenance, Section 6 Street Lighting; and
- Institution of Lighting Engineers (ILE) Technical Report No.22, Lighting Columns and Sign Posts: Planned Inspection Regime.

2. DESIGN CRITERIA

The design of lighting installations seeks to minimise both the day and night time impact in rural locations. Whilst best practice in design and advanced luminaire technology is used to achieve these objectives, the desired benefits of lighting must still be achieved.

Illuminated traffic signs and bollards in Herefordshire are provided to meet the requirements of The Traffic Signs Regulations and General Directions Act 1991. The primary objective of this provision is to promote highway safety. It is a legal requirement for mandatory signs to be lit after dark.

UDP Reference
S2 Development Requirements
DR14 Lighting

Herefordshire is a rural environment and a central issue in lighting design is avoidance of light pollution. Installations should be in accordance with 'Lighting in the Countryside - Towards Good Practice' by DEFRA. Particular attention should be given to the use of 'full cut off lanterns' although the Council will give due consideration to alternative types of lanterns in Conservation Areas.

The design of highway lighting shall be in accordance with BS 5489: 2003 and the Council may require the use of BS EN 13201:2003 in assessing the performance of the lighting installation. Herefordshire Council shall carry out all street lighting designs for the purpose of Section 38 Agreements.

The specification for the light columns, lanterns, luminaires and switchgear is obtained from the Council's Street Lighting Engineer and is site specific.

Where a site lies beyond the limits of an existing lighting scheme it may be necessary for highway safety reasons for the unlit section to be lit at the developers expense.

Full junction lighting may be installed where a new road junction is formed and shall be considered as part of the overall lighting layout.

The Developer will be responsible for the complete installation and commissioning of each lighting unit. It is recommended that road crossing ducts are installed during the road construction. Upon satisfactory inspection of the completed lighting scheme by the Council's Street Lighting Engineer, the Developer shall provide a schedule confirming the technical details and location of each light and a completed electrical company wiring completion certificate. The Street Lighting Engineer will forward this certificate to the appropriate electrical company office.

When the developer changes development layouts, Herefordshire Council must be informed. Herefordshire Council shall carry out any resulting redesign of the street lighting layout.

Adoption of Lighting

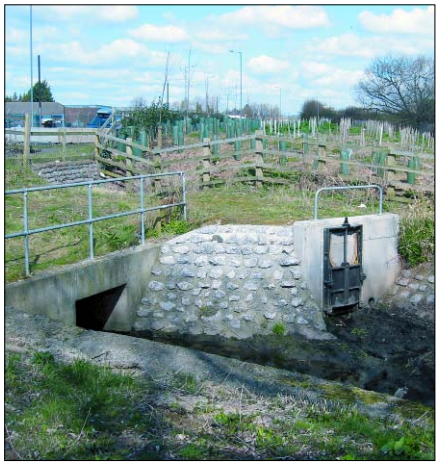
The specification for lighting of new developments is designed to ensure that the adopted lighting stock does not consume unnecessary maintenance resources throughout its life. Furthermore the specification ensures electrical and structural safety of the new installation and ensures compliance with other facets of Herefordshire street lighting policy.

A specification is developed to achieve the requirements of each site, and is rigorously enforced to ensure full compliance.

Where lighting is to be adopted under Section 38 of The Highways Act 1980, Herefordshire Council accepts maintenance responsibility for lighting on the issuing of a Part 2 Completion Certificate (Maintenance Period). Prior to this, lighting maintenance and energy cost are the developer's responsibility.

The Developer should also refer to the Specification, which details the specific requirements pertaining to the procurement and installation of street lighting equipment.

2.16 Drainage



General Requirements

In general, drainage systems shall be designed in accordance with the current edition of Sewers for Adoption and with the Specification accompanying this Design Guide.

All pipes that only carry surface water from the adoptable highway are prospectively maintainable by the Highway Authority. Their design and construction shall comply with the standards required in this document.

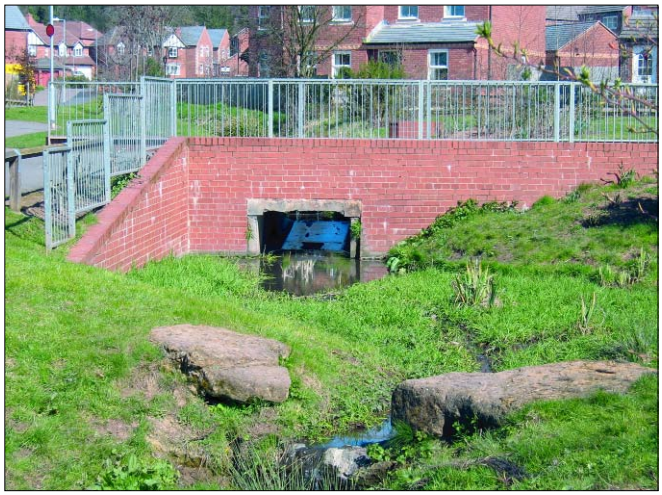
Pipes that carry surface water from the adoptable highway as well as other areas such as roofs, private drives etc must be adopted by the water authority and must comply with their requirements.

Lateral connections into public sewers will remain private but shall be designed and constructed to adoptable standards. All such connections shall run approximately at right angles to the centreline of the road to minimise their length.

UDP Reference
S2 Development Requirements
DR8 Culverting

Adoption Requirements

Where foul or surface water sewers are to be laid under the adoptable highway or where the highway drainage is to connected into a surface water sewer, written assurance must be obtained beforehand that the water authority will adopt the sewers, subject to compliance with their adoption procedure.



The Highway Authority will normally decline to adopt any highway covered by a Section 38 agreement until the water authority has confirmed the adoption of all sewers within the highway. This also includes any other sewers not within the adoptable highway but which carry water from it.

All drains that are intended to be adopted as highway drains shall discharge to a pipe or watercourse at a point approved by the Highway Authority. Evidence will be required that the developer has right to discharge, free of any liability which may be binding upon the Highway Authority when the drain is adopted.

Private drains will not normally be permitted within the adoptable highway.

All prospectively maintainable highway drains shall be located within land that is to be adopted by the Highway Authority. Only in exceptional circumstances will they be permitted in land that is to remain private. Where such circumstances do arise the land owner at the time of completing a Section 38 Agreement will be required to give a grant of easement keeping 3m each side of the pipe clear of all obstructions, which will be binding on successors in title. The developer is strongly advised not to sell any land that will contain a highway drain before completion of such an Agreement. The Highway Authority will not accept any different form of undertaking, which dilutes the rights conferred on it.

Outfalls and Watercourses

Where the outfall is into a ditch or watercourse the approval of the Environment Agency must be obtained in writing.

Where the outfall is proposed to be through an existing highway drain the developer will be required to prove its capacity and condition before approval for the connection can be given. This will include a CCTV survey of the drain and the carrying out of any improvement works found to be necessary.

Where the highway drain discharges into a watercourse, calculations shall take into account the possibility that the watercourse may be flooded.

Drainage Design

Gully spacing shall be determined using the recommendations of HA 102/00, Spacing of Road Gullies. Gullies will be required immediately upstream of block paviours, pedestrian crossing points and road junctions but shall never be located on a crossing point. It is the developer's responsibility to demonstrate and ensure that the number and positioning of gullies is adequate to drain the highway.

The proposed drainage system is to be designed using 'Micro Drainage' or similar approved. A disc containing the input data and the output must be submitted to the Director of Environment for checking prior to any works taking place.

Road gully

2. DESIGN CRITERIA

The parameters to be used during the drainage design are as listed below:

Rainfall average return period	2 Years
Rainfall average return period (risk of flooding)	10 Years
Time of entry	4 Minutes
Design flow velocities	0.75m/s (Min), 7.5m/s (Max)
Minimum gradient	1:225
Design maximum rainfall	50mm/hour
Minimum pipe diameter	225mm

The Council may consider the use of combined kerb and drainage systems depending on the situation and design submitted for approval.

In certain cases the Council may require the provision of a larger capacity drain than would normally be needed in order to accommodate the drainage of adjoining land and/or future development.

Soakaways

Where soakaways are to be considered it will be at the discretion and approval of the Director of Environment and will be considered as a last resort only (refer to Specification, Section 12.4.2). The Developer is to note that a commuted sum of £5000 may be charged for each soakaway installed. The minimum diameter shall be 1500mm.

If more than one soakaway is planned, they are to be linked by a 225mm diameter pipe. The soakaways are to be surrounded by Terram or similar, laid between the chamber and the filter material. The appropriate filter material to be used will vary according to prevalent ground conditions. Where possible, the soakaway is to incorporate an overflow link (minimum diameter 225mm) to an existing highway drain/outfall system.

2.17 Sustainable Urban Drainage (SUDS)

PPG 25 makes clear the need for measures to control surface water run-off and prevent flooding. While issues exist as to the acceptance of SUDS by various bodies, Herefordshire Council expects developers to incorporate storage, attenuation and filtration measures in accordance with 'SUDS- A Guide for Developers' by the Environment Agency and 'SUDS - A Design Manual for England and Wales' by CIRIA.

Herefordshire Council will examine all proposals for SUDS and judge them on their merits. Permeability tests and hydrology surveys will be required to verify the suitability of the designs and commuted sums will be required for ongoing maintenance of the systems. The amount of the commuted sums will be calculated by the Council and will reflect the special maintenance requirements of the proposed system.

Sustainable Urban Drainage feature

The SUDS proposals for a development shall be submitted along with geology and hydrology information, at planning application stage. Any proposals for outfalls into existing watercourses or ponds shall be accompanied by an environmental impact report and obviously such outfalls will need Consent to Discharge from the Environment Agency. Private SUDS drainage shall drain into the water authority surface water sewers and any infiltration will be into private land. SUDS for the highway shall drain into the highway drain network and any infiltration will be within highway/public areas.

UDP Reference
S2 Development Requirements
DR14 Lighting

www.ciria.org/suds

2.18 Structures

Structures which are to be built under or adjacent to the highway by a private individual will require structural Approval in Principle by the Highway Authority, Herefordshire Council. The exception to this will be when the structure is under or adjacent to roads managed by the Highways Agency (Trunk Roads and motorways).

Adoption of Structures by the Council

The Council may adopt certain structures adjacent to, under or over the highway. In normal circumstances, the only structures that will be considered for adoption are those upon which the Highway relies for support and are constructed on Highway land.

All structures to be adopted should have received Structural approval in accordance with the procedures overleaf.

Approval of Structures not to be adopted by the Council

The following structures although not necessarily to be adopted by the Council require Structural Approval in accordance with the procedure detailed overleaf.

- Any wall or basement constructed on private land by an individual or developer that affects the support of the highway;
- Bridges crossing the Highway where there is no public access to the bridge;
- Retaining walls where any part of the retaining wall is 1.20m above the boundary of the highway nearest that point; and
- Structures over 0.9m span (diameter) carrying sewage.

Assessment of Existing Structures

Any existing structure to be modified for the purposes of the development or to be subjected to increased magnitude or frequency of loading shall be assessed according to BD21/01.

UDP Reference
S2 Development Requirements
P1 UDP Strategy

Approval submissions

- General arrangement showing location and extent of all structures and in the case of walls detailing lengths to be adopted and/or over 1.20m high if applicable;
- Designers Risk Assessment;
- Sufficient to determine wall heights, giving ground levels, behind and in front of wall and any features affecting loadings such as cover to culverts;
- Clearances to deck soffit and piers/abutments shall be submitted for bridges;
- Site investigation details and geotechnical assumptions on which the design has been based. This must be given in sufficient detail on the drawing to allow the designers assumptions to be compared with the conditions actually found on site by those responsible for construction;
- Construction details and material specifications;
- Design calculations with full reference to the design standards used; and
- For structures that are to be adopted or for structures upon which the Highway relies for support: Design and Construction Certificates and 'As Built' Drawings for the CDM Heath and Safety File.

Design and Construction Certificates (see Appendix C)

Design and Construction Certificates are required if the structure is to be adopted or for structures upon which the Highway relies for support. These certificates must be in the form given in these notes and must be submitted at the appropriate stage. The positions in the organisation of the signatories and their qualifications must be stated. If a section of the work is to be undertaken by another party, such as a precast concrete supplier, then it would be appropriate for that party to take responsibility for their section of the work and complete a separate Certificate.

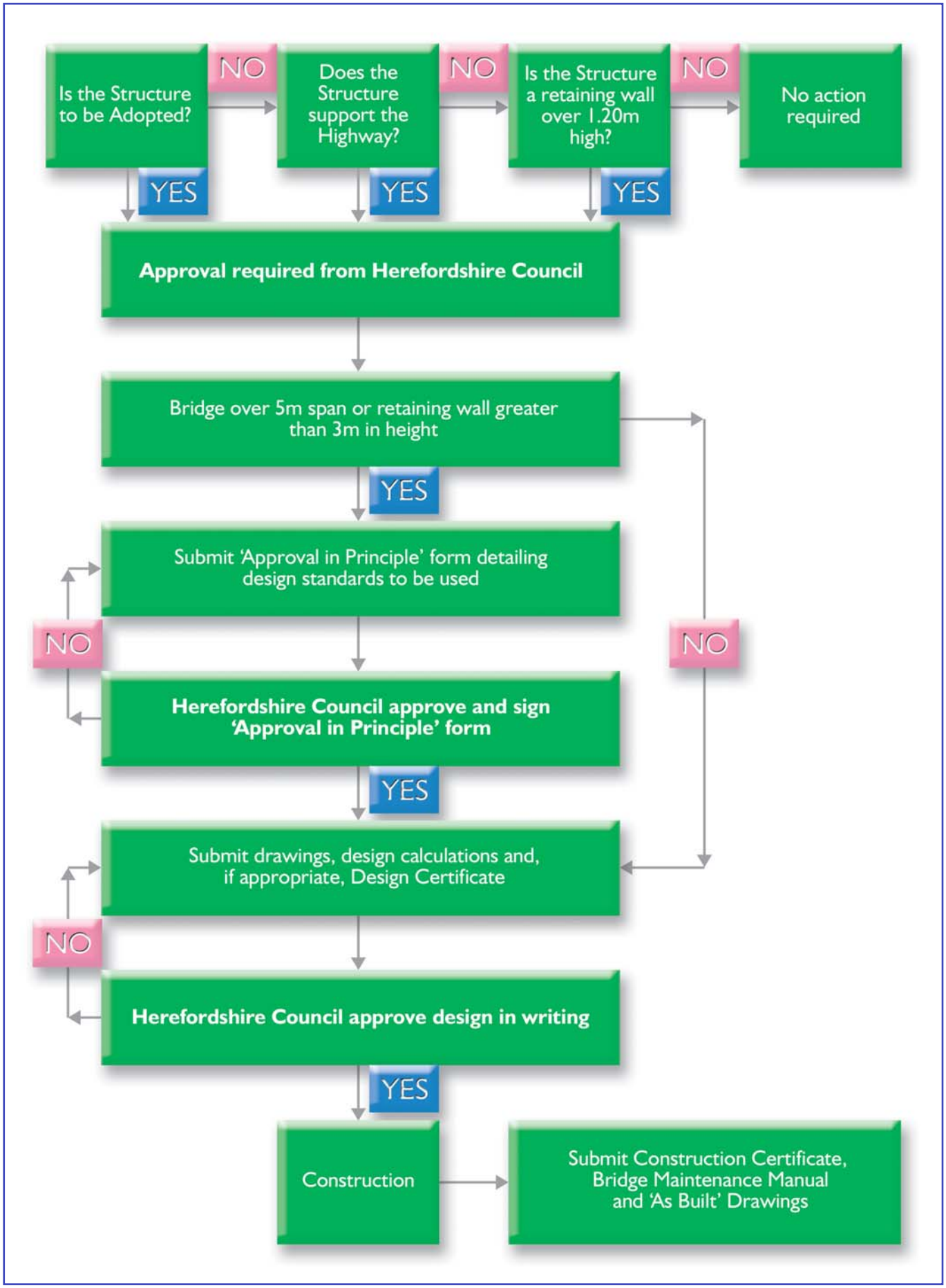
Bridge Maintenance Manual/Health and Safety File

On completion of the work the Developer must provide a Bridge Maintenance Manual containing:

- Details of the materials used in construction and the supplier;
- Requirements for future maintenance;
- Any survey and geotechnical details undertaken on the site of the Structure;
- Details of problems encountered during construction that may have a long-term effect on the structure;
- Any access arrangements for future maintenance;
- As built drawings as electronic TIF, DXF or AutoCAD files;
- Design calculations; and
- Special arrangements required for demolition.

The above information will comprise the documentation you have to legally provide under the CDM Regulations.

2. DESIGN CRITERIA

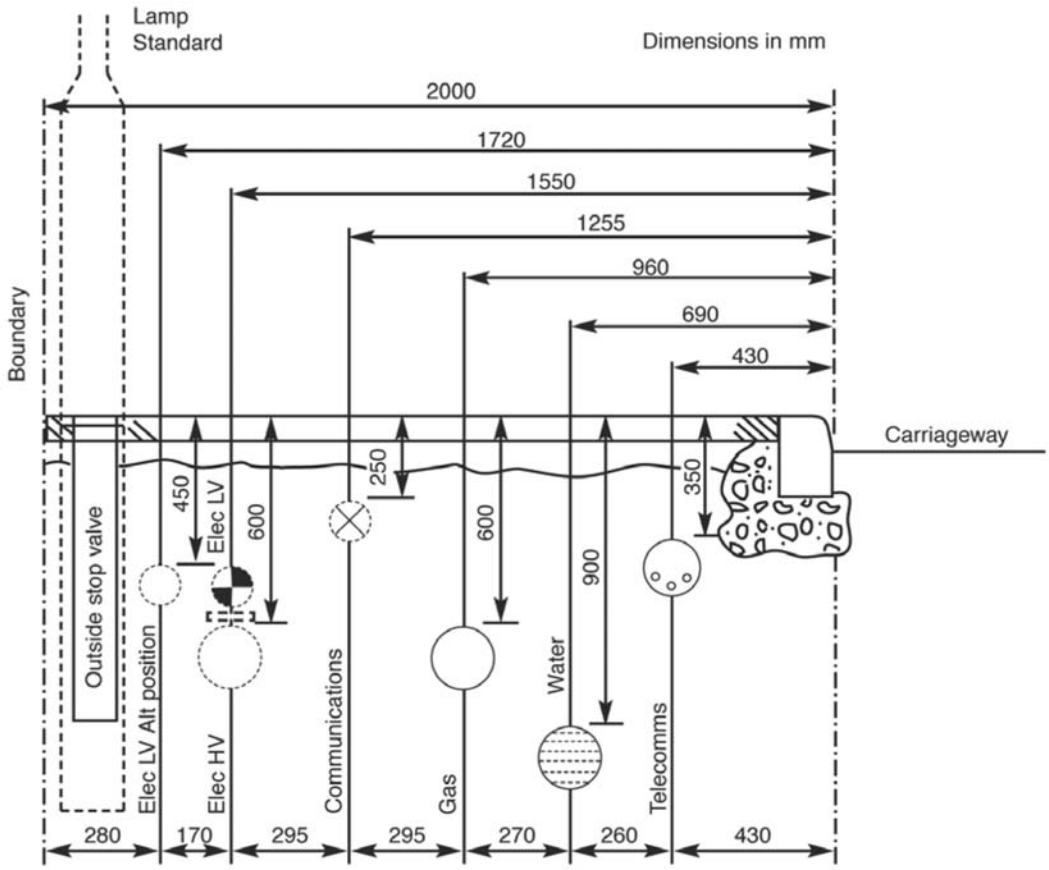


2.19 Statutory and Other Services

New estate roads should be designed to accommodate services and liaison with all statutory undertakers and communications providers should be done at the earliest stage possible to ensure that their equipment is installed in an efficient manner and as much as possible to comply with the recommendations of the National Joint Utilities Group Publication number 7 (NJUG 7, 2003) a diagram of which is shown below.

UDP Reference
DR1 Design
DR4 Environment

www.njug.co.uk



Although this idea is not always possible it is important to ensure that services do not conflict.

All categories of estate road should have either footways or service strips in which services will be located. The Highway Authority will not adopt land the sole purpose of which is to contain services. Any land must have a justifiable connection with the highway and be clearly adoptable as highway.

The laying of apparatus within the carriageway will not generally be permitted although at junctions and in the case of public sewers exceptions are clearly unavoidable.

Service strips shall be dedicated to the Highway Authority as part of the public highway. The Highway Authority will not object to the adjoining householder maintaining the service strip provided they do not erect walls, fences or structures or plant deep-rooted plants or any plant, which can exceed a height of 600mm.

The Developer shall ensure that service strips are clear of trees, walls and hedges. Any trees shall be located so that their root systems when mature will neither damage apparatus, nor be damaged during the laying and maintenance of apparatus. Root deflection barriers should be used. Developers should consult the Local Planning Authority regarding any Tree Preservation Orders and should act in accordance with BS 5837: 1991 during construction works.

Service strips shall be delineated from private property by Highway Boundary concrete marker blocks.

When selecting routes for services, dual mains installations should be the norm to prevent carriageway crossings weakening the road structure and preventing the need to dig up the carriageway.

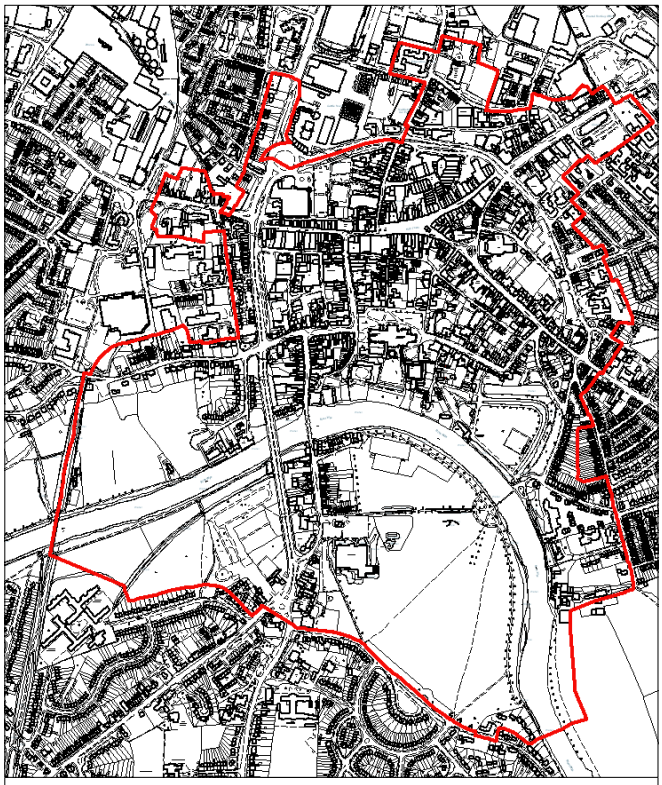
2.20 Parking Criteria

In considering what level of parking provision is required Herefordshire Council has deemed it is most important to evaluate the accessibility of alternative modes of transport. The mainly rural nature of much of Herefordshire makes walking and cycling a viable alternative only in the larger villages, market towns and Hereford City. Access to public transport varies across the county with the highest levels of accessibility concentrated in Hereford and the Market Towns, which have a reasonable level of access to buses and rail access in Hereford, Ledbury and Leominster.

Herefordshire Council has deemed that parking standards need to allow for significantly lower levels of off street parking provision, particularly for developments:

- In locations, such as town centres, where services are readily accessible by walking, cycling or public transport;
- Which provide housing for elderly people, students and single people where the demand for car parking is likely to be less than for family housing; and
- Involving the conversion of housing or non residential buildings where off street parking is less likely to be successfully designed into the scheme.

Additionally, the Herefordshire Council has deemed that the Hereford Central Conservation Area, bounded in red on the plan below and explained within the Unitary Development Policy, should be discouraged from developments that include additional car parking in order to encourage the use of alternative transport systems and modes of transport such as cycling. This will be further endorsed by encouraging the use of the strong transport links that Hereford enjoys with other major conurbations. Further guidance can be obtained from Planning Policy Guidance Note 3 (PPG 3).



Hereford Central Conservation Area

Only certain sections of Hereford City have the necessary access to public transport and local facilities that allows the creation of a zone where all private non-residential parking will be discouraged. Developments in the centre of Hereford City should be discussed with the Transportation Section of the council, within this central zone residential parking will also be restricted but will be considered on the individual developments links with public transport and local facilities.

Residential parking requirements should be carefully considered

Herefordshire Council will support applications with reduced levels of parking in other areas providing there would be no detrimental impact on highway safety or local amenity. It is anticipated that these areas would be mainly within Hereford City and the Market Towns.

Where access to public transport or local facilities is poor increased residential parking spaces can be provided.

For developments at or above the PPG 13 Annex D thresholds the maximum parking standards would apply. However the Council would support applications with lower levels of parking providing there would be no detrimental impact on highway safety or local amenity.

UDP Reference
H16 Car Parking
T11 Parking Provision

Disabled Parking

For all types of non-residential development, except where specified otherwise in the following standards tables, the provision for disabled users parking should be 10% of all spaces with a minimum of 1 space per development.

This also applies to residential development with communal parking.

Consideration should also be made for powered motor vehicles (PMV's) for residential spaces; storage space should be provided within covered storage areas, with a dedicated power supply provided.

Notes on applying the Standards

The standards apply to new developments or extensions and to changes of use.

The standards apply to the external dimensioned floor area of buildings unless otherwise specified.

The design of parking areas and service areas should avoid the need for vehicles to reverse onto the highway and in the case of service vehicles, manoeuvre or wait on the highway.

Where parking spaces are orientated at an angle of less than 90° the aisle should indicate one-way flow through the car park or alternatively turning areas will be required to avoid excessive manoeuvring.

Mixed uses will be assessed as a sum of the parking requirement of the individual elements of the scheme based on the standards. However, if for example a building used for commercial purposes has facilities for a recreational function used only by the incumbent workforce, the standards necessary for the commercial use only need be applied.

Motorcycle Parking

The provision for motorcycle parking should be based on the modal split obtained from the 2001 Census. For Hereford this should be taken at 2%. Motorcycle parking should therefore be provided at this level. Motorcycle parking should be designed in accordance with IHIE Guidelines For Motorcycling (April 2005).

Motorcycle parking spaces are available

www.ihie.org.uk

Dimensions and Location of Parking Spaces

The average car parking space measures 4.8m long and 2.4m wide with a 6m aisle when parking is at right angles. Alternative ways of arranging parking are shown on page 35.

The provision for disabled spaces is given in the parking standards and complies with the recommendations of BS 8300:2001; in grouped residential parking with less than 20 standard spaces there should be 1 space per group. Above this there should be one space for every 10 standard spaces. For disabled users car spaces should be 4.8m long and 3.6m wide but spaces of 2.4m width can be used where a shared space of 1.2m is demarked between the spaces.

For aesthetic reasons parking areas should be located behind the building line although sheltered on-street parking can be used as a speed restraint measure.

Communal visitors' spaces may be provided by widening the carriageway to accommodate a row of cars parallel to, at right angles to or at an angle to the kerb. Areas should be limited in size and numbers of spaces, and should form part of a landscaping and urban design proposal and again should serve the additional purpose of restraining vehicle speed. Groupings should be spread around the road to reduce visual impact. In the case of angled parking, the footway should be widened by 800mm to allow for vehicle overhangs.

Although residents' spaces and garages may be located on or near the frontage they should not dominate the street scene. Residents' spaces may also be located at the rear of dwellings and accessed from a separate road or drive. The parking should have natural surveillance as mentioned in Section 1.10 and the parking should be as convenient as possible to prevent resident on-street parking.

Garages

Garages should have internal dimensions to accommodate a cycle which can exit without removal of the car. Minimum internal dimensions of 4.8m x 2.4m are only acceptable where covered and secure cycle parking is provided elsewhere on the plot. Garage doors must not open over the adopted highway and visibility splays apply as for the parking spaces above.

Cycle Parking

The standards in the tables set out Herefordshire Council's minimum requirements in terms of cycle parking for new developments and changes in use. In addition to the application of these standards, new developments will have to comply with the following principles:

2. DESIGN CRITERIA

- Cycle racks or stands should conform to the design and dimensions as set out under Cycle Stand Design below;
- For residential purposes, cycle parking should be within a covered, lockable enclosure. For individual houses this could be in the form of a shed or garage. For flats or student accommodation either individual lockers or cycle stands within a lockable, covered enclosure are required;
- Cycle parking for employees should be, wherever practical, covered and in a convenient, secure location;
- Short stay cycle parking, e.g. for visitors or shoppers, should be located as near as possible to the main entrance of buildings and covered by natural surveillance or CCTV. For large developments the cycle parking facility should be covered;
- Reference to staff should be taken to mean the peak number of staff expected to be on site at any one time;
- All cycle parking should minimise conflicts between cycles and motor vehicles; and
- Some flexibility will be applied to applications where it can be demonstrated that strict adherence to the standards, e.g. for a multi-purpose site, is likely to result in a duplication of provision. Similar flexibility will apply for applications in the centre of Hereford or the Market Towns where land constraints may make application of the standards difficult for change of use or refurbishment.

Cycle Stand Design

A Sheffield Stand is preferred as it provides support and a suitable means of locking both wheels and frames for security. The Rounded A design provides additional support, particularly for smaller bicycles.

Sheffield Stand

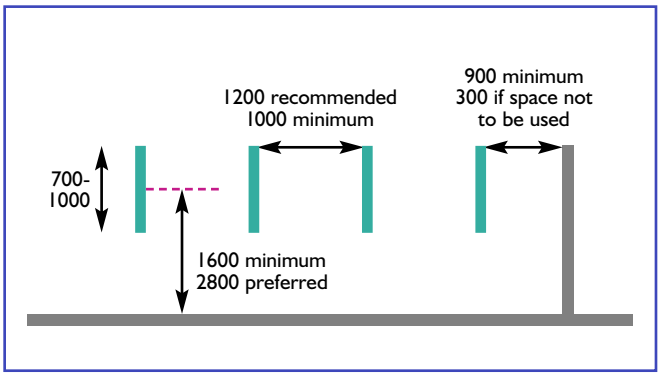
These are simple, provide a convenient way to secure both a bike's frame and wheels, and accommodate different size bikes easily. If stands are spaced as recommended, they will accommodate two bikes per stand, offering a very economical solution.

Rounded A Stand

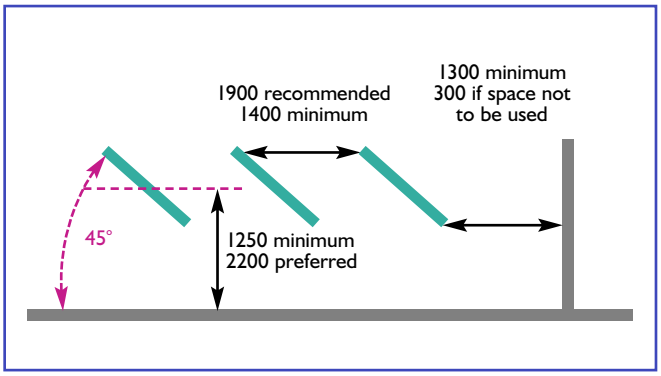
We do not recommend 'butterfly' type racks or variations such as wheel slots in the ground, as they do not offer proper security and will lead to damaged wheels if the bike is knocked over. It may be possible to attach robust rings or bars to walls to provide securing points for parking parallel to walls, where space is at a premium.

Cycle Parking Layout

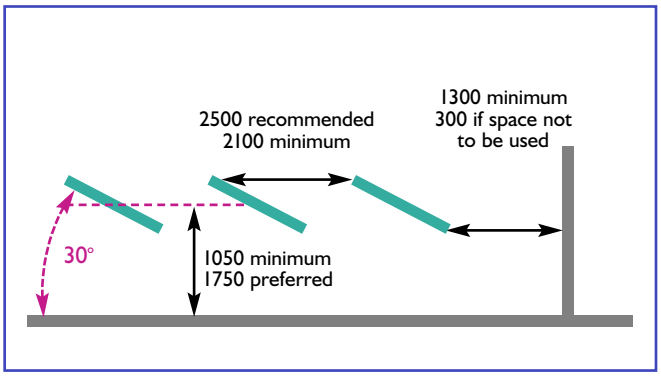
This diagram shows the spacing required for cycle stands. There should be at least 1000mm gap between a double row of stands. All measurements shown are in millimetres.



Arrangement at 90° to Wall



Arrangement at 45° to Wall



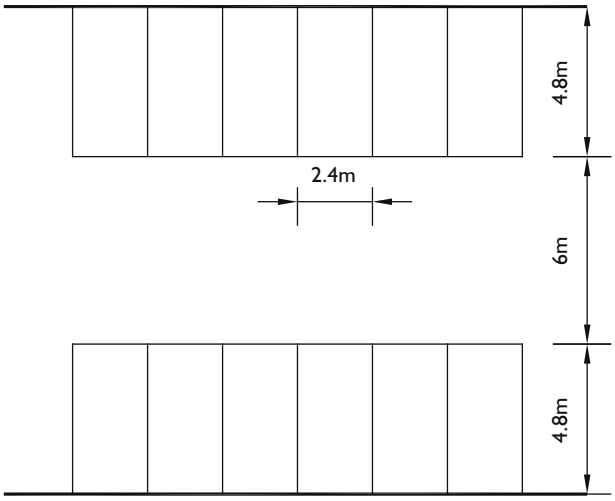
Arrangement at 30° to Wall

Cycle Parking Lockers

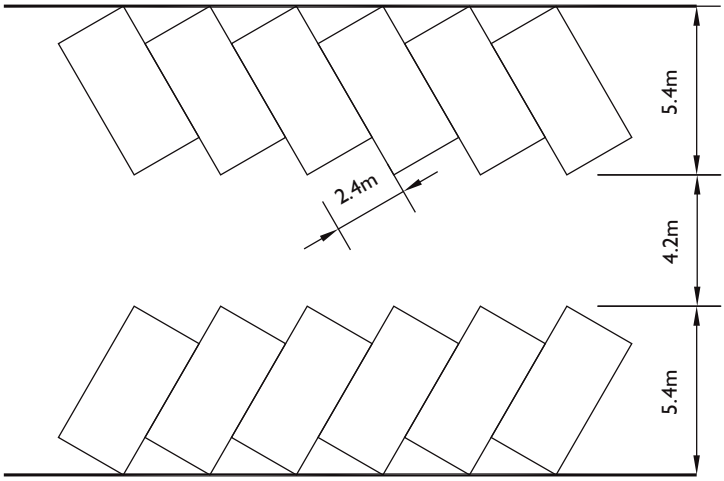
Longer-term parking might be usefully provided by cycle lockers, which provide convenient space for storing helmets and clothing, whilst also offering greater protection against vandalism or theft of accessories such as lights and saddles.

Rather than prescribe specific styles of parking stand or locker, it's more practical to specify a basic envelope of 0.9m x 2.0m, which can store 1 or 2 bikes and even tricycles. This envelope can be part of but not included in the garage allowance for a motor car or else provided as a further internal or external space, with an access route at least 0.8m wide 2.0m high - the store itself can be lower e.g. 1.4m.

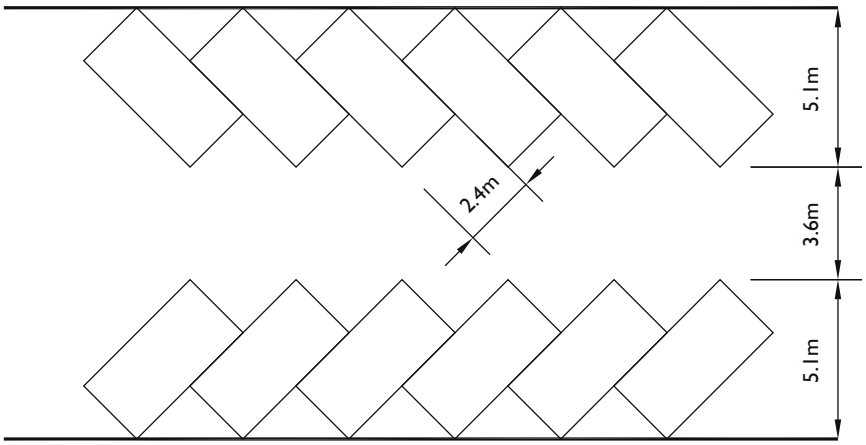
Alternative Ways of Arranging 12 Car Parking Spaces



90°PARKING



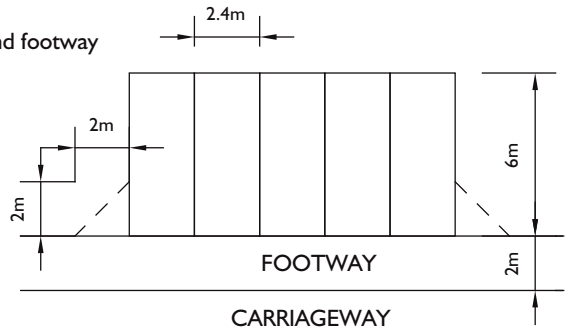
60°PARKING



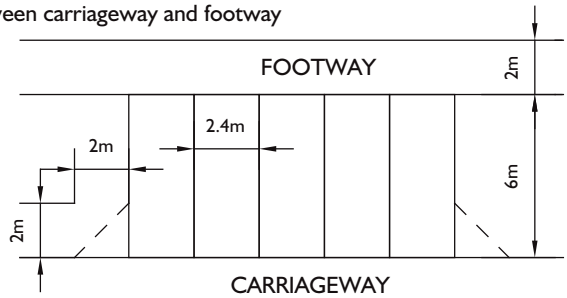
45°PARKING

Grouped Car Parking
With direct access to highway up to maximum of 5 bays

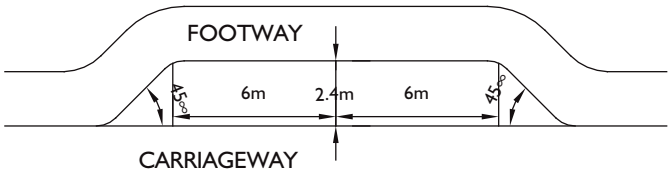
Layout (a) behind footway



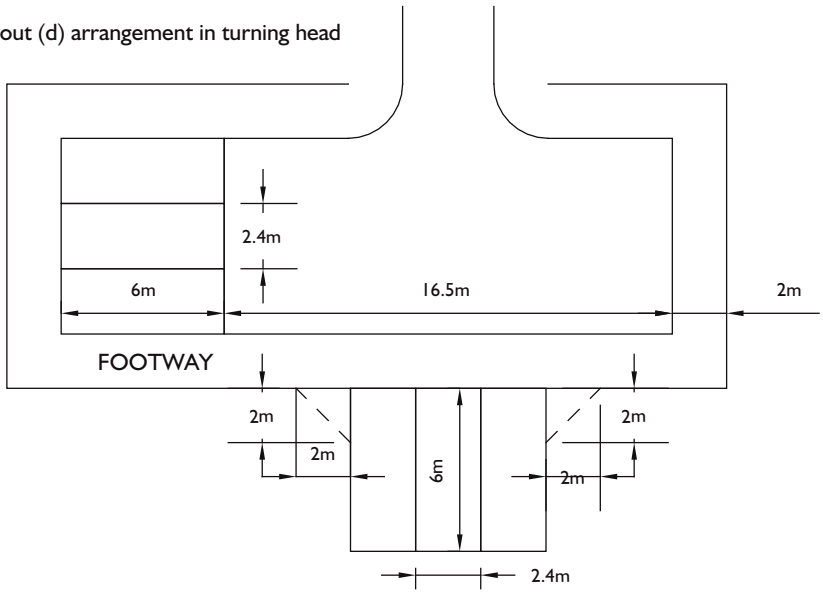
Layout (b) between carriageway and footway



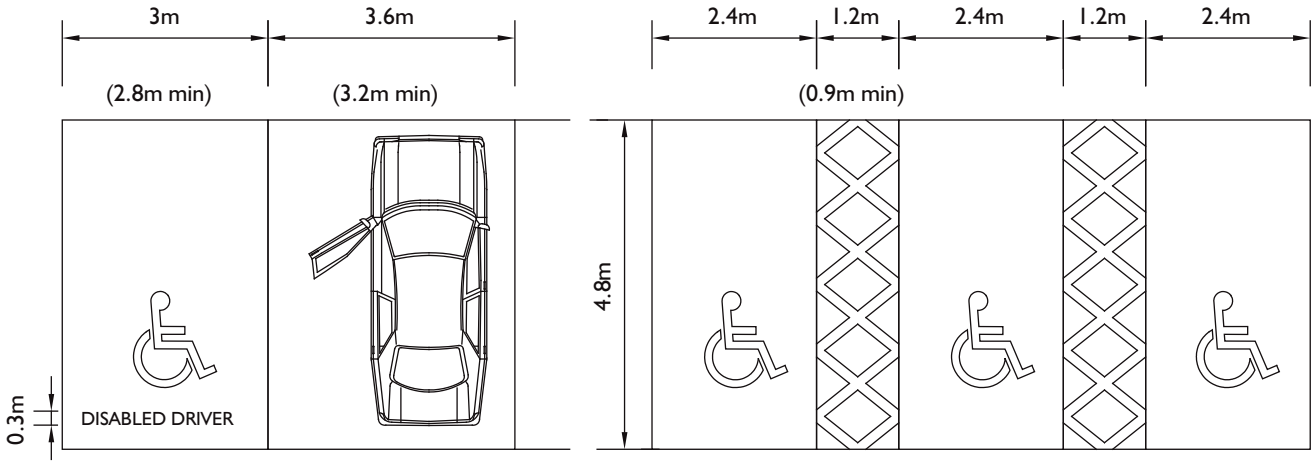
Layout (c) parallel parking



Layout (d) arrangement in turning head



Parking for the Disabled

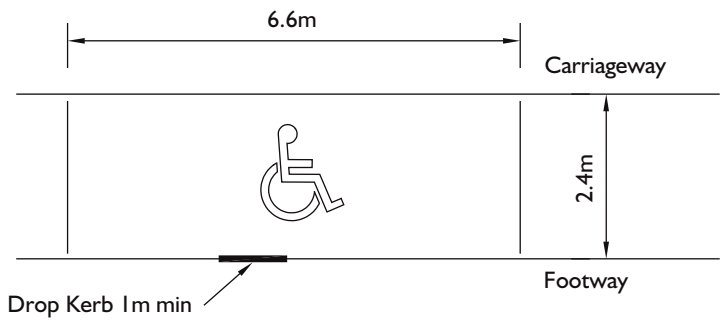


Ambulant disabled user - only where space is limited full width for wheelchair user preferred particularly in public car parks

Wheelchair user

Marked out shared space between 2 standard bays

Standard end bay with long side open for access



Parking side-on to kerb

2. DESIGN CRITERIA

Standards

The following standards shall apply throughout Herefordshire generally. They will apply generally for individual or smaller residential developments up to 25 units outside Hereford City's Central Conservation Area and thereafter the approach of PPG3 (2003) and PPG 13 (2001) will be applied i.e. standards are **maximums**.

In respect of non-residential use the following standards apply throughout Herefordshire generally. As with all standards they are maximum provision. They are based upon PPG13 and the minimum application thresholds are stated.

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
A1 Shops and Retail Outlets	Shops under 2000sq.m of gross floor area	1 car space/25 sq.m of gross floor area	1 lorry space/750 sq.m of gross floor area. Minimum of 1 space/unit unless grouped servicing arrangements when there shall be a minimum of 3 spaces/3 units where total floor space of 3 units does not exceed 1500 sq.m	Greater of 1 space per six staff or 1 space per 300 sq.m GFA	1 space per 100 sq.m GFA
	Supermarket, cash and carry, super stores and hypermarkets	Generally 1 space for each disabled employee (if numbers are known) and spaces at the rate of 1 for every 20 other spaces		Greater of 1 space per six staff or 1 space per 300 sq.m. GFA	Greater of 15% of car spaces or 1 space per 100 sq.m GFA
	a) Over 2000 sq.m gross floor area in established shopping centres or retail parks	1 car space/25 sq.m of gross floor area	1 lorry space/750 sq.m of gross floor area. Minimum of 3 lorry spaces. Service area to be segregated from service area of other shops		
	*b) Over 2000 sq.m gross floor area, stand-alone out of centre food stores	1 car space/ 20 sq.m of gross floor area	1 lorry space/750 sq.m of gross floor area. Minimum of 3 lorry spaces		
	*c) Over 2000 sq.m gross floor area, stand-alone out of centre non food stores	1 car space/20 sq.m of gross floor area	1 lorry space/750 sq.m of gross floor area. Minimum of 3 lorry spaces		

* Out of town may include development immediately adjacent to Town Centre but not within central core

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
A1 Shops and Retail Outlets continued	Garages and motor car showrooms	Add together the number of spaces required for each category. Appropriate parking to be allowed for retail use (A1).			
	Repair Garages	1 Space for each disabled employee (if disabled numbers are known) and 1 space for disabled users for every 15 other spaces Spare part store: 1 car space/25sq.m of gross floor area if a main distributor Workshop: 4 car spaces/bay or 2 lorry spaces plus 1 car space if a lorry repairs shop. MOT bays: minimum 4 car spaces/bay	1 lorry space unless provided under another category Ancillary vehicles: Minimum 3 lorry spaces		
	Car sales area	Offices: 1 car space/25 sq.m of gross floor area 1 space for each disabled employee (if numbers are known) and 1 disabled space for every 10 other spaces Sales - main distributor: 1 car space/50 sq.m of sales area. Other: 1 car space/100 sq.m of sales area. Minimum of 2 spaces	Space for car transporter		
	Petrol filling station	2 car spaces/pump plus minimum of 1 lorry space overall	Space for petrol tanker		
	Car wash	5 spaces for waiting	1 lorry space unless provided another category		
	Tyre and exhaust centre	4 car spaces/repair bay 2 lorry spaces/lorry repair bay			

2. DESIGN CRITERIA

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
A2 Financial and Professional Services (Threshold 1000 sq.m)	Betting offices Banks Building Societies Other Services	1 Space for each disabled employee and 1 disabled space for every 50 other spaces 1 car space/30sq.m of gross floor area	1 lorry space/1000 sq.m of gross floor area. Minimum 1 space/unit unless grouped servicing arrangements when there shall be a minimum of 2 spaces/3 units where total floor space of 3 units doesn't not exceed 2000 sq.m	Greater of 1 space per six staff or 1 space per 300 sq.m. GFA	Greater of 15% of car spaces or 1 space per 200 sq.m. GFA
A3 Restaurants and Cafes (Threshold 1000 sq.m)	Restaurants and Cafes	1 car space/5sq.m of gross floor area. Plus appropriate standard for dwelling accommodation	1 lorry space/1000 sq.m of gross floor area. Minimum 1 space/unit unless grouped servicing arrangements when there shall be a minimum of 2 spaces/3 units where total floor spaces of 3 units does not exceed 2000 sq.m	Greater of 1 space per six staff or 1 space per 50 sq.m GFA	1 space per 10 sq.m Dining area
	Transport cafe	1 lorry space/5sq.m of gross floor area	1 lorry space minimum		
A4 Drinking Establishments (Threshold 1000 sq.m)	Pubs and Clubs	1 car space/5sq.m of gross floor area. Plus appropriate standard for dwelling accommodation (C3)	1 lorry space/1000 sq.m of gross floor area. Minimum 1 space/unit unless grouped servicing arrangements when there shall be a minimum of 2 spaces/3 units where total floor spaces of 3 units does not exceed 2000 sq.m	Greater of 1 space per six staff or 1 space per 50 sq.m GFA	1 space per 10 sq.m dining area

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
A5 Takeaways (Threshold 1000 sq.m)	Takeaway's	1 car space/ 5sq.m of gross floor area	1 lorry space where gross floor area exceeds 750 sq.m	Greater of 1 space per six staff or 1 space per 50 sq. m. GFA	1 space per 50 sq. m. GFA
	Roadside restaurant	1 car space/ 5sq.m of gross floor area	1 lorry space minimum		
		For all above cases, (Class A3, A4 and A5) 1 space for each disabled employee (if numbers are known) and 1 disabled space for every 10 other spaces. If only open in the evenings, consideration will be given to dual use of spaces in public car parks.			

2. DESIGN CRITERIA

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
B1 Business (Threshold 1000 sq.m)	Office, research and Development	1 car space/25 sq.m of gross floor area	1 lorry space/ 250sq.m of gross floor area. Minimum of 1 space	Greater of 1 space per six staff or 1 space per 150 sq.m GFA	1 space per 500sq.m of GFA
	Light Industry, 'Hi Tech' Park			Greater of 1 space per six staff or 1 space per 250 sq.m GFA	On merit
B2 General Industry (Threshold 1000 sq.m)		1 car space/25 sq.m of gross floor area up to 250 sq.m per individual unit. Over 250 sq.m 1 additional car space/50 sq.m of gross floor area	1 lorry space/250 sq.m of gross floor area. Minimum 1 space	Greater of 1 space per six staff or 1 space per 500 sq.m GFA	On merit
B8 Storage and Distribution (Threshold 1000 sq.m)	Warehouse	1 lorry space minimum 1 space for each disabled employee (if numbers are known) or disabled space for every other 10 spaces.		Greater of 1 space per six staff or 1 space per 500 sq.m GFA	On merit
	Transport Depot	To be assessed on individual merit			

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
C1 Hotels, Motels (Threshold 2500 sq.m)	Hotels and Motels (more than 20 bed spaces)	1 car space/ bedroom plus non-residential staff parking at 1 car space/25 sq.m of all other floor area	Minimum 1 lorry space and manoeuvring space for a coach	Greater of s space per six staff or 1 space per 50 sq.m GFA	2 spaces minimum, 1 space per five bedrooms
		Appropriate parking to be allowed for restaurant, bar, function rooms etc. (A3) open to non-residents and appropriate standard for dwelling accommodation (C3) 1 space for each disabled employee (if numbers are known) or 1 disabled space for every other 20 spaces.			
	Guest houses (less than 20 bed spaces)	1 car space/ bedroom			
		Appropriate standards for dwelling accommodation (C3) and restaurant facility open to non-residents (A3)			
C2 Residential Institutions (Threshold 1000 sq.m)	Hospitals	1 car space per bed plus residential accommodation at 1 car space/self-contained flat. Clinic and outpatients parking as for doctors surgeries (D1)	Operational space depends on type and needs of hospital	1 space per six staff	On merit as per travel plan
	Nursing home/sheltered accommodation for the inactive elderly/handicapped and mentally ill	1 car space/4 beds. Warden provision as for C3	Minimum of 1 lorry/ambulance space	1 space per six staff	One space per 10 residents
		Defined as a scheme specifically designed for the elderly with a common room or rooms with a minimum floor area of 1.8 sq.m per bed space, all accommodation to be accessible by enclosed and heated circulation area 1 space for each disabled employee (if numbers are known) or 1 disabled space for every other 20 spaces			
	Residential school/training	1 car space/bed. Separate staff accommodation as for C3	Minimum 1 lorry space	1 space per six staff	One space per 5 residents

2. DESIGN CRITERIA

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
C3 Dwellings for areas outside Hereford City central area	Units with 1 bedroom where grouped parking	Max 1 car spaces/unit		One locker per unit (see design notes)	One space per unit
	Units with 1 bedroom where individual parking	Max 1 car spaces/unit *		One locker per unit (may be provided by a garage)	One space per unit
	Units with 2 or 3 bedrooms where grouped or individual parking	Max 2 car spaces/unit *		One space per bedroom (may be provided by a locker or garage)	One space per unit
	Units with more than 3 bedrooms where grouped or individual parking	Max 3 car spaces/unit *		One space per bedroom (may be provided by a locker or garage)	One space per unit
	This should produce an average maximum rate of 1.5 spaces per unit for the development.				
	Sheltered accommodation for the elderly:				
	a) Retirement units for Active elderly or aged person's dwellings with no communal and living facilities.	Normal dwelling standards apply		Normal dwelling standards apply	Normal dwelling standards apply
	b) Sheltered accommodation with a common room and resident Warden	0.5 car spaces/unit. Warden accommodation as for dwellings	Minimum of 1 lorry/ambulance space	Warden accommodation as for dwellings	One space per 5 units
	Mobile homes and residential caravans	1.5 car spaces/units			
	Transit or static holiday caravan sites	1 car space/caravan	1 car spaces/8 caravans		

* Note: The possible effect of garage being used for purposes other than parking a car should be considered.

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
D1 Non-Residential Institutions	Doctors' surgeries, day clinics, dentists and health centres	4 car spaces per consulting or treatment room	1 ambulance spaces/4 consulting or treatment rooms	1 space per six staff	Two spaces per consulting room
	Crèche, day nursery and day centre	1 car space/member of staff or 1/15sq.m of gross floor area whichever is the greater		1 space per six staff	Minimum four spaces
	Schools	1 car space/15sq.m based on 1/8 pupils	1 coach space/ manoeuvring space per 100 pupils with provision for setting down and picking up. Space can be provided by using reinforced playgrounds and driveways	1 space per six staff in all schools, plus: Primary Schools: one space for 100% of year 6 pupils Secondary Schools: One space for 40% of all pupils	On merit as per travel plan
	Places of further education	1 car space/15 students where known or 1/10 sq.m of gross floor area whichever is the greatest 1 space/2 staff	1 lorry space/1000sq.m of gross floor area. Minimum of 1 space.	1 space per six staff and One space for 20% of all pupils	On merit as per travel plan
	Art gallery, museum, libraries	1 car space/30 sq.m of gross floor area	1 lorry space	1 space per six staff	1 space per 50 sq.m of GFA
	Public Hall, exhibition centre, place of worship	1 car space/10 sq.m of gross floor area	1 lorry space. Manoeuvring space for a coach where gross floor area exceeds 750 sq.m	1 space per six staff	1 space per 100 sq.m of GFA

2. DESIGN CRITERIA

	CAR PARKING STANDARDS			CYCLE PARKING STANDARDS	
Class	**Description**	**Standard**	**Operational Space**	**Long Stay**	**Short Stay**
D2 Assembly and Leisure (Threshold 2500 sq.m)	Theatre, cinema, concert Hall, bingo hall, dance hall Nightclub	1 car space/10sq.m of floor area. If only open in the evening consideration will be given to dual use of spaces in public car parks	1 ambulance spaces/4 consulting or treatment rooms	1 space per six staff	1 space per 200 sq.m of GFA
		Appropriate parking to be allowed for restaurant, bar Facilities etc. open to the general public (A3).			
	Public open spaces	4 car spaces/hectare	Minimum of 1 coach space/ manoeuvring area	1 space per six staff	1 space/hectare
	*Sports facilities:				
	swimming pool	1 car space/5 sq.m of pool area	1 coach space/ manoeuvring area	1 space per six staff	Greater of 1 space per 25 sq.m or 1 space per 10 sq.m pool area
	team games area	1 car space/2 team members	1 coach space per team/ manoeuvring area	1 space per six staff	2 spaces per hectare
	golf course	60 car spaces/18 holes. 2 car spaces/bay if a golf driving range	1 coach space/ manoeuvring area	1 space per six staff	On merit as per travel plan
	leisure centre/sports centre/gymnasium	1 car space/10 sq.m of gross floor area Appropriate parking to be allowed for restaurant, bar facilities etc. open to the general public (A3)	1 coach space/ manoeuvring area	1 space per six staff	1 space per 25 sq.m
	marina	1 car space/berth	Minimum 1 lorry space	1 space per six staff	On merit as per travel plan
	fishing lake	1 car space/peg		1 space per six staff	On merit as per travel plan
Other	Allotments	10 car spaces/hectare		2 spaces per hectare	
	Kennels and Catteries	1 car space/4 pens		1 space per six staff	One space per 20 residents

3. PROCESS GUIDANCE

3.1 Transport Assessments

The following thresholds are normally applied for initiating a Transport Assessment. Due to the scale of development often experienced in Herefordshire, and the proportionate impact that smaller developments can make on the road network, developments below these threshold sizes may be required to provide limited Transport Assessment. Developers are advised to check at an early stage with Herefordshire Council to establish what information may be required.

Residential	100 dwellings
Food Retail	1000 sq.m gross floor area
Non-Food Retail	1000 sq.m gross floor area
Cinemas & conference Facilities	1000 sq.m gross floor area
D2 Including Leisure	1000 sq.m gross floor area
B1 Including Offices	2500 sq.m gross floor area
B2 Industry	5000 sq.m gross floor area
B8 Warehousing	10000 sq.m gross floor area
Higher/further education	2500 sq.m gross floor area
Stadia	1500 seats
Other travel intensive developments	100 trips in/out combined in the peak hour or more than 100 on site parking places

Scoping Reports shall be provided and be agreed in writing by Herefordshire Council prior to the undertaking of the TA Report.

Guidelines for the scope of T.A's are contained in 'Guidelines for Traffic Impact Assessment' published by the Institution of Highways and Transportation. T.A's are site specific and relate to the highway network surrounding the site.

UDP Reference
DR3 Movement
E8 Design Standards For Employment Sites

www.iht.org.uk

A variety of assessments will be required;

- Base year traffic flows on the surrounding highway links, and junctions;
- Traffic generation assessment will be required using TRICS or similar prediction software;
- Traffic growth predictions from the National Road Traffic Forecasts and the Councils' own LTP forecasts over the period of the design life of the proposal;
- Distribution of generated trips over the network; and
- Sustainable Access.

From this information the assessment shall identify peak hour traffic flows with development for the base year and a future year sufficient to enable the appropriate assessment of the capacity of adjacent junctions and links and must be in accordance with the requirements of Sustainable Transport. This should provide for all links and junctions that are likely to experience significant increases in traffic as a result of the development. Submission of a T.A. is not a guarantee of the proposal gaining the approval of the Highway Authority and each case will be judged in line with local and national guidance.

3.2 Section 106 Planning Obligations

New developments have a direct and indirect impact on the transport system in the County and should contribute towards the cost of all, or that part of, additional infrastructure provision that would not have been necessary but for their development. We have already developed a good track record in securing appropriate contributions for transport improvements from a range of development types including residential, retail and other commercial uses.

The Council is currently developing a Supplementary Planning Document on Planning Obligations, in order to provide a more robust procedure for the negotiation of planning obligations for a wide range of improvements including affordable housing, accessibility and transport, community and education facilities. This SPD will be fully in accordance with Government guidance and will take into account the guidance provided in Circular 05/2005 Planning Obligations.

In line with the Government guidance and as a further development of the work on the SPD we will develop a formula to provide a quantitative indication of the level of contribution which we are likely to seek through planning obligation towards the provision of infrastructure for the improvement of access relating to a proposed development. It is important that the formula links closely with the improvement of the transport network and improved accessibility set out in this Local Transport Plan strategy. This will provide a transparent link between the impact of the development in terms of the additional trip generation, its location and how it will benefit from proposals set out in this plan. The formula will enable us to provide developers with an indicative guide as to the level of contributions we are likely to require towards:

- sustainable transport infrastructure improvements;
- support for travel plans required as a result of a development proposal;
- contributions to conventional public transport services and demand responsive and community transport services; and

- contributions towards Streetscene improvements that may be required as a result of additional development.

UDP Reference
S2 Policy
DR5 Planning Obligations

3.3 Travel Plans

For certain types of development, generally non residential, a Travel Plan (formerly Green Travel Plan) should be submitted. Travel Plans are typically a package of practical measures to encourage employees and users to choose alternatives to single occupancy car use and even reduce the need to travel at all for their work. Travel Plans should be site specific and should offer a range of measures that will make a positive impact at that site. Typical examples of measures include car sharing schemes, flexible working schemes, offering good cycle facilities and cycle mileage allowances, negotiating for improved public transport facilities with providers, restricting or charging for car parking, setting up video conferencing to reduce business travel.

The Department of Transport has published the report 'Making Residential Travel Plans Work: Guidelines for New Development' which gives further advice on this subject.

The Council's Green Transport Promotions Officer is also available for advice on 01432 260514.

UDP Reference
S6 Transport
DR3 Movement
T13 Traffic Management
P9 UDP Strategies

www.dft.gov.uk

An Information Pack Containing Relevant Travel Plan Case Studies Demonstrates Herefordshire Council's Centre of Excellence Status

3.4 Advance Payments Code (APC)

Under part XI of the Highways Act 1980, the Advance Payments Code requires that anyone proposing to erect a building served by a private street must pay or secure sufficient funds with the Highway Authority or its agent to cover the eventual cost of making up the street to adoptable standard. This aims to relieve house buyers of road charge liabilities under the private street works code if the Developer defaults. New roads are considered private streets for the purposes of the act.

The Highway Authority or its agent will serve the appropriate Notice setting out the sum required under Section 219/220 of the Highways Act 1980 within six weeks of Building Regulations Approval being granted, either by the Council or notified by an

The APC is used to avoid the creation of new private streets

approved private agency. It is an offence to start constructing the building before depositing funds or completing an Agreement under S.38 of the Highways Act 1980.

The sealing of a S.38 Agreement secures exemption from the need to provide surety for the roadwork's in advance of building operations in accordance with the APC. However if the Developer wishes to construct dwellings before a S.38 Agreement is signed, it is necessary for the required APC security to be made for the appropriate site. This surety (together with accrued interest where cash deposits are made) will be returned to the Developer upon signing the Agreement, or used as part of the required bond and/or supervision fees.

There are certain exemptions to the obligations of the Advance Payments Code, details of which are given in Section 219(4) of the Highways Act 1980.

3.5 Section 38 Applications

The developer will normally make a Planning Application to the Council submitting full plans of the development and general plans for the infrastructure. The Highways and Transportation service will be consulted and make recommendations for conditions or indeed refusal as it sees fit. It is recommended that applicants seek informal advice about their proposals prior to making a formal submission.

Once the developer has received Planning Permission, the following details should be submitted to commence the adoption procedure;

- 2 copies of a 1:2500 scale A4 location plan showing the site boundary edged red;
- Copies of a 1:500 scale layout plan including drainage;
- 2 copies of a longitudinal section showing the following;
  - Chainage
  - Existing centreline levels
  - Proposed centreline levels
  - Storm water drainage
  - Proposed gradients/vertical curves
- Drainage calculations;
- Relevant standard details and construction tables; and
- Full details of any proposed structures, including completed Approval In Principle and Design Certificate forms (see Appendix C), together with an estimate of the total cost of the structure.

The council is required to apply the Advance Payments Code for all new developments with new roads serving 6 or more dwellings. Please refer to Section 3.4 for more information.

The developer should contact the Local Water Company for the adoption of new Storm and Foul sewers within the adoptable highway. Private sewers within the adoptable highway are not accepted.

The Council may require Road Safety, Vulnerable Road User and/or Maintenance Audits. See Section 3.7 for more details.

The Council will charge a supervision fee, based upon a percentage of the council's estimate of the total cost of the works, and this fee will cover the following;

- Design check and approval;
- Street lighting design;
- Administration;
- Site supervision; and
- Roadwork's and street lighting inspections.

A separate legal fee will be payable.

Prior to formal adoption, the developer will be required to submit a copy of the completed Health and Safety File in accordance with CDM (1994) Regulations.

UDP Reference
DR5 Planning Obligations

3.6 Section 278 Applications

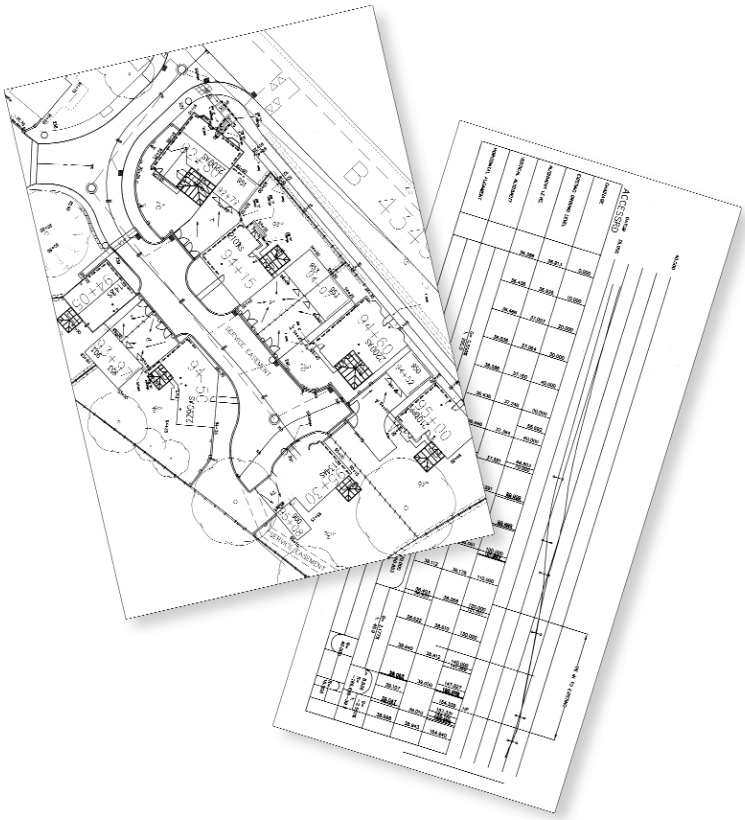
Physical improvements to the existing public highway must be subject to an appropriate form of agreement to ensure that the works can be executed at the time required by the relevant planning condition or obligation and that the necessary funding is provided by the developer. The arrangements would normally be as follows:

Improvements that will have a significant effect on the day-to-day operation of the public highway during or subsequent to

3. PROCESS GUIDANCE

the construction of the works will normally be subject to an Agreement made under Section 278 of the Highways Act 1980. Examples of this might be construction of a roundabout or the installation of traffic signal control at a junction.

Where an agreement under Section 38 of the Highways Act 1980 for the adoption of roads is being formulated, then clauses will be included to cover the construction of the bellmouth access or accesses within the public highway. If other related works are required within the existing public highway than a separate Section 278 Highway Works Agreement will be required, although this may be waived if any additional works are very minor - e.g. the erection of a small direction sign at the junction.



A Section 278 Highway Works Agreement will normally be required in advance of a development commencing. Developers should ensure, therefore, that they allow sufficient time for an Agreement to be completed bearing in mind procedures can often be protracted. Further advice is obtainable from the Highway Authority about the procedures for applying for and completing Section 278, Highway Works.

When a feasibility design for a road improvement has been approved in connection with an outline planning consent and subsequent alterations to the relevant design parameters are introduced prior to the submission of a full planning application or application for the approval of reserved matters, then the Highway Authority will reserve the right to review the approved design, in consultation with the relevant Local Planning Authority, with view to ensuring, so far as practicable, compatibility with the changed parameters is achieved prior to the completion of a Section 278 Highway Works Agreement.

Fees will be payable by the developer as appropriate and, depending on the form of agreement, may include the costs of administrating the agreement, legal charges, scheme design, technical approval, site inspection, safety, cycle and mobility audit, tendering and tender analyses, certification of works etc and commuted sum payments for additional future maintenance costs.

UDP Reference
DR5 Planning Obligations

3.7 Audits

Vulnerable Road User Audits

Vulnerable Road User Audits will be required on all developments that require physical improvements to the existing public highway to be undertaken as part of the development. They may also be requested on the following developments:

- On large developments;
- Developments containing major junctions;
- Developments with impacts on existing footways, cycleways or footpaths; and
- Developments which are considered to have an impact on highway safety.

The Transportation Section of the council will decide if Vulnerable Road User Audits are required for any particular development.

The Vulnerable Road User Audits will be undertaken in accordance with the IHT Cycle Audit Guidelines as amended.

Attention is drawn to the timing of these audits and their likely duration that may have programme implications for the development.

Road Safety Audits

Road Safety Audits will be required on all developments that require physical improvements to the existing public highway to be undertaken as part of the development. They may also be requested on the following developments:

- On large developments;
- Developments containing major junctions;

- Developments with impacts on existing footways, cycleways or footpaths; and
- Developments which are considered to have an impact on highway safety.

The Transportation Section of the council will decide if Road Safety Audits are required for any particular development.

The Road Safety Audits will be undertaken in accordance with the Design Manual for Roads and Bridges (DMRB) Volume 5 Section 2 Part 2 HD 19/03 Road Safety Audit.

For the purposes of these audits the Transportation Section of Herefordshire Council will act as the Project Sponsor in the DMRB procedure.

Attention is drawn to the timing of these audits and their likely duration that may have programme implications for the development.

3.8 Public Rights of Way and Development

There is an extensive network of public rights of way (PROW) across Herefordshire in both the Towns and countryside. There are different types of public Rights of Ways as detailed below:

- **Footpath** - May only be used for walking;
- **Bridleway** - May be used for walking, horse riding and cycling; and
- **Byway open to all traffic** - Walking, horse riding and cycling, plus use of any kind of wheeled vehicle, including motor cars and horse drawn vehicles.

Public Rights of Way are recorded on a 'Definitive Map and Statement', which are kept by Herefordshire Council. The public may view the map and statement together with any changes that have been made. If a Right of Way is shown on the definitive map and/or described in the statement then it is conclusive evidence, in law, that the public has those rights.

When considering a development proposal, the Council is required to take into account the impact on any development on a Public Right of Way. It is important therefore that the existence of any Public Right of Way should be considered in the preparation of the development proposal. Generally, the most suitable arrangement is for the Development to avoid impacting on the Public Right of Way.

If Development is likely to affect the Right of Way, it is possible to apply for either a Temporary Closure order (enabling works to be carried out close to a Right of Way without endangering the Public), or a Public Path order (permanently diverting or

extinguishing the Right of Way) Extinguishing a PROW should not be considered as an option unless there are no other alternatives.

Developments that affect a Public Right of Way should not be started and the Right of Way should be kept open and available to the public until the necessary order has come into effect. If the Development is carried out prior to the Order being made it may not be possible to complete the Diversion Order and the Developer may incur serious legal and financial consequences. It should not be assumed that because a Planning Permission has been granted an order would invariably be made or confirmed.

Where the Public Right of Way cannot be avoided the aim should be to maintain the Public Right of Way on its existing alignment. If this is not safe or practical then an alternative route should be indicated. In the case of housing estate Development this alternative should avoid the use of the estate road(s) and should be through open space or landscaped areas.

The Public Rights of Way Service have their own design guides in terms of furniture, widths of paths, surfacing and improvements. It is important developers contact the rights of way service at an early stage if the development impacts a Right of Way.

Further information may be obtained from:

Public Rights of Way Section,
Herefordshire Council
Tel 01432 260572
Fax 01432 261983
e-mail: rightsofway@herefordshire.gov.uk

UDP Reference
T6 Walking

4. APPENDICES

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4. APPENDICES

4.1 Appendix A - Relevant Herefordshire Council UDP Policies

S1 Sustainable development

The Plan will promote development and land use change, which in terms of its level, location, form and design contributes, to the achievement of sustainable development. This means avoiding or minimising adverse impacts on the environment whilst providing necessary dwellings and employment together with appropriate infrastructure, services, transport and amenities.

Sustainable development will be promoted by:

1. protecting and enhancing the natural environment and historic heritage, especially irreplaceable assets;
2. respecting patterns of local distinctiveness and landscape character in both town and country, and safeguarding landscape quality and visual amenity;
3. conserving and minimising use of natural resources - particularly non-renewables - and encouraging resource enhancement and alternatives to the use of nonrenewable resources;
4. regenerating or recycling previously-used resources - including previously developed, vacant and underused land, buildings and infrastructure - and perpetuating the use of existing infrastructure and facilities wherever possible;
5. increasing energy conservation, energy-efficiency, and energy generation from renewable sources;
6. minimising waste and pollution and adopting sustainable treatment systems;
7. directing necessary new development to strategic locations, settlements and sites that best meet the appropriate sustainable development criteria;
8. requiring more sustainable design in all aspects of new development, redevelopment and regeneration;
9. ensuring that development respects the needs of local communities and encouraging greater self-sufficiency within local communities;
10. seeking more equitable access for all sectors of the community to opportunities for homes and livelihoods, natural and historic resources, health, recreation, amenity, education, and facilities and services;
11. supporting sustainable economic activity and high and stable levels of employment;
12. supporting more sustainable approaches to land use and land management in rural areas;
13. reducing the need to travel, securing safe and convenient accessibility between different land uses and maintaining, improving and integrating opportunities to move safely and conveniently by modes other than personal motor transport;
14. improving health and safety through reduced pollution and safer design of the built environment and landscaping;
15. avoiding or minimising adverse impacts of human activities, land uses and development on the physical environment.

S2 Development requirements

The contribution that developments can make to a sustainable pattern of land use and development which respects the County's environmental resources will be secured by:

1. ensuring that new development achieves a high standard of design and layout which respects the townscape, landscape, ecological and historic character of the area; is sustainable in terms of its construction materials and methods, use of energy, water and other resources; and includes positive environmental benefits including landscaping schemes and provision of wildlife habitats;
2. promoting land use patterns and developments which favour mixed uses subject to amenity considerations, which respect the development potential of adjoining land, and which wherever possible secure the reclamation and beneficial use of degraded or contaminated land, environmental improvements and the reduction or removal of environmental conflicts;
3. ensuring that developments include suitable provision for public transport, cycling and walking, and that their likely effect in relation to the capacity and safety of both the trunk road and local highway network;
4. ensuring that development is designed having full regard to and within environmental constraints, including groundwater protection, land stability, contamination, and the location of hazardous uses;
5. taking a risk-based precautionary approach to flood risk and the effects of flooding elsewhere, having regard to indicative flood risk in the major flood plains of the Rivers Wye and Lugg and their tributaries. Where development is proposed in locations at risk of flooding, it should be demonstrated that there are no reasonable options available in a lower risk category, consistent with other sustainable development objectives;

6. ensuring that development does not lead to an unacceptable risk to human health and safety, and that risks of pollution of water, air, or land, or in terms of noise or lighting, are minimised;

7. ensuring that development which would result in significant negative effects is avoided, but where environmental impact is unavoidable, requiring mitigation or compensation measures which provide benefits at least equal to any environmental loss;

8. taking proper account of the ability of existing and proposed infrastructure including foul drainage, water supply and water resources, and the highway network to serve the development proposed without undue environmental impact; and

9. making use of planning conditions and planning obligations to further the strategy of the Plan.

S6 Transport

The safe, efficient and sustainable movement of people and goods will be promoted within the context of reducing the need to travel by:

1. locating developments wherever possible within the County's existing urban areas or at locations reasonably accessible by means other than the private car, in order to reduce growth in the length and number of motorised journeys and reliance on the motor vehicle, and promote modal choice according to a hierarchy of modes and solutions to demand for travel in order of their sustainability;

2. encouraging alternatives to the motor vehicle which through reducing energy consumption and pollution have less environmental impact;

3. promoting integration between transport modes so that the network is used to best effect;

The new Roman Road cycleway provides a link to Stretton Sugwas and Credenhill

4. assessing development and transport infrastructure proposals in terms of their traffic and transportation, economic development and environmental impacts and benefits, including implications for the whole road network including trunk roads, road safety, access to development areas, and assistance given to nonmotorised modes of travel and to reducing the need to travel; and

5. safeguarding appropriate opportunities for rail transport and the routes of new walking, cycle and highway schemes from development that would prejudice their implementation.

DR1 Design

Where relevant to the proposal, all development will be required to:

1. promote or reinforce the distinctive character and appearance of the locality in terms of layout, density, means of access and enclosure, scale, mass, height, design and materials;

2. retain and where possible incorporate existing site features contributing to the quality of the local environment, including landscape, historic and natural elements such as wildlife habitats and species;

3. respect the context of the site, taking into account townscape and landscape character and topography, including the impact of the proposal on urban vistas, longer distance views and ridgelines;

4. include measures that address health and safety, the conservation of energy and water, and avoids nuisance and pollution; and

5. submit a design statement with the application for planning permission which sets out how proposals relate to issues of design quality, environmental conservation and sustainability.

Development which does not adequately address design principles or is of poor design, including schemes which are out of scale or character with their surroundings, will not be permitted.

Within major development proposals, the provision of public art will be expected as a integral part of the overall design to enhance identity and local distinctiveness.

DR2 Land use and activity

Where relevant to the proposal, all development will be required to:

1. be located and designed so as to facilitate a genuine choice of modes of travel, including public transport, cycling and walking as alternatives to the private car;

2. incorporate wherever possible a mix of compatible land uses and activities;

3. be designed to deter crime and increase personal safety;

4. not prejudice the amenity or continued use of adjoining land and buildings; and

5. not constrain the future development of adjoining sites or prejudice the implementation of comprehensive development.

DR3 Movement

Where relevant to the proposal, all development will be required to:

1. provide a safe, convenient and attractive pattern of movement into, out of and across the site, particularly for pedestrians, people with disabilities and cyclists, satisfying minimum design standards and incorporating pedestrian seating and cycle parking as required;

2. include good links to public transport, incorporating wherever appropriate suitable access for public transport vehicles into the site and associated passenger facilities;

3. include a travel plan as part of the planning application in the case of proposals for major employment, retail, leisure and service development, proposals for such uses in Hereford and the market towns generating significant travel, or where particular local traffic problems require to be addressed;

4. be designed to secure access and mobility for all;

5. incorporate adequate provision for vehicular access from the highway network without detriment to highway safety or to pedestrians, cyclists or public transport; and

6. incorporate cycle and vehicle parking to the required standards having regard to the need to promote sustainable transport choices, together with suitable turning and loading facilities in the case of development proposals with significant transport implications, include a transport assessment.

Taking account of any proposed measures to improve access by public transport, walking and cycling and to reduce motorised journeys, additional traffic arising from development should be capable of being accommodated on the local road network without undue environmental, operational or safety consequences, or the existing road system should be capable of improvement to meet those consequences.

Planning obligations will be used as required to secure high quality accessibility to sites with an emphasis on maximising access by public transport, walking and cycling.

DR4 Environment

Where relevant to the proposal, all schemes will be required to:

1. be capable of being served by existing services or demonstrate that adequate services are reasonably accessible or can be readily provided without significant environmental impact;

2. minimise resource use, including water and energy, and maximise resource efficiency including passive energy absorption;

3. safeguard the availability and quality of surface and groundwater supplies, avoid creating or exacerbating problems of flooding and pollution, and utilise sustainable drainage techniques in respect of surface water wherever possible, with alternatives being considered only where sustainable techniques cannot demonstrably be provided;

4. demonstrate that where the potential for causing pollution and general nuisance exists by emitting odour, dust, smoke, chemicals or fumes, that the chosen location, site layout and proposed operation together with any necessary mitigation or protection measures avoids adverse effects to other land uses, residential amenity and the environment;

5. contribute to local open space provision and safeguard and where appropriate protect, restore and enhance biodiversity, features of geological interest and landscape character; and

6. maximise opportunities to enhance the local environment, to include the appropriate provision of public art, external lighting, and hard and soft landscaping.

DR5 Planning obligations

To further the strategy of the Plan planning obligations will be sought to achieve community, transport and environmental benefits where these benefits are reasonable, necessary, relevant, and directly, fairly and reasonably related to the proposed development. The circumstances in which such benefits will be sought will be identified in relevant Plan policies and may be further detailed in supplementary planning guidance.

DR7 Flood risk

Proposals for development in flood risk areas will need to be accompanied by a flood risk assessment. Additionally and within high risk areas (zone 3) as defined on the proposals maps, proposals will need to demonstrate through a sequential test that there are no reasonable alternative locations available on land of a lower flood risk, taking account of other environmental considerations.

Development within high risk developed areas (zone 3a) may only be suitable for residential, commercial and industrial development provided the minimum standards for flood defence can be provided and maintained for the lifetime of the development.

Development within high-risk undeveloped and sparsely developed areas (zone 3b) will not be permitted unless a particular location is essential.

Built development within functional flood plains (zone 3c) should be wholly exceptional and limited to essential transport and utilities infrastructure that have to be there.

In all cases development will only be permitted where it would not be at an unacceptable risk of flooding or where it is essential to that location. Any protection, compensatory, mitigation and other measures proposed must be acceptable in safety terms and in terms of their environmental effects. All proposals would need to include a dry access, the necessary minimum standards of flood defence, show that there would be no net loss of flood plain storage and that it would not impede water flows or increase flood risk elsewhere.

Wherever possible sustainable drainage techniques should be used to minimise the adverse effects associated with increased surface water run off. Adequate access to watercourses and flood defences for maintenance and improvements should be maintained.

DR8 Culverting

Development proposals should wherever possible retain open watercourses with an open corridor on both banks. Any culverting proposals should:

1. include appropriate mitigating enhancements;
2. be for the minimum length necessary;
3. demonstrate that the need for the development outweighs the objections to culverting in principle and that all other options have been explored and rejected; and
4. where development proposals are made for land containing a culverted watercourse, restore this to open channel as part of the overall scheme.

Greytree Road Culvert

DR10 Contaminated land

Development on or adjacent to land which is known or suspected to be contaminated will only be permitted provided that:

1. a site investigation and risk assessment has been carried out to determine the nature and degree of any contamination, its source and possible pathways and receptors; and
2. appropriate remediation and protection measures are proposed to reduce any risk to an acceptable level, taking into account the nature of the proposed use and the nature and extent of contamination, its source and possible pathways and receptors.

Development will not be permitted where the risk cannot be reduced to an acceptable level or appropriate remedial or protection methods are not proposed.

DR12 Hazardous substances

Applications for hazardous substances consent, for development involving the presence of hazardous substances, and for other development at or in the vicinity of establishments where hazardous substances are present, will only be permitted where there will be no unacceptable risks to the safety of the local community, the potential occupants and users of the development proposed, and the environment.

DR14 Lighting

Development requiring or likely to require external lighting should include details of the lighting scheme proposed. The scheme should meet the following requirements:

Lighting on a new development

1. demonstrate that external lighting is necessary for the development, and that the proposed lighting scheme is no more than the minimum needed to achieve the necessary purpose;
2. minimise light spillage into adjoining areas and the sky;
3. have appropriate regard to the immediate surroundings taking into account residential amenity, environmental and landscape character, particularly in edge of settlement or rural locations; and
4. where necessary include suitable mitigation measures.

Development which includes unnecessary, excessive or obtrusive lighting proposals will not be permitted. Lighting proposals should maximise the security, safety and crime prevention benefits of external lighting in relation to buildings, open spaces and walking and cycling routes.

4. APPENDICES

H16 Car parking

New housing developments will be subject to a maximum off-street car parking provision of 1.5 spaces per dwelling, with no minimum level of provision. Site densities and off-street parking provision should reflect site location, the type of housing to be provided, the types of household likely to occupy the development, and the availability of public transport.

E8 Design standards for employment sites

Proposals for employment purposes should provide for adequate infrastructure and the protection of the amenity of surrounding land uses particularly residential by:

1. limiting proposals for land adjacent to residential areas or other noise sensitive uses to B1 and B8 uses or other commercial uses where this would protect amenity, and imposing conditions as required to protect amenity;

2. orientating buildings and operations away from residential or other sensitive areas, and limiting door and window opening in buildings facing such areas to a minimum;

3. providing a buffer between buildings and land used for employment purposes and residential curtilages, such buffer to include landscaping, fencing, acoustic bunding, screen planting and noise attenuation measures as required and to exclude buildings and vehicle parking and manoeuvring;

4. incorporating a landscaping scheme which respects existing site features, makes provision for amenity open space areas, includes perimeter screen planting, and integrates with other aspects of the development;

5. ensuring that outdoor storage areas are kept to a minimum and where essential that they are properly designed and screened;

6. providing appropriate environmental protection ensuring satisfactory means for the disposal of trade effluent and the storage of waste by-products and waste awaiting disposal;

7. incorporate pedestrian and cycle links to residential areas and existing footpaths, together with access for public transport vehicles where appropriate and include measures for improving access by employees by alternative means of transport including travel Plans; and

8. not permitting proposals where the traffic generated is likely to cause serious nuisance to adjacent uses, adversely affect the effective use of land for employment uses, or lead to a significant increase in environmental disturbance caused by heavy goods vehicle movements on the local road network.

T2 Park and Ride

Proposals for bus or rail-based park and ride schemes for Hereford will be permitted subject to assessment of:

1. their feasibility and potential for implementation, and compatibility with the Local Transport Plan; and

2. their effect upon the current or any proposed future land use and the environmental impact of such a proposal on the area around a scheme;

3. their potential impact on existing bus services.

We will aim to introduce two permanent Park and Ride sites

T6 Walking

Development proposals should:

1. acknowledge the individual and network value of existing walking routes and, where appropriate, provide new links and infrastructure that enhance network capacity and encourage more journeys on foot, especially to workplaces, educational establishments, public transport nodes and other community facilities;

2. demonstrate that the strategic and/or local significance of walking routes through proposed development sites has been taken into account, especially in determining standards of provision including width, surfacing, signing and lighting;

3. respect the utility, convenience, recreational value, attractiveness and historical significance of any designated public right of way;

4. seek reasonably direct and convenient alignments for those new or improved walking routes that predominantly serve utility trips;

5. identify, with reference to the definitive map, the precise alignment and means of safeguarding of any public right of way, as well as the standard of any works to be carried out on the route;

6. demonstrate that the needs of disabled people have been taken into account in the design of new or improved walking routes; and

7. ensure that the legal alignment of any public right of way is kept open and usable during development works.

Development proposals that involve the extinguishment or diversion of a public right of way, or closure of any other type of established walking route, will not be permitted unless an alternative route of at least equal utility value can be provided on, or conveniently near to, the proposal site. The onus of demonstrating no net loss of value will be placed on applicants, in consultation with and to the satisfaction of the highway authority.

The creation of new public rights of way, permissive links, roadside forms of walking route will be supported where they add to the utility of the network, including providing missing links in otherwise continuous routes.

T7 Cycling

Development proposals shall wherever possible incorporate safe, direct, coherent, convenient and attractive cycle routes and associated facilities, taking full advantage of links to the existing or planned cycle route network and/or to major journey attractors including educational establishments, retail centres, public transport interchanges, leisure facilities and workplaces. The requirement for such provision and facilities may include related improvements to roads and junctions, cycle priority measures and the provision of secure cycle parking.

New cycle routes will be developed within the Plan period towards establishing a Countywide network. Off-highway routes will generally be for shared use with walkers. Planned routes already identified for development, include:

Hereford:

Great Western Way:

Northern extension from Widemarsh Common to Holmer Industrial Estate.
Southward extension from Haywood School to Newton Farm and proposed Haywood Country Park.

Commercial Road and Aylestone Hill.
Broad Street and Widemarsh Street.
St Owen's Street.
Edgar Street - Rail Station.
Holme Lacy Road - Phase 2 - Ross Road to Hinton Road.
Rotherwas/Lower Bullingham to Bartonsham.
Plough Lane to Eign Gate.
Hunderton (Golden Post) to Belmont (Ruckhall Lane).
King Georges V Playing Field to Lower Bullingham (riverbank route) and Green Crize.
Various safer routes to schools.

Inter-Urban Links (from Hereford):

Hereford- Ross-on-Wye to Symonds Yat (part Wye Valley Cycleway and National Route 44)

Development proposals that would prejudice the implementation of proposed routes within the Plan period will not be permitted. Similarly, development that would prejudice either the safety, convenience and attractiveness of existing routes used by cyclists or the continuity and utility of such routes will only be permitted where at least equivalent alternative provision is made. The onus of demonstrating no net loss of value will be placed on applicants, in consultation with and to the satisfaction of the highway authority, including submission of cycle audits.

T8 Road hierarchy

Access to the road network will be controlled in accordance with the road hierarchy. New accesses on the strategic highway network will not be encouraged and should not inhibit the strategic function of these routes. Development proposals that require access to the road network should have regard to the need to:

1. ensure the efficient movement of goods and people;
2. maximise road safety;
3. promote sustainable and integrated transport, including access to development by means other than the private car;
4. secure the development of previously developed land; and
5. safeguard or enhance the local environment and amenity.

T9 Road freight

When considering proposals for development of new or expanded businesses that generate commercial road traffic, regard will be had to the environmental effects of heavy goods vehicles and other service vehicles and to the traffic impacts on both the strategic and local road network. Proposals that generate service vehicle movements that would unacceptably affect the amenity, safety and character of the existing or neighbouring environments by virtue of danger, noise, traffic generation and congestion, air pollution, visual intrusion or causing parking problems, will not be permitted. All proposals will be expected to incorporate adequate operational arrangements within their layout, and include traffic management measures and workplace travel plans and more sustainable delivery systems where appropriate.

We need to facilitate safe and efficient freight movement

4. APPENDICES

T10 Safeguarding of road schemes

The land required for the following new road schemes, or improvement of existing roads where realignment is necessary, will be protected from development which would be likely to prejudice their implementation:

1. A49 Ross Road to B4399 Holme Lacy Road (Rotherwas Access Road);

1a. A49 Ross Road to A465 Abergavenny Road, Hereford;

2. A4103 Roman Road improvement (Tillington Road-Stretton Sugwas);

3. A4103 Roman Road improvement (eastern section);

3a Edgar Street/Commercial Road link, Hereford;

3b Canal Road extension, Hereford;

4. Leominster Enterprise Park access roads; and

5. Ledbury bypass.

T11 Parking provision

Development should incorporate suitable provision for car parking and operational space. Parking provision will generally be restricted as a maximum to that which is justifiably required, after having had regard to:

1. proximity to alternative provision, including the shared use of parking;

2. the availability of alternative modes of transport to the private car, including public transport, walking and cycling;

3. the type, design and use of development proposed;

4. any agreement to provide alternative arrangements for travel within the context of developing a workplace travel plan; and

5. road safety.

Parking provision will be further waived or restricted within conservation areas or where the setting of listed buildings may be affected in order that local heritage and the historic environment are not adversely affected, having regard to availability of alternative parking provision.

Within the central shopping and commercial area of Hereford, no further private nonresidential parking intended to meet the needs of commuters will be permitted.

T12 Existing parking areas

The beneficial redevelopment or re-use of existing private parking areas will be encouraged, particularly within Hereford and the market towns.

T13 Traffic management schemes

Traffic management schemes will be developed as appropriate within Hereford, the market towns, villages and the wider rural areas. Such schemes will be designed to limit the impact of traffic, improve access, safety and the local environment, enhance use of public transport and improve facilities for cycling and walking. Schemes will be required to audit existing use by walkers and cyclists and, where necessary, provide for appropriate improvements. They will also be required to meet the design guidance associated with the Plan.

Individual development proposals will be expected to include design elements which consider and contribute to such schemes wherever necessary.

T14 School travel

Proposals for new schools, for the expansion of existing schools and for associated facilities should include details of the arrangements proposed to support safer access and in general will need to include the development of a school travel plan. Any new housing development that causes significant increases to school numbers will be required to include elements within the design layout and/or off-site arrangements to support safer routes to school.

T16 Access for all

Development proposals for buildings or facilities which are to be used by the public or as places of employment will be required to provide suitable access for the disabled, older people and parents with young children. Any schemes concerning pedestrian movement, including traffic management and environmental enhancement, will need to provide appropriate access, means of circulation and a good relationship between buildings and parking areas, new and existing public access points and signage.

LA6 Landscaping schemes

Landscaping schemes will be required to be submitted as an integral part of any development proposals that will affect the visual amenity or character of the location. Landscaping schemes will be required to:

1. assess the existing character and features of the particular site and its wider landscape character in accordance with policy LA2, indicating how these have contributed to the overall design approach and which features, including trees, will be removed;

2. indicate and make arrangements to protect and retain existing trees and hedgerows, in accordance with policy LA5 and also other landscape features worthy of retention; and

3. include new landscape works to ensure development integrates appropriately into its surroundings in terms of scale, enhances any existing character and features and especially takes the opportunity to remove eyesores and improve disfigured or despoiled land.

Landscaping works should be undertaken during development or as soon as practicable thereafter. In the case of major proposals, consideration should be given to advanced landscaping works being carried out before building or enabling works are commenced.

RST1 Criteria for recreation, sport and tourism development

Proposals for the development of new recreation, sport and tourist facilities including change of use or improvement or extension to existing facilities will be permitted where the proposal:

1. is appropriate to the needs of the community which it serves, having particular regard to the nature of the use, mode of operation, scale and design;

2. would not harm the amenity of nearby residents;

3. respects environmental character and resources, including designated landscape, historic heritage, archaeology, biodiversity, and geological features and rights of way; and

4. is wherever possible accessible by a choice of modes of transport, with priority given to public transport, walking and cycling, and is designed to ensure access for all.

Proposals in the open countryside will only be permitted where the countryside is the primary resource for the proposal and the rural landscape and environment is sustained. In such instances new buildings will only be permitted where there are no suitable existing buildings capable of conversion, they are of a small scale and are ancillary to the primary proposal.

4.2 Appendix B - Relevant Herefordshire Council UDP Strategies

P1

The UDP will contribute to the achievement of sustainable development by developing land use policies and proposals which help ensure:

- Recognition of the legitimate needs of everyone in the community, and progress towards greater social equity;
- Sustainable economic activity and development, together with high and stable levels of employment;
- Effective protection, restoration and enhancement of the environment and of Herefordshire's environmental capacity; and
- Sustainable use of natural resources.

P9

The UDP will promote better accessibility to work, services and facilities in ways in ways which reduce the overall need to travel and promote the use of non-car based transport. It will guide new development to locations which offer a choice of transport modes for movement of people and freight. In promoting accessibility, guiding the location of new development and evaluating proposals, the UDP will have regard to the hierarchy set out in the Local Transport Plan, which prioritises modes according to their inherent sustainability.

4.3 Appendix C - Structures Certificates and Approval in Principal

DESIGN CERTIFICATE

To be submitted by the Design Engineer before construction commences. More than one certificate may be submitted if parts of the structure have separate designers.

We certify that reasonable professional skill and care has been used in the design of

…… (Name of structure) with a view to securing that:

i) It has been designed in accordance with the design documents listed in Schedule A attached*. The live loads are as follows

……

……

ii) The design has accurately been translated into contract drawings. The unique numbers of these drawings (copies of which are attached) are:

……

……

iii) Departures from standards and additional criteria which have been approved by Herefordshire Council are listed in Schedule B attached*.

SIGNED _____ DATE _____

NAME _____

POSITION HELD _____
(Design Team Leader) **

SIGNED _____ DATE _____

NAME _____

POSITION HELD _____
(Partner or Director) **

NOTES:

*1) *The Council should be consulted to ensure appropriate documents are used. Notes for guidance are available to cover simple structures.*

**2) *The position, qualification and employing organisation of each person signing the certificate shall be stated.*

CONSTRUCTION CERTIFICATE

To be submitted by the developer when construction is complete, before adoption of the structure.

We certify that:

1) ……(name of structure) has been constructed* in accordance with the 'As Built' drawings, (copies attached) the unique numbers of which are as follows:

……

……

2) Departures from the drawings submitted with the design certificate have been approved by Herefordshire Council and are listed in Schedule C attached.

SIGNED _____ DATE _____

NAME _____

POSITION HELD _____
(Director)**

NOTES:

*(1) *This undertaking does not absolve the developer or contractor from the need to notify the Council of progress on site sufficient to enable inspection of all critical stages.*

** (2) *The position, qualifications and employing organisation of each person signing the certificate shall be stated.*

APPROVAL IN PRINCIPLE (DESIGN AND ASSESSMENT[1])(Bridge and other Highway Structures)

Name of Project .....

Name of Bridge or Structure .....

Structure Ref. No .....

1. HIGHWAY DETAILS

1.1 Type of Highway[2]
1.2 Permitted traffic speed [3]
1.3 Existing weight restriction

2. SITE DETAILS

2.1 Obstacles crossed

3. PROPOSED STRUCTURE

3.1 Description of structure
3.2 Structural Type
3.3 Foundation Type
3.4 Span arrangements
3.5 Articulation arrangements
3.6 Road restraint system type
3.7 Proposed arrangements for maintenance and inspection/Inspection for Assessment[1]
- 3.7.1 Traffic Management
- 3.7.2 Access
- 3.7.3[A] Intrusive or further investigation proposed

3.8 Materials and finishes/Materials strengths assumed and basis of assumption[4]
3.9 Risks and hazards considered[5]
3.10[D] Estimated cost of proposed structure together with other structural forms considered and the reasons for their rejection including comparative whole life costs with dates of estimates
3.11[D] Proposed arrangements for construction
- 3.11.1 Traffic Management
- 3.11.2 Service diversions
- 3.11.3 Interface with existing structures

3.12[A] Year of construction
3.13[A] Reason for assessment
3.14[A] Part of structure to be assessed

4. DESIGN/ASSESSMENT[1] CRITERIA

4.1 Live loading, Headroom
- 4.1.1. Loading relating to normal traffic under AW regulations and C&U regulations[6]
- 4.1.2 Loading relating to General Order Traffic under STGO regulations[7]
- 4.1.3 Footway or footbridge live loading
- 4.1.4 Loading relating to Special Order Traffic, provision for exceptional abnormal indivisible loads including location of vehicle track on deck cross section[8]
- 4.1.5 Any special loading not covered above
- 4.1.6 Heavy or high load route requirements and arrangements being made to preserve the route, including any provision for future heavier loads or future widening
- 4.1.7 Minimum headroom provided
- 4.1.8 Authorities consulted and any special conditions required

4.2 List of relevant documents from the TAS
4.2.1.1 Additional relevant Standards
4.3 Proposed departures from Standards given in 4.2 and 4.2.1
4.4 Proposed methods for dealing with aspects not covered by Standards in 4.2 and 4.2.1

5. STRUCTURAL ANALYSIS

5.1 Methods of analysis proposed for superstructure, substructure and foundations
5.2 Description and diagram of idealised structure to be used for analysis
5.3 Assumptions intended for calculation of structural element stiffness
5.4 Proposed earth pressure coefficients (ka, ko or kp) to be used in the design/assessment[1] of earth retaining elements

6. GEOTECHNICAL CONDITIONS

6.1 Acceptance of recommendations of Section 8 of the Geotechnical Report to be used in the design/assessment[1] and reasons for any proposed changes
6.2 Geotechnical Report Highway Structure Summary Information (Form C)[9]
6.3 Differential settlement to be allowed for in the design/assessment[1] of the structure
6.4[D] If the Geotechnical Report is not yet available, state when the results are expected and list the sources of information used to justify the preliminary choice of foundations[10]

7. CHECKING

7.1 Proposed Category
7.2 If Category 3, name of proposed independent Checker
7.3[D] Erection proposals or temporary works for which an independent check will be required, listing parts of the structure affected with reasons for recommending an independent check

8. DRAWINGS AND DOCUMENTS

8.1 List of drawings (including numbers) and documents accompanying the Submission[11]
8.2[A] List of construction and record drawings (including numbers) to be used in the assessment
8.3[A] List of pile driving or other construction records[12]
8.4[A] List of previous inspection and assessment reports

9. THE ABOVE IS SUBMITTED FOR ACCEPTANCE

Signed _____ Name _____
Design/Assessment[1] Team Leader

Engineering Qualifications [13] _____ Date _____
Name of Organisation

10. THE ABOVE IS REJECTED/AGREED SUBJECT TO THE AMENDMENTS AND CONDITIONS SHOWN BELOW

Signed _____ Name _____
Assessing Consultant Position Held

Engineering Qualifications [13] _____ TAA* _____

Date _____ Position _____

Signed for Client _____
Project Manager

*TAA - Technical Approval Authority

APPROVAL IN PRINCIPLE (DESIGN AND ASSESSMENT[1])
(Bridge and other Highway Structures)

NOTES

D. Indicates clauses to be used in Design AIP only

A. Indicates clauses to be used in Assessment AIP only

1. Delete as appropriate

2. For a bridge, give over and/or under

3. Include restrictions at or adjacent to the bridge and any environmental restrictions

4. From record drawings or intrusive investigation

5. e.g. Risks and Hazards required to be considered under CDM such as construction methods, future demolition, jacking for bearing replacement.

6. e.g. HA loading

7. e.g. HB or SV loading

8. Include the following as applicable:
- *a) Gross weight of the vehicle in tonnes and vehicle No.*
- *b) Axle load and spacing (longitudinally and transversely)*
- *c) Air cushion in tonnes over area applied in m x m*
- *d) Single or twin tyres and wheel contact areas*

9. Include the Geotechnical Report Highway Structure Summary Information Form C listing relevant design/assessment parameters

10. When the results of the ground investigation become available, an addendum to the AIP, covering Section 6, shall be submitted to the TAA. The addendum shall have its own sections 8, 9 and 10 to provide a list of drawings, documents and signatures

11. Include, without limitation:
- *a) Technical Approval Schedule (TAS)*
- *b) General Arrangement Drawing*
- *c) Relevant extracts from the Geotechnical Report (Section 8), Inspection Report, Intrusive Inspection Report, Previous Assessment Report (or reference for report)*
- *d) Departures from Standards*
- *e) Methods of dealing with aspects not covered by Standards*
- *f) Relevant correspondence and documents from consultations*

12. Include some details of previous structural maintenance and/or strengthening works

13. C.Eng, MICE, M.I.StructE or equivalent

14. AIP is valid for three years after the date of agreement by the TAA. If the construction has not yet commenced within this period, AIP shall be re-submitted to the TAA for review.

TECHNICAL APPROVAL SCHEDULE (Bridge and other Highway Structures)

Schedule of Documents Relating to Design or Assessment of Highway Bridges and Structures

British Standards

BS 5268;	Part 2; (Date)*	Structural Use of Timber
BS 5400		Steel concrete and composite bridges
	Part 1; (Date)*	General Statement (see BD 15 (DMRB 1.3.2))
	Part 2; (Date)*	Specification for loads (as implemented by BD 37 (DMRB 1.3))
	Part 3; (Date)*	CP for design of steel bridges (see BD 13 (DMRB 1.3))
	Part 4; (Date)*	CP for design of concrete bridges (see BD16 DMRB 1.3))
	Part 5 (Date)*	CP for design of composite bridges (see BD 16 (DMRB 1.3))
	Part 9 (Date)*	Bridge bearings (see BD 20 (DMRB 2.3.1))
	Part 10; (Date)*	CP for fatigue (see BD 9 (DMRB 1.3))
BS 5628;	Part; (Date)*	Unreinforced Masonry
BS 5930;	(Date)*	Site Investigations
BS 6031;	(Date)*	Earthworks
BS 8002;	(Date)*	Earth retaining structures
BS 8004;	(Date)*	Foundations
BS 8118;	(Date)*	The structural use of aluminium
BS EN 1317-1-1998 Road Restraint Systems - Part 1		Terminology and general criteria for test methods
BS EN 1317-2-1998 Road Restraint Systems - Part 2		Performance classes, impact test acceptance criteria and test methods safety barriers
BS EN 1317-3-2000 Road Restraint Systems - Part 3		Performance classes, impact test acceptance criteria and test methods for crash cushions
BS EN 1317-4-2002 Road Restraint Systems - Part 4		Terminal and Transitions

Department of Transport Local Government and the Regions (DTLR)

Railway Group Approved Code of Practice GC/RC5510: Recommendations for the Design of Bridges
Railway Group Approved Code of Practice GC/RT5204: Structure Gauging and Clearances
Simplified Tables of External Loads on Buried Pipelines (1986)

Miscellaneous

Circular Roads No 61/72 - Routes for heavy and high abnormal loads

The Manual of Contract Documents for Highway Works (MCDHW)

Volume 1: Specification for Highway Works (Date)*
Volume 2: Notes for Guidance on the Specification for Highway Works (Date)*
Volume 3: Highway Construction Details (Date)*

The Design Manual for Roads and Bridges (DMRB)

Bridges and Structures, Advice Notes (BA Series)

The current alpha-numeric index in the DMRB, Volume 1, Section 0, Part 2 should be reproduced

Bridges and Structures, Advice Notes (BA Series)

The current alpha-numeric index in the DMRB, Volume 1, Section 0, Part 2 should be reproduced

Bridges and Structures, Advice Notes (BA Series)

The current alpha-numeric index in the DMRB, Volume 1, Section 0, Part 2 should be reproduced

Traffic Engineering and Control, Standards (TD Series)

TD 9/(Date)*	Road layout and geometry. Highway link design
TD 19/(Date)*	Safety fences and barriers
TD 27/(Date)*	Cross Sections and headroom
TD 36/(Date)*	Subways for pedestrians and cyclists, layout and dimensions

Highways, Advice Notes (HA Series)

HA 66/(Date)*	Environmental Barriers - Technical Requirement

Highways, Standards (HD Series)

HD 22/(Date)*	Ground Investigation and Earthworks- Procedure for Geotechnical Certification

■ The compiler of the AIP should insert the current date of publication of the asterisked British Standards. MCHW and DMRB Standards and Advice Notes. This should be in the form of the year of publication for British Standards, the month and year of publication for MCHW and the last two digits of the year of publication for DMRB Standards and Advice Notes. The dates of any Amendments should also be noted.

4.4 Appendix D - Road Types Table (Summary)

Road Type	Dwellings Served	Design Speed	Widths	Maximum Straight	Junction Spacing		Min Centreline radius	Forward Visibility	Surface
					Same Side	Opp Side			
Footway	-	-	2m	-	-	-	-	-	Tarmac
Cycletracks	-	15mph	3.5m shared use 2.5m + 1.5m segregated	-	-	-	15m	23m	Tarmac
Single Private Drives	1	-	3.2m	-	-	-	-	-	-
Shared Private Drives	Up to 5	10mph	3.5 min	-	-	-	-	-	-
Shared Surfaces	Up to 25 50 with two points of access	15mph	4.5 min 2 x 2m service strips	30m	-	-	15m	23m	Block paved
Home Zones	Depends on traffic flow criterion	10mph	Varies	30m	-	-	Swept path	12m	Varies
Minor Access Road	Up to 100	20mph	5.5m (4.8m > 50 dwellings) 2 x 2m footways	40m	-	-	20m	33m	Tarmac
Major Access Road	100-300	20mph	5.5m 2 x 2m footway	40m	30m	15m	25m	33m	Tarmac
Local Distributor Road	>300	30mph	7.3m 2 x 2m verge 2 x 2m footways	60m	100m	50m	40m	60m	Tarmac
Industrial and Commercial	-	30mph	7.3m 2 x 2m footways	60m	30m	15m	80m	60m	Tarmac